

Scientific, Technical and Economic Committee for Fisheries (STECF) – FDI methods (STECF-25-05)

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Abstract

Commission Decision of 25 February 2016 setting up a Scientific, Technical and Economic Committee for Fisheries, C(2016) 1084, OJ C 74, 26.2.2016, p. 4–10. The Commission may consult the group on any matter relating to marine and fisheries biology, fishing gear technology, fisheries economics, fisheries governance, ecosystem effects of fisheries, aquaculture or similar disciplines. This report addresses the methodologies used by Member States in the preparation of the data for the FDI data call. This report has been reviewed by STECF during the 2025 summer plenary meeting.

STECF Report on EWG 25-05 FDI methods

Request to STECF

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

STECF comments

EWG 25-05 met online from May 19 to May 23, 2025. EWG 25-05 was the third in a biennial series of STECF EWGs dedicated to reviewing the methodology applied by Member States in responding to the FDI data call, propose common practices, and follow up on future development of the FDI database and data dissemination.

STECF considers that the EWG adequately addressed the TORs and has the following specific comments on the four ToRs addressed by EWG 25-05:

TOR 1. Review approaches used by Member States responding to the FDI data call and if possible, propose common best practice.

STECF notes that, as in previous meetings, the experts presented the methodology used to prepare the Member States data as the response to the FDI data call, along with the changes since EWG 23-05. In addition, specific questions were formulated to collect targeted information directly from the Member States. These contributions are very valuable for gaining an overview of the approaches used by Member States.

STECF notes that the EWG received input from 17 Member States, reflecting increased engagement compared to the previous meeting of this series. In 2023 (EWG 23-05), only 13 Member States provided information, while in 2021 (EWG 21-10), 21 responses were received (including the United Kingdom). However, an effort by the missing Member States would be desirable to obtain a complete overview.

TOR 1.1. Any differences in definition of metier and related fields such as GEAR_TYPE, TARGET_ASSEMBLAGE and MESH_SIZE_RANGE as well as issues in preparing the data(call) with the new metier definitions.

STECF observes that no major issues were anticipated in applying the métier list agreed by the RCG ISSG on Métier and transversal variable issues, since the list had already been implemented during the 2023 FDI data call without significant difficulties.

STECF observes that mismatches between METIER and the related fields GEAR_TYPE, TARGET_ASSEMBLAGE and MESH_SIZE_RANGE, identified by EWG 23-05, were mapped in greater detail during the EWG. GEAR_TYPE mismatches often arise as it is derived directly from logbooks, whereas the gear component of METIER may have been adjusted during data processing. This contrasts with TARGET_ASSEMBLAGE, which is in most cases derived directly from METIER. This was confirmed by the quality checks of the data sets from 2013 to 2023, which showed clearly more mismatches involving GEAR_TYPE than TARGET_ASSEMBLAGE. For MESH_SIZE_RANGE, comparisons are difficult because in some cases the coding of mesh size ranges in METIER and in MESH_SIZE_RANGE do not align. According to the experts, in some cases MESH_SIZE_RANGE was extracted from METIER, while in others it was reported directly from logbooks, with subsequent adjustments made to the mesh size range code in METIER.

TOR 1.2. Methodology applied to define EEZ indicator.

STECF observes that the methodology used to derive EEZ indicators remains broadly in line with what was defined by the EWG 23-05. Member States mainly use logbooks and sales notes or landing declarations. Where EEZ boundaries are not available from logbooks, they are derived from VMS data or fixed proportions per statistical rectangle. No significant increase was observed in the use of the marine regions shapefile to promote standardization. Only a few minor methodological changes, seen as improvements, were introduced.

STECF notes that it remains unclear whether Member States are using the hierarchical decision tree established during EWG 23-05. Only three Member States stated clearly that they followed this decision tree. STECF agrees with the EWG on encouraging Member States to apply this approach. STECF further suggests that including details in the National Chapter on the experience of using the decision tree could be valuable in assessing its effectiveness in supporting data quality improvements.

TOR 1.3. Use of table B and refusal rates reported during submission.

STECF observes that the EWG 25-05 agreed to discontinue the Table B in the future FDI data calls. Refusal rates are estimated based on the sampling frame, but most Member States cannot report them consistently due to non-probability-based designs and lack of non-participation records. Since discard estimates in the FDI tables are not provided by sampling frame, refusal rates are not meaningful or applicable in this context. However, the EWG suggests reporting the refusal rates in the AR/WPs.

ToR 1.4. Use of quality indicators requested by FDI data call and issues arise during data submission.

STECF observes that there is considerable variation among Member States in both the methodologies used to calculate quality indicators (QIs) and the extent to which they are provided. Some have submitted discard estimates with associated coefficient of variations (CVs), often based on simplified methods. Nonetheless, there is growing interest in improving estimation techniques, with several Member States exploring more robust approaches such as bootstrapping for future reporting. Others reported discards data without CVs, for example due to zero observations in sampled strata, which make CV calculations statistically invalid. Several Member States did not submit any discard estimates or CVs for Tables C, D, and K, citing reasons such as ongoing development of data systems like RDBES, absence of regular discard monitoring under the DCF, limited resources, or work still in progress.

STECF observes that the EWG has raised concerns regarding the use of CVs reported in the biological tables (C, D, and K) in relation to the discard estimates in Table A. Since CVs are calculated at the DOMAIN_DISCARDS level and based on specific sampling designs (e.g. métier, season, fishery), they cannot be partitioned or aggregated in the same way as discard estimates in Table A. Although QIs were included in the biological tables to support the evaluation of the reliability of Table A estimates, the EWG advises against including these indicators in public data dissemination, as this could lead to incorrect assumptions about the quality or uncertainty of the reported discard estimates. In this context, the reporting of QIs should be made optional and the absence of CVs should not be flagged as a failure in the Data transmission monitoring tool.

ToR 1.5. Definition of DEEP indicator.

STECF observes that the DEEP indicator, characterising fisheries interacting with deep-water species listed in the legislation has been generally reported correctly and aligns with expected patterns, with most deep-water landings originating from otter trawlers and long liners that do not specifically target deep-water species. This is supported by expert input indicating that most Member States do not issue deep-water licences.

STECF observes that the EWG suggests adding a new appendix to the Annex of the FDI data call to clarify that it applies only to areas 27 and 34, as some records have been reported from other regions. The appendix should also specify that a fishing trip, including all species caught and the associated effort, should be classified as DEEP when the catch of at least one deep-sea species listed in the regulation exceeds 100 kg.

ToR 1.6. Definition of TOTVALLANDG indicator and how it relates to AER indicators totlandinc and totvallandg

STECF observes that most Member States calculate TOTVALLANDG by multiplying landed weight by the average price per species or segment, often combining landing declarations with sales notes. This reflects a consistent approach across Member States.

STECF notes that comparisons between the two data calls should focus solely on the variable “TOTVALLANDG,” as “TOTLANDGINC” (AER) is reported by fleet segment and not by species. In some Member States, landing values for certain segments are not reported due to confidentiality. Moreover, unsold landings (e.g. discards or by-products) and non-commercial uses (e.g. bait or own consumption) are explicitly excluded in the AER definition of TOTLANDGINC. Therefore, STECF agrees with the EWG on the suggestion to delete the term “estimated” from the FDI definition, as it adds little value and its removal would enhance the comparability of this variable across the FDI and AER data calls.

STECF observes divergent approaches regarding the alignment of data sources and procedures between the FDI and AER data calls in relation to the TOTVALLANDG indicator (FDI+AER) and TOTLANDGINC indicator (AER). While some Member States reported no issues and confirmed the use of the same sources, others noted differences such as the use of logbooks for FDI and sales notes or surveys for AER. Even when data originate from the same system, variations in extraction timing, specifications, and aggregation levels can lead to inconsistencies. The comparison of the “totvallandg” indicator between AER and FDI data calls will be performed during the EWG 25-10 in September.

ToR 1.7. *Spatial data coverage and confidentiality rules*

STECF notes that most Member States reported spatial data availability for the entire fleet population, although one Member State reported that Small-Scale Coastal Fisheries (SSCF) are currently not covered.

STECF observes that most Member States indicated that certain data submitted under the FDI data call are considered confidential, typically when derived from less than three vessels. However, some Member States reported applying no confidentiality restrictions or using different criteria than the “less than three vessels” rule.

ToR 2. Dissemination of aggregated data tables and spatial information

ToR 2.1. Define dissemination formats for more disaggregated data and spatial information, taking into account confidentiality concepts (resulting from the confidentiality workshop as recommended by RCG NANSEA & Baltic 2024 to the Commission) and be validated by National Correspondents.

STECF notes that the EWG defines more disaggregated data as including the country level, and that the country-level FDI data currently available on the dissemination page are incomplete due to confidentiality restrictions.

STECF notes that the EWG highlighted the importance of disseminating a complete data set on an agreed aggregation level including country to ensure a robust and meaningful analysis.

STECF notes that applying the level of aggregation proposed by EWG 24-11 for the data dissemination would still result in an incomplete dataset. This proposal follows the principle that aggregated data are not confidential if combined with non-confidential data, however, remains confidential if all underlying data are marked as confidential.

STECF observes that the EWG prepared tables outlining various aggregation levels for the FDI data dissemination, to be assessed by National Correspondents in collaboration with individuals familiar with the FDI data structure. For each aggregation level, a data sensitivity scale (1–3) will be applied: (1) data are publishable; (2) data may be publishable with justification and reference to agreements; (3) data are not publishable and require a legal reference. This assessment would support the identification of the lowest feasible aggregation level for disseminating landings (weight and value), discards, and effort variables in FAO areas 27 and 37 and will not involve long-distance fisheries, where data often remain sensitive. The EWG notes that landings weight by country, year, area, and species (suggested aggregation level 1) are already publicly available in other fora and should generally be considered acceptable.

STECF notes that the proposed tables with a data sensitivity scale, as outlined above, also include suggestions for the spatial dissemination of landings and effort. However, these tables currently lack dimensions such as country, metier level 7, EEZ indicator, and GEO indicator—on the dissemination page.

STECF notes that the EWG did not further discuss or develop the dissemination approach outlined by EWG 24-11, which proposed combining Table I, Table G, and Table H to check and disseminate species- and country-specific spatial landings data.

STECF notes that the EWG conducted an initial exploration of disseminating spatial data by EEZ indicator. This revealed inconsistencies in the allocation of the EEZ within the FDI data and highlighted the need for a method to properly divide c-squares along EEZ borders, as well as the requirement for accurate shape files.

STECF notes that the EWG identified duplicated entries within the spatial data and suggests implementing a duplicate check during the uploading process of spatial tables.

ToR 2.2. Provide guidance on dissemination of refusal rate information (Table B).

STECF observes that the EWG agreed to discontinue the provision of Table B in the FDI data call; therefore, the related dissemination guidance is no longer applicable.

ToR 3. Monitor use and dissemination impact of FDI data

ToR 3.1. Propose a method to monitor the use of FDI data, including both publicly available and restricted datasets. This may include solutions such as DOIs (Digital Object Identifier), Creative Commons licences, or citation tracking.

STECF notes the EWG proposal to use a DOI to track scientific citations, with a new DOI created annually upon data publication, starting with the 2025 FDI data call response.

STECF further notes that the EWG recommends using an interactive website to make the FDI variables more understandable, following the approach used in the Work Plan (WP) and Annual Report (AR) guidelines. The EWG suggests highlighting in the dissemination page's introductory text that the data are reviewed and quality-assured during the annual STECF Expert Working Group on FDI. Additionally, it suggests referencing the National Work plans and Annual reports in the metadata file of the FDI data on the dissemination pages. All these measures aim to enhance data accessibility and usability.

ToR 3.2. Establish an inventory of downloads from the dissemination platform, to provide a quantitative indicator of data usage.

STECF notes that the EWG reported the number of unique downloads for each FDI table and spatial data set from the dissemination platform over the one-year period following data publication (1 December 2023 - 1 December 2024).

ToR 4. Finalise the process and scripts to facilitate the process of estimating landings and discards for each exemption of the landing obligation without ad hoc preparatory contract.

STECF acknowledges the progress made in the development of the three R scripts defined during the EWG 24-11 to streamline the preparatory work required to estimate the landings and discards for the exemptions of the landing obligation (LO).

STECF notes that the EWG reviewed the coding table, which aligns legal acts with their corresponding FDI codes and has been used since FDI data extractions began related to LO exemptions. The EWG agreed to adopt this table as a standardized template to ensure systematic and consistent updates for any amendments or newly introduced exemptions by DG MARE.

STECF notes that the revised coding table will be used during the 2025 summer test phase to track changes related to 2026 exemptions. DG MARE will update the table in parallel with the existing ad hoc legislative review process, allowing for validation of the new approach while ensuring continuity in data provision.

STECF observes that script 1, which aims to fully automate the translation of legal texts into FDI extraction codes, will need to be finalized following the validation of the coding table template.

STECF notes that script 2, which merges FDI Table A with the extraction code table and extracts FDI data for exemptions, has been developed and integrated into the workflow. This improves data merging, cleaning and pre-processing, ensuring that high-quality input data feed into the visualization and summary tools.

STECF observes that two procedures have been developed to visualize the output by species, area and exemption. The first is an R script (script 3), building on the EWG 24-11 foundation, which enables users to explore data at various levels of aggregation. The alternative is a standalone, browser-based interactive HTML dashboard designed to maximize accessibility and transparency for all users, regardless of their technical expertise or IT limitations.

STECF conclusions

STECF concludes that EWG 25-05 adequately addressed all ToRs except the follow-up on the comparability between AER and FDI data calls. This was postponed to EWG 25-10 due to limited involvement of economists, as attendance restrictions at EWG 25-05 led to prioritizing data submitters over economists.

STECF reiterates its previous conclusion (PLEN 21-03 and PLEN 23-02) that sharing and integrating FDI methods applied by Member States is essential for achieving a unified approach and improving data quality. The inputs received from 17 Member States show increased engagement compared to the previous meeting and supports better alignment of applied methods. STECF observes the need to increase the attendance limit from 20 to 25 to ensure full representation of all reporting countries, along with necessary coordination and expert support. Full Member States participation is key to ensure consistency, transparency and progress in this methodology process.

STECF concludes that the methodological presentations prepared for the EWG often trigger valuable additional data analyses across the full FDI time series. These are key to identifying and resolving inconsistencies and enhancing both data quality and documentation.

Based on Member States' responses, STECF also concludes that, overall, there have been no significant changes in the approaches used by Member States in response to the FDI data call since the 2023 review.

Regarding newly raised items by the EWG, the DEEP indicator is generally reported correctly, though STECF supports the EWG's proposal to add a new appendix to the Annex of the FDI data call to give extra guidance on its geographic scope and threshold criteria. Similarly, the TOTVALLANDG variable is generally calculated consistently across Member States. STECF also supports the EWG's recommendation to delete the term "estimated" from the FDI definition, as it adds little value and its removal would enhance the comparability of this variable across the FDI and AER data calls.

STECF supports the EWG proposal to apply a three-level data sensitivity scale: (1) data are publishable; (2) data may be publishable with justification and reference to agreements; (3) data are not publishable and require a legal reference) to assess FDI data dissemination across different aggregation levels by National Correspondents. This process will help identify the lowest feasible aggregation level for publishing landings (weight and value), discards, and effort data in FAO areas 27 and 37.

STECF supports the EWG proposal to exclude the dissemination of some quality indicators (DISCARD_CV, DISCARD_CI_UPPER, DISCARD_CI_LOWER) from the discard age and length tables, as they may misrepresent uncertainty of discard estimates in Table A, which are not necessarily based on the same sampling frame.

STECF supports the EWG proposal to discontinue Table B and the reporting of refusal rates in the FDI data call, as these relate to the sampling frame and not to discard estimates in Table A. Furthermore, most Member States cannot report refusal rates consistently due to non-probability sampling and missing non-participation data. However, STECF agrees that refusal rates remain valuable and supports the EWG suggestion to include them in Annual Reports and Work Plans, where they can provide useful context on sampling quality and coverage.

In line with the JRC FAIR Data Guidelines requiring persistent identifiers for data products, STECF concludes that the EWG proposal to use DOIs to assess the visibility and dissemination impact of FDI data, should be explored in the near future. As an initial step, STECF further concludes including citation guidance on the dissemination page, as done for spatial data. It also endorses the following improvements to data accessibility and usability provided by the EWG: an interactive website for exploring FDI variables (aligned with the Work Plan and Annual Report guidelines); a note in the dissemination page's introduction stating that the data are reviewed and quality-assured by the annual STECF EWG on FDI; and referencing National Work Plans and Annual Reports in the FDI metadata.

STECF concludes that the EWG has made significant progress in developing automated processes to estimate landings and discards for each exemption under the landing obligation. The script for fully automating the translation of legal texts into FDI extraction codes will be finalized following the validation of the coding table template at EWG 25-10. In preparation for EWG 25-10, the template will need to be updated by DG MARE in parallel with the ongoing legislative review conducted under

the ad hoc contract. During EWG 25-10, a comparison will be made between the final outputs generated by the automated and standard (*ad hoc* contract-based) procedures.

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EXPERT WORKING GROUP EWG-25-05 REPORT

REPORT TO THE STECF

Fisheries Dependent Information methods (EWG-25-05)

19-23 May 2025

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

1. INTRODUCTION

The STECF EWG 25-05 met virtually during 19–23 May 2025. The meeting opened at 9:00 on 19 May and was adjourned at 18:00 on 23 May 2025.

The EWG 25-05 was the third working group on FDI methods. The first meeting was held in 2021 (STECF EWG 21-10), and the second in 2023 (STECF EWG 23-05). Information about the ToRs and results of the previous discussions can be found in the reports STECF-21-12 (STECF 2021) and STECF-23-05 (STECF 2023).

1.1 Terms of Reference for EWG-25-05

DG MARE focal person: Martin Mortensen (D3), Thomas Brégeon (5), Ilaria Vielmini (C1), Leonie O'dowd (C3), Silvia Tomescu (D1), Chato Osio (D1), Anne-Cécile Dragon (D1)

JRC focal person: Zeynep Hekim

Chairs: Arina Motova-Surmava and Antonella Zanzi

The STECF EWG is requested to:

1. Review approaches used by Member States responding to the FDI data call and if possible propose common best practice.

The experts are invited to prepare a presentation on their methodology as changed since 2023 discussion in the respective Member State including new discussion points:

- 1.1. Any differences in definition of metier and related fields such as GEAR_TYPE, TARGET_ASSEMBLAGE and MESH_SIZE_RANGE as well as issues in preparing the data(call) with the new metier definitions
- 1.2. Methodology applied to define EEZ indicator
- 1.3. Use of table B and refusal rates reported during submission
- 1.4. Use of quality indicators requested by FDI data call and issues arise during data submission
- 1.5. Definition of DEEP indicator
- 1.6. Definition of TOTVALLANDG indicator and how it relates to AER indicators totlandinc and totvallandg
- 1.7. Spatial data coverage and confidentiality rules

The EWG to discuss and summarise the above topics.

2. Dissemination of aggregated data tables and spatial information
 - 2.1. Following conclusion of the STECF PLEN 24-03 that the dissemination of more disaggregated data tables and spatial information need to be defined by FDI Methodology, the EWG is requested to discuss and define possible dissemination format. This should incorporate the conclusions of the Workshop about data confidentiality concepts (recommended by RCG

NANSEA & Baltic 2024 to the Commission), and then be validated by National Correspondents.

2.2. EWG 25-05 is requested to issue guidance and elaborate on dissemination needs concerning information of refusal rates, contained in Table B.

3. Inventory of number of downloads from the website

The monitoring of the impact of FDI data dissemination and the needs of FDI data end-users is essential to ensure both the accuracy and relevance of FDI outputs. The EWG is therefore asked a.) during the FDI Methodology meeting, to propose a method (e.g. DOI, creative commons licence, or citation) to track the use of the FDI data, both publicly available and restricted data and b.) to establish an inventory on the number of downloads from the website.

4. Finalise the process and scripts to facilitate the process of estimating landings and discards for each exemption of the landing obligation without ad hoc preparatory contract.

The EWG 24-11 outlined the three main steps executed during the ad hoc contract providing catches, landings and discards as specified in the exemptions of each delegated regulation.

The EWG 25-05 is requested to:

4.1. Create legal text summary table to be filled in by DGMARE when changes in exemptions legal text are introduced, or new exemptions introduced in the EU law.

4.2. Check if automation of legal text translation from DGMARE table to FDI codes is technically feasible and develop the necessary procedure.

4.3. Further elaborate initial script produced during the EWG 24-11 that currently covers data visualisation and summary tables extraction and integrate it with 4.1, 4.2 and data extraction procedure.

EWG 25-10 is requested to finalise, review and test the process and scripts to enable exemptions data provision without preparatory ad hoc contracts.

2. RESPONSES TO THE TERMS OF REFERENCE

2.1 Review approaches used by Member States responding to the FDI data call and if possible propose common best practice

During the EWG 25-05 the experts attending the meeting were asked to present the methodology used by Member States in the preparation of the data for the FDI data call, as well as to report any changes that have occurred since the EWG 23-05.

2.1.1 Any differences in definition of metier and related fields such as GEAR_TYPE, TARGET_ASSEMBLAGE and MESH_SIZE_RANGE as well as issues in preparing the data with the new metier definitions

The EWG 25-05 did not observe many issues regarding the change to the new métier codes submitted to FDI data calls. A summary of the information based on the presentations by the experts participating in the EWG and the topics discussed at the meeting is summarized in Table 2.1.1.1.

Table 2.1.1.1. Issues, mismatches and changes in metier definitions.

Country	Definition of metier and related fields such as GEAR_TYPE, TARGET ASSEMBLAGE and MESH SIZE RANGE				
	1.1.1. Any specific issues using ISSG definitions/codes?	1.1.2 Mismatch between FDI columns and metier definitions (if yes, provide reason)			1.1.3 Any changes since 2023, if needed
		GEAR_CODE	TARGET ASSEMBLAGE	MESH SIZE RANGE	
BEL	No issues	GEAR_TYPE is reported from logbooks, metier gear can be adjusted in rare cases	No mismatch. TARGET_ASS EMBLAGE is extracted from the metier	No mismatch. MESH SIZE RANGE is extracted from the metier	No
BLG	There are no issues related to the preparing of the data call, but one metier that was used in the previous data call is missing from this year's list. The métier is GNS_DEF_>=400_0_0, which is used by Bulgaria and Romania of the gears targeting turbot.	There is no mismatch between FDI columns and metier definitions.	No mismatch	No mismatch	Yes. The métier.GNS_DEF_>=400_0_0 should be included in the list of metiers.

Country	Definition of metier and related fields such as GEAR_TYPE, TARGET ASSEMBLAGE and MESH SIZE RANGE				
	1.1.1.Any specific issues using ISSG definitions/codes?	1.1.2 Mismatch between FDI columns and metier definitions (if yes, provide reason)			1.1.3 Any changes since 2023, if needed
		GEAR_CODE	TARGET ASSEMBLAGE	MESH SIZE RANGE	
CYP	No issues	There is no mismatch between FDI columns and metier definitions .	No mismatch	No mismatch	No
DEU	No issues	No issues, except converting the following gears: FIX - in FYK, FWR - in FPN, OFG, OTG, GEN, GN - in GNS	No issues	No issues	No
DNK	No issues. Script from ISSG is used with national adjustments	GEAR_TYPE is reported from logbooks, metier gear can be grouped or adjusted	No mismatch	MESH SIZE RANGE is reported from logbooks (estimated for SSF), metier mesh size range can be adjusted.	No
ESP	No	Mismatch GEAR_TYPE is reported from logbooks and sales notes, and the métier are defined by profile capture (ICES area and Mediterranean Sea) and fleet, area, seasonality and target species (Long distance fisheries,	No mismatch. TARGET_ASS EMBLAGE is extracted from the metier	Mismatch. GEAR_TYPE is reported from logbooks and sales notes, and the métier are defined by profile capture (ICES area and Mediterranean Sea) and fleet, area, seasonality and target species (Long distance fisheries, Tuna fisheries and CECAF area)	A quality check was carried out for the Mediterranean Sea. If reliability of metier assignment is high, the GEAR_TYPE will be change.

Country	Definition of metier and related fields such as GEAR_TYPE, TARGET ASSEMBLAGE and MESH SIZE RANGE				
	1.1.1.Any specific issues using ISSG definitions/codes?	1.1.2 Mismatch between FDI columns and metier definitions (if yes, provide reason)			1.1.3 Any changes since 2023, if needed
		GEAR_CODE	TARGET ASSEMBLAGE	MESH SIZE RANGE	
		Tuna fisheries and CECAF area)			
EST	Absent from the meeting				
FIN	No issues	No issues	No issues	No issues	No
FRA	Absent from the meeting				
GRC	No issues	No issues	No issues	No issues	No. From 2025 data for OTB_MDD_>0_0_0 will be collected
HRV	Métier_7 allocation for ICCAT species required a specific rule based on gear type, TAQ status, and declared fishing activity. In cases where a vessel holds two distinct TAQs (e.g. for both BFT and SWO), the métier_7 cannot be unambiguously assigned and is therefore reported as "NK".	No issues	No issues	No issues	No changes
IRL	No issues	Unclear what the source of all mismatches between gear and metier are caused by. Will be explored and where possible resolved for 2025 data call.	No issues	No issues	No changes
ITA	No issues	No issues.	No issues	No issues	No changes
LTU	No. RCG ISSG developed script	No mismatch in submitted	No	No	Any changes

Country	Definition of metier and related fields such as GEAR_TYPE, TARGET ASSEMBLAGE and MESH SIZE RANGE				
	1.1.1.Any specific issues using ISSG definitions/codes?	1.1.2 Mismatch between FDI columns and metier definitions (if yes, provide reason)			1.1.3 Any changes since 2023, if needed
		GEAR_CODE	TARGET ASSEMBLAGE	MESH SIZE RANGE	
	used. Some manual correction was made for SSF	data. However, reported in logbooks TBS gear was converted to OTB and FIX to FYK for metier and GEAR_CODE. In 2023 data submission, mistake on mismatch between GEAR_TYPE and metier gear occurred.			
LVA	No issues	No issues	No issues	No issues	No changes
MLT	Absent from the meeting				
NLD	No. RCG ISSG metier list used	No issues	No issues	No issues	No changes
POL	No issues	No issues	No issues	No issues	No changes
PRT	No issues	In 2023, the gear codes reported are the same used for defining the metier. Some exceptions are related to 'NK' reported in 'GEAR_CODE' or in the 'METIER'. There are some mismatches in the	No mismatch in 2023; some mismatches in the remaining period.	MESH SIZE RANGE is the one reported in logbooks. Sometimes it does not match the metier assigned.	No

Country	Definition of metier and related fields such as GEAR_TYPE, TARGET ASSEMBLAGE and MESH SIZE RANGE				
	1.1.1. Any specific issues using ISSG definitions/codes?	1.1.2 Mismatch between FDI columns and metier definitions (if yes, provide reason)			1.1.3 Any changes since 2023, if needed
		GEAR_CODE	TARGET ASSEMBLAGE	MESH SIZE RANGE	
		remaining period.			
ROU	Absent from the meeting presentation				
SVN	Absent from the meeting presentation				
SWE	No issues	Gear code is allocated from the metier, so no mismatches	Target assemblage is allocated from the metier, so no mismatches	Mesh size is allocated separate from the metier, so some (very few) mismatches can occur	No

Source: MSs submissions to FDI data calls.

During the EWG meeting, ToR 1.1 was analyzed in detail. The main concerns are outlined in the following section.

Any specific issues using ISSG definitions/codes?

No major issues reported by Member States. Two issues with the allocation of métiers are detailed below.

The EWG discussed the issue regarding the use of a specific métier by Member States operating in the Black Sea. According to the technical regulations for trout fisheries, a mesh size greater than 400 mm should be used.

In the list of métiers agreed upon by the RCG ISSG on métiers and transversal variable issues, and later adopted by the RCG Med&BS, three relevant métiers are currently available:

- GNS_DEF_>0_0_0
- GNS_DEF_<16_0_0
- GNS_DEF_>=16_0_0

Introducing an additional métier, GNS_DEF_>=400_0_0, would lead to overlapping issues. This contradicts the goal of the RCG ISSG, which aims to develop methods to eliminate such overlaps.

Moreover, any changes to the mesh size ranges for net métiers used by RCG MBS members would require updates to the submitted data for the entire historical time series since 2013 – something that is intended to be avoided.

At EWG 25-05, three possible scenarios were proposed:

1. Use the existing métier GNS_DEF_>=16_0_0, while reporting the MESH_SIZE_RANGE as 400DXX.
2. Split the métier into two categories:
 - a. GNS_DEF_16_399_0_0
 - b. GNS_DEF_>=400_0_0
 In this case, the RCG MBS should apply to the RCG ISSG to update the métier list for the Mediterranean and Black Sea regions.
3. Since GNS_DEF_>=400_0_0 is specific to the Black Sea region, split the métier list into separate lists for the Mediterranean and Black Sea regions. This decision would need to be made by the RCG MBS.

Any regional changes would also require updates to the reference lists in the ICES vocabulary or other relevant databases.

An issue was indicated by one Member State in metier_7 code assigning for the case where a vessel holds two distinct TACs (e.g. BFT and SWO) or where no TAQ is allocated. These cases are handled separately:

- In the first case, metier_7 code cannot be uniquely assigned and reported as “NK”;
- In the second case, metier_7 is reported as “NA”.

Mismatch between FDI columns and metier definitions (if yes, provide reason)

The mismatches between the METIER, GEAR_TYPE, TARGET_ASSEMBLAGE, and MESH_SIZE fields were discussed at the EWG and presented by the experts that participated in the meeting.

Some Member States highlighted adjustments and changes in the gears reported under the METIER and related to gear variable fields as reason for mis-matches. In cases of mismatches occurring the variable source for GEAR_TYPE was from logbooks or declarative forms, when metier gear was grouped or adjusted.

The EWG observed mismatches between METIER and GEAR_TYPE in the data submitted for the period 2013-2023, aimed at observing gear adjustments frequency. The discrepancies identified require further explanation from the MS. In most cases, there is no clear correspondence between the gear level 6 métier and the GEAR_TYPE field reported. EWG assumes that in some cases, the data quality is not compliant. It was observed that gear adjustments were often contradictory, particularly when adjusting gears with different specifications or when the métier was not reported, even though both gear and target assemblages were available in the Member States’ resources.

Table 2.1.1.2. Mismatches between gear and metier gears for 2013-2023 data.

GEAR_TYPE specified as variable	Gear type specified in metier
DRB	FPO;GND;GNS;GTR;HMD;LLD;LLS;MIS;NK;OTB;PS;SDN;TBB

GEAR_TYPE specified as variable	Gear type specified in metier
DRH	DRB
FPN	FPO;FWR;GNS;NK;OTB;PTB;TBB
FPO	DRB;FPN;FWR;GNS;GTR;HMD;LH;LHM;LHP;LLD;LLS;LTL;MIS;NK;OTB;OTM;PS;PTM;SDN;SV;SX;TBB
FYK	FPN;FPO;GNS
GEF	GES
GNC	FPO;FWR;GND;GNS;GTR;HMD;LHM;LHP;MIS;NK;PS;SDN;TBB
GND	FPO;GNS;GTR;HMD;MIS;NK;PS;PTM;SDN;TBB
GNS	DRB;FPN;FPO;FWR;FYK;GNC;GND;GTR;HMD;LH;LHM;LHP;LLD;LLS;LTL;MIS;NK;OTB;OTM;PS;PTM;SDN;SV;SX;TBB
GTN	DRB;FPO;FWR;GNS;GTR;HMD;LHM;LLS;MIS;NK;OTB;PS;TBB
GTR	DRB;FPN;FPO;FWR;GND;GNS;HMD;LH;LHM;LHP;LLD;LLS;MIS;NK;OTB;PS;PTM;SDN;SV;TBB
HMD	DRB;FPO;GNS;GTR;HMS;LHM;LHP;MIS;NK;OTB;PS;TBB
LA	FWR;GTR;HMD;LHP;LLD;MIS;NK;PS;SDN
LHM	FPO;GNS;GTR;HMD;LH;LHP;LLD;LLS;LTL;MIS;NK;PS;SDN;TBB
LHP	DRB;FPO;FWR;GNS;GTR;HMD;LH;LHM;LLS;LTL;MIS;NK;OTB;PS;PTB
LLD	FPO;FWR;GNS;GTR;LH;LHM;LHP;LLS;LTL;MIS;NK
LLS	DRB;FPN;FPO;FWR;GNS;GTR;HMD;LH;LHM;LHP;LLD;LTL;MIS;NK;OTB;OTM;PS;SDN;SV;TBB
LNB	DRB
LTL	FPO;FWR;GNS;GTR;LHM;LHP;LLD;LLS;MIS;NK;OTB;PS
NK	FPO;FWR;GNS;GTR;LH;LHM;LHP;LLD;LLS;LTL;IS;OTB;PS
NO	DIV;FOO;LLS;MIS;NK;PS
OTB	DRB;FPN;FPO;FWR;GND;GNS;GTR;HMD;LHM;LHP;LLD;LLS;LTL;MIS;NK;OTM;PS;PTB;PTM;SDN;SSC;SV;TBB
OTM	FPO;LHP;MIS;NK;OTB;PTM;SSC;MIS;OTB;NK;PS;PTM;TBB
PS	DRB;FPO;GNS;GTR;HMD;LHM;LHP;LLS;LTL;MIS;NK;OTB;OTM;PTB;PTM;SDN;SV;TBB
PTB	FPO;GNS;GTR;MIS;NK;OTB;PS;PTM
PTM	DRB;FPO;MIS;OTB;OTM;SSC
SB	GNS;SV
SDN	FPO;GNS;GTR;HMD;LHM;LLS;NK;OTB;PS;SSC;TBB
SPR	OTB;SSC
SSC	FPN; NK;OTB
SV	FPO;FWR;GNS;GTR;HMD;LLS;MIS;NK;SB;SB-SV;SDN;SX;TBB
TBB	DRB;FPO;GNS;GTR;LHM;LLS;MIS;NK;OTB;PS;PTB;SDN

Source: MSs submissions to FDI data calls.

Table 2.1.1.3. shows the number of unique combinations where different gears are specified in the METIER and GEAR_TYPE fields. Some mismatches may result from accidental errors. The EWG is concerned that Member States may need to revise the submitted data.

Table 2.1.1.3. Number of unique combination where the gear types specified in the METIER and GEAR_TYPE columns do not match.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
BEL		1			1						
BGR	1	1	1	1	1	1	1	1	1	1	1
CYP							1		1	1	
DEU								1	1	1	1
DNK	60	58	61	72	59	44	60	55	64	56	38
ESP	203	185	209	201	187	174	212	186	184	185	212
EST	1										
FIN	2	1	1	4	4	4	4	5	5	5	4
FRA	14	14	14	16	15	14	14	15	15	14	15
GRC	10	9	10	10	9	7	7	11	10	7	1
HRV	4	5	5	4	4	4	2	3	2	2	2
IRL	43	42	42	45	35	34	47	40	34	36	41
ITA	1										
LTU											1
MLT										1	
NLD										2	
POL	2	2	2	2	5	1	2	2	2		
PRT	49	52	64	61	55	54	56	50	55	56	11
ROU	1	1	1	1	1	1	1	1	1	1	1
SVN	3	2	2	2	2	2	2	2	2	3	3

Source: MSs submissions to FDI data calls.

Most presentations indicated that no mismatches were identified, which was partly attributed to the extraction of the *TARGET_ASSEMBLAGE* from the *METIER*. Upon analysis, only a negligible number of inconsistencies were observed in the data. The same reference period used for identifying gear type mismatches was also applied to check for inconsistencies between the *TARGET_ASSEMBLAGE* and *METIER* fields (Tables 2.1.1.4 and 2.1.1.5). The EWG assumes that in these cases, mismatches might occur due to different allocation procedures applied when completing the fields. For example, mismatches may arise when data are completed at the haul

level versus the trip level, or when different institutions, with varying approaches, fill in the dataset variables, leading to inconsistent outcomes.

Table 2.1.1.4. Mismatches between the target assemblage recorded in the *TARGET_ASSEMBLAGE* field and in the *METIER*.

TARGET_ASSEMBLAGE specified as variable	Target assemblage specified in metier
ANA	FWS
CEP	DEF; FIF
CRU	DEF; MIS
DEF	CRU; FIF; LPF; MIS
DES	DEF
FIF	CEP; DEF; MIS
GLE	CAT
LPF	CEP; DEF
MCF	CEP
MDD	MIS
MPD	DEF; LPF; SPF
NK	CRU; DEF; SWD
SPF	DEF; LPF; MPD

Source: MSs submissions to FDI data calls.

Table 2.1.1.5. Number of unique combinations where the target assemblage specified in the *METIER* and *TARGET_ASSEMBLAGE* column do not match.

	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CYP							5	1	8	8	7
EST	2										
FIN		1	1	4	3	3	3	4	4	3	2
FRA	3	3	3	2	2	3	3	3	3	3	3
GRC	4	3	4	4	3	2	2	4	4	5	2
HRV	5	5	5	4	4	5	4	4	4	4	3
PRT	2	2	1	1	1	1	1	1	1	1	
SVN	1							1	1	1	

Source: MSs submissions to FDI data calls.

The EWG believes that the target assemblage specified in the *METIER* field is more accurate. The R script developed by the RCG ISSG on *métier* issues aims to harmonize the grouping of species codes in the target assemblage, ensuring consistent outcomes across Member States.

Based on the presentations, in some cases the *MESH_SIZE_RANGE* was extracted from the *METIER* field, while in others it was reported from logbooks (and estimated for Small-Scale Fisheries, SSF), with subsequent adjustments made to the mesh size range in the *METIER*.

Due to the specific coding of mesh size ranges in the *METIER* field and in the *MESH_SIZE_RANGE* field, which in some cases do not align, the group was unable to compare the submitted records during EWG meeting. An example is the *MESH_SIZE_RANGE* 80D100 which could have corresponding *METIER* codes OTB_DEF_70-89_0_0, OTB_DEF_90-99_0_0 and OTB_DEF_>0_0_0 (if unknown mesh size).

The EWG 25-05 considers that the mismatches shall be detailed in the national chapters at the FDI EWG in September.

Any changes since 2023, if needed

There are no significant changes since 2023. Improvements related to quality check, were developed and applied by Spain in the Mediterranean Sea case. They are focused on enhancing the association between fishing gear type and assigned métier code: if the reliability of métier assignment is high, the gear type will be changed.

For the FDI data call 2025, Greece is going to use a new métier code OTB_MDD_>0_0_0. Also, for Bulgaria, the addition to the métier list of a new métier code GNS_DEF_>=400_0_0 might be considered.

2.1.2 Methodology applied to define EEZ indicator

A summary of the information based on presentations by experts participating at the EWG is summarized in Table 2.1.2.1.

Table 2.1.2.1. EEZ indicators, methods and data sources used to report information related to the EEZ.

Country	EEZ indicator applied	Method	Data sources	Hierarchical decision tree followed
BEL	yes	Midpoint of ICES rectangle located in certain zone	logbooks	
BGR	NA	Fishing only in Black sea	logbooks	
CYP	NA	Fishing only in Mediterranean	logbooks + vms	
DEU	yes	Derived from FAO area + economic zone	logbooks + landings declarations	
DNK	yes	Hierarchy approach based on ICES rectangle/VMS/logbook haul/sales notes	logbooks + vms + sales notes	Yes
ESP	yes	Most detailed available information is used for EEZ: based on VMS, Logbook reported Rectangle or Country	logbooks + vms + sales notes	
FIN	NA	Fishing only in the Baltic	logbooks	NA
GRC	NA	According the Resolution GFCM/33/2009/2	not applicable	
HRV	NA	Not applicable	not applicable	
IRL	yes	VMS when available, or stat rec using shape file (EEZ)	logbooks + vms	
ITA	NA	Not applicable for Italy	not applicable for Italy	
LTU	yes	The crosscheck between recorded latitude/longitude and FAO zone is established. The obtained mismatch is flagged for check with EEZ as well.	logbooks + vms	Yes
LVA	yes	EEZ is derived based on Rectangle centroid of reported catches	logbooks	Yes
NLD	yes	Based on VMS + if no VMS available surface area of each rectangle	VMS + logbooks	
POL	yes	Based on data officialy reported + VMS checks	logbooks	
PRT	yes	EEZ declared in electronic logbook, still under development	logbooks	
SWE	yes	2013-2022: shapefile, positions in logbooks/journals. 2023 onwards: EEZ reported in logbooks/journals	logbooks & coastal journals	

Source: own elaborations.

EEZ indicator applied

In the FDI tables A, G, H and I, Member States are required to use the Exclusive Economic Zone (EEZ) codes listed in Appendix 9 of the FDI data call as an indicator for fishing activity data pertaining to sub-regions that encompass classifiable waters.

During the EWG 25-05, experts were requested to present how the EEZ indicator was applied in response to the FDI data call. The indicator is relevant only for FAO Areas 34 and 27 (excluding the Baltic Sea). Therefore, Member States operating exclusively in the Mediterranean/Black Sea and Baltic Sea regions were not involved in either the EEZ indicator submission or the provision of methodology.

Six Member States (Bulgaria, Croatia, Cyprus, Greece, Finland, and Italy) reported that, based on their national fishing activity data, no operations occurred within the relevant sub-regions. Consequently, they designated the EEZ indicator as "NA" (Not Applicable). All other Member States with fishing activity in the specified areas confirmed the use of the EEZ indicator in their submissions.

Methods used

The methodology used to estimate or derive EEZ indicators remains largely consistent with what was defined during EWG 23-05. Only a few minor methodological changes, considered as improvements, have been introduced.

During EWG 25-05, no significant increase was observed in the use of the marine regions shapefile (source: <https://www.marineregions.org>) to promote standardization and harmonization among Member States in defining EEZ borders.

When applying the recommended method for assigning EEZ indicator, data submitters are also encouraged to check that there is correspondence between the EEZ indicator and c-square/rectangle. The EEZ indicator allocation should be consistent between tables where it is reported (tables A, G, H and I).

The EWG 25-05 encourages Member States to follow the steps proposed in the hierarchical decision tree, as was established on EWG 23-05:

Step1. Declarative detailed coordinates informed by fishing haul/sequence. In this case, the EEZ indicator could be directly derived from the declaration. An issue can arise when starting and ending coordinates do not belong to the same EEZ. In this case the declarative EEZ indicator could be evaluated first and prioritized if available and consistent with one of the coordinates. Otherwise in case it is not consistent, fishing activity estimates could be either 1) completely allocated to the "end coordinates" or to the "start coordinates" or 2) proportionally allocated considering fishing time estimated by EEZ. Furthermore, it seems useful to compare/validate coordinates with VMS/geolocalized data, if they are available, and to highlight cases with observed inconsistencies.

Step 2. Declarative EEZ indicator from fishermen directly recorded in logbooks. In this case, the EEZ indicator could be directly copied from the declaration. Furthermore, it is useful to develop quality/consistency checks against other declared spatial information (e.g., does the EEZ indicator match with the ICES rectangle recorded in the declaration?) and/or VMS/geolocalized data if available. In case of inconsistencies, a decision should be made if the declarative EEZ information is preferred or should be refined or specified considering additional spatial information.

Step 3. Aggregated spatial information. When no other information is available except the aggregated spatial information (e.g. ICES rectangle) allocated to a fishing trip, then a methodology should be defined to derive the EEZ indicator from it. When the aggregated spatial information covers more than one EEZ then a different approach could be applied to derive the EEZ: using a proportional allocation rate (e.g. area proportion - % of ICES rectangle by EEZ), allocated each spatial information to a unique EEZ (e.g. considering the ICES rectangle' centre or the main EEZ by ICES rectangle) or using complementary information like vessel historical pattern or fishing activity calendars. Nevertheless, the information provided will be less informative and precise than derived following step 1 or 2.

Step 4. Finally, VMS/geolocalized data, if available (i.e., for geolocalized vessels, VMS ≥ 12 m vessels), could be used either: to validate/check the declarative information available (coordinates or EEZ indicator, see steps 1&2), to specify/refine the EEZ indicator assessed in the step 3 based on aggregated spatial information (esp. when the aggregated spatial information cover more than one EEZ) and/or to fill in the gap determining/calculating the EEZ directly from the VMS/geolocalized data (e.g. estimating fishing effort allocated by EEZ water).

The EWG suggests that adding details in the National Chapter describing the experience of using the hierarchical decision tree could be valuable in indicating whether it effectively supports the improvement of data quality.

The EWG acknowledged the need for a commonly agreed EEZ shapefile, officially validated at the EU, UK, and third-country levels. It was agreed to provide an annual country-by-country overview of the methodology applied to define the EEZ indicator, to be presented during the FDI meetings.

Sources to report EEZ

The main sources for Member States are logbooks and sale notes/landings declarations. The borderlines between economic zones, if they are not reported in the logbooks, are derived from:

- VMS data (Denmark, Ireland, Lithuania, the Netherlands, Poland, Spain),
- <https://www.marineregions.org> (Sweden, Belgium),
- fixed proportions for each statistical rectangle (Germany, Ireland).

2.1.3 Use of table B and refusal rates reported during submission

Summary

The EWG 25-05 concluded that **Table B should not be requested in the data call** anymore for the following reasons:

- Refusal rates are estimated based on the sampling frame which is described in the Member State's Work Plans and Annual Reports. Therefore, **if refusal rates are required, they would be more relevant to report in the Annual Reports (Table 2.5 – Sampling plan biological) where context can be provided in terms of MS.**
- The majority of Member States are not able to report refusal rates consistently across all sampling frames, particularly due to the absence of probability-based designs and lack of systematic recording of non-participation. As a result:
 - Table B in some cases does not contain all sampled frames, or includes a large number of “NK” or incomplete information per member state.
 - Reported refusal rates cannot be linked to specific discard estimates in Tables A, C, D and K due to the different level of aggregation across these tables. The discard domains in these tables are subsets of the broader sampling frame.
 - It is currently not possible to assess how the quality information in Table B informs or validates the estimates presented in the main FDI dataset.
 - Each member state interpreted the data call guidelines differently in terms of calculating refusal rates and inclusion of sampling strata.

Therefore, it is not possible to understand how this table relates to other tables in the FDI database. Table B currently functions as a standalone dataset rather than an integrated quality component of the FDI framework.

History of development

Table B, which captures refusal rates in fisheries-dependent data collection, was introduced into the FDI data call framework in 2018. Its inclusion aimed to enhance the quality assurance of discard estimates by providing insights into sampling participation and potential biases. However, the practical utility of Table B has been limited due to inconsistent reporting across Member States and challenges in linking refusal data to specific discard estimates.

Until 2017, the “old-FDI” data call included discard observer refusal rates in tables C. *Discards biological data (age based)* and D. *Discards biological data (length based)*. In line with the definition of observer refusal rates from SGPIDS 2013 (ICES CM 2013/ACOM:56):

“the proportion of skippers who, having been successfully contacted ultimately failed to allow the observer to go on-board to obtain the sample. This refusal rate is calculated as the number of industry refusals divided by the number of sequential selections or approaches where contact was successfully made. A successful contact is defined as a phone call to a vessel skipper being answered.”

From 2018 onwards, information of refusal rates was excluded from biological tables and included in a separate format – Table B, no longer linked to discard fractions, but only to sampling frames.

Refusal rate data reporting

Table B is designed to capture detailed metadata on observer refusal rates and sampling coverage in cases where a probability-based vessel selection design is applied. It serves as a quality assurance tool within the FDI framework and provides insights into sampling feasibility and industry cooperation.

Member States are required to complete this table only if their sampling design qualifies as probability-based. Where such a design is not implemented, all fields must be marked as 'NK' (Not Known).

Key variables requested in Table B include:

- **Sampling context:** Country, year, and the name of the sampling frame
- **Quality indicators:**
 - REFUSAL_RATE: Proportion of successful contacts where the skipper declined to participate.
 - COVERAGE_RATE: Proportion of the population sampled.
 - NONRESPONSE_RATE: All unsuccessful sampling attempts, regardless of reason.
- **Fleet context:**
 - VESSELS_FLEET, TRIPS_FLEET: Total fleet size and activity in the year.
 - TRIPS_SAMPLED_ONBOARD, UNIQUE_VESSELS_SAMPLED: Sample size realised.
- **Contact and response detail:**
 - UNIQUE_VESSELS_CONTACTED, NO_CONTACT_DETAILS, NO_ANSWER: Tracking of contact success.
 - INDUSTRY_DECLINED, OBSERVER_DECLINED, NOT_AVAILABLE: Specific reasons for non-sampling.
 - TOT_SELECTIONS: Total number of randomised selections attempted

Key Observations

The use of Table B and refusal rates data remains inconsistent across member states, both in terms of methodology and interpretation. While some member states apply a clear probability-based sampling design and report refusal rates explicitly, others either partially apply the concept (for selected fleet segments) or enter zeroes or "NK" based on the assumption that no refusals occurred or the design does not allow such quantification.

Most Member States continue to rely on **non-probability-based sampling** approaches, limiting the methodological basis for calculating valid refusal rates. Despite this, some still report refusal rates numerically, raising concerns over conceptual clarity.

In contrast, a smaller group of Member States have implemented probability-based designs and report refusal rates using standard methodologies (e.g. SRSWR, ICES SGPIDS 3). In these cases, refusal data are sometimes used operationally to monitor cooperation of the fishing sector or inform sampling adjustments.

Table B has limited connection to quality assurance or national planning. Only a few Member States actively use refusal data for national purposes, and even fewer provide methodological transparency or document the limitations encountered.

Refusal rates metrics are typically calculated at the sampling frame level. If disseminated, it should be accompanied by qualitative information on the sampling design. In addition, to interpret the refusal rates detailed information on implementation issues should be provided. This information is outlined in the Member State's Annual Reports.

Key Issues Identified

- **Inconsistent definitions** of the primary sampling unit (PSU) and refusal rates methodology across MSs.
- **Refusal rates are reported even when non-probabilistic designs** are in place, which undermines statistical reliability.
- Reported refusal rates cannot be reliably linked to specific discard estimates or metiers in Tables A, C and D, due to the different level of aggregation and strata definitions across these tables.
- **Ambiguity** about when to report zero refusals, "NK", or simply omit strata.
- **Table B is underutilised**, with minimal reflection of actual sampling field conditions or strategic value.

Table 2.1.3.1. Summary of Table B Reporting.

Indicator	Number of Member States	Note
Type of PSU: vessel / fishing trip / vessel*trip / vessel*landing / vessel*time	5 / 4 / 11 / 1 / 3*	Vessel*trip is the most used PSU
MS implements a probability-based vessel selection design	2	10 countries have a probability selection design, but most are based on vessel*trip
Use of refusal rates for national purposes	4	Often informal or limited to internal coordination
Systematically report 'NK' in Table B (where applicable)	8	Especially where probability-based design is not implemented or refusal rate is not collected
MS report zeroes or actual rates despite non-probabilistic design	2	Indicates inconsistency in understanding/reporting methodology

* A country can use more than one PSU

Source: MSs submissions to FDI data calls.

The PSU of most Member States is the vessel*trip (See Table 2.1.3.1). Therefore, member states that implement a probability-based vessel selection design are limited (only 2), which limits the systematic calculation and reporting of refusal rates. Only a minority report using refusal data for national planning or validation, and even fewer directly link these metrics to discard estimation frames.

The use of “NK” in Table B is generally applied where appropriate, although 2 countries reported zero refusals or numerical rates despite the absence of a formal probability-based vessel selection design. This raises concerns regarding the consistency and interpretability of Table B data.

2.1.4 Use of quality indicators requested by FDI data call and issues arise during data submission

Background

During the STECF EWG 21-10 it was agreed that there was a growing need to supply measures of confidence for the discard estimates reported by EU Member States under the FDI data call. The inclusion of Quality Indicators (QIs) to the FDI data call reflected the need for transparency, statistical rigour, and contextual information to accompany discard data, especially under the Landing Obligation and its associated exemptions.

Purpose and Role of Quality Indicators

Quality Indicators aim to assess the **precision and accuracy** of discard estimates and help identify issues in sampling design or implementation. They enable end users – such as the STECF, DCF, and national authorities – to evaluate the reliability of reported values, especially where discard rates are used to inform exemptions or support fisheries management. Precision is generally estimated using **Coefficient of Variation (CV) and Confidence Intervals (CI), that express the uncertainty** around estimates. These metrics offer a statistical way to understand potential errors due to **sampling rate and estimate variability**, and are particularly relevant where sampling strategies and estimation methods vary across Member States or métiers.

In STECF EWG 21-10 there was the recommendation to add new fields in Tables C, D and K, in order to better represent coverage and precision and help data users understand the quality of the estimates and support comparability across sampling plans when possible¹:

- TOTAL_TRIPS
- TOTAL_SAMPLED_TRIPS
- DISCARD_CV

¹ A CV estimated from a non-probabilistic and from a probabilistic sampling scheme are not comparable. A non-probabilistic CV can indicate relative variability of the estimate and could be compared annually if the non-probabilistic sampling is consistent across time. Whereas a probabilistic CV expresses true statistical uncertainty due to sampling.

- DISCARD_CI_UPPER
- DISCARD_CI_LOWER

These indicators were marked as **mandatory**, with 'NK' to be used when values are not known.

Statistical Approaches

While theoretical estimators from **survey sampling theory** (e.g., Cochran, 1977; Vigneau, 2006) underpin these indicators, the EWG acknowledged that complex sampling designs and ratio estimators often require computationally intensive methods like the **bootstrap** (Efron & Tibshirani, 1994). Bootstrap methods, now widely available in software like R, are especially valuable when analytical solutions are infeasible.

During this meeting, Spain presented a case study on its fisheries data to evaluate methods for calculating variance. The study found that design-based estimation is more effective when sampling is well-structured and data are sufficient, while the bootstrap method is better suited for smaller or less structured samples. Spain plans to submit discard estimates and their coefficients of variation (CVs) for its fleets in FDI format next year, using this approach.

Reporting Challenges

Although QIs have been integrated into the FDI data call in 2022, some challenges were found:

- Member States facing difficulties in calculating QIs due to methodological gaps or incomplete data.
- To promote flexibility while methods are still under refinement, in the 2023 data call it was necessary to remove the **validation rules** (i.e. the check values<1) during the upload of the data
- Not all métiers or fisheries had domain assignments, limiting the coverage and representativeness of QIs.

To address these, Member States were encouraged to document calculation efforts and challenges in National Chapters (STECF EWG 21-10).

Practical Implications and Data Interpretation

The partitioning of discard estimates into Table A of the FDI data call can be performed using slightly different methods, which may lead to variations in the outputs. To ensure consistency and statistical robustness, the Expert Working Group (EWG 21-10) provided guidance on best practices for this process. Discard estimates should be derived from scientific sampling and based on national sampling programs, with the sampling design and estimation process accurately reflected in the variable DOMAIN_DISCARDS. This aimed to ensure that the statistical soundness of the estimates is maintained when transferring data from Tables C, D, and K into Table A. The use of a correctly specified DOMAIN_DISCARDS allows the

proper linkage between tables and preserves the integrity of the sampling methodology. In cases where discard estimates are associated with zero landings or lack biological data, Member States should report these in Table K using a valid DOMAIN_DISCARDS, enabling proper partitioning and inclusion in Table A. A detailed summary of the partitioning approaches used by Member States was provided in the report of the EWG 23-05 (STECF 2023).

However, the **aggregation levels, data gaps, and non-standardized domains** impact the completeness and comparability of QIs. The current estimation process links discard estimates from Tables C, D and K to the more detailed Table A via the **domain_discards** field. A particular concern arises from **fill-in procedures**, where discard rates from sampled fleets are partitioned with unsampled ones. These partitions can lead to **non-representative or misleading** results due to differences in gear, temporal aggregation, vessel segment, fishing behaviour, etc. In the same way, also the quality indicators reported in Table C, D and K should not be associated to discard estimates reported in Table A.

Compilation of national responses to ToR 1.4

Member States present in the meeting were asked to make a presentation to get national feedback on the several questions regarding ToR1. In what relates to the ***use of quality indicators requested by FDI data call and issues arise during data submission***, a summary table was compiled (Table 2.1.4.1). An examination of the MS discard reporting for Tables C, D, and K highlights diverse practices among Member States, both in how data is provided and in the methodologies and constraints influencing those submissions.

Some Member States have submitted discard estimates with associated coefficients of variation (CVs), though these submissions often rely on simplified estimation methods. There is a growing interest in improving these methods, with several countries actively exploring the use of more robust statistical techniques, such as bootstrapping, for future reporting cycles.

A number of Member States have reported discard data but did not include CVs. This is due to various reasons, such as the use of zero observations (where discards did not occur in a sampled stratum), rendering CV calculations statistically invalid, or the reporting of discard values where CVs were not calculated.

Some Member States have partially completed their submissions, having conducted estimates but not uploaded all the data due to failed quality control checks. These cases highlight the importance of quality assurance in the data submission process and suggest that improvements in validation workflows may be needed.

Several Member States have not submitted any discard estimates or CVs for Tables C, D, and K. The reasons for non-submission vary and include ongoing development of data reporting systems (such as the Regional DataBase & Estimation System – RDBES), lack of regular discard monitoring programs under the Data Collection

Framework (DCF), limited time and resources, or the fact that the work is still in progress.

In a few cases, data submissions were not applicable because the Member States in question are not required to report discard estimates for these tables.

This overview underscores the heterogeneity in discard data reporting across Member States and points to both structural and procedural challenges that impact the consistency and completeness of data submissions under current EU fisheries data collection frameworks.

Table 2.1.4.1. Summary table with Member State responses for ToR 1.4.

MS	Table	Provided	Comment
NL	C, D	No	Not statistically correct
NL	K	No	This table is used to report the zero observations to indicate that a stratum was sampled but there were no discards, therefore a CV can't be provided when the associated value is 0
PL	C, D, K	Yes	Currently using a simplified method, however, new estimation options are explored (bootstrap) for future submissions.
LT	C, D	Yes	Since 2023 there were no discard data, therefore, currently no associated CV
DK	C, D, K	No	Focus on RDBES development with the aim to report them from there
FI	C, D, K	No	No regular discard onboard observer program for biological parameters under DCF
DE	C, D, K	Yes	Currently using a simplified method, however, new estimation options are explored (bootstrap) for future submissions.
BE	C, D, K	No	Time constraints
SE	C, D, K	No	Work in progress
PT	C, D	Yes	The CV are routinely calculated with discard estimates, for species with frequency of occurrence >30% (and reported in the ICES DC); 2020-2023 no onboard sampling - different discard estimation procedure used with no CV's reported
PT	K	No	Reported discards for all species reported in the ICES DC that are not reported in tables C and D. Include also species with zero discards. No CV's are provided
ES	C, D	No	Joel Morales (University of Santiago de Compostela, Spain) conducted a case study using Spanish fisheries data to identify the best methodology for calculating variance. His results concluded that design-based estimation can be more efficient and accurate when the sampling design is well-structured and sufficient data are available. Conversely, if the sample size is small or the sampling structure is unclear, using the bootstrap method might be preferable. Next year, Spain plans to transmit the estimated discards and their respective CVs for Spanish fleets in FDI format following this approach.
IR	C, D, K	Partially	All were estimated but QC checks did not allow for all to be uploaded
FR	C, D, K		No one from France
HR	C, D, K	Not applicable	No reporting requirements for tables C, D, K
RO	C, D, K	Not applicable	No reporting requirements for tables C, D, K
GR	C, D, K	Not applicable	No reporting requirements for tables C, D, K
CY	C, D, K	Not applicable	No reporting requirements for tables C, D, K
IT	C, D, K	Not applicable	No reporting requirements for tables C, D, K
BG	C, D, K	Not applicable	No reporting requirements for tables C, D, K

Source: MSs submissions to FDI data calls.

Outcomes from this EWG

The quality indicators were included in the biological tables of the FDI with the aim of evaluating the reliability of discard estimates reported in Table A by EU Member States under the FDI data call, while reflecting more transparency, statistical rigor, and contextual information to accompany discard data under the Landing Obligation and its associated exemptions. However, quality indicators reported in Tables C, D and K are related to discard estimates reported by domain in those tables. The EWG has issued the concerns in linking these same quality indicators to discard estimate values provided in Table A because the domains in biological tables are based on specific sampling design (metier, season, fishery, etc) and, when translated to Table A, in most cases, they will not reflect the same aggregation of those domains. The CV cannot be partitioned in the same way as the discard weights in Table A because it is calculated at the level of the DOMAIN_DISCARDS. The discard weights typically reflect estimates at the sampling level and the CV represents the overall variability of these estimates. Since the statistical properties needed to calculate the CV – such as variance and sample size – do not align with the finer partitions used for discard weights, partitioning the CV and corresponding CIs to the level of aggregation of Table A would be statistically incorrect. This means that there would be a need to re-estimate the quality indicators associated to the discard estimates reported in Table A, which is not a simple procedure and probably not possible to accomplish correctly.

RDBES will support improvements in discard estimation at the domain level; however, it does not resolve the methodology for converting these estimates into Table A.

Clarification and elaboration of QI issues identified in EWG

The EWG considers that there is a mismatch between biological tables and discard estimates reported in Table A

The QI reported in biological tables (C, D and K) cannot be directly linked to the discard estimates presented in Table A. This is because Table A aggregates discard estimates across different sampling domains, while QI in the biological tables are domain-specific and reflect only the quality of the sampling design used to collect biological samples, not the overall discard estimation process for including discards in Table A.

The EWG encountered reasons for omission of quality indicators data in some biological tables

As a result of this disconnection, some MS have chosen not to include QI data in the biological tables, even if they have calculated them. These MS recognize that including QI in a context where they cannot be meaningfully interpreted or directly associated with the estimates in Table A could lead to confusion or misinterpretation of data quality.

The EWG found limitations of the QI reported in Tables C, D and F

The QI reported in Tables C, D and K are specific to the sampling domains described in those tables. They reflect the quality of the data collected for particular subsets (e.g. metier, region, time period), but they do not correspond to the discard aggregations that figure in Table A. Therefore, using these domain-specific QI to assess the reliability (accuracy) of Table A discard estimates would be inappropriate.

The EWG has the recommendation to make the QI optional in Tables C, D and K

Given their limited applicability and potential for misinterpretation, it is recommended that reporting of QI such as coefficient of variation (CV) and confidence intervals (CI) in Tables C, D and K be made optional. This approach allows MS to include such data where it may be meaningful, without mandating inclusion in cases where it is not applicable or be misleading.

The EWG has the recommendation to continue using 'NK' and not leaving empty information

When QI are not available or cannot be meaningfully calculated, the use of 'NK' (Not Known) should remain an accepted standard rule. This aims to ensure clarity in reporting without forcing the inclusion of uncertain or non-representative information.

The EWG has the recommendation for exclusion of this information in the Data Dissemination and DTMT

Since QI reported in Tables C, D and K cannot be directly linked to the discard estimates reported in Table A, and given the risk of misinterpretation, these QI should not be included in public data dissemination because it could lead to incorrect assumptions about the quality or uncertainty of the reported discard estimates. In addition, missing QI information in Tables C, D and K should not be reported as an issue in the DTMT.

2.1.5 Definition of DEEP indicator

Background

The DEEP indicator is requested in 4 tables within the FDI database: catch summary (Table A); effort summary (Table G); landings by rectangle (Table H); and effort by rectangle (Table I). This variable was first requested in 2017 to capture information on the coverage and application of the deep-sea fisheries regulation. This variable is not linked to the use of deep-water fishing licences. This variable identifies fishing activity associated with trips on which more than 100kg of the deepwater species (as listed in the legislation EC 2016) were caught. To assist data submitters and users to identify these species in the FDI dataset a summary of the species listed in the legislation is outlined in Table 2.1.5.1. This list has been updated to corrected Latin

names, common names and accompanying FAO codes based on the RCG ISSG reference list².

In recent months the DEEP indicator has been used by ad hoc contracts which were reviewed by EWG 24-09 on VMEs socio-economic impact assessment (STECF 2025). The analysis conducted by EWG 24-09 used the DEEP indicator to describe the fisheries interacting with the deep-water species listed in the legislation. The indicator provided a useful tool to track the impact of fisheries on these species over time, their targets, and total effort landings weight in tonnes and value. It is likely that this exercise will be repeated in the future and could be used to produce advice within STECF, therefore EWG 25-05 reviewed the available data.

Current records in FDI database (2013 – 2023)

Records of DEEP indicators in the FDI data base cover the full-time series of the data base (2013–2023), which predate the implementation of the legislation which occurred in 2016 (EC 2016). The analysis indicates that the DEEP indicator is being reported correctly in the majority of cases (Figure 2.1.5.2.1.5.1). However, there are some records reported for subregions outside of areas 27 and 34, therefore EWG 25-05 proposed updating the data call text to ensure submitters understand (see “Proposed update to data call” paragraph).

The remainder of this summary focuses on the data submitted for subregion 27. EWG 25-05 concluded that data flagged as DEEP in the FDI data follow the trends seen by experts with the majority of landing associated with deepwater catches (>100 kg per trip) are taken by otter trawlers (OTB, OTM and OTT) and longliners (Figure 2.1.5.2), which are typically not targeting deepwater species (Figure 2.1.5.3). The use of the deepwater species target assemblage (DWS varied by Member state over time (Figure 2.1.5.4). Spain and Germany reported the highest landings of all species associated with the DEEP indicator (Figure 2.1.5.5). The strong interannual variability of all Member State submissions, including the sharp increase in German landings in the last three years were investigated (Figure 2.1.5.6). In the case of Germany, this trend was driven by a methodological change implemented over the past three years. Germany will resubmit the full time series.

The lack of targeting of deepwater species is corroborated by the information gathered from experts during EWG 25-05 (Table 2.1.5.2), which indicated that most Member States do not issue deep-water licences.

A similar trend is evident in table H and I with the majority of landings (Figure 2.1.5.7) and effort (Figure 2.1.5.8) being submitted with a DEEP indicator being reported in subregion 27.

² https://github.com/ices-eg/RCGs/blob/master/Metiers/Reference_lists/Metier%20Subgroup%20Species.xlsx

Proposed update to data call

The EWG 25-05 proposed to add a new appendix to the Annex to the FDI data call.

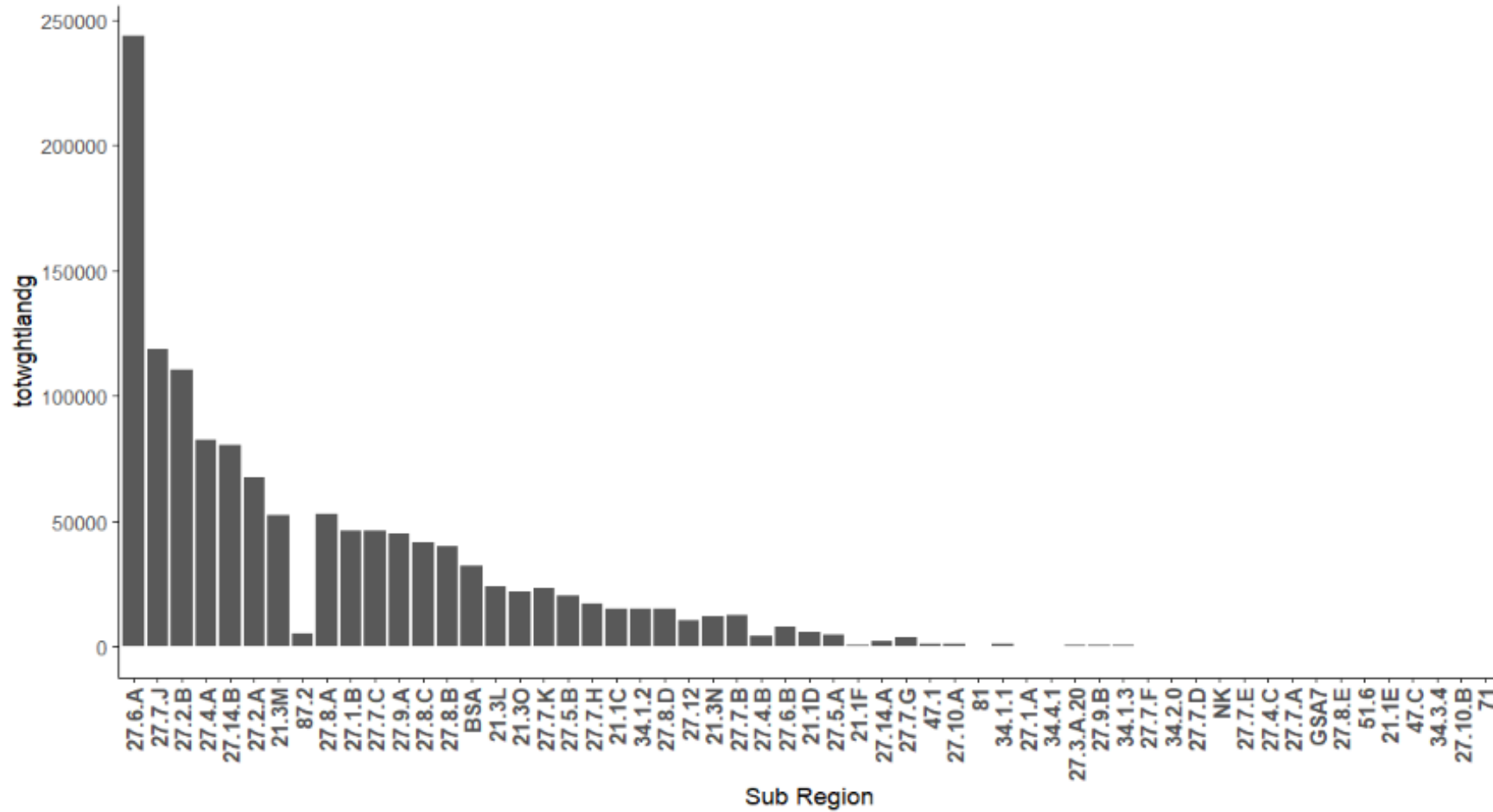
Appendix 15: DEEP variable

The DEEP variable is present in Table A, Table G, Table H and Table I. A fishing trip, including all species caught and its associated effort, should be classified as DEEP when the catch of at least one deep-sea species listed in the regulation exceeds 100 kg. Sub-areas I to XIV inclusive, and Community waters of CECAF areas 34.1.1, 34.1.2, 34.1.3 and 34.2 which lead to catches of species listed in Annex I (EC) 2347/2002

(<https://eur-lex.europa.eu/legal-content/EN/TXT/PDF/?uri=CELEX:32002R2347>).

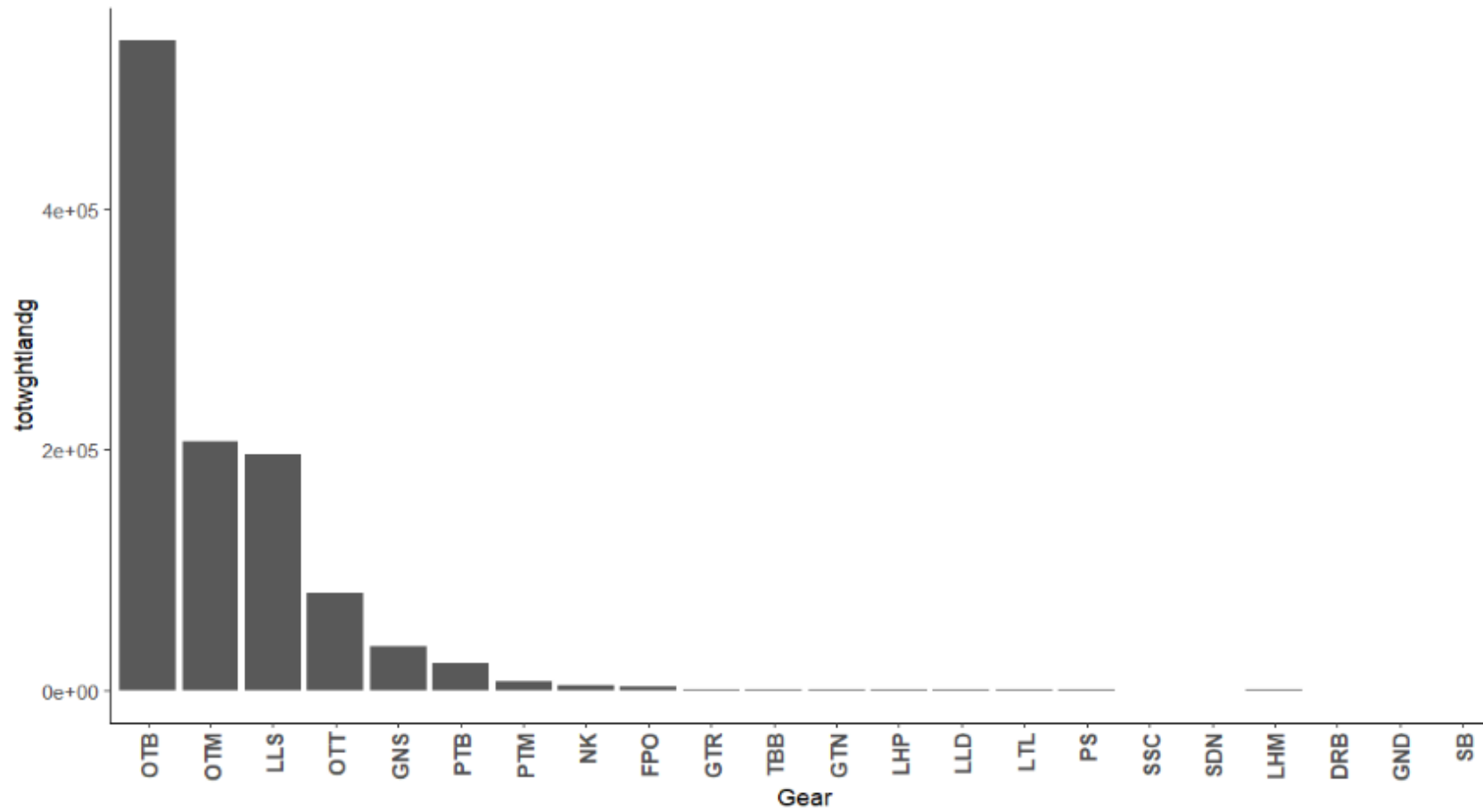
Although the regulation was implemented in 2016 the DEEP variable should be declared for the whole time series.

Figure 2.1.5.1. Total landings (tonnes) reported to table A in FDI (2013 - 2023) by sub region where DEEP indicator was flagged.



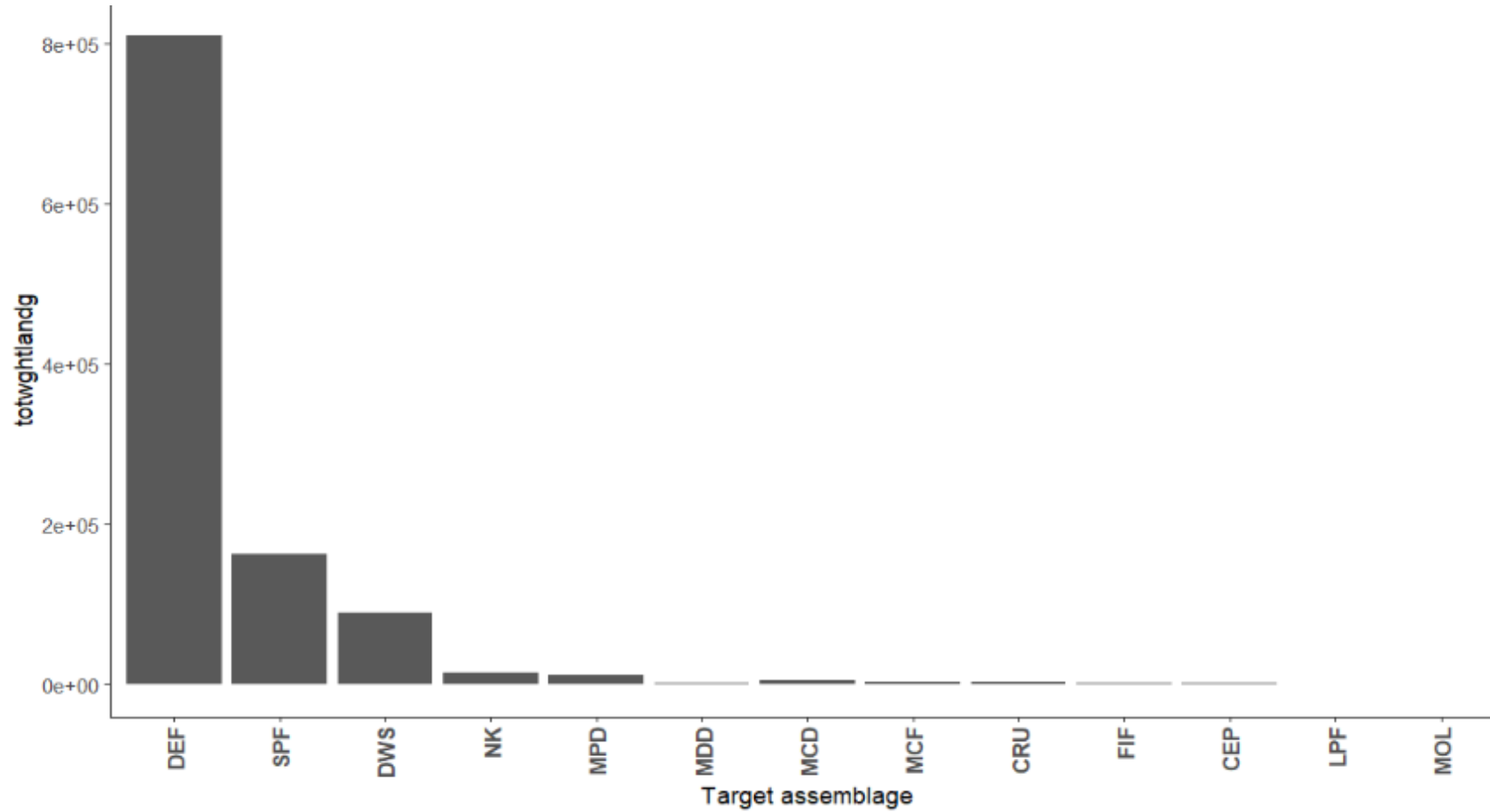
Source: MSs submissions to FDI data calls.

Figure 2.1.5.2. Total landings (tonnes) reported to table A for subregion 27 in FDI (2013 - 2023) by gear where DEEP indicator was flagged.



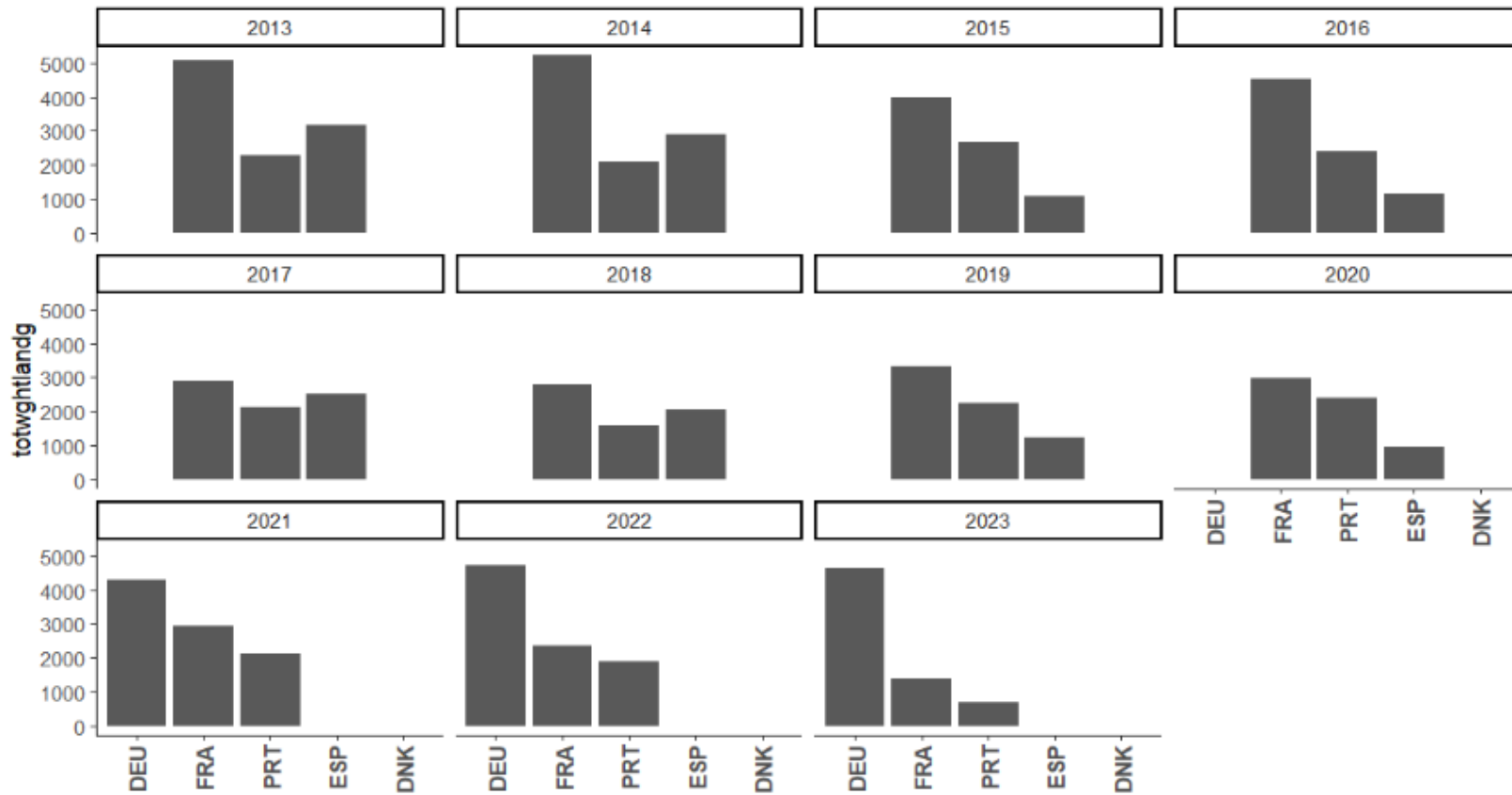
Source: MSs submissions to FDI data calls.

Figure 2.1.5.3. Total landings (tonnes) reported to table A for subregion 27 in FDI (2013 - 2023) by target assemblage where DEEP indicator was flagged.



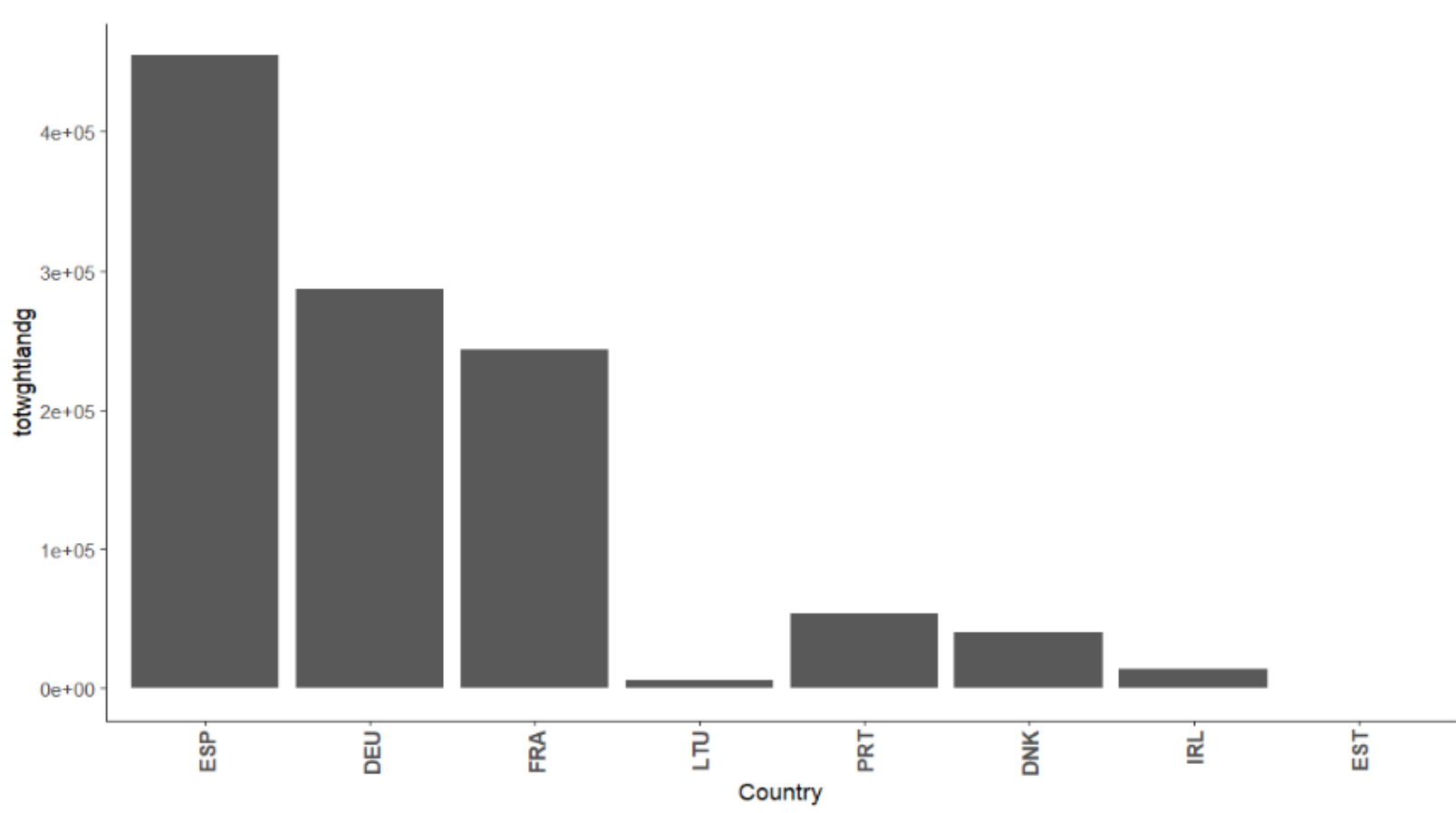
Source: MSs submissions to FDI data calls.

Figure 2.1.5.4. Total landings (tonnes) reported to table A for subregion 27 in FDI (2013 - 2023) by Country where DEEP indicator was flagged and a target assemblage of deepwater species (DWS).



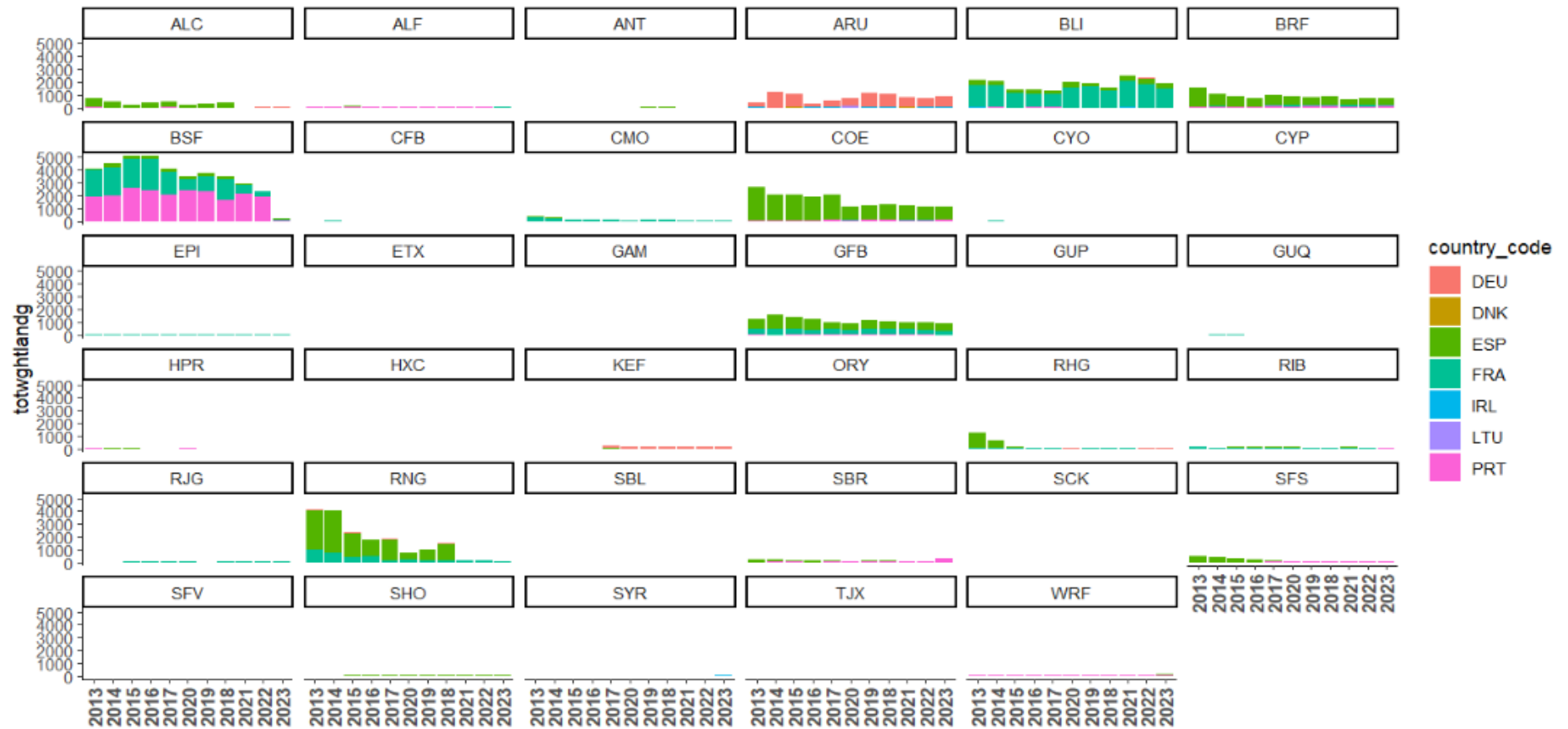
Source: MSs submissions to FDI data calls.

Figure 2.1.5.5 Total landings (tonnes) reported to table A for subregion 27 in FDI (2013 - 2023) by Country where DEEP indicator was flagged.



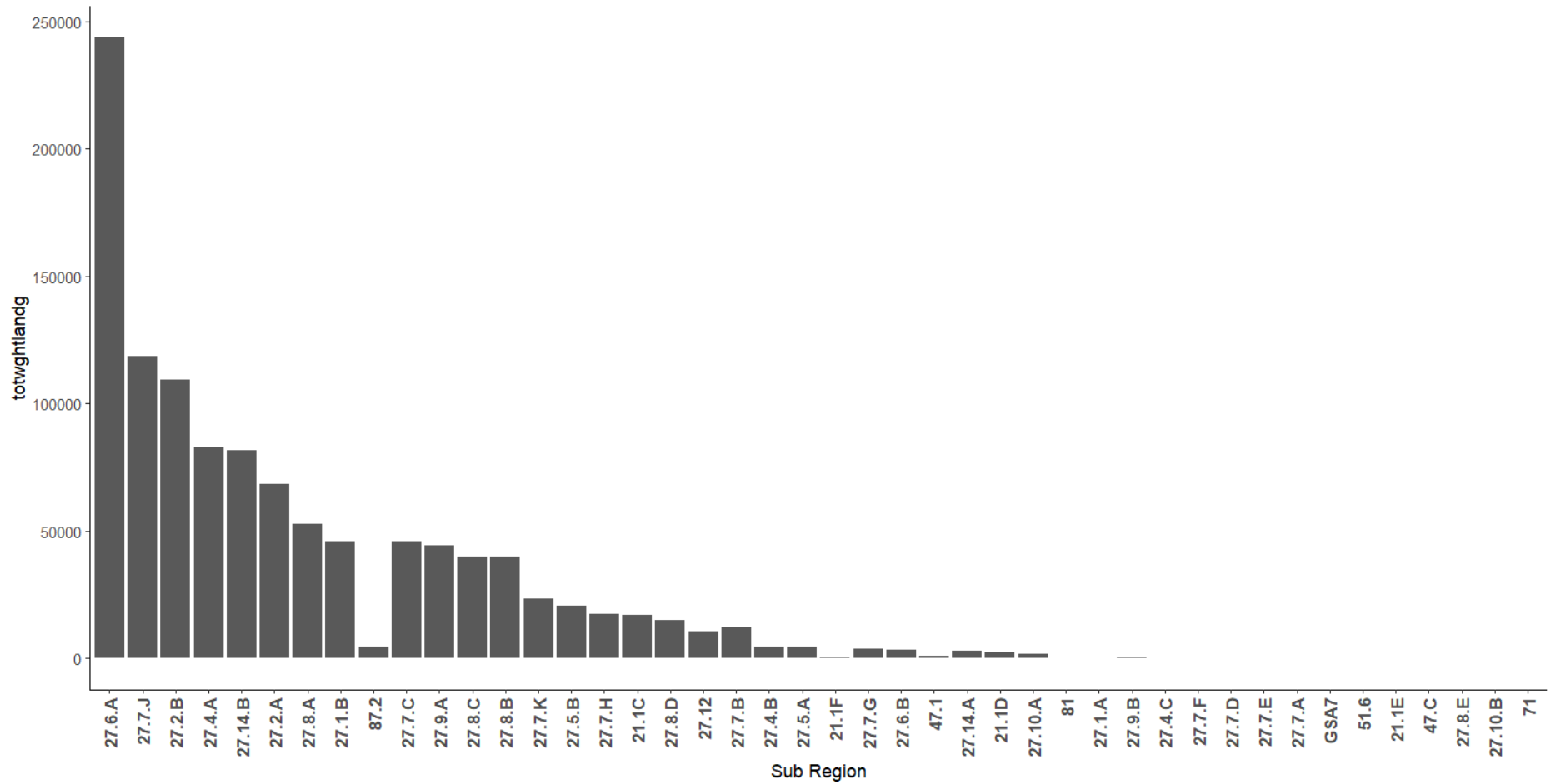
Source: MSs submissions to FDI data calls.

Figure 2.1.5.6. Total landings (tonnes) reported to table A for subregion 27 in FDI (2013 - 2023) of species named in legislation where DEEP indicator was flagged.



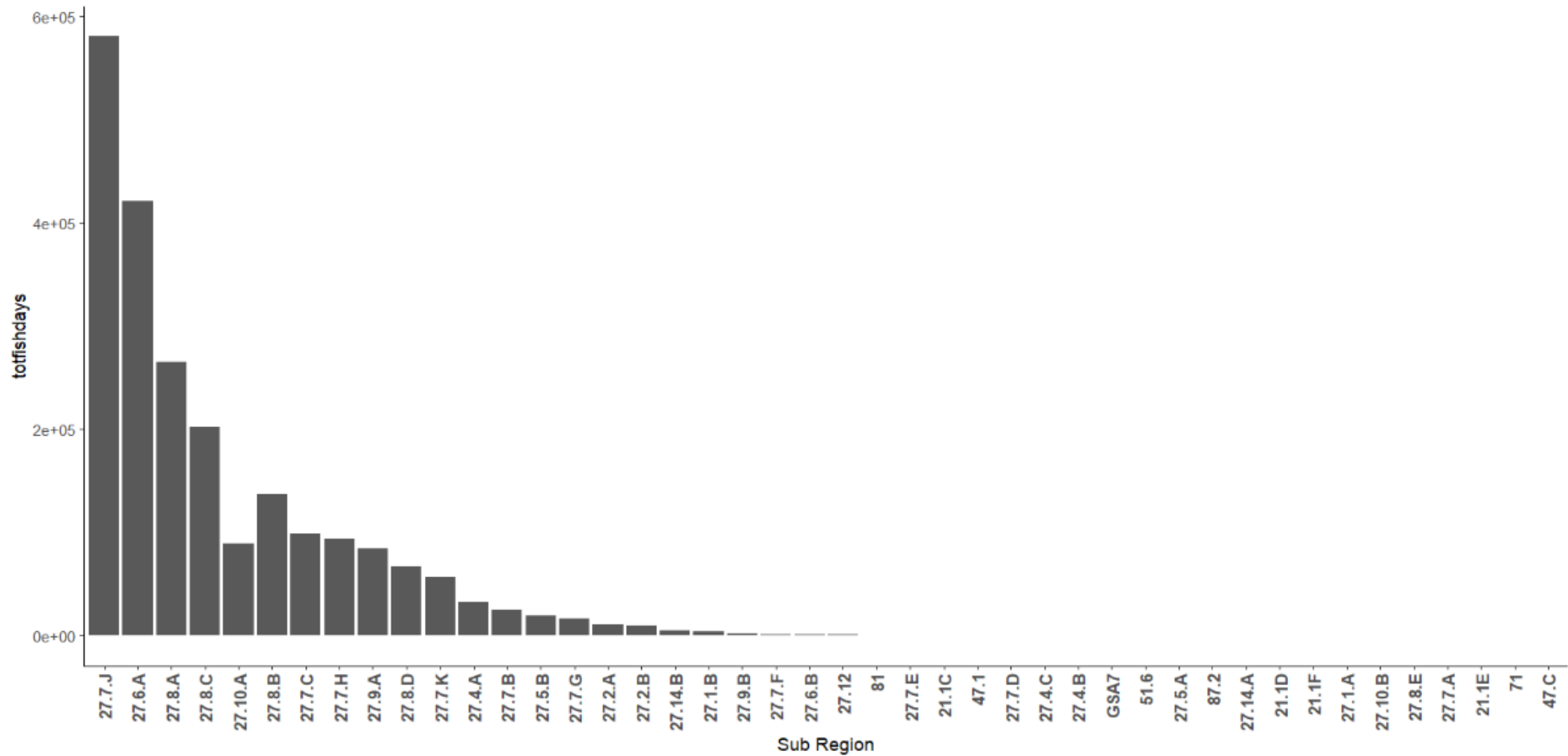
Source: MSs submissions to FDI data calls.

Figure 2.1.5.7. Total landings (tonnes) reported to table H in FDI (2013 - 2023) by sub-region where DEEP indicator was flagged.



Source: MSs submissions to FDI data calls.

Figure 2.1.5.8. Total effort (fishing days) reported to table I in FDI (2013 - 2023) by sub-region where DEEP indicator was flagged.



Source: MSs submissions to FDI data calls.

Table 2.1.5.1. Deep-water species listed in regulation, with corrected Latin names, common names and FAO codes based on RCG species reference list ([RCGs/Metiers/Reference lists/Metier Subgroup Species.xlsx](#) at [master · ices-eg/RCGs](#)).

Scientific name	Common name	Assumed FAO code
<i>Aphanopus carbo</i>	Black scabbardfish	BSF
<i>Apristurus spp.</i>	Deep-water catsharks	API
<i>Argentina silus</i>	Greater argentine	ARU
<i>Beryx spp.</i>	Alfonsinos	ALF
<i>Centrophorus granulosus</i>	Gulper shark	GUP
<i>Centrophorus squamosus</i>	Leafscale gulper shark	GUQ
<i>Centroscyllium fabricii</i>	Black dogfish	CFB
<i>Centroscymnus coelolepis</i>	Portuguese dogfish	CYO
<i>Coryphaenoides rupestris</i>	Roundnose grenadier	RNG
<i>Dalatias licha</i>	Kitefin shark	SCK
<i>Deania calceus</i>	Birdbeak dogfish	DCA
<i>Etmopterus princeps</i>	Great lanternshark	ETR
<i>Etmopterus spinax</i>	Velvet belly	ETX
<i>Galeus melastomus</i>	Blackmouth catshark	SHO
<i>Galeus murinus</i>	Mouse catshark	GAM
<i>Hoplostethus atlanticus</i>	Orange roughy	ORY
<i>Molva dypterigia</i>	Blue ling	BLI
<i>Phycis blennoides</i>	Greater forkbeard	GFB
<i>Centroscymnus crepidater</i>	Longnose velvet dogfish	CYP
<i>Scymnodon ringens</i>	Knifetooth dogfish	SYR
<i>Hexanchus griseus</i>	Bluntnose sixgill shark	SBL
<i>Chlamydoselachus anguineus</i>	Frilled shark	HXC
<i>Oxynotus paradoxus</i>	Sailfin roughshark (Sharpback shark)	OXN
<i>Somniosus microcephalus</i>	Greenland shark	GSK
<i>Pagellus bogaraveo</i>	Red (blackspot) seabream	SBR
<i>Chimaera monstrosa</i>	Rabbit fish (Rattail)	CMO
<i>Macrourus berglax</i>	Roughhead grenadier (Rough rattail)	RHG
<i>Mora moro</i>	Common mora	RIB
<i>Antimora rostrata</i>	Blue antimora (Blue hake)	ANT
<i>Epigonus telescopus</i>	Black (Deep-water) cardinal fish	EPI
<i>Helicolenus dactylopterus</i>	Blackbelly rosefish	BRF
<i>Conger conger</i>	Conger eel	COE
<i>Lepidopus caudatus</i>	Silver scabbard fish (Cutlass fish)	SFS
<i>Alepocephalus bairdii</i>	Baird's smoothhead	ALC
<i>Lycodes esmarkii</i>	Greater eelpout	LXK
<i>Raja hyperborea</i>	Arctic skate	RJG
<i>Sebastes viviparus</i>	Small redfish (Norway haddock)	SFV
<i>Hoplostethus mediterraneus</i>	Mediterranean slimehead	HPR

Scientific name	Common name	Assumed FAO code
<i>Trachyscorpia cristulata</i>	Atlantic thornyhead	TJX
<i>Raja nidarosiensis</i>	Norwegian skate	JAD
<i>Chaecon affinis</i>	Deep-water red crab	KEF
<i>Rajella fyllae</i>	Round ray	RJY
<i>Hydrolagus mirabilis</i>	Large-eyed rabbitfish	CYH
<i>Rhinochimaera atlantica</i>	Straightnose rabbitfish	RCT
<i>Alepocephalus rostratus</i>	Risso's smooth-head	PHO
<i>Polyprion americanus</i>	Wreckfish	WRF

Source: RCG species reference list.

Table 2.1.5.2. Responses collected from experts attending EWG 25-05.

Country	Deep indicator reported	Deep water species >100kg caught per trip?	Did your Member State issue deepwater licenses/authorisation in 2024?	Do you have records of deepwater species from legislation in your logbooks?
BEL	NO	NO	NK	YES
BGR	NO	NO	NA	NA
CYP	NO	NO	YES	NA
DEU	YES	YES	NK	YES
DNK	YES	YES	NK	YES
ESP	YES	YES	YES	YES
EST	Unknown			
FIN	NO	NO	NO	NO
FRA	Unknown			
GRC	NO	NO	NO	
HRV	NO	NO	NA	NA
IRL	YES	YES	NO	YES
ITA	NO	NO	NA	NA
LTU	NO	NO	NO	YES
LVA	NO	NO	NA	NA
MLT	Unknown			
NLD	YES *	YES	NK	YES
POL	NO	NO	NK	NO
PRT	YES	YES	YES	YES
ROU	Unknown			
SVN	Unknown			
SWE	NO	NO	NK	YES

* from this 2025 data call for the whole time series

NA = not applicable as MS fishes outside areas specified in legislation

Source: own elaborations.

2.1.6 Definition of TOTVALLANDG indicator and how it relates to AER indicators totlandinc and totvallandg

This TOR is aimed at identifying and clarifying eventual inconsistencies and propose methodological harmonization across the Fleet Economic (FDI) and Annual Economic Report (AER) data calls in relation to the following variables: TOTVALLANDG (FDI), TOTLANDGINC (AER) and TOTVALLANDG (AER).

Harmonizing these indicators is not only a technical necessity but a strategic requirement for ensuring the accuracy of policy-support models, particularly in the evolving context of marine socio-ecological systems modelling.

Table 2.1.6.1. Definition for the variable Value of Landings in FDI and AER data calls.

Data call	Code	Variable group	Variable	Definition
FDI	TOTVALLANDG			Estimated total value of the landings in euro
AER	<i>totlandginc</i>	Income	Gross Value of Landings	Value of landings sold during the year
AER	<i>totvallandg</i>	Production value per species	Value of landings per species	Value of landings per species

Source: STECF EWG 24-11.

The FDI data call defines TOTVALLANDG as the estimated total value of landings in euro. The AER data call includes two related variables (see Table 2.1.6.1):

- *totlandginc*: Gross value of landings sold during the year, categorized under income. This variable is requested to be reported by national totals and by fleet segment.
- *totvallandg*: Production value per species, providing species-level detail.

Following these definitions, the variable “*totvallandg*” in FDI and AER are homogenous in terms of definition as the values should include all landings and not only those that were actually sold. The unsold landings (e.g., discards, by-products) and non-commercial uses (e.g., bait, own consumption) are explicitly excluded only in the definition of *totlandginc* in the AER.

EWG suggest to delete “estimated” from the FDI definition, as it is not informative and in order to increase the comparability of the same variable accross the 2 data calls.

Comparison among the 2 data calls should only consider the variable “*totvallandg*” because:

- *totlandginc* (economic data call) focuses strictly on commercialized landings;
- *totlandginc* (economic data call) is reported by fleet segment and not by species. This implies that, in some MS specific cases, value of landings of some segments are not reported for confidentiality reasons. The differences between *totlandginc* and

totvallandg from the economic data call are checked and monitored (if discrepancies are greater than 5%) during the EWGs dealing with the preparation of the AER.

To assess the challenges related to harmonizing FDI and AER data, four key questions were formulated to gather insights from experts.

These questions may also be used to inform about the methods used, specifically, whether the valuation is based on sales notes, auction prices, market sales data or other data sources.

Q.1.6.1 What data sources or estimation methods are used to derive TOTVALLANDG in FDI?

This section captures each MS understanding of how the TOTVALLANDG indicator is defined. Most countries describe TOTVALLANDG as the result of multiplying landed weight by the average price per species or segment. There is consistency in using similar estimation methods, such as combining landing declarations and sales notes.

Q.1.6.2 What are the key conceptual and methodological differences between TOTVALLANDG (FDI), totlandginc (AER), and totvallandg (AER)?

MS provided a range of sources, such as:

- Sales notes, sales receipts, or auction data (e.g., Cyprus, Spain),
- Landing declarations and logbooks (e.g., Germany, Italy),

Some respondents reported a direct alignment with the methodologies used for the AER, while others pointed to specific national procedures for data handling. Differences may be attributed to the level of coordination between the institutes responsible for the two data calls, highlighting the need for improved institutional collaboration to ensure consistency.

Q.1.6.3 Can TOTVALLANDG in the FDI data be considered equivalent to the sum of totlandginc across segments in AER?

The majority of respondents indicated that TOTVALLANDG in the FDI data is broadly comparable to the sum of totlandginc in the AER, although minor discrepancies may occur. These differences are generally attributed to factors such as rounding, different units of measurement (e.g., kilograms in AER vs. tonnes in FDI), and data processing variations. In some cases, confidentiality constraints affecting specific fleet segments in the AER were cited. Two MS explicitly reported that the values are not directly comparable, highlighting that the gross value of landings is derived from different sources: logbooks and sales notes for FDI, and financial statements (reflecting turnover) for AER.

Q.1.6.4 What challenges have been identified in harmonizing these indicators across FDI and AER?

The responses indicate a mixed picture regarding the alignment of data sources and procedures between the FDI and AER data calls. In several cases, no issues were reported, and some countries confirmed the use of the same data sources. Others, however, highlighted differences in data origin, such as the use of logbooks for FDI and sales notes or surveys for AER, which can introduce inconsistencies. A few respondents pointed out that although the data may come from the same system (e.g., FIS database), differences in

extraction timing, specifications, and aggregation levels pose challenges. Limited time for harmonization between the two data calls was also mentioned as a constraint. In some cases, efforts are ongoing to align the procedures and improve consistency.

In conclusion, most Member States report general alignment between TOTVALLANDG in FDI and in the AER. However, some conceptual and methodological inconsistencies persist. The EWG concludes that the next EWG 25-10 meeting should include a comparison using the actual data from both FDI and AER data calls; the comparison should be limited to the value of landings, excluding landings income, to ensure conceptual alignment.

The EWG discussed the need for the same variable to be reported in two separate data calls. It was acknowledged that TOTVALLANDG, along with effort data, is essential for the AER – not only for ensuring consistency and completeness of the economic datasets, but also for enabling the regional analyses.

In the FDI context, the value of landings is required in both Table A and Table H (spatial data). This dual reporting provides additional insights into the spatial distribution of landing values and supports bio-economic modelling. Notably, Table A reports the value of landings by metier, rather than solely by fleet segment, which enhances the analytical potential of the data.

2.1.7 Spatial data coverage and confidentiality rules

In order to address ToR 1.7 on spatial data coverage and confidentiality rules, three specific questions were established to collect information directly from the Member States. These questions were designed to assess whether spatial data are available for the entire fleet population, to identify any segments not covered, and to understand the confidentiality rules applied to the data provided under the FDI framework. The analysis presented below is based on the responses received to these targeted questions.

Q.1.7.1: Is the spatial data available for the whole fleet population?

Most Member States reported that spatial data are available for the entire fleet population. This includes Belgium, Bulgaria, Cyprus, Croatia, Germany, Denmark, Spain, Finland, Greece, Ireland, Lithuania, Latvia, the Netherlands, Poland, Portugal and Sweden. Italy reported that spatial data are only available for vessels equal to or greater than 15 meters in length; as such, the SSCF is currently not covered.

Q.1.7.2: In case the answer to the previous question is No, which part of the population is not covered and why?

Only Italy indicated partial coverage, specifying that the SSCF segment is not yet covered under the current spatial data framework. No additional details were provided by other Member States.

Q.1.7.3: Is any of the data provided under the FDI data call considered confidential? If Yes, please specify the confidentiality rules applied.

Most reporting Member States indicated that certain data submitted under the FDI data call are considered confidential. The general confidentiality rule applied by many Member States is that data are considered confidential when derived from fewer than three vessels.

Germany further noted that, in addition to the general rule, all value-related data are systematically marked as confidential. Ireland specified that confidentiality applies when data are based on fewer than three vessels per stratum and/or when a single stratum accounts for 80% or more of landings from a given stock. Latvia applies an extended confidentiality protocol, whereby data are treated as confidential if they are derived from one to three statistical units, if a single statistical unit contributes 80% or more to a given indicator, or if the cumulative share of two units amounts to 90% or more. In addition, Latvia enforces secondary confidentiality rules to ensure that no confidential data can be reconstructed through arithmetic operations within or across datasets.

However, it was also reported that in some Member States, no confidentiality limitations are applied to the data submitted under the FDI data call.

2.2 Dissemination of aggregated data tables and spatial information

2.2.1 Following conclusion of the STECF PLEN 24-03 that the dissemination of more disaggregated data tables and spatial information need to be defined by FDI Methodology, the EWG is requested to discuss and define possible dissemination format

The EWG 25-05 understands the 'dissemination of more disaggregated data tables' as publication of data including the country. Currently, on the FDI data dissemination website data submitted to the FDI are publicly available on EU level (all countries combined) and by country, with confidential values replaced by a 'C' in accordance with the original data submission. The specific use of the data is unknown in this request, but it is assumed that data published on country level will be of use for the scientific community, national work as well as other users.

In the FDI EWG 24-11 report a suggested level of aggregation is described, following the approach that if submitted data marked as confidential are aggregated with data not marked as confidential, this aggregated data would not be confidential. If data marked as confidential are aggregated with other data marked as confidential, this would still be confidential. The EWG 25-05 explored this approach and concluded that a substantial part of the data would still be marked as confidential, and that another incomplete dataset by country would not be useful.

The other approach discussed by the EWG was to suggest useful aggregation levels that could be forwarded for evaluation by the National Correspondents, see tables 2.2.1.1 and 2.2.1.2. This should only be evaluated for publishing data in FAO areas 27 and 37, and not for the long-distance fisheries, where the data are sensitive as it is often few national vessels and additionally data are sensitive in relation to EU-RFMO negotiations; therefore it will not be the full EU fleet fisheries. The EWG is aware of the issue that for some MS, fishery within

some parts of FAO area 27 is considered long-distance fishery, as only a few vessel is conducting the fishery.

However, the EWG considers that the publication of a complete dataset on an agreed aggregation level including country would be more useful; it would ensure higher data quality and would reduce the risk of misinterpretation compared to publishing an incomplete dataset with confidential values.

The suggested aggregation levels are listed in table 2.2.1.1 (for landings weight and value and discards) and table 2.2.1.2 (for effort variables). The EWG suggests that the National Correspondent for each MS fills in this table indicating if the data can be published, following the suggested data sensitivity scale:

1. Data are not sensitive and can be published on this level.
2. Data can potentially be published (there is no strong legislation). Please explain the issue and refer to agreements.
3. Data cannot be published. Please explain and refer to legislation.

The suggested process for consulting National Correspondents is to liaize with the NC subgroup working on data confidentiality to coordinate the most appropriate way for them to respond to this question. If a request is sent to all National Correspondents, the EWG recommends that it is highlighted that this evaluation on national level should also involve the person responsible for submitting the FDI data call, who has knowledge of the data structure, and can make supporting data analysis. There should be an agreement between all MSs (by regions 27 and 37), particularly given that data at the suggested aggregation level 1 (landings weight by country, year, area and species) are already publicly available in other fora, e.g., NWP, RWP, ICES stock advice.

The EWG acknowledges the ongoing work on data confidentiality between the RCGs and the Commission. Following the recommendation of the RCG NANSEA & Baltic 2024 to run a data confidentiality workshop, the NC subgroup and Commission launched a detailed questionnaire via EU survey, asking Member States on their national confidentiality restrictions of DCF data.

The survey included detailed questions relating to data confidentiality on three different levels (sharing, use and publication) covering the main DCF data type: sampling data, commercial and recreational data coming from the control regulation; socioeconomic data and other. For each level and data type, information was obtained on the underlying legal obligations, whether confidentiality restrictions follow national applicable rules and whether they are part of data sharing agreements.

The survey was completed by all MS and highlighted a wide range of approaches. Results showed that confidentiality restrictions are not always linked to legal obligations but also include soft rules and data sharing agreements. Instead of a confidentiality workshop, the NC group decided as an initial step to summarize the outcomes of the survey and propose potential ways forward. This proposal will be presented and discussed at the RCG technical meetings 2025.

Table 2.2.1.1. Suggestion on data dissemination/publication levels for landings weight, landings value and discards. This should be filled in by NCs indicating the sensitivity level of data publication: 1: data are not sensitive and can be published on this level, 2: data can potentially be published (there is no strong legislation). Please explain the issue and refer to agreements, 3: Data cannot be published. Please explain and refer to legislation.

Aggregation level	Weight of landings	Value of landings	Discards
1. Country, year, supra-region, sub-region (ICES/GSA area), species	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>
2. Country, year, supra-region, sub-region (ICES/GSA area), vessel length group, species	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>
3. Country, year, supra-region, sub-region (ICES/GSA area), gear type, species	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>
4. Country, year, supra-region, sub-region (ICES/GSA area), vessel length group, gear type, species	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>
5. Country, year, sub-region, species, c-squares 0.5 degrees and a field indicating rectangle type *	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>	NA (not submitted in data call)
6. Country, year, sub-region, species, gear type, c-squares 0.5 degrees and a field indicating rectangle type *			NA (not submitted in data call)

* C-square 0.5*0.5 degrees, ICES rectangle 0.5*1 degrees, GFCM 0.5*0.5 degrees, ICCAT 1*1 degrees, IOTC 5*5 degrees

Source: Own elaborations.

Table 2.2.1.2. Suggestion on data dissemination/publication levels for effort variables. This should be filled in by NCs indicating the sensitivity level of data publication: 1: data are not sensitive and can be published on this level, 2: data can potentially be published (there is no strong legislation). Please explain the issue and refer to agreements, 3: Data cannot be published. Please explain and refer to legislation.

Aggregation level	Days at sea	Fishing days	kW*days at sea
1. Country, year, supra-region, sub-region (ICES/GSA area)	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>
2. Country, year, supra-region, sub-region (ICES/GSA area), vessel length group	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>
3. Country, year, supra-region, sub-region (ICES/GSA area), gear type	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>
4. Country, year, supra-region, sub-region (ICES/GSA area), vessel length group, gear type	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>	<i>Indicate sensitivity level (1-3)</i>
5. Country, year, sub-region, c-squares 0.5 degrees and a field indicating rectangle type *	NA (not submitted in data call)		NA (not submitted in data call)
6. Country, year, sub-region, gear type, c-squares 0.5 degrees and a field indicating rectangle type	NA (not submitted in data call)		NA (not submitted in data call)

* C-square 0.5*0.5 degrees, ICES rectangle 0.5*1 degrees, GFCM 0.5*0.5 degrees, ICCAT 1*1 degrees, IOTC 5*5 degrees

Source: Own elaborations.

Dissemination of spatial data

A suggestion is included in tables 2.2.1.1 and 2.2.1.2 for spatial dissemination of landings and effort. The approach explored in the EWG 24-11 suggests a data dissemination format by species based on an analysis combining spatial tables with landings and effort (tables I and H) and table G with the effort summary to a resulting analysis of spatial distribution of fisheries by species. EWG 25-05 concludes that the first step would be for NCs to evaluate the tables 2.2.1.1 and 2.2.1.2 for spatial data dissemination. The EWG 24-11 suggestion for dissemination of spatial data by species could be further explored in the future.

Validation and processing of spatial data before public dissemination

In preparation of the public dissemination, the following data validation and processing are conducted at the annual FDI EWG meetings. The aggregated spatial landings and spatial effort data sets are cleaned of all records where there are no indication of the sub-region, where the unit of measurement for landings is incorrect and when the combination of gear

and mesh size range is not allocated to the gear classes described in the ToR 3.3 of the STECF EWG 24-11. Spatial landings and effort can be submitted either with 0.5x0.5 c-square codes or coordinates of rectangles together with a rectangle type. The validity of c-square codes is checked against a reference list of c-squares. Coordinates of the centres of rectangles are checked against the provided rectangle types. Additionally, points on land are identified and removed.

Given that the spatial data submitted to the FDI database may have varying spatial resolutions (0.5x0.5, 0.5x1, 1x1, or 5x5 degrees), the methodology employed to visualize and disseminate the results standardizes all the data using a c-square global grid with a resolution of 0.5x0.5 degrees. Coarser geographic resolutions, such as the 5x5 grid from IOTC, 1x1 from ICCAT, and 0.5x1 from ICES, are subdivided into their constituent c-squares at 0.5x0.5 degrees. The corresponding landings weight, landings value, and fishing effort are also allocated proportionally. The allocation of effort and landings follows a proportional apportionment approach, where the total values are distributed equally among the constituent 0.5x0.5 c-squares.

Country and metier level 7 is not included in the disseminated data because of confidentiality reasons. To avoid misleading interpretations of data EEZ indicator and GEO indicator are excluded from disseminated tables.

EEZ indicator in spatial data

During the EWG 25-05 meeting, algorithms for including the EEZ in data dissemination were explored. As the lowest resolution for dissemination is c-square, it was decided to create a reference table listing all c-squares valid for the UK EEZ. The reference table was created using geographically linked c-squares and Maritime Boundaries (Marineregions.org) shapefiles. Finally, each row of the reference table contained the name of the c-square and, where applicable, the name of the ICES rectangle.

Before proposing the algorithms, it was decided to check the consistency of the FDI data. The consistency checks were carried out in three ways using the spatial effort tables:

- Data submitted with the EEZ indicator equal to UK but are outside.
 - Data submitted on c-square level (FRA - an average of 500 rows per year, PRT – 1 row in 2013).
 - Data submitted on ICES rectangle level (FRA - an average of 29 rows per year, DEU and ESP - an average of 8 rows per year, SWE - by 1 row in 2013 and 2014).
- Data disseminated on STECF homepage.
 - The downloaded data was merged with the c-squares reference table and the Maritime boundaries file to visualize the effort. In this case, all information was allocated to the UK EEZ, even if the country didn't provide the UK EEZ indicator in its submission. The EEZ indicator is not disseminated, and it is currently not possible to break down the data.
- Data submitted with the EEZ indicator outside the UK but within the UK EEZ. During the EWG meeting it wasn't possible to find a solution on how to divide the c-squares on the border of the EEZ and it was proposed to continue the work at the next meeting. The following values include adjacent EEZ rows and do not always indicate the inconsistency.

- Data submitted on c-square level (FRA – an average of 3787 rows per year, POL – 11 rows in 2017, PRT – from 1 to 3 rows between 2015-2017).
- Data submitted on ICES rectangle level (FRA – an average of 2000 rows per year, IRL – an average of 76 rows per year, NLD – an average of 330 rows per year, BEL, DEU and ESP – an average of 135 rows per year, DNK – an average of 69 rows per year, LTU, POL and SWE – from 1 to 13 rows between 2013 and 2022).

The scripts used to explore the inconsistencies in the FDI data and the reference tables produced were uploaded to the EWG 25-05 shared drive. They can be shared with Member State data providers to check their data for inconsistencies between UK EEZs.

In order to further explore proposals for the algorithm to separate data by EEZ, the availability of accurate shapefiles of EEZs is required. Further exploration is needed on how to deal with adjacent c-squares and how to disseminate the submitted data, which could be done in subsequent meetings.

Dissemination of spatial data at country level

The possibility of disseminating the spatial data at national level and feasibility to aggregate it to a level that would not compromise confidentiality of the data provided by Member States was discussed by the EWG 24-11. An option discussed by the EWG 24-11 could be to publish spatial data at national level excluding the data marked as confidential, but the EWG 24-11 considered that a substantial proportion of the data would be removed, and the product would not be useful.

During EWG 24-11, an alternative way of disseminating the data contained in the spatial tables at the individual country level to show the fisheries by species was explored. This method is based on combination and analysis of several tables (H, I and G), and would need further exploration to make it available for data dissemination.

Another option would be to publish data on a more aggregated level by member state, including the data marked as confidential. This would need to be accepted by NCs and could also be presented as a suggestion at the workshop on data confidentiality concepts. The suggested formats are included in tables 2.2.1.1 and 2.2.1.2.

Suggestion for aggregated landings by rectangle and MS format: COUNTRY, YEAR, SUB_REGION, C_SQUARE /rectangle, GEAR_TYPE, SPECIES, TOTWGHTLANDG

Suggestion for aggregated effort by rectangle and MS format: COUNTRY, YEAR, SUB_REGION, C_SQUARE/rectangle, GEAR_TYPE, TOTFISHDAYS

The dissemination of spatial data should follow the outcomes from the planned workshop on data confidentiality concepts.

Variables published: as reported, except EEZ and country

The variables of the spatial tables already published do not include the information on the country, level 7 métier, the EEZ indicator and the GEO indicator, which were originally included in the data transmitted. Given the process of validation and processing of spatial data described above, the inclusion of geographical indicators (EEZ and GEO) in the publication of data could lead to misleading results and to the allocation of landings and effort

to neighboring sub-areas or EEZs. On the other hand, the inclusion of the name of the country or the level 7 métier would make it very difficult to publish the data while maintaining confidentiality.

Duplicates in spatial data submitted by MS

An issue identified was duplicates in the spatial data. This should be explored at the EWG FDI meeting in September. The EWG 25-05 suggests to include a check for duplicates during upload of the spatial tables.

Dissemination of biological data

Regarding the dissemination of the tables containing biological data (landings and discards by age and length) following the inventory and discussions on quality indicators in ToR 1.3, the EWG 25-05 agreed that the quality indicators (DISCARD_CV, DISCARD_CI_UPPER, and DISCARD_CI_LOWER) should not be included when disseminating the discard age and discard length tables (Tables C and D). In addition, the EWG 25-05 recommends that the discards reported in table K for the data call is disseminated following the same publication rules as tables C, D, E and F. The table should be named 'FDI Discards not biological data'.

The method for public dissemination of biological data was discussed in EWG 22-10 as there is a potential confidentiality issue of some domains in the biological tables due to which the total weight in the biological tables could not be disseminated. This is due to some domains having all rows marked as confidential. Disseminating landing and discards weight at the domain level in the biological tables would be going against the confidentiality concerns expressed in Table A by Member States. The decision was then taken by EWG 22-10 to mark as confidential the values of domains in the biological tables if all rows in Table A are marked as confidential ("A"). If at least one row is not marked as confidential or only marked ("V", meaning that the weights are not confidential), the information (weight, number at length) will be included in the publicly disseminated biological tables.

2.2.2 EWG 25-05 is requested to issue guidance and elaborate on dissemination needs concerning information of refusal rates, contained in Table B

The STECF EWG 25-05 has decided to discontinue the request for Table B in the FDI data call; as a result, it will not be disseminated.

2.3 Inventory of number of downloads from the website

JRC provided an inventory of the number of downloads from the STECF data dissemination web pages (Table 2.3.1).

Table 2.3.1. Number of unique downloads from the FDI dissemination pages (https://stecf.ec.europa.eu/data-dissemination/fdi_en) both the csv files and the spatial data during the period from 1 December 2023 - 1 December 2024.

Files downloaded	Unique downloads	Percentage (%)
FDI_catches	144	27
FDI_effort	159	26
FDI_landings	164	23
FDI_capacity	68	11
FDI_biological	80	13
Total	615	
FDI_Spatial	158	100

Source: JRC.

Suggestion for improvement of accessibility of data dissemination web site

The monitoring of the impact of FDI data dissemination and the needs of FDI data end-users is essential to ensure both the accuracy and relevance of FDI outputs. The EWG 24-11 compiled a list of FDI data request received in the period from May 2023 to May 2024. The aggregated FDI data are disseminated on the STECF website and publicly available, however, FDI data are sometimes requested on a more disaggregated level. MS need to grant access for this data to be used for a certain purpose. These requests were from various framework contracts from DGMARE, European project NECCTON, ICES workshop WKTRADE4 and several STECF Expert Working groups (report STECF-24-11 pages 54-55).

The EWG 25-05 proposes to have a DOI for the FDI data that would enable the data to be traced when used in scientific publications. A new DOI needs to be created every year for the new data set. JRC has already created a DOI for the MEDITS survey data for the Mediterranean and Black Sea. Similar procedure can be followed for the FDI data call. EWG 25-05 suggests creating this DOI for the FDI data call starting 2025.

The EWG 25-05 discussed the possibility to improve the data dissemination page and make the information on the pages more user friendly. Instead of attaching the FDI data call Annex as an attachment to see the details of the variables and tables submitted to the FDI, the group suggested to use the approach used by Work Plan (WP) and Annual Report (AR) guidelines. The WP and AR templates are filled in by Members States using the interactive guidelines on the DCF page ([WP/AR templates - European Commission](#)). The EWG 25-05

suggested to investigate the possibility to present the FDI data call Annex using an interactive web site where the information on the variables and tables submitted can be explored more easily.

The EWG 25-05 suggested to add a link to the National Work plans and Annual reports in the metadata file of the FDI data on the dissemination pages ([FDI - European Commission](#)).

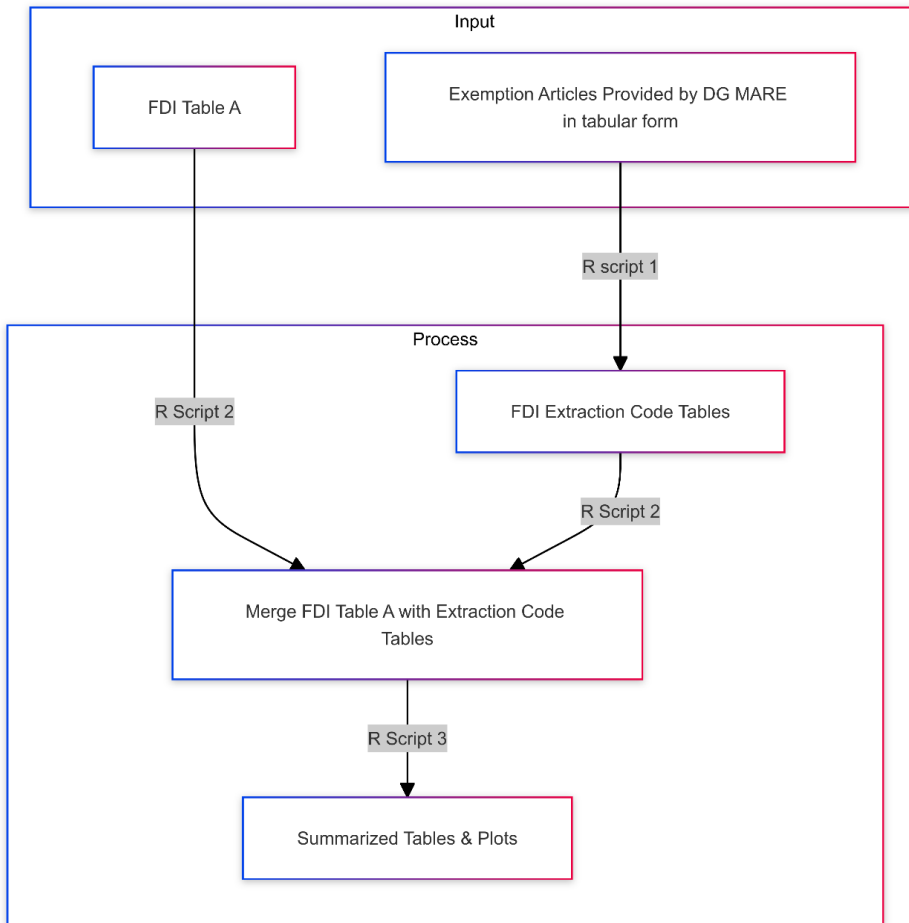
The EWG 25-05 suggested to modify and add more information to the text on the data dissemination web site to highlight the important work the EWG is doing:

The data published on this page are the result of the 2024 DCF Fisheries Dependent Information (FDI) data call. The data provided by EU Member States in response to the data call were reviewed and quality assured during the annual STECF Expert Working Group on Fisheries Dependent Information ([EWG 24-11](#)). Every other year a methodological meeting is organized to review the methodology on how the variables are estimated. The methodological meeting aims to have a standardized and harmonized way of producing the estimates between the Member States for different variables requested for the FDI data set.

2.4 Finalise the process and scripts to facilitate the process of estimating landings and discards for each exemption of the landing obligation

During the EWG 25-05 progress on the development of the scripts to facilitate the process of estimating landings and discards for each exemption of the landing obligation was achieved. The data processing work flow is shown in Figure 2.4.1.

Figure 2.4.1. Flowchart showing the data processing workflow.



Source: Own elaborations.

2.4.1 Creation and update of Legal Text Summary Table

Development and Piloting of Excel Template:

The EWG 25-05 reviewed the coding table published as part of EWG 24-11 annex 2 and agreed to use it as a starting point for any changes in exemptions list. The table combines information related to both data sources: legal acts and their translation to FDI codes and been used by FDI EWGs and ad hoc since extract of data for exemptions from new FDI database started.

The columns of the Exemptions table can be grouped to two main groups:

- Columns directly coming from legislation
- FDI codes applied by previous EWGs to extract relevant FDI data.

There are few columns that are translated to FDI codes directly. Such columns are: ‘vessel length’, ‘SPECON’, ‘Target Assemblage’ and ‘MCRS threshold cm’. These columns could be pre-filled by DGMARE and reviewed by FDI experts in the future.

The group agreed the procedure to be applied by DGMARE when reporting change in exemptions definitions. Written instructions have been provided to DG MARE, enabling systematic and consistent completion of the table for any amendments or newly introduced exemptions.

- **Test Phase:** The template will be used during the summer to report changes in the exemptions for 2026. During a test phase DG MARE will report legal changes in the relevant fields of the coding table in parallel with the traditional ad hoc legislation review process. This will allow for validation and refinement of the tool and process, ensuring reliability and completeness before transitioning to full operational status.
- **Expected Outcome:** This structured approach is expected to reduce a need for an ad hoc contract and shift responsibility for legal text review from expert delivered ad hoc contracts previously to DGMARE policy people that are preparing legal acts and amendments and fully aware of changes in legal acts. That will improve timeliness of information capture from legal texts, forming a solid foundation for preparing codes needed prior to EWG meetings without need for additional resources and automation (ToR 4.2).

2.4.2 Automation of Legal Text to FDI Code Translation

- **Preparation for Automation:** The piloted Excel template is designed with automation-readiness in mind, enabling machine-readable extraction of key legal elements (e.g., article numbers, conditions, geographic and species scope) relevant to each exemption.
- **Status of Automation Script (Script 1):** The full automation of legal text translation into FDI extraction codes (script 1) is contingent on the successful conclusion of the template's test phase. Feedback from DG MARE's trial runs will inform any necessary modifications to both the template structure and the script logic.
- **Interim Approach:** During the pilot period, the existing ad hoc and new template-based workflows will run in parallel, ensuring no interruption to ongoing data provision.

2.4.3 Development and Integration of Scripts for Data Extraction, Visualization, and Aggregation

Enhancement of Existing Scripts (Script 3 and Script 2):

- **Script 3 (R-based):**
 - Script 3 has been further developed to allow presentation of results by species and area, a feature specifically requested by DG MARE in recent consultations.
 - New interactive plots have been added to support these expanded outputs. Users can now select and view data at multiple aggregation levels.
 - The script structure has been prepared for further updates, including the integration of alternative landings data sources, pending the provision of these datasets by DG MARE.

- This development builds directly on the EWG 24-11 foundation, focusing on usability, flexibility, and alignment with user requirements.
- **Script 2:**
 - Script 2 was developed and integrated into the workflow, addressing the need for improved data merging, cleaning, and pre-processing from various sources before visualization.
 - This ensures that the visualization and summary tools receive harmonized, high-quality input data, reducing the risk of inconsistencies or errors.

Development of Fully Standalone HTML Dashboard:

- **Overview:**
 - A major advance in this cycle is the creation of a standalone, browser-based HTML dashboard as an alternative to the R-based Script 3 output.
 - This dashboard is fully portable and does **not require R or any server-side software**, enabling direct use by stakeholders on any modern web browser.
- **Functionality:**
 - The dashboard supports full interactivity:
 - **Dynamic filtering and aggregation** by species, area, and legal exemption article.
 - **Interactive plots powered by Plotly**, allowing on-the-fly recalculation and visualization of totals, means, and other metrics based on user selection.
 - **Advanced data tables** (Reactable) allow sorting, grouping, searching, and aggregation (sum, mean, unique, etc.) – all client-side.
 - **Calculation and aggregation are performed in-browser:** All data processing for filtering, grouping, and summarizing is executed via JavaScript in the user’s browser, with no reliance on backend computation.
- **Benefits:**
 - This approach ensures maximum accessibility and transparency for all stakeholders, regardless of technical background or IT constraints.
 - The HTML dashboard matches and, in many ways, surpasses the original R-based interactivity, now being the preferred method for many end-users.

Workflow Summary Table

Step	Tool/Script	Status & Main Features
Legal text extraction	Excel Template	Developed, in test phase, standardizes legal data extraction
Legal text to FDI codes	Script 1 (Planned)	Will automate mapping, to be finalized post-template validation
Data integration/merging	Script 2	Developed, robust merging and cleaning of data prior to visualization
Data visualization/aggregation	Script 3 (R), HTML Dash	Enhanced, supports new outputs, HTML version fully standalone and interactive

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4. CONTACT DETAILS OF EWG-25-05 PARTICIPANTS

¹ - Information on EWG participant’s affiliations is displayed for information only. In any case, Members of the STECF, invited experts, and JRC experts shall act independently. In the context of the STECF work, the committee members and other experts do not represent the institutions/bodies they are affiliated to in their daily jobs.

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List of Annexes

Electronic annexes are published on:

<https://stecf.ec.europa.eu/document/72de3c0e-0196-4f32-9cfb-03b81006b712>

List of electronic annexes documents:

Annex 1 ToR 4 details on script 3

Annex 2 Exemptions codes

List of Background Documents

Background documents are published on:

<https://stecf.ec.europa.eu/document/72de3c0e-0196-4f32-9cfb-03b81006b712>

List of background documents:

EWG-25-05 – Declarations of invited and JRC experts (see also the section of this report 'Contact details of EWG-25-05 participants')

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