THIRD WORKSHOP ON DESIGNING AN EEL DATA CALL (WKEELDATA3)

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International Council for the Exploration of the Sea
Conseil International pour l'Exploration de la Mer

H.C. Andersens Boulevard 44–46
DK-1553 Copenhagen V
Denmark
Telephone (+45) 33 38 67 00
Telefax (+45) 33 93 42 15
www.ices.dk
info@ices.dk

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Editors

Ciara O'Leary • Alan Walker

Authors

Laurent Beaulaton • Clarisse Boulenger • Cedric Briand • Estibaliz Diaz • Hilaire Drouineau • Blanka Garcia-Alvarez • Rob van Gemert • Maria Maria Mateo • Burcu Mestav • Ciara O'Leary • Sukran Yalcin Ozdilek • Jan-Dag Pohlmann • Alan Walker

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i Executive summary

The Third Workshop on Designing an Eel Data Call (WKEELDATA3) met to design a Data Call to all countries having natural production of European eel.

The life cycle of the European eel is complex, with a unique spawning area in the Sargasso Sea and growth areas widely distributed across Europe and Northern Africa. The stock is genetically panmictic, but the continental eel stock shows strong local and regional differences in population dynamics and local stock structures (sex ratio, length and age distributions). Local impacts by fisheries with various gears may vary from almost nil to heavy exploitation. Other forms of anthropogenic mortality (e.g. hydropower, pumping stations) have an impact on eel too, and vary in distribution and local relevance. Data on stock and impacts are reported to the Working Group on Eels (WGEEL), which supports the official ICES Advice. Data correspond to several different life stages, from juveniles to pre-spawning eels, in different habitats (from freshwater to saltwater environments).

To collect those data more efficiently, ICES and GFCM started a Data Call process in 2017. The ICES Workshop on Designing an Eel Data Call (WKEELDATA) defined the main steps of this process, generated the first version of the Data Call and improved the WGEEL database to host the collected data. During the 2017 meeting of the WGEEL, the first data were collected and integrated into the WGEEL database. In 2018, a workshop on Tools for Eel (WKTEEL) improved the integration and use of these data. During this workshop the database was improved further, Data Call spreadsheets were adapted, enhanced and automated tools for extracting and visualizing data from the PostgreSQL database were developed. In 2019, a second Workshop on Designing an Eel Data Call (WKEELDATA2) improved the process for the next Data Call, by extracting data from the database to send back to national correspondents, by developing tools to enable access to the database to the WGEEL through a local raspberry server, and by designing the Data Call sheets, database, integration tools and visualization for new types of data (Yellow eel standing stock series and silver eel series).

This, the third WKEELDATA workshop, has finalised the annual Data Call templates and improved and updated the annexes required should the European Commission request an Eel Management Plan Evaluation workshop. This report contains a list of tasks that would need to be addressed by this evaluation workshop and outlines what data are required and how the Data Call will fulfil the data needs of ICES.

ii Expert group information

Expert group name	The Third Workshop on designing an eel data call (WKEELDATA3)
Expert group cycle	Annual
Year cycle started	2021
Reporting year in cycle	1/1
Chairs	Alan Walker, UK
	Ciara O'Leary, Ireland
Meeting venue and dates	19–23 April 2021 by Video Conference (15 participants)

1 Terms of Reference

WKEELDATA (ICES, 2017b) along with WGEEL (ICES, 2017a) and WKTEEL (ICES, 2018) have implemented a Data call system for formalizing and standardizing the data provision to support WGEEL work. Data on recruitment, catches and landings from commercial and recreational fisheries, restocking, aquaculture production, rates of other human-induced mortalities on eel, biological characteristics of eel, etc. are provided by WGEEL participants in many complex spreadsheets. A second workshop was held in 2019 to continue to improve on the data available and to create processes for data preparation for the working group. This is the third workshop in the eel data cycle.

As 2021 is a reporting year for both WGEEL and for EU Member States to report to the EU under the Eel Regulation it was agreed to streamline the reporting process. The WKEELDATA3 will design a Data Call to all ICES/EIFAAC/GFCM countries having natural production of European eel and prepare their integration of data in the eel database supporting WGEEL work. The Data Call 2021 will request the same data as every year (e.g. the 2020 call) but also various extra stock indicators (B_0, B_{best}, $B_{current}$, ΣA, ΣH and ΣF) reported by EU countries and others every three years to the WGEEL and to the EC in the context of the Council Regulation (EC) No 1100/2007. To achieve this aim, the WK will:

a) Prepare templates that will be used to report these data to the ICES and text for the 2021 ICES Data Call on eel;
b) Develop in the WGEEL shiny application, the tools required for the automatic generation of templates for the integration of reported data in the database and for their analysis;
c) Run tests with dummy data to validate the spreadsheets, data integration procedures and debug the shiny application ;
d) Define the data needs for the 2021 MS Progress reports on the Eel Management Plans to the EC and integrate them to the 2021 ICES Data Call on eel.

1.1 Organisation and progress during workshop

The meeting was held virtually, using TEAMS hosted by the ICES Secretariat, and was attended by 12 scientists from seven countries, plus two participants from the European Commission and a Professional Officer from ICES.

The meeting started with a review and discussion of the ToRs. The tasks outlined in ToRs were divided into two subgroups; Technical and Evaluation. Subgroup membership had been provisionally assigned ahead of the meeting, but was confirmed on the first day. The Technical subgroup leader gave a presentation outlining the tasks planned for the week. The two observers from the European Commission delivered a presentation outlining their personal thoughts on plans for evaluation of progress reports on implementation of Eel Management Plans (EMPs), planning for which was ongoing at the time of this workshop but not finalised. In light of this, the group anticipated the data needs so they could be included in the forthcoming Data Call.

The two subgroups then split into breakouts for the next three days to address their tasks, but with whole workshop plenaries towards the end of each day to summarise progress and discuss any matters arising.

On the last day, the draft Data Call annexes and the draft Report were reviewed by all. A number of closing actions were identified and delivered over the following days, to produce this report, Data Call Annexes (table templates) and a draft Covering Letter for the 2021 Eel Data Call.

2 Subgroup 1 – Technical

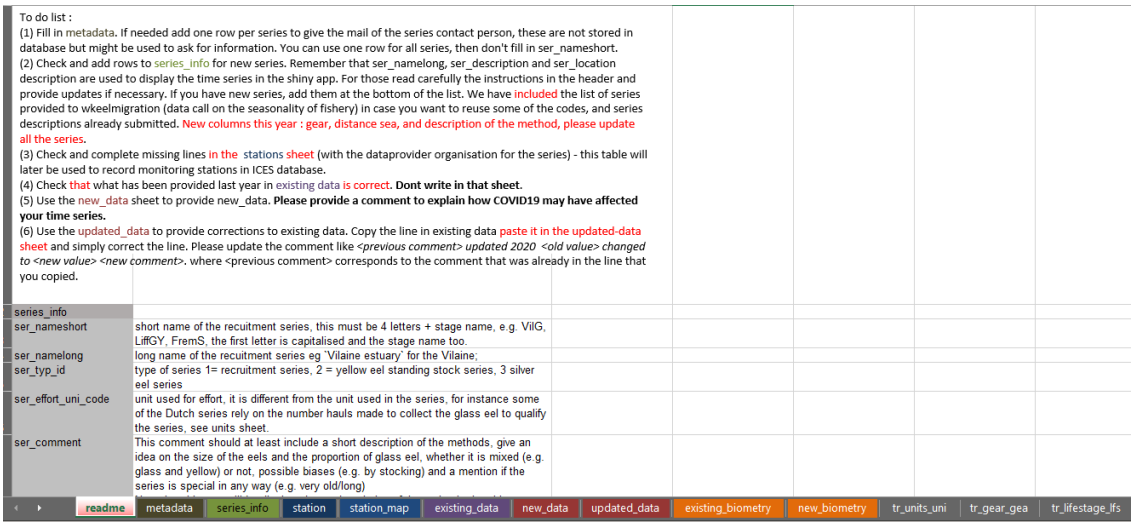
This subgroup task was to produce the Data Call files, develop scripts to produce the files, further develop the shiny integration tool to integrate new datasets (mortality and biomass), and integrate changes in the database for time-series. Table 2-1 contains the list of Annexes included in the Data Call 2021.

Table 2-1 Annex files produced for the Data Call.

Annex	Content
Annex 1 Time-series recruitment	Series of recruitment and their description, annual abundance index of glass eel or young yellow eels, and biological data describing the series
Annex 2 Time-series of yellow eel	Similar to Annex 1, but for yellow eel standing stock
Annex 3 Time-series of silver eel	Similar to Annex 1, but for silver eels
Annex 4 Commercial landings	Commercial landings from all life stages and habitat types
Annex 5 Recreational catch	Recreational catch and landings from all life stages and habitat types
Annex 6 Other type of landings	These correspond to eel caught that will be later reported as releases in trap and transport operations
Annex 7 Release	These correspond to transport operations
Annex 8 Aquaculture	Aquaculture data per country
Annex 9 Mortality rates	Report on mortality, sum A (lifetime anthropogenic mortality), sum F (lifetime fishing mortality), sum H (lifetime mortality for non-fishing anthropogenic mortality) and indicators about the habitat coverage of those indicators
Annex 10 Biomass indicators	B_0, B_{best}, $B_{current}$ and indicators about the habitat coverage of those indicators
Annex 11 Recreational fishers	Report on the numbers of recreational fishers that are licensed or authorised explicitly to fish for eel, and the total number of recreational fishers that might catch eel
Annex 12 Fishing effort	Report on the fishing effort by gear type
Annex 13 EMP Overview	Captures information in relation to the data collection and assessment of the Biomass and Mortality Indicators, along with Management questions
Annex 14 Less than 12 cm eels utilisation	Report the proportions of eels caught measuring less than 12 cm length that are used for restocking, direct consumption or aquaculture
Annex 15 Measures	Captures details on measures implemented, monitoring their effectiveness and progress of outcomes

Annexes 1 to 8 are now part of the annual Data Call, Annexes 9 to 15 have been further developed this year as they are part of the triennial Data Call for reporting progress on the EMPs.

Data from previous years are pulled from the database, and different types of data are made accessible to the data providers via excel sheets. The data used by WGEEL and those discarded[1] are all presented to the data providers so that they can check the validity of the contents of the database (Figure 2-1). For the new data expected this year, the sheets are provided with partially filled rows to ease the reporting process. Each excel file contains instructions on how to fill in the data in a tab labelled 'readme'. Missing landings data are pre-filled by using historical data, to enable the providers and WGEEL to distinguish between missing data and those that are not pertinent (NP).


To do list :
(1) Fill in metadata. If needed add one row per series to give the mail of the series contact person, these are not stored in database but might be used to ask for information. You can use one row for all series, then don't fill in ser_nameshort.
(2) Check and add rows to series_info for new series. Remember that ser_namelong, ser_description and ser_location description are used to display the time series in the shiny app. For those read carefully the instructions in the header and provide updates if necessary. If you have new series, add them at the bottom of the list. We have included the list of series provided to wkeelmigration (data call on the seasonality of fishery) in case you want to reuse some of the codes, and series descriptions already submitted. New columns this year : gear, distance sea, and description of the method, please update all the series.
(3) Check and complete missing lines in the stations sheet (with the dataprovider organisation for the series) - this table will later be used to record monitoring stations in ICES database.
(4) Check that what has been provided last year in existing data is correct. **Dont write in that sheet.**
(5) Use the new_data sheet to provide new_data. **Please provide a comment to explain how COVID19 may have affected your time series.**
(6) Use the updated_data to provide corrections to existing data. Copy the line in existing data paste it in the updated-data sheet and simply correct the line. Please update the comment like *<previous comment> updated 2020 <old value> changed to <new value> <new comment>*. where <previous comment> corresponds to the comment that was already in the line that you copied.

series_info	
ser_nameshort	short name of the recuitment series, this must be 4 letters + stage name, e.g. VilG, LiffGY, FremS, the first letter is capitalised and the stage name too.
ser_namelong	long name of the recuitment series eg 'Vilaine estuary' for the Vilaine;
ser_typ_id	type of series 1= recruitment series, 2 = yellow eel standing stock series, 3 silver eel series
ser_effort_uni_code	unit used for effort, it is different from the unit used in the series, for instance some of the Dutch series rely on the number hauls made to collect the glass eel to qualify the series, see units sheet.
ser_comment	This comment should at least include a short description of the methods, give an idea on the size of the eels and the proportion of glass eel, whether it is mixed (e.g. glass and yellow) or not, possible biases (e.g. by stocking) and a mention if the series is special in any way (e.g. very old/long)

readme | metadata | series_info | station | station_map | existing_data | new_data | updated_data | existing_biometry | new_biometry | tr_units_uni | tr_gear_gea | tr_lifestage_lfs

Figure 2-1. An example of the content of the Data Call for time-series.

Following the last WGEEL meeting (September 2020, ICES 2020b), it was decided to collect additional metadata on time-series. In this context, we now ask data providers to describe the gear used for catching eels, the method (including sampling method, period and life stage collected), and the possible effect of restocking on the series. A list of possible gear types has been collected from FAO. A request for the number of individual eels collected within an annual biometric sample has also been added. The database has been updated to integrate these new data.

The shiny data integration allows one to connect to the database, and then to load the different types of excel files. Checks are done on the integrity of the data, and comparisons are run with the database to ensure the unicity of data. Finally, data are imputed to the database with some data deprecated.

The details about tasks completed during this workshop have been handled in the git/wgeel in issues 179 and 180. The shiny apps and postgres server have been shifted to a new ubuntu 20.04 server and updated from postgres 10 to postgres 12, The R version has been shifted from 3.6.3 to 4.0.5. The new addresses for the server will be http://185.135.126.250:8080/shiny_di/ and http://185.135.126.250:8080/shiny_dv/, and the older shiny http://185.135.126.249:8080/shiny_di/ and http://185.135.126.249:8080/shiny_dv/ will be stopped during May 2021.

[1] Either as duplicate, or because they have been replaced by other data, or because they have been scored as poor quality.

3 Subgroup 2 – Evaluation

3.1 Data requirements

To ensure the Data Call created during the workshop captured all requirements for WGEEL and for any future workshop(s) requested from the European Commission in relation to the evaluation of management plans, a list of requirements and relevant Data Call sheets was compiled (Table 3-1). This table contains the information requested under Regulation 1100/2007 Articles 9, 10 and 11 (2, 3). See Annex 3 for full text extracts on reporting requirements (Regulation 1100/2007; Articles 9, 10 and 11).

Table 3-1 Summary of the reporting requirements from the EC 1100/2007 and the Data Call Annexes where this information should be supplied.

Regulation	Data Call Annex
Article 9	
1. Reports shall outline:	
monitoring	Annex 13 EMP Overview updated. Annex 15 Measures updated
effectiveness	Annex 9 Mortality rate Annex 10 Biomass Indicators;
outcome	Annex 15 Measures
2.a proportion of silver eel biomass	Annex 10 Biomass Indicators
2b. Level of fishing effort & reduction	Annex 9 Mortality rate (ΣF)
	Annex 15 Measures
	Annex 12 Effort
2c. Level of mortality factors outside fishery & reduction	Annex 9 Mortality rate (ΣA, ΣH, ΣF)
2d. Amount of eel <12cm caught	Annex 4 Commercial landings
& proportion utilised….	Annex 14 Less than 12 cm eel utilisation.
3. Commission can propose alternative measures	Annex 15 Measure
Article 10	
1. Control and Enforcement	Annex 15 Measures Annex 13 EMP Overview
2. register of fishing rights	n/a
Article 11	
2. Recreational fishers' numbers	Annex 11 Recreational Fishers

In previous years, the European Commission also requested a word document to supplement the information gathered in the data Annexes for reporting progress with EMPs. The questions included:

- Describe the measures implemented since the adoption of your eel management plan, including the year of implementation and, where practical, realised or anticipated effect on silver eel escapement biomass. (Now summarised in Annex 15 Measures)
- Provide an explanation for any planned measures not implemented, and list any difficulties encountered in the implementation of the plan. (free text) (Now a textbox in Annex 13 EMP Overview).
- Please list the difficulties encountered in the implementation of the plan (Now a textbox in Annex 13 EMP Overview).

For the 2021 Data Call, template annexes were adapted to capture this information in a standardised manner to facilitate analysis at a later stage (as shown in parentheses in the list above). The Data Call Annexes should be accompanied by a scientific report detailing the methodology used to assess the status of the local stock in each EMU(s), and to quantify anthropogenic mortality factors and determine the biomass of silver eel being produced and escaping from that EMU(s), as this would facilitate the evaluation of biomass and mortality indicators submitted within the Data Call.

3.2 Data Use

The group envisages the data from this Data Call will be used in multiple workshops over the next year. In the immediate term WGEEL will analyse landings data, recruitment, biometry, yellow and silver time-series data, as part of the annual report on eel.

Upon agreement with the European Commission and ICES colleagues, we anticipated the following tasks to evaluate the progress and effectiveness of EMPs.

1. Prepare data for evaluation.
2. **Evaluate the effectiveness and outcomes of the EMPs.** This could be done using the 3Bs and ΣAs from the Annex 9 Mortality rates and Annex 10 Biomass Indicators, along with the new Annex 13 EMP Overview which provides details on what types of data are used in the assessments. Two questions that could be answered with these data would be:
   a) Has biomass changed in EMU '1' through time (2000 to present);
   b) Has mortality changed in EMU '1' through time (2000 to present).
3. **Evaluate the effectiveness and outcomes of the measures**. This would be done using descriptions of the measures from Annex 15 Measures and Annex 13 EMP Overview, access to data, and scientific opinion, to answer the core question of 'Have EMPs done what they could?' It could be reported using the following:
   a) A table of standardised/possible measures across the region that would registering their implementation across EMPs as yes; no; not applicable; identify whether pressures/threats were addressed in each EMU [Annex 15 Measures]; and
   b) A list of measures planned in EMPs, the degree of their implementation (fully, partial, not implemented), year of full implementation, availability of quantification and method of quantification.

To expand on some of the terms used here: effectiveness could be examined in terms of the effect on silver eel output in weight of silver eels ($B_{current}$), and in mortality levels; outcomes could be for example the removal of 'x' number of barriers or 'x' kms of wetted area opened up, or number of glass eels stocked in a known wetted area; and acknowledging the indirect benefits of certain

measures noting that the cumulative impact of measures should be having an impact but if there is no change in biomass then other factors may be at play.

4. **Evaluate the effectiveness and outcomes of monitoring measures** (of biomass, mortality, traceability, etc). This would be done using descriptions of monitoring methods and self-assessment of what is achievable and what are the national and international challenges:
   a) Monitoring description (data collection, analysis; or process) (Annex 13 EMP Overview);
   b) Assessment methods using Annex 13 EMP Overview;
   c) Asking has all habitat been included in the biomass and mortality assessments?

3.3 Data Call Files: Updated and New Annexes

This section describes and explains the updates to existing and new Data Call Annexes.

Updated Annexes

For annexes 1–3, as described above, modifications were made to achieve a better description of time-series and additional details on the reported biological data, as suggested in last WGEEL report (ICES, 2020b).

For Annex 5, additional data are requested on the quantities of eel that are caught but then returned alive to the waters where they were caught (eel_discard_kg). For further details see Annex 11 below.

Annexes 9 and 10 were redesigned compared to the 2018 Data Call, following recommendations from last WGEEL meeting (ICES, 2020b). These modifications will facilitate the reporting process and the comparison and aggregation of indicators at different spatial scales.

New Annexes

Annex 11 Number of Recreational Fishers

Article 11.2 in the Regulation EC 1100/2007 (EC, 2007) requires that Member States:

….shall establish on a regular basis an estimate of the number of recreational fishermen and their catches of eels.

And Article 11.3 requires that:

On a request from the Commission, Member States shall provide the information referred to in paragraphs 1 and 2.

The special request from the European Commission makes explicit that the term 'catch' here means all eel caught and does include any eel that are caught and then returned alive to the water. They make the distinction between the catch (all) and landings (excludes those returned alive to the water where they were caught, that in marine parlance these are often called discards). This means that the landings data that are reported by Member States to ICES as part of the annual eel Data Call (Annex 5 Landings Recreational), are not necessarily the same numbers as catches requested here. Annex 5 has been revised this year therefore to include the quantities of eel that are caught but then returned to the water where they were caught, as eel_discards_kg. Therefore, a new annex was created for Member States to report the numbers of recreational fishers: Annex 11, 'Recreational eel fishers'.

There are several possible ways to interpret this request for the number of fishers, for example depending on the Member States' definition of a recreational fisher, and whether there is a license or authorisation specific to eel or broader to include other fish. Even in this broader category, fishers might target eel on some days but catch them as a bycatch on other days. However, to distil the request to its simplest terms, the annex specifies that the number of fishers should be reported both for (1) those that have a fishing licence or authorisation that explicitly permit them to fish for eels and (2) for the total number of recreational fishers that might have the opportunity to catch eel.

As the Regulation has required these data for each year since the implementation of an EMP, we have set this as the reporting period.

Annex 12 Effort

Under Article 9 of the regulation the Commission requests information on fishing effort and any reduction effected in accordance with Articles 4(2) and 5(4). The WGEEL has previously addressed the limitations of the effort data currently available for a region wide assessment (ICES, 2019).

Fishing effort is a measure of the amount of activity involved in exploiting a stock (Cunningham and Whitmarsh, 1980). There is an important distinction between two types of fishing effort. While the nominal fishing effort is an easily measurable and manageable quantification of resources devoted to fishing (e.g. number of boats, number of days, number of gears) (Gulland, 1956; McCluskey and Lewison, 2008), the effective fishing effort refers to the resulting pressure exerted on the stock by the fishery, and directly related to fishing mortality or catch rates (Cunningham and Whitmarsh, 1980; Stocker and Fournier, 1984; Biseau, 1998), but is much more difficult to measure. Caution should be made when analysing fishing effort: a decrease in nominal effort does not necessarily imply a decrease in effective fishing effort (so of fishing mortality). For example, a reduction in fishing season does not necessarily lead to a decrease of effective fishing mortality if the closures are implemented in periods where fishery is limited. Similarly, a decrease in the number of fishermen does not necessarily lead to a reduction of effective fishing effort if only the less efficient fishermen leave the fishery. This point was discussed in detail in ICES, 2019 (Section 4.2). In the forthcoming Data Call, it is likely that countries will report nominal fishing effort (the one they manage), but given the high seasonality of eel fisheries (ICES, 2020 WKEELMIGRATION) and important heteroegeneities within fisheries, we consider that while this nominal fishing effort may be relevant for socio-economic analysis, it is not a meaningful proxy of effective fishing effort and therefore should not be used as a measure of the impact of fisheries on the stock.

The effort annex from the 2018 Data Call was used in the regulation review to assess changes through time per country (Huntington *et al.,* 2020) and for consistency no changes will be made for the forthcoming Data Call. We note the recommendation from WKEELDATA2 to WGEEL that a sound procedure for the collection and use of this data should be developed. We also note the follow up recommendations outlined in the 2019 WGEEL report that a workshop with fishery managers is required to harmonise the reporting of effort on key commercial fisheries across the eel range states in order to provide adequate data to the WGEEL and national stock assessors.

Annex 13 EMP Overview

In the 2018 EU Data Call there was an 'EMP Overview Annex' to capture information in relation to the Data Collection and Assessment of the Biomass and Mortality Indicators. This annex was expanded at this workshop to reduce the need for a formal text report by each Member State. Additional questions were included to fulfil the needs of the evaluation group and European Commission. They are outlined below:

Transboundary EMU's

To capture the information relating to how many transboundary EMU are present in the eel region.

- Is this a transboundary EMU?
- Is there an agreement between countries?
- Is this EMU connected to another either upstream or downstream?

Traceability

To quantify the countries with a traceability scheme (both national and international) and understand the difficulties encountered with eel trade.

- Do you have an eel traceability scheme set up in your EMU?
- Do you have an eel traceability scheme set up in your country?
- Do you have an eel traceability scheme for eels that leave your country?
- Have these systems changed since implementation of the EMP?
- What difficulties have you encountered with this scheme?

Reserving at least 60% of glass eels to be marketed for restocking Do you have a monitoring scheme for reserving 60% of glass eels for restocking

- Have these systems changed since implementation of the EMP?
- What difficulties have you encountered with this scheme?

Control & Catch Monitoring

- Do you have a control and catch monitoring system (Control Regulation No 1224/2009)?
- Do you have a system adapted to inland fisheries?
- Have these systems changed since implementation of the EMP?

Difficulties

- Give a short description of the difficulties encountered in the implementation of the plan.

Annex 14 Less than 12 cm eel utilisation

Article 9.1d in the Regulation EC 1100/2007 (EC, 2007) requires Member States to report:

…… the best available estimates of: …….. (d) the amount of eel less than 12 cm in length caught and the proportions of this utilised for different purposes.

In addition, the guidance provided by the European Commission in 2011 (EC, 2011) requested that Member States should report:

The amount of eel less than 12 cm in length caught and the proportions of this utilised for all purposes such as restocking, direct consumption, aquaculture within the EU and outside the EU, export outside the EU.

The amounts of eel less than 12 cm in length are annually reported by Member States to ICES as part of the annual eel Data Call (Annex 4 Landings Commercial). Therefore, a new annex was required only for Member States to report the proportions of this catch utilised for all purposes. The WK used the utilisation categories given by the European Commission, i.e. restocking, direct consumption, aquaculture, to develop Template Annex 14 "Less Than 12 cm Eel Utilisation".

There are a range of locations or times when 'utilised' can be recorded, which makes it difficult to be definitive about when to make this record. For example, some may record the use when the fisher sells their catch to a dealer, or when the dealer sells those eels to a company, or even when the fisher donates their catch to a restocking exercise so there is no sale. Another complication might be that eel are sold for aquaculture but later some of those eels are repurposed for

restocking. Furthermore, recording (the traceability) may be more complex if the eel is moved from one country to another, and even to another. Therefore, in its simplest term, Member States completing this annex are requested to declare the proportions of eel used for all purposes to the best of their ability and knowledge. The EMP Overview Annex (Annex 13) includes a section where the Member State can record any issues with the traceability scheme.

The data used to derive the proportions also potentially complicates the request, especially when there is more than a few days or weeks between capture and final use during which time some of the eel may have died while the survivors will probably have grown in weight. Therefore, the proportions should be calculated in terms of the numbers of eel caught, recognising that (i) this will probably be an estimate derived from catch weight, and (ii) mortalities will mean that the proportions may not sum to 1.000.

Annex 15 Measures

Under Article 9 (1) of Council regulation (EC) No 1100/2007 (EC, 2007) it was specified that Member States should outline the monitoring, effectiveness and outcome of the EMPs, and in the ToRs for the 2013 ICES Evaluation of EMPs (ICES, 2013), this was developed further to report on implementation of EC 1100/2007 via the measures established and implemented under each EMP.

Based on the information collated during WKEPEMP (ICES, 2013), a dedicated Data Call template to collect and update information on previously reported and potential new measures was designed to facilitate an effective data collection and analysis for the evaluation of EMP progress. In particular, different categories of measures and sub-measures were identified (to aid analyses) and specific measures were assigned accordingly, using the information provided in the assessment evaluation form of WKEPEMP. A template, pre-filled with these measures, was created for each Member State with one or more EMPs, requesting data on the current implementation status, the timing of the implementation and the means to quantify the effectiveness of measures, per EMU, in order to facilitate the planned EMP evaluation requested by the European Commission. For further information see Annex 15. Added indirect to impact column to capture the measures that impact biomass and mortality indirectly but are still worth implementing.

Good Practice

- Give a short description of any good practices in the implementation of your EMP you wish to highlight.

Changes were made to the other fields to elaborate on what was asked previously in the 2018 Data Call.

Changes in Indicators

- Explanation is requested if there are any changes to the B_0, $B_{current}$ and B_{best} separately as opposed to one explanation for all three indicators;
- Explanation is requested if there are any changes to the Habitat, Data Source or Method of assessment separately as opposed to one explanation for all three indicators.

Data & Monitoring /What data is used in your assessment

The 2018 EMP Overview Annex had a section title Data we have changed it to "What data are used in your assessment?"

To capture the wide range of data that can be collected and analysed for the determination of the Biomass indicators, an expanded list was included.

Assessment Methods

We modified the section on Assessment Methods requesting a short text on the assessment methods. This was due to the complexities involved in formulating yes/no questions for such a topic that would give a meaningful answer.

We removed a section on habitat assessed as it is now captured in the updated layout of Annex 10.

4 Cover letter

A Cover Letter to accompany and explain the Data Call was drafted, based on previous letters updated to reflect the changes and additions to the Data Call in 2021, and supplied to ICES for further discussion with the European Commission, GFCM and EIFAAC.

ICES International Council for the Exploration of the Sea
CIEM Conseil International pour l'Exploration de la Mer

DCF national correspondents

Els Torreele, Ivana Vukov, Jørgen Dalskov, Elo Rasmann, Heikki Lehtinen, Louise Veron, Christoph Stransky, Michael Chatziefstathiou, Leonie O'Dowd, Mauro Bertelletti, Didzis Ustups, Vilda Griūnienė, Mandy Doddema, Irek Wojcik, Emilia Batista, Tim Berginc, Anna Hasslow, Maria del Pilar Vara del Río, Matthew Elliott.

ICES ACOM members

Els Torreele, Morten Vinther, Robert Aps, Jari Raitaniemi, Alain Biseau, Jonathan White, Linas Lozys, Bjarte Bogstad, Christopher Zimmermann, Didzis Ustups, Niels Hintzen, Jan Horbowy, Maria de Fátima Borges, Francisco Velasco Guevara, Massimiliano Cardinale, Pieter-Jan Schön.

Our Ref: H.4/ACB/hgj/ck **21 May 2021**

Subject: **ICES Eel Data Call 2021**

Dear Reader,

Please find enclosed a document describing the rationale, scope and technical details of the Eel Data call for the 2021. Also, enclosed are up to 15 annexes (depending on the country, see below) with the Data Call templates to fill.

The data will be used by WGEEL to conduct an assessment of the eel stock status and factors affecting the stock in support of the recurrent ICES Advice, and ICES workshop(s) to address tasks to evaluate Eel Management Plan progress as reported by EU Member States in terms of monitoring, effectiveness and outcome, in support of the special request from the EC to ICES.

For countries which are also EU members this data call is under the Council Regulation (EC) No 2017/1004.

The deadline for this data call is Monday 30th of August 2021.

For questions about the content of the data call, please contact: advice@ices.dk. For questions on data submission, please contact: data.call@ices.dk.

The data call will also available from the ICES website at:
https://www.ices.dk/data/tools/Pages/Data-calls.aspx

Sincerely,

Anne Christine Brusendorff

General Secretary

CC: Jan-Dag Pohlmann (WGEEL chair), Cédric Briand (WGEEL Stock Coordinator); Hilaire Drouineau (WGEEL Stock Assessor); Elisabetta Betulla Morello (GFCM), Teppo Vehanen (EIFAAC), Ciara O' Leary (EIFAAC), DG MARE.

ICES International Council for the Exploration of the Sea
CIEM Conseil International pour l'Exploration de la Mer

H. C. Andersens Boulevard 44-46,
1553 Copenhagen V. Denmark

+45 33 38 67 00
info@ices.dk | www.ices.dk

5 Conclusion

The workshop reviewed the data requirements for WGEEL and for the anticipated special request on evaluating EMP progress reports, and generated excel table templates (Annexes) that should simplify and standardise the data submissions, and their analysis and reporting.

This remains a developing work area, and the workshop anticipates that in 2022, the priority will become to finish work associated with the process of analysing and reporting the time-series data and capturing the biometry data collected under the Data Collection Framework, and rebuilding the landings datasets by using corrections for the underreporting (see the WKFEA text roadmap for further details).

As many of the Data Call Annex formats are now complete in terms of their content, efforts will focus on options to fully standardise the layout and colours to make it easier for data providers.

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Annex 1: List of participants

Name	Institute	Country	E-mail
Laurent Beaulaton	Office Français de la Biodiversité / Management of Diadromous Fish in their Environment, OFB, INRAe, Agrocampus Ouest, UNIV PAU and PAYS ADOUR/E2S UPPA	France	laurent.beaulaton@ofb.gouv.fr
Clarisse Boulenger	Office Français de la Biodiversité/ Management of Diadromous Fish in their Environment, OFB, INRAe, Agrocampus Ouest, UNIV PAU and PAYS ADOUR/E2S UPPA	France	clarisse.boulenger@ofb.gouv.fr
Cedric Briand	Institution d'Amenagement de la Viliane	France	cedric.briand@eptb-vilaine.fr
Esti Diaz	Azti Sukkarieta	Spain	ediaz@azti.es
Hilaire Drouineau	INRAE/ Management of Diadromous Fish in their Environment, OFB, INRAe, Agrocampus Ouest, UNIV PAU and PAYS ADOUR/E2S UPPA	France	Hilaire.drouineau@inrae.fr
Blanka Garcia-Alvarez	DGMare	Belgium	Blanca.GARCIA-ALVAREZ@ec.europa.eu
Rob van Gemert	SLU Aqua	Sweden	Rob.van.gemert@slu.se
Kasia Janiak	DGMare	Belgium	Katarzyna.JANIAK@ec.europa.eu
Inigo Martinez	ICES	Denmark	Inigo.martinez@ices.dk
Maria Maria Mateo	Azti Sukkarieta	Spain	
Burcu Mestav	Canakkale Onsekiz Mart University	Turkey	burcumestav@comu.edu.tr
Ciara O'Leary Chair	Inland Fisheries Ireland	Ireland	Ciara.oleary@fisheriesireland.ie
Sukran Yalcin Ozdilek	Canakkale Onsekiz Mart University	Turkey	sozdilek@comu.edu.tr
Jan-Dag Pohlmann	Thünen Institute Institute for Fisheries Ecology	Germany	jan.pohlmann@thuenen.de
Alan Walker Chair	Cefas	UK	Alan.walker@cefas.co.uk

Annex 2: Resolutions

2021/2/FRSSG62 A **Workshop on Designing an Eel Data Call** (WKEELDATA3), chaired by Alan Walker (UK) and Ciara O'Leary (Ireland), will meet virtually, 19 April–23 April 2021 to design a data call to all ICES/EIFAAC/GFCM countries having natural production of European eel and prepare their integration of data in the eel database supporting WGEEL work. The data call 2021 will request the same data as every year (e.g. the 2020 call) but also various extra stock indicators (B_0, B_{best}, $B_{current}$, ΣA, ΣH and ΣF) reported by EU countries and others every three years to the WGEEL and to the EC in the context of the Council Regulation (EC) No 1100/2007. To achieve this aim, the WK will:

a) Prepare templates that will be used to report these data to the ICES and text for the 2021 ICES Data call on eel;

b) Develop in the WGEEL's shiny application, the tools required for the automatic generation of templates for the integration of reported data in the database and for their analysis;

c) Run tests with dummy data to validate the spreadsheets, data integration procedures and debug the shiny application.

WKEELDATA3 will report by 7th May 2021 for the attention of FSRG, WGEEL, WGDIAD, ACOM, SCICOM, EIFAAC, GFCM. The WK will require post-meeting work of estimated 15 man-days to run betatests to validate the developments, which will be distributed among WK members.

Supporting information

Priority	This topic is a high priority for ICES recurrent eel advice. For the countries/institutions (EIFAAC, GFCM) supporting the work of the WGEEL, the present data collection procedures are complex and require a large resource in staff time shortened by this workshop, and it will facilitate the future benchmarking of the stock assessment process to support the ICES Advice as will be proposed to ACOM by WKFEA.
Scientific justification	The WGEEL annually collates data on recruitment, landings from commercial and recreational fisheries, restocking, aquaculture production, rates of other human-induced mortalities on eels, biological characteristics of eels, etc. The development of various tools (database, standardised templates, shiny application for data integration and analysis) have allowed to greatly improve consistency in the data collection and to facilitate their use in the stock assessment process. In addition to this yearly data call, WGEEL collects every three years various indicators on mortalities and silver eel biomass indicators that are reported by Member States to the EU. Since these additional data will be collected in 2021, the tools must be adapted to manage this specific type of data, addressing issues that emerged during the last collection of these data in 2018.
Resource requirements	The workshop will be run virtually. Videoconferencing system and sharepoint will be required.
Participants	WGEEL members in charge of the data collection and management. One or two persons in charge of answering to the data call.
Secretariat facilities	The standard support for arranging the meeting, providing access to sharepoint, videoconferencing system and for formatting the report.

Financial	No financial implications.
Linkages to advisory committees	Links to ACOM as the data collection and related procedures are crucial for the work of WGEEL, providing the scientific basis for the ICES advice on fishing opportunities published by ACOM.
Linkages to other committees or groups	The results will be of direct benefit to the WGEEL and wider to WGDIAD.
Linkages to other organizations	The results will be of direct interest to DG MARE of the European Commission, in relation to the obligations of the Eel Regulation (EC1100/2007) and the EU MAP, and to GFCM in relation to planned eel Data Collection Framework Reference.

Annex 3: Agenda

Monday, 19th April

10:00	Welcome and Introductions
10:15	Reminder of Procedural Matters
10:30	Update on ToRs
10:45	Technical Subgroup presentation
11:30	Evaluation Subgroup presentation
13:30	All task groups breakout
16:00	Plenary to discuss matters arising

Tuesday, 20th April

09:00	All task groups breakout
16:30	Plenary to discuss matters arising

Wednesday, 21st April

09:00	All task groups breakout
16:30	Plenary to discuss matters arising

Thursday, 22nd April

09:00	All task groups breakout
16:30	Plenary to receive draft report sections and tables, with short presentations on key points

Friday, 23rd April

09:00	Plenary to review tables and report
17:00	WK close

Annex 4: Eel Regulation text on Article 9, 10 and 11

L 248/22 EN Official Journal of the European Union 22.9.2007

Article 9

Reporting and Evaluation

1. Each Member State shall report to the Commission, initially every third year, with the first report to be presented by 30 June 2012. The frequency of reporting shall decrease to once every sixth year, after the first three tri-annual reports have been submitted. Reports shall outline monitoring, effectiveness and outcome, and in particular shall provide the best available estimates of:

(a) for each Member State, the proportion of the silver eel biomass that escapes to the sea to spawn, or the proportion of the silver eel biomass leaving the territory of that Member State as part of a seaward migration to spawn, relative to the target level of escapement set out in Article 2(4);

(b) the level of fishing effort that catches eel each year, and the reduction effected in accordance with Articles 4(2) and 5(4);

(c) the level of mortality factors outside the fishery, and the reduction effected in accordance with Article 2(10);

(d) the amount of eel less than 12 cm in length caught and the proportions of this utilised for different purposes.

2. The Commission shall, not later than 31 December 2013, present a report to the European Parliament and the Council with a statistical and scientific evaluation of the outcome of the implementation of the Eel Management Plans, accompanied by the opinion of the Scientific, Technical and Economic Committee for Fisheries.

3. The Commission shall, in the light of the report referred to in paragraph 2, propose any appropriate measures to achieve with high probability the recovery of the stock of European eel and the Council shall decide by qualified majority on alternative measures to achieve the target level of escapement set out in Article 2(4) or a reduction of fishing effort in accordance with Articles 4(2) and 5(4).

Article 10

Control and enforcement in waters other than Community waters

1. Member States shall establish a control and catch monitoring system adapted to the circumstances and to the legal framework already applicable to their inland fisheries, which shall be consistent with the relevant provisions set out in Regulation (EEC) No 2847/93.

2. The control and catch monitoring system shall contain a thorough description of all systems of allocation of fishing rights in eel river basins which constitute natural eel habitats as defined by Member States according to Article 2(1), including privately owned waters.

Article 11

Information concerning fishing activities

1. By 1 January 2009, each Member State shall establish the following information concerning commercial fishing activities:

— a list of all fishing vessels flying its flag authorised to fish for eel in Community waters in accordance with Article 8, notwithstanding the overall length of the vessel,

— a list of all fishing vessels, commercial entities or fishermen, authorised to fish for eel in eel river basins which constitute natural eel habitats as defined by Member States according to Article 2(1),

— a list of all auction centres or other bodies or persons authorised by Member States to undertake the first marketing of eel.

2. Member States shall establish on a regular basis an estimate of the number of recreational fishermen and their catches of eels.

3. On a request from the Commission, Member States shall provide the information referred to in paragraphs 1 and 2.

Article 12

Control and enforcement concerning imports and exports of eel

No later than 1 July 2009, Member States shall:

— take the measures necessary to identify the origin and ensure the traceability of all live eels imported or exported from their territory,

— determine whether the eel harvested in the Community area and exported from their territory was caught in a manner consistent with Community conservation measures,

— take measures to determine whether the eel harvested in the waters of any relevant regional fisheries organisation and imported into their territory was caught in a manner consistent with the rules agreed in the regional fisheries organisation in question.

Annex 5: Notes for WKEMP 2021

During the revision and production of Data Call annexes, and the accompanying analytical processes, a series of issues were identified that WKEMP2021 might consider. These are recorded here:

In the measures annex, we are not sure how Member States will capture the requested consecutive EU Closure Regulation obligations set out in the Council Regulations (EU) 2018/120 relating to 'Measures on European eel fisheries, (EU) 2019/124 relating to 'Measures on European eel fisheries in Union waters of the ICES area, or European eel in the Mediterranean Sea (GSAs 1 to 27), or more recent similar obligations. It might be captured within EMP measures or as new measures for different MS.

Check connected EMUs (i.e. an EMU that shares a river basin with an adjacent EMU, often inland EMU or transboundary EMU, so that migratory eels can migrate from an EMU to another during their life cycle) to ensure there is no double reporting:

- For connected EMU's, do they consider mortality upstream/downstream in their assessments?
- Do they integrate biomass from upstream EMUs?

See previous comments about Annex 12 – fishing effort and the risk of mis-usage of nominal fishing effort as a proxy of fishing mortality.

Many management measures can have effects that are hardly visible on biomass and mortality indicators (e.g. reducing contaminant levels can have long-term effects on spawner quality, rather than on direct mortality) but still be relevant measures for eels and for the ecosystem.

Moreover, because of the long and complex life cycle of eels, many management measures can have delayed effects that cannot be detected yet (e.g. management measures protecting glass eels cannot be yet detected on biomass indicators in regions where the age-at-silvering is greater than ten years).