



**ICES**  
**CIEM**

International Council for  
the Exploration of the Sea

Conseil International pour  
l'Exploration de la Mer

21 February 2024

## 2024 FRSG Expert Group ToRs

### Contents

Generic ToRs for Regional and Species Working Groups.....	2
AFWG – Arctic Fisheries Working Group .....	4
HAWG – Herring Assessment Working Group for the Area South of 62°N .....	4
NIPAG – Joint NAFO/ICES Pandalus Assessment Working Group .....	5
NWWG – Northwestern Working Group.....	5
WGAMEEL - Working Group on American Eel.....	6
WGBAST – Baltic Salmon and Trout Assessment Working Group.....	9
WGBFAS – Baltic Fisheries Assessment Working Group .....	10
WGBIE– Working Group for the Bay of Biscay and Iberian waters Ecoregion.....	10
WGCSE – Working Group for the Celtic Seas Ecoregion.....	10
WGDEEP – Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources .....	11
WGDIAD - Working Group on Science to Support Conservation, Restoration and Management of Diadromous Species.....	12
WGEEL – Joint EIFAAC/ICES/GFCM Working Group on Eels.....	12
WGEF – Working Group on Elasmobranch Fishes .....	13
WGHANSA – Working Group on Southern Horse Mackerel Anchovy and Sardine .....	14
WGMIXFISH-ADVICE – Working Group on Mixed Fisheries Advice .....	14
WGMIXFISH-METHODS - Working Group on Mixed Fisheries Advice Methodology	15
WGNAM - Working Group on Northwest Atlantic Mackerel Ecology and Assessment	16
WGNAS – Working Group on North Atlantic Salmon.....	18
WGNSSK – Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak.....	20
WGRFS – Working Group on Recreational Fisheries Surveys (WGRFS) .....	20
WGTAFGOV - Working Group on Transparent Assessment Framework Governance ..	24
WGTRUTTA - Working Group to develop and test assessment methods for Sea trout populations (anadromous <i>Salmo trutta</i> ).....	26

WKBSEABASS – Benchmark workshop on selected seabass stocks .....	31
WKREBUILD2 – Workshop on guidelines and methods for the design and evaluation of rebuilding plans for category 1-2 stocks .....	33
WKSIDAC3 - Third Workshop on Stock Identification and allocation of catches of herring to stocks.....	35
WKNEWREF - Workshop on the calculation and evaluation of new reference points for category 1-2 stocks.....	37
WKBMSYSPICT3 - Benchmark Workshop on the application of SPiCT to produce MSY advice for selected stocks.....	40
WKBANSP – Benchmark workshop on Anchovy stocks.....	41
WKBFLATFISH 1 – Benchmark workshop 1 on selected flatfish stocks .....	43
WKEELDATA 5 - The Fifth Workshop on Designing an Eel Data Call.....	44
WKLANDEEL - The Workshop for the reconstruction of eel landings statistics.....	45
WKBPLAICE – Benchmark workshop on selected plaice stocks .....	47
WKEcoMSE Joint ICES-SEAwise workshop to quality assure methods to incorporate environmental factors and quantifying ecological considerations in Management Strategy Evaluation tools.....	48

## Generic ToRs for Regional and Species Working Groups

*Approved in Resolutions meeting on 31 October 2023*

The following ToRs apply to: AFWG, HAWG, NWWG, NIPAG, WGWISE, WGBAST, WGBFAS, WGNSSK, WGCSE, WGDEEP, WGBIE, WGEEL, WGEF, WGHANSA and WGNAS.

### **The working group should focus on:**

- a) Conduct an assessment on the stock(s) to be addressed in 2024 using the method (assessment, forecast or trends indicators) as described in the stock annex and documented in TAF; - complete and document an audit of the calculations and results; and produce a **brief** report of the work carried out regarding the stock, providing summaries of the following where relevant:

Quality control and quality assurance of input data. In the event of late, missing or inconsistent data document issues and deviations from the stock annex.

- i) Where misreporting of catches is significant, provide qualitative and where possible quantitative information and describe the methods used to obtain the information;
- ii) For relevant stocks (i.e., all stocks for NEAFC request advice), estimate the percentage of the total catch that has been taken in the NEAFC Regulatory Area in the most recent years.
- iii) For category 2 and 3 stocks requiring new advice in 2024, implement the methods in guidance for harvest control rules and stock assessments for stocks in categories 2 and 3. Replace the former 2 over 3 advice rule (2 over 5 for elasmobranchs) which is no longer considered precautionary.

- iv) Evaluate spawning stock biomass, total stock biomass, fishing mortality, catches (projected landings and discards) using the method described in the stock annex;
  - 1) for category 1 and 2 stocks, in addition to the other relevant model diagnostics, the recommendations and decision tree formulated by WKFORBIAS (see Annex 2 of [https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2020/WKFORBIAS\\_2019.pdf](https://www.ices.dk/sites/pub/Publication%20Reports/Expert%20Group%20Report/Fisheries%20Resources%20Steering%20Group/2020/WKFORBIAS_2019.pdf)) should be considered as guidance to determine whether an assessment remains sufficiently robust for providing advice.
  - 2) If the assessment is deemed no longer suitable as basis for advice, provide advice using an appropriate Category 2-5 approach as described in ICES technical guidance for harvest control rules and stock assessments for stocks in categories 2 and 3 or in Advice on fishing opportunities (for Cat 5 & 6).
  - 3) If the assessment has been moved to a Category 2-5 approach in the past year, consider what is necessary to move back to a Category 1 and develop proposal for the appropriate benchmark process.
- v) Provide all requested catch scenarios for the year(s) beyond the terminal year of the data (These are listed in ICES Guidance for completing single-stock advice)
- vi) Historical and analytical performance of the assessment and catch options with a succinct description of associated quality issues. For the analytical performance of category 1 and 2 age-structured assessments, report the mean Mohn's rho (assessment retrospective bias analysis) values for time series of recruitment, spawning stock biomass, and fishing mortality rate. The WG report should include a plot of this retrospective analysis. The values should be calculated in accordance with the "Guidance for completing ToR viii) of the Generic ToRs for Regional and Species Working Groups - Retrospective bias in assessment" and reported using the ICES application for this purpose.
- b) Produce and quality assure a first draft of the advice for each stock according to ACOM guidelines.
- c) Include conservation status advice in accordance with the "Technical Guidelines on the conservation status advice".
- d) Review progress on benchmark issues and processes of relevance to the Expert Group.
  - i) update the benchmark issues lists for the individual stocks in SID;
  - ii) review progress on benchmark issues and identify potential benchmarks to be initiated in 2025 for conclusion in 2026;
  - iii) determine the prioritization score for benchmarks proposed for 2025–2026;
  - iv) as necessary, document generic issues to be addressed by the Benchmark Oversight Group (BOG)
- e) Prepare the data calls for the next year's update assessment and for planned data evaluation workshops;

- f) Identify research needs of relevance to the work of the Expert Group.
- g) Review and update information regarding operational issues and research priorities on the Fisheries Resources Steering Group SharePoint site.
- h) Update TAF, SAG, ASD (Advice and Scenarios database) and SID with final assessment input and output and advice information.
- i) Consider and comment on Ecosystem and Fisheries Overviews with a focus on:
  - i) identifying and correcting mistakes and errors (both in the text, tables and figures), and
  - ii) proposing concrete evidence-based input that is considered essential for the advice but is currently under-developed or missing (with references and Data Profiling Tool entries, as appropriate).

Information of the stocks to be considered by each Expert Group is available [here](#).

### **AFWG – Arctic Fisheries Working Group**

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG02 The **Arctic Fisheries Working Group** (AFWG), chaired by Daniel Howell, Norway, will meet in (Bergen) 8–12 April 2024 to:

- a) Address generic ToRs for Regional and Species Working Groups, for all regionally relevant stocks.
- b) Conduct reviews as required of any time-series computed using the STOX and ECA open source software for use in assessment in the Barents Sea.
- c) Where relevant, provide references to other available sources of scientific assessment and advice for fisheries in the region.

The assessments will be carried out on the basis of the stock annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2024 ICES data call.

AFWG will report by 3 May 2024 for the attention of the Advisory Committee.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group.*

### **HAWG – Herring Assessment Working Group for the Area South of 62°N**

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG03 The **Herring Assessment Working Group for the Area South of 62°N** (HAWG), chaired by Aaron Brazier, UK, and Nis Sand Jacobsen\*, Denmark, will meet:

In ICES HQ, Copenhagen, Denmark 23–25 January 2024 to:

- a) Compile the catch data of sandeel in assessment areas 1r, 2r, 3r, 4, 5r, 6, 6a and 7r and address generic ToRs for Regional and Species Working Groups that are specific to sandeel stocks in the North Sea ecoregion;

and in Aberdeen University, UK, 12-21 March 2024 to:

- b) Compile the catch data of North Sea and Western Baltic herring on 12-14 March;
- c) Address generic ToRs for Regional and Species Working Groups on 15-21 March, for all other stocks assessed by HAWG.

The assessments will be carried out based on the Stock Annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2024 ICES data call.

HAWG will report by 10 February (sandeel), 21 April (sprat) and 28 May (herring) 2024 for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group*

### **NIPAG – Joint NAFO/ICES Pandalus Assessment Working Group**

*T3 - To be approved on the Resolutions Forum when remaining issues have been addressed*

2023/AT/FRSG04 The **Joint NAFO/ICES Pandalus Assessment Working Group** (NIPAG), chaired by Fabian Zimmermann, Norway (ICES Chair) and Mark Simpson, Canada (NAFO Chair), will meet from 6–9 May 2024 in IMR, Tromsø, to:

- a) Address generic ToRs for Regional and Species Working Groups for Northern shrimp in divisions 3.a and 4.a East stock.
- b) The WG will reconvene in the autumn (TBC) to address generic ToRs for Regional and Species Working Groups, for other regionally relevant stocks.”

NIPAG will report by 24 May 2024 for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group*

### **NWWG – Northwestern Working Group**

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG05 The **Northwestern Working Group** (NWWG), chaired by Helga Bára Mohr Vang\*, Faroe Islands, and Teunis Jansen, Denmark, will meet in Nuuk, Greenland, 22–26 April 2024 to:

- a) Address generic ToRs for Regional and Species Working Groups for all stocks except those listed in ToRs b);

and online in October/November 2024 (*dates to be decided in April 2024*) to:

- b) Address generic ToRs for Regional and Species Working Groups, for Cod (*Gadus morhua*) in Subdivision 5.b.1 (Faroe Plateau), Cod in Subdivision 5.b.2 (Faroe Bank,) Haddock (*Melanogrammus aeglefinus*) in Division 5.b (Faroes grounds) and Saithe (*Pollachius virens*) in Division 5.b (Faroes grounds).

The assessments will be carried out on the basis of the stock annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2024 ICES data call.

NWWG will report by 15 May and 10 November 2024 for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group*

## WGAMEEL – Working Group on American Eel

*Approved in November 2021 – Updated in September 2022*

2021/2/FRSG06 **Working Group on American Eel (WGAMEEL)**, co-chaired by Thomas Pratt, Canada, and Kristen Anstead, USA, will be established, will work on ToRs, and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2022	September 13-15, 2022	Online	Interim report by 29 September 2022 to Fisheries Research Steering Group	
Year 2023	TBD	USA	Interim report to Fisheries Research Steering Group	
Year 2024	TBD	Canada	Final report to Fisheries Research Steering Group	

### ToR descriptors

TO R	DESCRIPTION	BACKGROUND	SCIENCE PLAN CODES	DURATION	EXPECTED DELIVERABLES
	This should capture the objectives of the ToR	Provide very brief justification, e.g. advisory need, links to Science Plan and other WGs	Use codes (max 3 per ToR)	1, 2 or 3 years	Specify what is to be provided, when and to whom
a	Collate and evaluate data on American eel abundance, distribution, habitat, and biology from surveys and fisheries in Canada and the United States	Fishery-independent and fishery-dependent time series datasets available for various life stages (glass eels, elvers, yellow eels, silver eels) in both countries will be critically reviewed. While the primary focus will be on abundance time series, other types of data (distribution, habitat, biology) may also be important to consider.	1.7, 1.8, 3.1	Year 1	Review paper

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		Growth-phase American eels are known to use all sheltered coastal (bay, estuary) and all accessible freshwater (river, stream, lake, pond) habitat types. However, knowledge of eel status is often based on habitat-specific series-of-			
b	Assemble information on spatial population structure of growth-phase American eels and devise approaches to fill data gaps	opportunity (e.g. stream electrofishing, estuary seining), leaving data gaps in other habitats (lakes and ponds). This effort will search for previously unexploited data sources and draw on GIS-based modelling tools to advance a pan-habitat understanding of growth-phase American eel status and relative abundance.	1.7, 1.8, 3.1	Years 1 & 2	Review paper

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		Recognizing the complexity of Indigenous knowledge systems (IKS) as distinct ways of knowing, IKS is becoming increasingly recognized for its contribution as a form of adaptive management that may enhance sustainable management of resources. However, few attempts to integrate scientific knowledge and IKS exist for eels. The WG will compile existing Indigenous knowledge for the purpose of enhancing current understanding and to improve the management and sustainability of eels.			
c	Enhance current understanding of eel spatial distribution, abundances, alternative management strategies, and appreciation of the cultural and social significance of eels by integrating existing Indigenous knowledge systems to complement current scientific knowledge		3.6, 7.1, 7.5	Years 1, 2 & 3	Review paper

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d	Compare and contrast modelling approaches used for European and American eels and identify data needs for these approaches	<p>Beginning in 2007, the European Union mandated member states to compare current European silver eel escapement in eel management units to estimated escapement under pristine conditions. However, this method has not been used to provide management advice, which is instead based on recruitment trends. The American eel has been assessed in US Atlantic states by a model based on fisheries-induced abundance changes, and in Canada's Maritimes Region by spawner-per-recruit analysis. The potential of these approaches to provide insight into American eel population dynamics and status will be examined in the context of current and potential future data availability.</p>	4.3	Years 2 & 3	Review paper
e	Identify potential stock assessment methods and management approaches that would be appropriate to use for fishery management and conservation needs	<p>International governance (i.e., stock assessment and management) remains undeveloped for the American eel, which is comprised of a single, panmictic population shared among many jurisdictions. Although there are concerted assessment and management efforts within each country, there is no formal binational organization overseeing this species between the two main users of the resource, Canada and the United States. The</p>	4.3	Years 2 & 3	Report to ICES on methods to improve American eel assessments.

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WG will propose methods that could improve assessment, management, and conservation of eels in both countries.

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### Summary of the Work Plan

Year 1	The WG will meet online to address primarily the first 3 TORs.
Year 2	The WG will meet online or face to face to address the 5 TORs.
Year 3	The WG will meet online or face to face to address primarily the last 2 TORs. The WG will review drafts of papers developed following the first 2 years.

### Supporting information

Priority	The current activities of this Group will lead ICES into issues related to the ecosystem effects of fisheries, especially with regard to the application of the Precautionary Approach. Consequently, these activities are considered to have a very high priority.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resources required to undertake additional activities in the framework of this group is small.
Participants	The Group should be attended by some 20–25 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	There are no obvious direct linkages but developing the expertise could link to ACOM in the future.
Linkages to other committees or groups	Interactions will be sought with WGEEL and WGFEA.
Linkages to other organizations	There are linkages to a number of organizations and institutions throughout North America and Europe, such as the Research Programme on European eel from the General Fisheries Commission for the Mediterranean.

## WGBAST – Baltic Salmon and Trout Assessment Working Group

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG07 The **Baltic Salmon and Trout Assessment Working Group** (WGBAST), Katarina Magnusson\* (Sweden) and Katarzyna Nadolna-Altyn\* (Poland) will meet 9–17 April 2024 in Gävle, Sweden to:

- a) Address relevant points in the Generic ToRs for Regional and Species Working Groups;

Material and data relevant for the meeting must be available to the group on the dates specified for the 2024 ICES data call.

WGBAST will report by 3 May 2024 for the attention of ACOM.

*Further specific terms of reference and/or workshops linked to WGBAST may arise.*

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## **WGBFAS – Baltic Fisheries Assessment Working Group**

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG08 The **Baltic Fisheries Assessment Working Group** (WGBFAS), chaired by Kristiina Hommik, Estonia, will meet on 10–11 April 2024 online and on 16–23 April 2024 at ICES HQ, Copenhagen, Denmark to:

- a) Address generic ToRs for Regional and Species Working Groups.
- b) Review the main result from WGMIXFISH, WGIAB, WGSAM, WGBIFS, WKBMSYSPICT3, WKHERBAL, WKNEWREF, and WKREBULD2, with main focus on the biological processes and interactions of key species in the Baltic Sea.

The assessments will be carried out on the basis of the stock annexes. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates to be specified in the 2024 ICES data call.

WGBFAS will report by 9 May 2024 for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group.*

## **WGBIE- Working Group for the Bay of Biscay and Iberian waters Ecoregion**

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG09 The **Working Group for the Bay of Biscay and Iberian waters Ecoregion** (WGBIE), chaired by Ching Villanueva, France and Santiago Cerviño, Spain, will meet in Lisbon, Portugal, 30 April 2024 – 8 May 2024 to:

- a) Address generic ToRs for Regional and Species Working Groups;
- b) Review results and recommendations from benchmark and other interim relevant workshops held in 2023 and early 2024;
- c) Update on Stock ID studies

The assessments will be carried out on the basis of the stock annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2024 ICES data call.

WGBIE will report by May 17 2024 for the attention of the Advisory Committee.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group.*

## **WGCSE – Working Group for the Celtic Seas Ecoregion**

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG10 The **Working Group for the Celtic Seas Ecoregion** (WGCSE), chaired by Jonathan White, Ireland and Ruth Kelly\*, UK will meet 8–17 May 2024 in ICES HQ Copenhagen, Denmark to:

- a) Address generic ToRs for Regional and Species Working Groups;

and online in September (*dates to be decided in May 2024*) to:

- b) Address generic ToRs for Regional and Species Working Groups for *Nephrops* stocks, anglerfish and megrim in Rockall.

The assessments will be carried out on the basis of the stock annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2024 ICES data call.

WGCSE will report by 31<sup>st</sup> May 2024 for the attention of ACOM, and by October 2024 for *Nephrops* stocks, anglerfish and megrim in Rockall.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group*

### **WGDEEP – Working Group on the Biology and Assessment of Deep–Sea Fisheries Resources**

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG11      The **Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources** (WGDEEP), chaired by Elvar Hallfredsson, Norway and Juan Gil Herrera, Spain, will meet in Copenhagen, Denmark, 24–30 April 2024 to:

- a) Address generic ToRs for Regional and Species Working Groups.
- b) Update the description of deep-water fisheries in both the NEAFC regulatory areas and ICES area(s) by compiling data on catch/landings, fishing effort (inside versus outside the EEZs, in spawning areas, areas of local depletion, etc.), and discard statistics at the finest spatial resolution possible by ICES Subarea and Division and NEAFC regulatory areas. In particular, describe and prepare a first advice draft of any new emerging deep-water fishery with the available data in the NEAFC regulatory areas.
- c) Continue work on exploratory assessments for deep-water species.
- d) Evaluate the status of stocks for the provision of advice in 2024.

The assessments will be carried out based on the Stock Annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2024 ICES data call.

WGDEEP will report by 20 May 2024 for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group.*

## WGDIAD – Working Group on Science to Support Conservation, Restoration and Management of Diadromous Species

2023/MT/FRSG12

### WGEEL – Joint EIFAAC/ICES/GFCM Working Group on Eels

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG13 The Joint EIFAAC/ICES/GFCM Working Group on Eels (WGEEL), chaired by Jan-Dag Pohlmann, Thünen Institute, Germany and Caroline Durif, Norway will meet, in a split meeting from 11–16 September (online) and 7–14 October in 2024 (venue TBD) to:

- a) Address the generic EG ToRs from ICES, and any requests from EIFAAC or GFCM;
- b) Report on developments in the state of the European eel (*Anguilla anguilla*) stock, the fisheries on it and other anthropogenic impacts;
- c) Report on updates to the scientific basis of the advice, including any new or emerging threats or opportunities;
- d) Identify and address Mediterranean-specific issues on European eel
- e) Implement the roadmap proposed by WKFEA

Material and data relevant for the meeting must be available to the group on the dates specified in the 2024 ICES data call.

WGEEL will report by Date, xx October 2024 for the attention of ACOM, WGDIAD, FRSG and FAO, EIFAAC and GFCM.

### Supporting Information

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Priority	<ol style="list-style-type: none"><li>i) The status of the European eel stock remains outside safe biological limits and continuing and further management actions are required to recover the stock.</li><li>ii) The present stock status assessment is based on recruitment time series, which have no predictive power and therefore cannot be used to identify the most effective way to recover the stock nor the time scale over which recovery might be achieved. Therefore, the development and application of further status assessment methods are urgently required. Therefore the findings of WKFEA require particular attention.</li><li>iii) The Council Regulation (EC) 1100/2007 obliges EU Member States to report national stock indicators, to take management measures and to report progress. Non-EU countries have no such legal obligation, but the same aspirations are necessary to provide a whole-stock assessment and management. The Working Group continues to provide EIFAAC, ICES and the GFCM countries with support in implementing and improving such actions.</li><li>iv) The EU has requested annually recurring scientific advice on the European eel. Specifically, for eel, the advice is sought in support of the Eel Regulation (EC 1100/2007).</li></ol>
Scientific justification	European eel life history is complex and atypical among aquatic species. The stock is genetically panmictic and data indicate random arrival of adults in the spawning area. The continental eel stock is widely distributed and there are strong local and regional differences in population dynamics and local

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	<p>stock structures. Fisheries on all continental life stages take place throughout the distribution area. Local impacts by fisheries vary from almost nil to heavy overexploitation.</p> <p>Other forms of anthropogenic mortality (e.g. hydropower, pumping stations) also impact on eel and vary in distribution and local relevance.</p> <p>Most but not all EU Member States reported quantitative estimates of the required stock indicators to the EU in 2012, 2015, 2018 and 2021. The reliability and accuracy of these data have not yet been fully evaluated, but the ICES WKEMP will examine this. Furthermore, the stock indicators of some non-European countries within the natural range are lacking.</p>
Resource requirements	SharePoint, WebEx
Participants	EIFAAC, ICES and GFCM Working Group Participants, Invited Country Administrations, Client representative
Secretariat facilities	Support to organize the logistics of the meeting.
Financial	At countries expense
Linkages to advisory committees	ACOM
Linkages to other committees or groups	WGDIAD, SCICOM, FRSG
Linkages to other organizations	FAO EIFAAC, GFCM, EU DG-MARE, EU DG-ENV

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group.*

## **WGEF - Working Group on Elasmobranch Fishes**

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG14 The **Working Group Elasmobranch Fishes** (WGEF), chaired by Sophy McCully Phillips (UK) and Teresa Moura\* (Portugal), will meet:

online 5–6 June 2024 to:

- a) Compile the catch and length data for all elasmobranch stocks;

and in Lisbon, Portugal, from 18–27 June 2024 to:

- b) Address generic ToRs for Regional and Species Working Groups.
- c) Update the description of elasmobranch fisheries for deep-water, pelagic and demersal species in the ICES area and compile landings, effort and discard statistics by ICES Subarea and Division, and catch data by NEAFC regulatory areas. Describe and prepare a first Advice draft of any emerging elasmobranch fishery with the available data on catch/landings, fishing effort and discard statistics at the finest spatial resolution possible in the NEAFC RA and ICES area(s);
- d) Evaluate the stock status for the provision of biennial advice due in 2024 for: (i) spurdog in the NE Atlantic; and (ii) skates in the Celtic Seas and Bay of Biscay and Iberian Coast ecoregions;
- e) Collate landings and discard data from countries and fleets according to the ICES data call to follow recommendations from WKSHARK5 to: (i) address the following issues: data quality and onboard coverage; raising factors; discard retention patterns between fleets and countries; discard survival; (ii) advise on how to include

- discard information in the advisory process; and (iii) develop a coherent data-base for landings/discard information used in the assessments.
- f) Follow the outcomes of WSKATE and make the best use of survey indices in the assessments where appropriate.
  - g) Work intersessionally to draft/update stock annexes and then develop a procedure and schedule for subsequent reviews.

The assessments will be carried out on the basis of the stock annex in National Laboratories, prior to the meeting. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting as specified in the 2024 ICES data call must be available to the group no later than 14 days prior to the starting date.

WGEF will report by TBD August 2024 for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group.*

#### **WGHANSA – Working Group on Southern Horse Mackerel Anchovy and Sardine**

*Approved in Resolutions meeting on 31 October 2023, chair and venue approved in the resolutions forum on 20 February 2024.*

2023/AT/FRSG15      The **Working Group on Southern Horse Mackerel Anchovy and Sardine** (WGHANSA), chaired by Rosana Ourens (UK) will meet online 27–31 May 2024 (WGHANSA-1) to:

- a) Address generic ToRs for Regional and Species Working Groups for relevant stocks (hom.27.9a and ane.27.9a in WGHANSA-1 and pil.27.7, pil.27.8abd, pil.27.8c9a and ane.27.8 in WGHANSA-2);

and in Madrid, Spain 25-29 November 2024 to:

- b) Address generic ToRs for Regional and Species Working Groups for remaining relevant stocks (pil.27.7, pil.27.8abd, pil.27.8c9a and ane.27.8).

The assessments will be carried out on the basis of the Stock Annexes. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2024 ICES data call.

WGHANSA1 will report by 17 June 2024 and WGHANSA-2 will report by 13 December 2024 for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group.*

#### **WGMIXFISH–ADVICE – Working Group on Mixed Fisheries Advice**

2023/AT/FRSG16      *Resolution pending*

## WGMIXFISH-METHODS – Working Group on Mixed Fisheries Advice Methodology

*T3 – To be approved in the resolutions forum, on the basis that ToR b) is on hold*

2023/AT/FRSG17 The Working Group on Mixed Fisheries Advice Methodology (WGMIXFISH-METHODS), chaired by Marc Taylor, Germany, and Harriet Cole, UK, will meet in Edinburgh, UK, 17–21 June 2024 to:

- a) Continue the improvement of WGMIXFISH-ADVICE data call, data processing, methodological framework, workflow, auditing, updating associated documentation and increasing transparency;
- b) Respond to the outcomes of the Mixed Fisheries Scoping Meeting;
- c) Exploration of developments in methodology and advice;
- d) Respond to the outcomes and issues encountered during WGMIXFISH-ADVICE;
- e) Develop mixed fisheries models for sea regions not currently covered in the mixed fisheries advice.

WGMIXFISH-METHODS will report by 29 July 2024 for the attention of ACOM.

### Supporting Information

Priority:	The work is essential to ICES to progress in the development of its capacity to provide advice on multispecies fisheries. Such advice is necessary to fulfil the requirements stipulated in the MoUs between ICES and its client commissions.
Scientific justification and relation to action plan:	The issue of providing advice for mixed fisheries remains an important one for ICES. Following the Aframe project (2007-2009), SGMIXMAN (2008) and AGMIXNS (2009) where methods were developed and applied, WGMIXFISH has continued this work, combining outputs of single-stock-assessments and métier-effort data to provide forecast of effort and multi-species catch at fleet level based on annual single stock catch advice. WGMIXFISH –METHODS will meet to continue this development, ensuring outputs are informative and fit for purpose.
Resource requirements:	No specific resource requirements, beyond the need for members to prepare for and participate in the meeting.
Participants:	Experts with qualifications regarding mixed fisheries aspects, fisheries management and modelling based on limited and uncertain data.
Secretariat facilities:	Meeting facilities, production of report.
Financial:	None
Linkages to advisory committee:	ACOM
Linkages to other committees or groups:	SCICOM through the WGMG. Strong link to STECF.
Linkages to other organizations:	This work serves as a mechanism in fulfilment of the MoU with EC and fisheries commissions. It is also linked with STECF work on mixed fisheries.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group*

## WGNAM – Working Group on Northwest Atlantic Mackerel Ecology and Assessment

*This resolution was approved on the Resolution Forum in October 2022*

2021/2/FRSG40            The **Working Group on Northwest Atlantic Mackerel Ecology and Assessment** (WGNAM), co-chaired by Kiersten Curti, USA and Elisabeth Van Beveren, Canada, will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2022	24-27 October	online	Interim report by 15 November FRSG	
Year 2023			Interim report by Date Month May to FRSG	
Year 2024	8-12 April	TBD	Final report by Date Month May to FRSG	

### ToR descriptors

ToR	Description	Background	<a href="#">Science Plan Codes</a>	Duration	Expected Deliverables
a	Evaluate population structure of Atlantic mackerel and consider the impact of spatial structure on the population dynamics in the region.	Atlantic mackerel in the Northwest Atlantic have long been divided into a northern and southern contingents – definitions based on spawning areas and migratory patterns. The biological relationship between these two contingents is unclear. Population structure in small scombrids (including Northeastern Atlantic Atlantic mackerel) will be reviewed and a comparison of recent methods and results (genomics and otolith stable isotopes) will be made. Presentations and discussions should provide a platform to develop and optimize research projects aimed at differentiating fish from each contingent, and how this capacity should best be used to improve the stock assessments of Atlantic mackerel in the US and Canada.	1.8, 6.6	3 years	Review paper



b	Compare and contrast data collection programs, current research and modeling used for Atlantic Mackerel in the Northwest Atlantic and identify data needs and research topics that could improve assessments.	The Atlantic Mackerel stock is assessed separately by both the U.S. and Canada. In recent years, there has been increased collaboration in developing assessments. Science supporting the two assessments will be compared including data and models. Data and model assumptions reviewed should include but not be restricted to fishery independent and dependent surveys, acoustics, reproductive, aging, growth, natural mortality, availability and habitat. From this comparison, data needs and research questions will be identified to improve assessments in the future.	5.2	3 years	Review paper
c	Develop and evaluate hypotheses for decline in recruitment of Atlantic mackerel and identify research approaches to evaluate these hypotheses.	The biomass of the Northwest Atlantic Mackerel stock is low. One of the contributing factors is decreased recruitment. Hypotheses have been developed for the northern contingent, but these hypotheses have not been evaluated for the southern contingent. Further, the role of physical changes in the system, changes in movement patterns, changes in age-structure, and changes in reproductive dynamics have not been evaluated. This effort will take a holistic approach and consider evidence for a variety of recruitment hypotheses and then identify research approaches to evaluate the most promising ones.	5.1	3 years	Review paper

### Summary of the Work Plan

YEAR 1	The WG will meet and address each ToR.
Year 2	The WG will review drafts of papers developed following the year 1 meeting.
Year 3	The WG will complete the review papers and submit for publication. A final report will also be completed.

### Supporting information

Priority	The current activities of this Group will lead ICES into issues related to the ecosystem effects of fisheries, especially with regard to the application of the Precautionary Approach. Consequently, these activities are considered to have a very high priority.
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
Participants	The Group will be attended by some 5-10 members and guests
Secretariat facilities	None.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	There are no obvious direct linkages but developing the expertise could link to ACOM in the future.
Linkages to other committees or groups	Interactions will be sought with WGMEGS and GWIDE.
Linkages to other organizations	There are linkages to a number of organizations and institutions throughout North America

## WGNAS – Working Group on North Atlantic Salmon

*Approved on Resolutions forum 29 January 2024*

2023/AT/FRSG18 The **Working Group on North Atlantic Salmon (WGNAS)**, chaired by Alan Walker (UK), will meet in Galway, Ireland 11–21 March 2024 to address the ToRs detailed below:

1. With respect to Atlantic salmon in the North Atlantic area:
  - 1.1. provide an overview of salmon catches and landings by country, including unreported catches and catch and release, and production of farmed and ranched Atlantic salmon in 2023<sup>1</sup>;
  - 1.2. report on significant new or emerging threats to, or opportunities for, salmon conservation and management<sup>2</sup>;
  - 1.3. provide a compilation of tag releases by country in 2023;
  - 1.4. provide an update on the distribution and abundance of pink salmon across the North Atlantic through 2023; and,
  - 1.5. identify relevant data deficiencies, monitoring needs and research requirements.
2. With respect to Atlantic salmon in the North-East Atlantic Commission area:
  - 2.1. describe the key events of the 2023 fisheries<sup>3</sup>;
  - 2.2. review and report on the development of age-specific stock conservation limits, including updating the time-series of the number of river stocks with established CLs by jurisdiction;
  - 2.3. describe the status of the stocks, including updating the time-series of trends in the number of river stocks meeting CLs by jurisdiction; and
  - 2.4. provide catch options or alternative management advice for the 2024 / 2025–2026 / 2027 fishing seasons, with an assessment of risks relative to the objective of exceeding stock conservation limits, or pre-defined NASCO Management Objectives, and advise on the implications of these options for stock rebuilding<sup>4</sup>.
3. With respect to Atlantic salmon in the North American Commission area:
  - 3.1. describe the key events of the 2023 fisheries (including the fishery at St Pierre and Miquelon)<sup>3</sup>;

- 3.2. update age-specific stock conservation limits based on new information as available, including updating the time-series of the number of river stocks with established CLs by jurisdiction;
- 3.3. describe the status of the stocks, including updating the time-series of trends in the number of river stocks meeting CLs by jurisdiction; and
- 3.4. provide catch options or alternative management advice for 2024–2027 with an assessment of risks relative to the objective of exceeding stock conservation limits, or pre-defined NASCO Management Objectives, and advise on the implications of these options for stock rebuilding<sup>4</sup>.
4. With respect to Atlantic salmon in the West Greenland Commission area:
  - 4.1. describe the key events of the 2023 fisheries<sup>3</sup>;
  - 4.2. describe the status of the stocks<sup>5</sup>; and
  - 4.3. provide catch options or alternative management advice for 2024-2026 with an assessment of risk relative to the objective of exceeding stock conservation limits, or pre-defined NASCO Management Objectives, and advise on the implications of these options for stock rebuilding<sup>4</sup>.
5. Provide input to and feedback on the development of draft formats and materials for providing advice.
6. Address relevant points in the Generic ToRs for Regional and Species Working Groups for each salmon stock complex.

Material and data relevant for the meeting must be available to the group by the dates specified in the 2024 ICES data call.

The assessments will be carried out on the basis of the stock annex and the most recent benchmark as agreed by ACOM (i.e., on the basis of WKBSalmon 2023).

*Notes:*

- <sup>1</sup> With regard to ToR 1.1, for the estimates of unreported catch the information provided should, where possible, indicate the location of the unreported catch in the following categories: in-river; estuarine; and coastal. Numbers of salmon caught and released in recreational fisheries should be provided.
- <sup>2</sup> With regard to ToR 1.2, ICES is requested to include reports on any significant advances in understanding of the biology of Atlantic salmon that is pertinent to NASCO.
- <sup>3</sup> In the responses to ToRs 2.1, 3.1 and 4.1, ICES is asked to provide details of catch, gear, effort, composition and origin of the catch and rates of exploitation. For homewater fisheries, the information provided should indicate the location of the catch in the following categories: in-river; estuarine; and coastal. Information on any other sources of fishing mortality for salmon is also requested. For ToR 4.1, if any new surveys are conducted and reported to ICES, ICES should review the results and advise on the appropriateness of incorporating resulting estimates into the assessment process.
- <sup>4</sup> In response to ToRs 2.4, 3.4 and 4.3, provide a detailed explanation and critical examination of any changes to the models used to provide catch advice and report on any developments in relation to incorporating environmental variables in these models. Also provide a detailed explanation and critical examination of any concerns with salmon data collected in 2023 which may affect the catch advice considering the restrictions on data collection programmes and fisheries due to the COVID 19 pandemic.

<sup>5</sup> In response to ToR 4.2, ICES is requested to provide a brief summary of the status of North American and North-East Atlantic salmon stocks. The detailed information on the status of these stocks should be provided in response to ToRs 2.3 and 3.3.

WGNAS will report by 16 April 2024 for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group.*

## **WGNSSK – Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak**

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG19 The **Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak** (WGNSSK), chaired by Lies Vansteenbrugge, Belgium, and Alessandro Orio, Sweden, will meet 16–25 April 2024 in Lowestoft, UK and by online September 2024 to:

- a) Address generic ToRs for Regional and Species Working Groups.
- b) Assess Norway pout assessments by correspondence.
- c) Report on reopened advice as appropriate;

The assessments will be carried out on the basis of the stock annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2024 ICES data call.

WGNSSK will report by 24 May 2024, and by 30 September 2024 (Norway pout) for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group*

## **WGRFS – Working Group on Recreational Fisheries Surveys (WGRFS)**

*Was transferred from DSTSG to FRSG in 2023*

2022/2/FRSG36 The **Working Group on Recreational Fisheries Surveys** (WGRFS), chaired by Kieran Hyder, UK, and Estanis Mugerza, Spain, will work on ToRs and generate deliverables as listed in the table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2023	19–23 June 2023	Ancona, Italy	Interim report by 01 November 2023 to FRSG	
Year 2024	10–14 June 2024	Horta, Azores, Portugal	Interim report by 01 November 2024 to FRSG	Estanis Mugerza completes 3 years as chair

Year	14–18 June	TBD	Final report by 01 November	Kieran Hyder
2025	2025		2025 to FRSG	completes 3 years as chair

### ToR descriptors

ToR	Description	Background	<a href="#">Science Plan codes</a>	Duration	Expected Deliverables
<b>a</b>	Collate and review quality of national estimates of recreational catch and effort, catch-and-release impacts, and socio-economic benefits for candidate stocks, identify significant data gaps in coverage and species, and support the ICES TAF and ecosystem approach.	Most countries are engaged in data collection. This activity collates national participation, catch and socio-economic data sets together, understands the quality of data, and highlights where new data are needed. This is important for supporting the ICES TAF and ecosystem approach.	2.1, 3.1, 3.2, 5.4	Regular activity in each year, with intersessional tasks and workshops to develop new approaches.	Report WG perspectives and publication of scientific papers
<b>b</b>	Assess the validity of traditional knowledge, new survey designs, novel methods (e.g. citizen science, apps), innovative statistical methods for data provision, and approaches for selecting appropriate cost-effective methods.	Recreational data can be collected in many ways, with different associated biases. This supports improvement of analysis of existing surveys and understanding the utility of new methods. This will lead to the most robust and broad evidence-base to underpin assessment and advice.	3.1, 3.2, 3.3, 3.6, 4.1, 4.3, 4.4, 5.4	Regular activity in each year, with intersessional tasks and workshops to develop new approaches.	Report WG perspectives and publication of scientific papers
<b>c</b>	Provide guidance to ICES and respond to ad hoc requests from ACOM on the availability of data, design of data collection programs, data storage systems, use of data in assessments, catch allocation, and ecosystem approach.	Recreational catches are not included in many assessments and data collection is limited to a few species. This activity supports data collection requirements, access to data and methods needed. This will facilitate embedding recreational fisheries	3.1, 3.2, 3.3, 3.5, 3.6, 5.1	Regular activity in each year, with intersessional tasks and workshops to develop new approaches.	Report WG perspectives and publication of scientific papers

ToR	Description	Background	<a href="#">Science Plan codes</a>	Duration	Expected Deliverables
		into fisheries management.			
d	Develop approaches for regional data collection programmes that generate robust data for end users and support the ICES TAF and ecosystem approach.	Regionalisation is an important goal, but implementation is unclear. This is a challenge for recreational fisheries due to the different actors, gears and survey instruments. This will underpin generation of transparent and robust regional data to support end users needs.	3.1, 3.2, 3.3, 3.6,	Regular activity in each year, with intersessional tasks and workshops to develop new approaches.	Report WG perspectives and publication of scientific papers
e	Evaluate the use of economic (e.g. impact, valuation), social (e.g. governance, behaviour, welfare, health), and communication (e.g. participatory process, messaging) to support the assessment and management of recreational fisheries.	Recreational fisheries have broad benefits and behavioural responses are difficult to predict due to diverse motivations. Hence, understanding of the human dimension is needed. This develops understanding of the data and methods needed for codesign.	7.1, 7.4, 7.6	Regular activity in each year, with intersessional tasks and workshops to develop new approaches.	Report WG perspectives and publication of scientific papers
f	Review outcomes of the workshops organized by the group.	Recreational fisheries is a diverse topic, so not all aspects can be addressed at WGRFS. A number of workshops on specific topic have been done or are in the workplan. This reviews outcomes of the workshops and the implications for recreational fisheries.	5.4, 7.1, 7.4	Activity-dependent on workshop	Report WG perspectives and publication of scientific papers

### Summary of the work plan

Year 1	<p>a) Review progress of intersessional groups (i.e. governance, survey design, quality and analysis, regional coordination, data storage, catch-and-release impacts, novel methods, assessment and catch allocation, human dimensions, and communication) and agree approach for the next year. (a, b, c, d, e)</p> <p>b) Evaluate the quality of up to three national survey programmes using the QAT and provide feedback on tasks requested by ICES. (a, c)</p>
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	<ul style="list-style-type: none"> <li>c) Review the outputs from ICES WRGRFS led workshops and discuss next steps for the inclusion of outcomes. (f)</li> <li>d) Scope data call for ICES based on the formats developed by WGRFS and the RDBES core group. (c, d, f)</li> <li>e) Assess priorities for inclusion of recreational fisheries in stock assessment using data from the pilot studies. (a, c, d)</li> <li>f) Develop ICES workshop proposal with WGCATCH for integrating probabilistic and non-probabilistic surveys. (b)</li> <li>g) Create ICES workshop proposal to evaluate post-release mortality estimates, potential sublethal effects, and reasonable extrapolations across species and fisheries for inclusion in stock assessments. (a)</li> <li>h) Assess the potential for food safety and human health issues from consumption of recreational caught fish (e.g. environmental toxins). (e)</li> <li>i) Review and share methods for engaging with stakeholders and the potential for participatory approaches. (e)</li> <li>j) Draft a roadmap to increase the inclusion of recreational fisheries data into advisory processes</li> </ul>
Year 2	<ul style="list-style-type: none"> <li>a) Evaluate the outcomes from the intersessional work and agree approach for the next year. (a, b, c, d, e, f)</li> <li>b) Review national programmes including assessment of quality of up to three programmes and provide feedback on tasks requested by ICES. (a)</li> <li>c) Assess the potential of novel survey methods to deliver recreational fisheries data (e.g. citizen science approaches, smartphone apps, traditional knowledge). (b)</li> <li>d) Develop a framework for allocation of catches between sectors based on a review of existing systems and provide best-practice guidance. (c,d)</li> <li>e) Develop MSE approaches to assess the impact of uncertainty in recreational catches on assessment and regional sampling programme. (d).</li> <li>f) Review and share methods for engaging with stakeholders and the potential for participatory approaches. (e)</li> <li>g) Assess outcomes of workshop on inclusion of recreational data in stock assessments. (f)</li> </ul>
Year 3	<ul style="list-style-type: none"> <li>a) Review progress of intersessional groups (i.e. governance, survey design, quality and analysis, regional coordination, data storage, catch-and-release impacts, novel methods, assessment and catch allocation, human dimensions, and communication) and agree approach for the next year. (a, b, c, d, e)</li> <li>b) Evaluate the quality of up to three national survey programmes using the QAT and provide feedback on tasks requested by ICES. (a, c)</li> <li>c) Review the outputs from ICES WRGRFS led workshops and discuss next steps for the inclusion of outcomes. (f)</li> <li>d) Collate advances in survey methods that could be used to improved national approaches. (b)</li> <li>e) Assess the potential for impact of climate change on species caught by recreational fisheries and how that could impact on DCF and regional species requirements. (c, d)</li> <li>f) Develop ICES workshop proposal on MSE approaches to assess the impact of uncertainty in recreational catches on assessment and regional sampling programmes. (d).</li> <li>g) Assess the potential of novel survey methods to deliver recreational fisheries data (e.g. citizen science approaches, smartphone apps, traditional knowledge). (b)</li> </ul>

- h) Evaluate progress against three year plan and develop new ToRs.  
(a, b, c, d, e, f)

### Supporting information

Priority	High – the biological, social and economic impact of recreational fisheries is becoming increasingly recognised and needs to be included in the fisheries assessment and management processes.
Resource requirements	None.
Participants	The WG is normally attended by around 60 members and chair-invited experts.
Secretariat facilities	Normal backstopping support in the organization of the group.
Financial	None.
Linkages to ACOM and groups under ACOM	ACOM, WGBFAS, WGEEL, WGBAST, WGCSE, WGNSSK, WGBIE, WGMEDS, and benchmarks workshops for stocks that have recreational catches.
Linkages to other committees or group	WGCATCH.
Linkages to other organizations	<ul style="list-style-type: none"> <li>• EC, STECF, Regional Coordination Groups, Advisory Councils.</li> <li>• WECAFC/OSPESCA/CRFM/CFMC/MEDAC Working Group on Recreational Fisheries.</li> <li>• Many linkages to (inter)national angling associations, since WGRFS members estimate national marine recreational catches.</li> <li>• Links to broader organizations with interests in angling and fisheries management including EIFACC and FAO.</li> </ul>

### WGTAFGOV – Working Group on Transparent Assessment Framework Governance

*Approved in Resolutions meeting on 31 October 2023*

**2023/MT/FRSG20** The **Working Group on Transparent Assessment Framework Governance (WGTAFGOV)**, chaired by Iago Mosqueira\*, Netherlands, will work on ToRs and generate deliverables as listed in the Table below.

	MEETING DATES	MEETING DATES AND VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
<b>Year 2024</b>	1) 2) 3) 4)	Dates and venue TBD	Interim business report by <b>TBD</b> to FRSG, DIG, ACOM, and SCICOM	Iago Mosqueira takes over as chair
<b>Year 2025</b>	1) 2) 3) 4)	Dates and venue TBD	Interim business report by <b>TBD</b> to FRSG, DIG, ACOM, and SCICOM	
<b>Year 2026</b>	1) 2) 3) 4)	Dates and venue TBD	Final business report by <b>TBD</b> to FRSG, DIG, ACOM, and SCICOM	



## ToR descriptors

TO R	DESCRIPTION	BACKGROUND	SCIENCE PLAN CODES	DURATION	EXPECTED DELIVERABLES
<b>a</b>	Maintain overall responsibility over the TAF project, including adapting the priorities of work being carried out to the changing needs of ICES. Provide steering to the work of the ICES Secretariat TAF team.	Following the vision for TAF set by the manifesto, its translation into strategic decisions on work priorities is required. The relationships of TAF with other ICES initiatives (e.g. RDBES) are to be established so that TAF can cater to their needs. Guidance on handling of feedback, task prioritisation and expected resource availability is still needed.		3 years/ Generic ToR	. Annual strategic priorities for TAF. Definition of resources available. Definition of responsibilities. Collaboration of TAF and other relevant ICES initiatives.
<b>b</b>	<i>Based on the guidance established in ToR A:</i> Provide a channel for user feedback to the Transparent Assessment Framework. Feedback will be compiled by WGTAFGOV and appropriate actions to be taken with assigned responsibilities and resource requirements will be listed and prioritised.	TAF should develop to meet the requirements of a broad range of users and thus needs to be responsive to user feedback. Feedback will be collected and organised using GitHub and the traditional recommendations system from ICES reports. To achieve a long-term stability, availability and quality, TAF development requires a workplan with clear objectives and milestones. This can only be successfully implemented when resource requirements have been estimated and the availability of resources is known.		3 years/ Generic ToR	A GitHub site allowing users to submit feedback and requests. Provide an annual workplan, with an agreed and prioritised list of TAF related EG recommendations along with suggested resource allocations, budget estimates and feasibility estimates.
<b>c</b>	<i>Using the guidance established in ToR A and the feedback captured in ToR B:</i> Oversee and advise on the interpretation and prioritisation of recommendations and requests addressed to the	The project planning cycle needs to be responsive (more than one meeting a year) in order to manage the TAF development effectively. Although there is an annual plan, short		3 years/ Generic ToR	Reformulate and maintain a project board on GitHub to manage tasks. Review project plan and agree on tasks to be completed. Review new tasks for addition to the

	Transparent Assessment Framework.	term priorities must be evaluated against resource availability and needs of the ICES advice processes that vary through the year.		workplan, or for consideration for the next annual workplan.
<b>d</b>	Oversee development of user guidance and training for the Transparent Assessment Framework.	As TAF develops over time a range of users will require various levels of training including step by step user manuals, tutorials and workshops. Documentation of guidelines and procedures will also be necessary. Outreach activities will be required.	3 years/ Generic ToR	Annually updated training documentation. Workshops with specific goals proposed and planned where necessary. Relevant fora for dissemination investigated and outreach activities planned.

### Summary of the Work Plan.

<b>Year 1</b>	First meeting to establish ToRs a) and b) will be a physical meeting to be followed by quarterly online meetings dealing with ToR c) and d). DIG will aid in review of ToR a).
<b>Year 2</b>	ToRs c) and d) will be addressed in quarterly online meetings, with the potential annual meetings for prioritising ToRs a and b).
<b>Year 3</b>	ToRs c) and d) will be addressed in quarterly online meetings, with the potential annual meetings for prioritising ToRs a and b).

### Supporting information

<b>Priority</b>	High priority.
<b>Resource requirements</b>	A commitment of time from the members of the group consistent with progressing actions identified in the quarterly meetings.
<b>Participants</b>	ACOM Leadership and FRSG representative, one member each representing survey data, commercial data and stock assessments. Members with an overview of stock assessment results. ICES Secretariat and other related EG members as need be. Representative of main EGs using TAF. Members of the TAF team.
<b>Secretariat facilities</b>	Community Sharepoint site, remote meeting facilities.
<b>Financial</b>	No financial implications.
<b>Linkages to ACOM and groups under ACOM</b>	This is an integral component to the overall Quality Assurance Framework (of Advice) that ACOM together with the Coordination group are describing.
<b>Linkages to other committees or groups</b>	There is a strong linkage to DIG as the main umbrella for data/software governance structures.
<b>Linkages to other organizations</b>	DFO and NOAA have expressed interest in the system.

### WGTRUTTA – Working Group to develop and test assessment methods for Sea trout populations (anadromous *Salmo trutta*)

*This resolution was approved on the Resolution Forum in June 2020*

2019/2/FRSG20      The **Working Group to develop and test assessment methods for Sea trout populations (anadromous *Salmo trutta*) (WGTRUTTA)**, chaired by Johan

Höjesjö, Sweden, and Alan Walker, UK, will work on ToRs and generate deliverables as listed in the Table below.

The WG's 4-year term will run from June 2020 to November 2023.

	MEETING DATES	VENUE	REPORTING DETAILS	COMMENTS (CHANGE IN CHAIR, ETC.)
Year 2020	15–18 June	online meeting		Start-up meeting, learning lessons from WG1, preparing detailed workplan with roles & responsibilities, milestones & deliverables
Year 2021	19-21 January	Online meeting		Mid-year progress review and workshop
	29 June – 1 July	Online meeting	Interim E-eval by 1 October	Review progress in year 1 and plans for years 2 & 3
Year 2022	DATE February	Online		Mid-year progress review and workshop
	21–25 November	Rennes, France	Interim E-eval by 9 December	Mid-year progress review and workshop
Year 2023	23 -25 April	Gothenburg, Sweden		Workshop on juvenile assessment using habitat score and biological reference points.
	6-10 November	Evora, Portugal	Final report by 31 March 2024	Draft the Final Report and plan a further term. Submit the Final Report

### ToR descriptors

ToR	DESCRIPTION	BACKGROUND	SCIENCE		EXPECTED DELIVERABLES
			PLAN CODES	DURATION	
a	Describe the life history drivers and distribution of sympatric sea and freshwater trout populations	The trout life cycle is highly variable over space and time, which renders assessment and management challenging. Our understanding of ecological patterns in trout phenology, life history and distribution across large scale environmental gradients is far from complete but is a prerequisite to improving sea trout management.	5.2	3 years	A1. Fully establish the sea trout database, its population with data from all involved countries, and its preparation for inclusion as one of the official ICES databases.  A2. Define a sub-set of variables for trout life history and habitat characteristics accounting for the between-stocks

				<p>variances, for identifying key index rivers and for targeting stock-recruitment and state models.</p> <p>A3. Investigate trout distribution within rivers as a function of abiotic and biotic habitat characteristics.</p> <p>A4. Quantify the importance of anadromy for trout populations.</p>
b	Quantify the external pressures on trout populations in formats necessary to understand the state of local populations	Knowledge of the ecology of trout is limiting our ability to understand the consequences for trout populations of the rapidly increasing natural, anthropogenic, additive and cumulative impacts on aquatic environments.	2.1, 2.5, 5.6 3 years	<p>B1. Describe the current and potential future impacts of natural and anthropogenic impacts on trout populations.</p> <p>B2. Make recommendations for unified and standardized protocols for sampling trout, characterizing habitats and calibrating for extrapolations across the natural range.</p> <p>B3. Describe situations outside the Baltic where sea trout stocks may be exploited or otherwise impacted at an international scale.</p>
c	Develop a toolbox of methods to assess stock and population state, based on a suite of options, and suitable for a range of scenarios found across the natural range of the sea trout.	The WG (2017-2019) developed approaches for assessing the state of trout populations, including (i) stock-recruitment models using metrics from various life stages by applying several curve fitting approaches to 'data rich' stocks with data from counts, returning stock	3.2, 3.3, 6.1. 3 years	C1. Examine the S/R models from WG (2017-2019) in terms of transfer functions, types and amounts of data required for setting BRPs, additional data and better and standardized reporting of catches.

	<p>estimates, catches, and juvenile abundance surveys, and (ii) length-based indicators using index catchments, to demonstrate state and identify where pressures may have had an impact; (iii) extended the application of the Trout Habitat Scores (THS); and collaborated on development of a theoretical Bayesian Population Dynamics Model for Baltic sea trout. These all require further development and testing with novel data and situations in order to advance them to a toolbox for managers and other stakeholders.</p>		<p>C2. Examination of the opportunities to develop regional versions of the Trout Habitat Score (THS) process across the native range of sea trout.</p> <p>C3. Develop the Bayesian model of sea trout</p> <p>C4. Develop and propose a data collection framework to support LBI type analysis of pressures on stocks, liaising with EU Regional Coordination Groups.</p> <p>C5. Define the methods for the forecast of catches that would be consistent with the ICES application of the precautionary approach and, in case it is desired, MSY,</p>
d	<p>Develop solutions to achieve sustainable governance of trout stocks</p> <p>Sustainable use and management of the anadromous sea trout is challenging for many reasons including because the fish use multiple environments and are subject to a variety of impacts and stressors, migrating across different ecological and legislative borders. In many European countries, sea trout fishers are not registered or licenced, and knowledge of effort and catch is insufficient or lacking. Knowledge of non-fishery impacts is even more data-poor.</p> <p>To effectively conserve the varied and multiple contributions from sea trout to society, social scientific knowledge must complement ecology. Economic valuation</p>	7.1, 7.4, 7.7 3 years	<p>D1. Describe the key ecological, social and economic management objectives for sea trout fisheries across the natural range, to identify the target audience requirements.</p> <p>D2. Define conservation reference points to ensure stock sustainability consistent with the precautionary approach.</p> <p>D3. Establish what level of socio-economic risk (uncertainty) is acceptable to fisheries managers in setting management reference points.</p>

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studies can clarify how the public, including participants and non-participants of sea trout fishing, benefit from and value sea trout. This may vary spatially between fisheries (e.g. between countries) and, moreover, is likely affected by different regulation regimes between regions. Comparative studies of governance across countries and levels can identify “best practice” and learning across jurisdictions.

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D4. Explore and evaluate management strategies conducive to meeting socio-economic goals while ensuring the biological sustainability of the stocks.

### Summary of the Work Plan

Over the 3-year period, there will be 8 meetings, though some will be face-to-face whereas others will be by webex – the WG will only meet by webex in 2020, and will use webex as much as possible to minimise travel.

Meetings will address: a start-up meeting to agree the work plan with roles and responsibilities; annual review and planning meetings at the end of years 1 and 2; interim workshops in years 1, 2 and 3 focussing on specific tasks; a meeting to specifically draft the final report and a final meeting to submit the Final Report.

Subgroups will work on the ToRs between these meetings with regular contact through email and/or webinars. Most of the work regarding deliverables for the different ToRs will be planned and performed in parallel.

All four ToR will be launched at the onset of the working group and be delivered in parallel throughout the three-year term. However, given that ToR D requires expertise on socio-economics that is not within the existing membership but is available through other ICES working groups, we propose to carry out this ToR as a separate workshop under its own resolution in 2021/22.

### Supporting information

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Priority	The inclusion of sea trout and other diadromous fish in EU policy areas including the CFP and Marine Strategy Framework Directive means that it is important to improve the methods currently available to managers to assess the status of stocks and investigate the effects of management actions. The final report and recommendations will guide both individual countries in making progress on sea trout assessment and management and will steer ICES on the best next steps for sea trout science, assessment and advice.
Resource requirements	The research programmes which provide the main inputs to this group are already underway, and resources are already committed. The additional resource from ICES required to undertake additional activities in the framework of this group is only Secretarial support (see below). A proposal has been submitted for an International Training Network (ITN) of PhDs on subjects contributing to the general aims of the WGTRUTTA and, if successful, this will significantly enhance

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	resourcing of delivery. However, core delivery does not depend on this ITN support.
Participants	The Group is normally attended by some 15-20 members and guests.
Secretariat facilities	Standard support to EG.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	Links to ACOM, FRSG, WGBAST who provide advice on Baltic sea trout, and WGDIAD regarding diadromous fish stocks, life histories, threats and sustainable use of the resource.
Linkages to other committees groups	The activities of this group will take forward the developmental work of WGTRUTTA, testing the implementation of assessment methods, and addressing key knowledge gaps. Links will be fostered with the The Working Group on Cumulative Effects Assessments in Management (WGCEAM). This work will be closely associated with the ICES Ecosystem Observation Steering Group (EOSG) and by incorporating ToRD we will also link with the ICES Human Activities, Pressures and Impacts Steering Group (HAPISG) and any future work of the IEASG-WGSOCIAL. Working Group on Social Indicators.
Linkages to other organizations	Links to the EU Commission and the Data Collection Framework / EU_Multi-annual Plan (MAP), and to the associated InterSessional Sub-Group (ISSG) on Diadromous Species. Links to the EU-funded research projects of SAMARCH (Interreg: France, England); RETROUT (European Regional Developmental Fund); MARGEN II (Interreg: Sweden, Denmark, Norway).

## WGWISE- Working Group on Widely Distributed Stocks

*Approved in Resolutions meeting on 31 October 2023*

2023/AT/FRSG21 The **Working Group on Widely Distributed Stocks (WGWISE)**, chaired by Erling Kåre Stenevik, Norway, will meet 28 August to 3 September 2024 at the MFRI in Hafnarfjörður, Iceland to:

- a) Address generic ToRs for Regional and Species Working Groups.

The assessments will be carried out on the basis of the stock annex. The assessments must be available for audit on the first day of the meeting.

Material and data relevant for the meeting must be available to the group no later than 14 days prior to the starting date.

WGWISE will report by 10 September for the attention of ACOM.

*Only experts appointed by national Delegates or appointed in consultation with the national Delegates of the expert's country can attend this Expert Group*

## WKBSEABASS – Benchmark workshop on selected seabass stocks

*Approved in Resolutions meeting on 31 October 2023*

2023/WK/FRSG22 A **Benchmark workshop on selected seabass stocks (WKBSEABASS)** composed of three meetings (a stock ID workshop, a data workshop, and a benchmark workshop) chaired by Pia Schuchert\*, AFBI, and Massimiliano Cardinale\*, SLU, will:

**As part of the Stock ID workshop<sup>1</sup>** (report: <https://doi.org/10.17895/ices.pub.22794737>)

- a) Review information on stock identification for bss.27.4bc7ad-h and bss.27.8ab and conduct a comparative review of Atlantic seabass population structure, including critical evaluation of inferences from each source of information, to build up a picture of seabass stock structure in Celtic Sea, Bay of Biscay and adjacent areas, based on the following:
  - 1) Distribution and movements of different life-stages of seabass, including changes over time, inferred from:
    1. Tagging
    2. Scientific Surveys
    3. Commercial landings
    4. Dispersal models (e.g. of larva/juveniles)
  - 2) Genetic analyses
  - 3) Otolith microchemistry
  - 4) Morphometrics and meristics
  - 5) Life-history and parasites
  - 6) Other approaches not listed above
- b) Based on the evidence from ToR 1, formulate scenarios for seabass stocks in the Celtic Sea, Bay of Biscay and adjacent areas, and assess the evidence-based plausibility of each of these scenarios (including current definitions).
- c) Consider the practical implications, for data, particularly time-series of catch data and year class strength, and mixing rates of each of the scenarios in ToR 2, and how any difficulties might be dealt with. For example, considering spatial components with mixing in a single model has different implications for data compared to split stock units. Considerations should include how to deal with changes over time.
- d) Make recommendations for which seabass stock scenario(s) to take forward in the forthcoming seabass benchmark, including in what format data should be requested and prepared.

**As part of the data workshop 29 January–2 February 2024, in Copenhagen, Denmark:**

- e) Conduct a 4-day data workshop. Stakeholders are invited to contribute data (including data from non-traditional sources) and to contribute to data preparation and evaluation of data quality. Data, particularly catch information, should be collated as far back in time as possible. As part of the data compilation workshop consider the quality of data including discard and estimates;
- f) Make a proposal to the benchmark on the use and treatment of data for each assessment, including discards, surveys, life history, recreational fisheries etc.
- g) Following the DEWK, produce working documents to be reviewed during the Benchmark workshop at least one month prior to the workshop.

**As part of the benchmark workshop 25–29 November 2024, in Copenhagen, Denmark:**

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<sup>1</sup> Stock ID workshop chair: David Murray, UK; Stock ID invited experts: Naiara Rodríguez-Ezpeleta, Spain, and Florian Berg, Norway.



- h) Evaluate the appropriateness of data and methods to determine stock status and investigate methods for short term forecast taking agreed or proposed management plans into account for the stocks listed in the text table below. The evaluation shall include consideration of:
  - i) Life-history data;
  - ii) Fishery-dependent and fishery-independent data;
  - iii) Further consideration of environmental drivers, multispecies information, and ecosystem impacts for stock dynamics in the assessments and outlook
- i) Agree and document the most appropriate method for evaluating stock status and (where applicable) short-term forecast and update the stock annex as appropriate. Knowledge about environmental drivers, including multispecies interactions, and ecosystem impacts should be integrated in the methodology.
- j) A full suite of diagnostics (regarding data, retrospective behaviour, model fit etc.) should be examined as a whole to evaluate the appropriateness of any model developed and proposed for use in generating advice.

If no analytical assessment method can be agreed, then an alternative method for providing advice (ideally one of the WKLIFE X (<https://doi.org/10.17895/ices.pub.5985>) methods should be put forward;

- k) Re-examine and update (if necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points).
- l) Draft stock annexes for each of the stocks part of the benchmark outcomes.
- m) Develop recommendations for future improvements of the assessment methodology and data collection;
- n) Provide detailed guidance on the mechanics of the seabass allocation tool.

Stock
<b>bss.27.4bc7ad-h</b> – Seabass ( <i>Dicentrarchus labrax</i> ) in Divisions 4.b-c, 7.a, and 7.d-h (central and southern North Sea, Irish Sea, English Channel, Bristol Channel, and Celtic Sea)
<b>Bss.27.8ab</b> – Seabass ( <i>Dicentrarchus labrax</i> ) in divisions 8.a-b (northern and central Bay of Biscay)

The Benchmark Workshop will report by TBD 2024 for the attention of ACOM.

**WKREBUILD2 – Workshop on guidelines and methods for the design and evaluation of rebuilding plans for category 1–2 stocks**

*Approved in Resolutions meeting on 31 October 2023*

2023/WK/FRSG23 A **Workshop on guidelines and methods for the design and evaluation of rebuilding plans for category 1-2 stocks (WKREBUILD2)**, chaired by Martin Pastoors\* (Netherlands) and Dorleta Garcia\* (Spain) will meet in ICES HQ, Copenhagen, Denmark 6–10 November 2023 to:

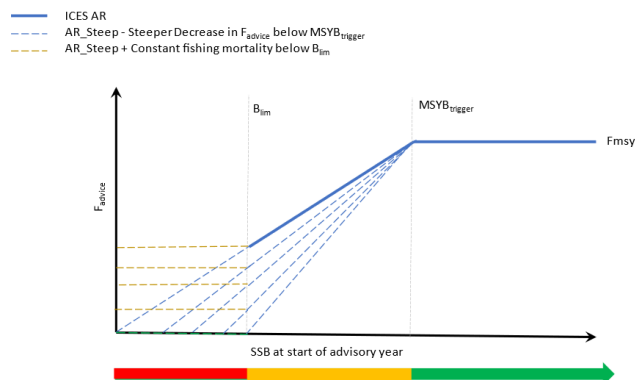
- a) Define a framework for scientific advice for developing rebuilding plan elements as part of overall management strategies, that could be widely applied to ICES stocks.
- b) Develop guidelines for the evaluation of rebuilding plan elements that consider the precautionary approach, the species life history (incl. longevity), changes in productivity and rebuilding potential.

- c) Propose the performance indicators and thresholds to be used for the acceptability of rebuilding plan elements including rebuilding target, probability of rebuilding and rebuilding time relative to rebuilding time in the absence of fishing.
- d) Test the rebuilding plan evaluation guidelines on a limited number of test cases using a newly developed and dedicated evaluation tool
- e) Identify any additional requirements for a evaluation tool that would allow the evaluation of rebuilding plans elements proposed in ToR (a) in the context of assessment working groups.

WKREBUILD will report by 1 December 2023 for the attention of FRSG and ACOM.

## Supporting Information

Priority	<p>High.</p> <p>ICES regularly recommends rebuilding plans in combination with zero TACs for the next year, This occurs when stocks are estimated to be below <math>B_{lim}</math> and there is no perceived possibility of rebuilding above <math>B_{lim}</math> within the timeframe of a short-term forecast. Furthermore, the performance of ICES category 1 advice rule below <math>B_{trigger}</math> and especially below <math>B_{lim}</math> has been questioned.</p> <p>WKREBUILD2 should build on the findings of the first workshop on guidelines and methods for the evaluation of rebuilding plans (WKREBUILD) and taking into account the general guidelines on management strategy evaluations (e.g. WKG MSE3). In 2020, WKREBUILD analyzed guidelines and methods for the evaluation of rebuilding plans. The workshop generated a guidance table summarizing the best practices for evaluation of rebuilding plans against the potential criteria of acceptability. However, it did not propose specific rebuilding plans of harvest control rules. Instead, the workshop recommended that a follow-up workshop (WKREBUILD2) be organized for testing the guidelines with actual test cases, with the aim of defining more specific criteria and guidelines.</p> <p>A simulation tool is being developed and will be ready to be used during WKREBUILD2.</p> <p>The framework proposed for rebuilding plans should be transferable between the current and proposed new advice frameworks. In terms of the definition of rebuilding plans, independently of specific values, the main difference between the current and the new advice framework is <math>B_{safe}</math>.</p> <p>The current ICES advice rule specifies the recommended management action when the stock is estimated to be above <math>B_{lim}</math>. When the stock is estimated to be below <math>B_{lim}</math> and unable to recover to <math>B_{lim}</math> within the period of the short term forecast, ICES recommends a zero catch and the development of a rebuilding plan.</p>
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WKREBUILD2 should explore how rebuilding plan elements could be included into the ICES advice rule. This can be done through specific

	<p>(and different) actions when the stock is between between <math>B_{lim}</math> and <math>MSY B_{trigger}</math> and when the stock is below <math>B_{lim}</math>. This should involve different shapes of HCRs that take into account recommended management actions at different biomass levels and under different conditions (uncertainty in the assessment, distance between references points, lifespan of the species, role of the stock in the fishery (target/bycatch) etc.)</p> <p>The rebuilding plan elements should be aimed at restoring the stock biomass above <math>B_{lim}</math> and ensuring a non-decreasing trend in stock biomass between <math>B_{lim}</math> and <math>B_{trigger}</math>. As the plan will need to be evaluated in a short time frame for specific cases, developing a standardized tool is required. It could be similar to eqSim but with initial population equal to the last population estimate and focused on assessing impacts in the short to medium term. The tool should report on the rebuilding probability metrics in absolute terms and in comparison with zero fishing mortality scenario.</p>
Scientific justification	ICES is regularly recommending the development of rebuilding plans so guidance on how to evaluate these plans is required.
Resource requirements	One meeting room at ICES HQ with at least one breakout room.
Participants	Scientists with experience and interest in rebuilding plans and tools for short-term evaluations of potential effects of rebuilding plans.
Secretariat facilities	Secretariat administrative and scientific support.
Financial	No extra funding requested.
Linkages to advisory committees	The results of this work will feed in directly in the ICES advisory process.
Linkages to other committees or groups	HAWG, WKG MSE2, WGBIE, WGWIDE, WGBFAS, WGCSE, WGNSSK, NWWG, AFWG, WGHANSA
Linkages to other organizations	

### WKSIDAC3 – Third Workshop on Stock Identification and allocation of catches of herring to stocks

*Approved in Resolutions meeting on 31 October 2023*

2023/WK/FRSG24 A **Third Workshop on Stock Identification and allocation of catches of herring to stocks (WKSIDAC3)** chaired by Christoffer Moesgaard Albertsen\*, Denmark, and Florian Berg\*, Norway, will meet at the Institute of Marine Research (IMR) in Bergen, Norway, 3–7 June 2024 (start and end at 13:00), to:

- k) Review current sampling strategies and designs (surveys, catches, etc.)
- l) Establish a simulation framework for estimating stock compositions based on genetics
  - a) to investigate differences between random or stratified sampling
  - b) to investigate inter-haul variability in surveys
- m) Provide guidance on the optimal sampling strategies for methods with different uncertainty which are used for estimating stock compositions based on genetics

WKSIDAC3 will report by 15 October 2024 for the attention of ACOM and WGBIOP.

Key surveys to focus on:

Stock / component	Abbr.	Area
Icelandic Summer Spawning Herring	ISSH	27.5.a
Norwegian Spring Spawning Herring	NSSH	27.2.a
North Sea Autumn Spawning Herring	NSAS	27.4, 27.3.a, 27.7.d
Downs Winter Spawning Herring		27.4.c, 27.7.d
Western Baltic Spring Spawning Herring	WBSS	27.3.a, etc.
Central Baltic Herring	CBH	27.3.d
Irish Sea Herring	NIRS	27.7.aN
Celtic Sea Herring	IRLS	27.7.aS, 7.g-h, 7.j-k
6a North Autumn spawning herring	VIAN	27.6.aN
6a South 7bc herring	IRLW	27.6.aS, 7.bc

In addition, the following stocks may be considered as part of WKSIDAC 2.

Norwegian Autumn Spawning Herring	NASH	27.2.a
Faroese Autumn Spawning herring	FASH	
Baltic Autumn spawning herring	BASH	27.3
6a North Spring spawning herring		27.6.aN
Thames/Blackwater herring		
Clyde herring		27.6.aN
Herring in Divisions 7ef		27.7.e, 27.7.f

## Supporting information

Priority	High
Scientific justification	<p>Most herring populations are migratory and often congregate on feeding and wintering grounds where aggregations may consist of mixtures of individuals from several populations, thus the concept of ‘a herring stock’ within a geographical area such as a management unit is not straight-forward and cannot be assumed. Genetic stock identification of herring has been recently examined by WKSIDAC2 in 2023 (ICES, 2023) and recommended methods for future stock identification. However, several caveats have been highlighted before these genetic methods can be fully implemented in the assessment of herring stocks.</p> <p>Therefore, it is now timely to resolve these caveats following the recommendations of WKSIDAC2 in 2023 (ICES, 2023). The objectives of the workshop are to</p> <ul style="list-style-type: none"> <li>Review current sampling strategies and designs undertaken by laboratories and their surveys</li> </ul>

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- Investigate the advantages and disadvantages of differing sampling strategies
  - outline a common generic approach for sampling both surveys and commercial catches
  - draft guidelines for the methods along with their uncertainties

The workshop will cover the ICES SubAreas 2, 3, 4, 5, 6 and 7. A draft manual will be compiled, specifying the areas/surveys relevant for the given method, contain details on the minimum sampling size, stratification, and other sampling related issues.

Where appropriate samples have or are being obtained it is possible to undertake 'stock separation' using e.g. genetics for the most recent time period, and going forward with a new sampling protocol. Stock assessment, however, is reliant on a time-series of data where the stock information is known. Having the ability to retrospectively separate both survey and catch data to stock is important and this needs to predate any new genetic protocols which may be implemented. The Workshop will also consider a number of available data datasets which could be used to separate the historical survey and catch data into the various populations. These could include otolith archives, age and growth data etc.

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Resource requirements	
Participants	20-30
Secretariat facilities	Meeting rooms
Financial	None
Linkages to advisory committees	ACOM
Linkages to other committees or group	WGBIOP
Linkages to other organizations	

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### **WKNEWREF – Workshop on the calculation and evaluation of new reference points for category 1–2 stocks**

*Approved on Resolutions Forum 13 September 2023*

2023/WK/FRSG25 The **Workshop on the calculation and evaluation of new reference points for category 1-2 stocks (WKNEWREF)** chaired by C oil n Minto (Ireland) and Dorleta Garcia (ICES) will meet from 5-9 February 2024 at ICES headquarters, to:

Following recommendations of WKREF2, for each stock estimate and report any issues detected in the estimation of:

- f) Alternative stock-recruitment relationships.
- g)  $%B_0$ ,  $F_{msy}$ ,  $B_{msy}$  and  $B_{%SPR}$ .
- h)  $B_{lim}$ , alternatively looking at the distribution of  $B_{msy}$  or  $B_{%SPR}$

- i)  $B_{\text{trigger}}$ .
- j) Alternative values for  $F_{\text{target}}$  ( $F_{\%SPR}$ ,  $F_{0.1}, \dots$ )
- k) Allee effects and/or regimen shifts (if relevant).

Based on the results from a) to f):

- l) Identify the situations where a stock recruitment relationship, the breakpoint in the segmented regression stock recruitment relationship,  $B_0$  and  $B_{\text{msy}}$  can be estimated reliably and those where it cannot.
- m) Identify the strengths and weaknesses of the new reference points in comparison with the current framework.
- n) Propose  $B_{\text{lim}}$ ,  $B_{\text{trigger}}$  and  $F_{\text{target}}$  for each stock based on the proposal of WKREF2 or new proposal.

WKNEWREF will report to FRSG and ACOM by 1 March 2024.

## Supporting Information

Priority	High
Scientific justification	<p>WKREF1 and WKREF2 took place in November 2021 and January 2022 respectively. WKREF1 and WKREF2 made several recommendations in relation to the new reference point framework and the basis for the calculation of reference points. However, they recommend having an additional workshop to provide the evidence based and build community understanding and consensus around simplified and harmonised guidelines.</p> <p>WKNEWREF will explore the reference point framework proposed by WKREF1 and WKREF2 in a representative set of stocks across ICES ecoregions. WKNEWREF will estimate and simulation test reference points based on the guidelines of WKREF1 and WKREF2 and will investigate their performance in detail. In particular, the new reference points will be compared to the old ones and pros and cons of both approaches will be identified. Where none of the approaches provide adequate reference points, and if possible, alternative approaches to calculate them will be proposed.</p> <p>Based on these worked examples the WK will make recommendations to ACOM on reference points guidelines.</p>
Resource requirements	One meeting room at ICES HQ with at least one breakout room and facilities for online participation.
Participants	Stock assessors and coordinators and scientists with experience and interest in reference points definition and estimation procedures from inside and also from outside the ICES area.
Secretariat facilities	Secretariat administrative, scientific and TAF support.
Financial	Funding for two external reviewers
Linkages to advisory committees	The results of this work will directly feed the ICES advisory process.
Linkages to other committees or groups	HAWG, WKG MSE3, WGWIDE, WGBFAS, WGCSE, WGNSSK, NWWG, AFWG, WGHANSA
Linkages to other organizations	All advice recipients having an interest in ICES reference points.



**WKBMSYSPiCT3 – Benchmark Workshop on the application of SPiCT to produce MSY advice for selected stocks**

*Approved in Resolutions meeting on 31 October 2023*

2023/WK/FRSG26 The **Benchmark Workshop on the application of SPiCT to produce MSY advice for selected stocks (WKBMSYSPiCT3)**, co-chaired by Henning Winkler\* (External Chair) and Massimiliano Cardinale\*, Sweden (ICES Chair), and reviewed by Casper Berg (Denmark) and Tobias Middleberger (Denmark), will meet by web conference 11-13 December 2023 for a data evaluation meeting, and it will meet in at ICES in Copenhagen, Denmark 15-19 January, 2024 for the assessment workshop. WKBMSYSPiCT3 will evaluate the appropriateness of data and the use of the Surplus Production in Continuous Time (SPiCT) to provide MSY advice for selected stocks. The specific ToRs for this workshop are:

1. Collate necessary data and information for the application of SPiCT for the stocks listed in Annex 1 prior to the data evaluation workshop.
2. Review the available data and make recommendations on the most appropriate series to be used for SPiCT and potential improvements to eliminate biases.
3. Apply the SPiCT methodology and determine the appropriateness of the data and the methodology to determine stock status for each of the stocks listed using the guidance developed following WKLIFEVII, WKLIFEVIII, WKLIFEIX, and [ICES 2022](#).
4. For stocks where the methodology is appropriate, determine the methods to derive the parameters for the catch forecast using the harvest control rule for providing MSY advice using SPiCT.
5. Prepare the stock annex for those stocks where SPiCT is considered appropriate for providing MSY advice.
6. Provide recommendations for improving the guidance and training for the application of SPiCT and for deriving MSY advice.

The Benchmark Workshop will report by 20 February 2024 for the attention of ACOM.

**Supporting Information**

Priority:	Very high. ICES provides advice on more than 260 stocks and more than 60% of these stocks are in categories 3-6 where currently MSY advice is not provided. With the development of approaches to provide MSY advice for category 3-4, it is imperative that these approaches be implemented as soon as possible.
Scientific justification and relation to action plan:	<p>Following on a request from the European Commission through DG MARE, to improve the scientific assessment of some category 3-6 stocks, ICES has held a series of workshops (WKLIFE) to develop methodologies that would allow to provide MSY advice (see <a href="#">WKLIFEIX</a>).</p> <p>Currently, ICES provides advice for category 3-6 stocks with the precautionary approach. To provide MSY advice for many of these stocks, ICES through WKLIFEVII, WKLIFEVIII and WKLIFEIX has developed a coherent framework for category 3-4 stocks where available data would permit the use of SPiCT .</p> <p>The purpose of the workshop is to conduct a benchmark peer review of the application of the SPiCT approach to provide MSY advice for selected stocks. The selected stocks to be considered in this benchmark was determined based on the availability of appropriate data and capacity.</p>



In addition to producing the Stock Annex for stocks where the method is appropriate, the workshop will serve to provide recommendations to improve the guidance for the method as well as potential training.

**Annex 1** – List of ICES stocks to be examined during WKMSYSP ICT (Note: the list may change as the model is applied and developed for each stock).

Stock code	Stock name
bzq.27.2628	Flounder ( <i>Platichthys</i> spp) in subdivisions 26 and 28 (east of Gotland and Gulf of Gdansk)
fle.27.2223	Flounder ( <i>Platichthys flesus</i> ) in subdivisions 22 and 23 (Belt Seas and the Sound)
tur.27.22-32	Turbot ( <i>Scophthalmus maximus</i> ) in Subdivisions 22-32 (Baltic Sea)
dab.27.22-32	Dab ( <i>Limanda limanda</i> ) in subdivisions 22-32 (Baltic Sea)
fle.27.3a4	Flounder ( <i>Platichthys flesus</i> ) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat)
nep.fu.32	Norway lobster ( <i>Nephrops norvegicus</i> ) in Division 4.a, Functional Unit 32 (northern North Sea, Norway Deep)
cod.27.2.coastS	Cod ( <i>Gadus morhua</i> ) in Subarea 2 between 62°N and 67°N (Norwegian Sea), southern Norwegian coastal cod
Sbr.27.10	Blackspot seabream ( <i>Pagellus bogaraveo</i> ) in Subarea 10 (Azores)
sbr.27.9	Blackspot seabream ( <i>Pagellus bogaraveo</i> ) in Subarea 9 (Atlantic Iberian waters)
aru.27.1234a	Greater silver smelt ( <i>Argentina silus</i> ) in subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat)

### WKBANSP – Benchmark workshop on Anchovy stocks

*Approved in Resolutions forum on 8 December 2023*

2023/WK/FRSG27 A **Benchmark workshop on Anchovy stocks** (WKBANSP), chaired by Afra Egan, and Kiersten Curti, and attended by invited external experts (tbd), will be established and meet 3-7 March 2024 (Online) for the data workshop, and 23-27 September 2024 (Nantes, France) for the assessment methods workshop. WKBANSP will:

- a) As part of the data workshop:
  1. Consider the quality of data proposed for use in the assessment;
  2. Consider stock identity and migration issues;

3. Make a proposal to the benchmark on the use and treatment of data for each assessment, including discards, surveys, life history, etc.
  - i. Note: stakeholders are also invited to contribute data in advance of the data evaluation workshop (including data from non-traditional sources) and to contribute to data preparation and evaluation of data quality.
- b) In preparation for the assessment methods workshop:
  1. Produce working documents to be reviewed during the assessment methods workshop at least 14 days prior to the meeting.
- c) As part of the assessment methods workshop, agree to and thoroughly document the most appropriate, data, methods, and assumptions for:
  1. Obtaining population abundance and exploitation level estimates (conducting the stock assessment);
  2. Estimating fisheries and biomass reference points that are in line with ICES guidelines (see latest [technical guidelines](#) on reference points);
    - i. Note: If additional time is needed to conduct the work and agree to reference points, an additional reference point workshop could be scheduled.
3. Conducting the short-term forecast.
- d) As part of the assessment methods workshop, a full suite of diagnostics (regarding e.g. data, retrospective behaviour, model fit, predictive power etc.) should be examined to evaluate the appropriateness of any model developed and proposed for use in generating advice.
- e) If no analytical assessment method can be agreed upon, then an alternative method (the former method, or following the ICES data-limited stock approach see WKLIFE XI <sup>2</sup> should be put forward by the benchmark;
- f) Update the stock annex; and
- g) Develop recommendations for future improvements in the assessment methodology and data collection.

WKBANSP will report by 31 October 2024 for the attention of ACOM.

Recurrent advice subject to benchmark	
ane.27.8	Anchovy ( <i>Engraulis encrasicolus</i> ) in Subarea 8 (Bay of Biscay)
ane.27.9a	Anchovy ( <i>Engraulis encrasicolus</i> ) in Division 9.a (Atlantic Iberian waters)

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<sup>2</sup> ICES. 2023. Eleventh Workshop on the Development of Quantitative Assessment Methodologies based on LIFE-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks (WKLIFE XI). ICES Scientific Reports. 5:21. 74 pp. <https://doi.org/10.17895/ices.pub.22140260>

## WKBFLATFISH 1 – Benchmark workshop 1 on selected flatfish stocks

*Approved in Resolutions forum on 8 December 2023*

2023/WK/FRSG28 A **Benchmark workshop 1 on selected flatfish stocks** (WKBFLATFISH 1), Chaired by Bjarki Thor Elvarsson (External Chair, Iceland), and Lies Vansteenbrugge (ICES Chair, Belgium), and attended by invited external experts Hans Gerritsen (Ireland) and Marc Taylor (Germany), will be established and meet 27-1 December in Copenhagen (hybrid) for the data workshop, and 19-23 February 2024 in Copenhagen for the assessment methods workshop. WKBFLATFISH1 will:

- a) As part of the data workshop:
  1. Consider the quality of data proposed for use in the assessment;
  2. Consider stock identity and migration issues;
  3. Make a proposal to the benchmark on the use and treatment of data for each assessment, including discards, surveys, life history, etc.
    - i. Note: stakeholders are also invited to contribute data in advance of the data evaluation workshop (including data from non-traditional sources) and to contribute to data preparation and evaluation of data quality.
- b) In preparation for the assessment methods workshop:
  1. Produce working documents to be reviewed during the assessment methods workshop at least 14 days prior to the meeting.
- c) As part of the assessment methods workshop, agree to and thoroughly document the most appropriate, data, methods, and assumptions for:
  1. Obtaining population abundance and exploitation level estimates (conducting the stock assessment);
  2. Estimating fisheries and biomass reference points that are in line with ICES guidelines (see latest [technical guidelines](#) on reference points);
    - i. Note: If additional time is needed to conduct the work and agree to reference points, an additional reference point workshop could be scheduled.
  3. Conducting the short-term forecast.
- d) As part of the assessment methods workshop, a full suite of diagnostics (regarding e.g. data, retrospective behaviour, model fit, predictive power etc.) should be examined to evaluate the appropriateness of any model developed and proposed for use in generating advice.
- e) If no analytical assessment method can be agreed upon, then an alternative method (the former method, or following the ICES data-limited stock approach see WKLIFE XI <sup>3</sup> should be put forward by the benchmark;
- f) Update the stock annex; and
- g) Develop recommendations for future improvements in the assessment methodology and data collection.

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<sup>3</sup> ICES. 2023. Eleventh Workshop on the Development of Quantitative Assessment Methodologies based on LIFE-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks (WKLIFE XI). ICES Scientific Reports. 5:21. 74 pp. <https://doi.org/10.17895/ices.pub.22140260>

WKBFLATFISH1 will report by 25 March 2024 for the attention of ACOM.

Recurrent advice subject to benchmark	
sol.27.4	Sole ( <i>Solea solea</i> ) in Subarea 4 (North Sea)
sol.27.8ab	Sole ( <i>Solea solea</i> ) in divisions 8.a-b (northern and central Bay of Biscay)
sol.27.7a	Sole ( <i>Solea solea</i> ) in Division 7.a (Irish Sea)
anf.27.3a46	Anglerfish ( <i>Lophius budegassa</i> , <i>Lophius piscatorius</i> ) in Subareas 4 and 6, and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)

## WKEELDATA 5 – The Fifth Workshop on Designing an Eel Data Call

*Approved in Resolutions forum on 6 February 2024*

**2023/WK/FRSG29 A Workshop on Designing an Eel Data Call (WKEELDATA5)**, chaired by Tea Basic, UK, and Jani Helminen, Finland, will meet virtually, February 5<sup>th</sup> – 9<sup>th</sup> 2024 to design a data call to all ICES/EIFAAC/GFCM countries having natural production of European eel and prepare their integration in the eel database supporting WGEEL work. The data call 2024 will request stock indicators (biomass and mortality) in addition to data collected every year (e.g. this call will be similar to the 2020 call). To achieve this aim, the WK will:

- a) Update templates that will be used to report data to the ICES and text for the 2024 Eel Data Call, following WGEEL recommendations;
- b) Develop/Update the tools in the WGEEL shiny application and possibly in the database, required to automate the generation of spread sheets for the data call and to manage data integration;
- c) Develop, with the ICES Data Centre, the roadmap to achieve the data call publication beginning of May and the data integration during the WGEEL meeting (part one):
  - List the necessary tasks to finalise the data call preparation
  - List and prioritise the developments needed in the shiny application.
  -

WGEELDATA5 will report in 2024 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 beta tests to validate the developments, which will be distributed among WK members.

### Supporting information

Priority	This topic is a high priority for ICES and the countries/institutions supporting the work of the WGEEL because the present data collection procedures of WGEEL are complex and require a large resource in staff time before and during the WGEEL meetings. The refinement of data provision will save time and money, and it will facilitate the future benchmarking of the stock assessment process to support the ICES Advice.
Scientific justification	The WGEEL annually collates data on recruitment, landings from commercial and recreational fisheries, restocking, aquaculture production, biological characteristics of eels, in every annual data call. Every three years, following the reporting obligations from the Regulation, it collates data on stock indicators (Biomass and Mortalities). 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. Since the data collection is continuously improved, the tools must be regularly adapted to these changes.
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. The presence of a GFCM representatives would be required to ensure the consistency between ICES and GFCM data calls.
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.

## **WKLANDEEL – The Workshop for the reconstruction of eel landings statistics**

*Approved in Resolutions forum on 5 February 2024*

**2023/WK/FRSG30** The **Workshop for the reconstruction of eel landings statistics** (WKLANDEEL), chaired by L. Beaulaton, France will be established and will meet online 04-06 March 2024 and in Cestas (France) 13-17 May 2024 to:

- a) Review methods used to reconstruct eel catch/landings data
- b) Review past and existing eel fisheries and data on eel catch/landings statistics, focusing primarily on ICES and FAO reports (including WGEEL reports) and international research projects.
- c) Identify missing information and, if necessary, design a specific data call to collect additional information required for the reconstruction model.
- d) Develop methods and reconstruct landings statistics as far back in time as possible to inform on their potential use in the stock assessment and propose any means to improve the model and future data collection.

WKLANDEEL will report by 29<sup>th</sup> of April 2024 for the attention of the Advisory Committee.

## Supporting information

Priority	
Scientific justification	Landings can be used to quantify fishing mortalities but can also be used in population dynamic models. WKFEA (2021) repeats the previous findings that for European eel landings (and effort) data are deficient, heterogeneous, incomplete and not well documented. WKFEA proposes to focus as a first step on landings data and on improving the reconstruction of missing data. Both commercial and recreational landings should be included (WGEEL, 2022).
Resource requirements	This work will require access to the ICES SharePoint, and online meetings facilities. This work will also require access to the WGEEL database and associated shiny visualisation apps.
Participants	The participation should reflect the diverse scientific competence (knowledge of eel fisheries, modelling skill) needed to fulfil the objectives of the workshop. Participants from all countries of the European eel distribution including non ICES countries, particularly Mediterranean countries.
Secretariat facilities	ICES data call, Secretariat support, and Advisory process and Secretariat support
Financial	At countries expense
Linkages to advisory committees	ACOM
Linkages to other committees or groups	WGEEL, WGDIAD, SCICOM, FRSG.
Linkages to other organizations	FAO EIFAAC, GFCM

## WKBPLAICE – Benchmark workshop on selected plaice stocks

*Approved in Resolutions forum on 12 February 2024*

2023/WK/FRSG31 A **Benchmark workshop on selected plaice stocks (WKBPLAICE)**, chaired by Stefanie Haase, Germany, and Pamela Woods, Iceland and attended by reviewers Marta Cousido Rocha, Spain, and Silvia Angelini, Italy, will be established and meet online on 3-7 June 2024 for a data evaluation workshop, and on 21-25 October 2024 at ICES Headquarters, Copenhagen, for an assessment methods workshop. WKBPLAICE will:

- a) As part of the data workshop:
  1. Consider the quality of data proposed for use in the assessment;
  2. Consider stock identity and migration issues, if appropriate;
  3. Make a proposal to the benchmark on the use and treatment of data for each assessment, including discards, surveys, life history, etc.
    - i. Note: stakeholders are also invited to contribute data in advance of the data evaluation workshop (including data from non-traditional sources) and to contribute to data preparation and evaluation of data quality.
- b) In preparation for the assessment methods workshop:
  1. Produce working documents to be reviewed during the assessment methods workshop at least 14 days prior to the meeting.
- c) As part of the assessment methods workshop, agree to and thoroughly document the most appropriate, data, methods, and assumptions for:
  1. Obtaining population abundance and exploitation level estimates (conducting the stock assessment);
  2. Estimating fisheries and biomass reference points that are in line with ICES guidelines (see latest [technical guidelines](#) on reference points);
    - i. Note: If additional time is needed to conduct the work and agree to reference points, an additional reference point workshop could be scheduled.
  3. Conducting the short-term forecast.
- d) As part of the assessment methods workshop, a full suite of diagnostics (regarding e.g. data, retrospective behaviour, model fit, predictive power etc.) should be examined to evaluate the appropriateness of any model developed and proposed for use in generating advice.
- e) If no analytical assessment method can be agreed upon, then an alternative method (the former method, or following the ICES data-limited stock approach see WKLIFE X<sup>4</sup>, including considerations of stock-specific tuning with a management strategy evaluation, if possible) should be put forward by the benchmark;
- f) Update the stock annex;

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<sup>4</sup> ICES. 2020. Tenth Workshop on the Development of Quantitative Assessment Methodologies based on LIFE-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks (WKLIFE XI). ICES Scientific Reports. 2:98. 72 pp. <http://doi.org/10.17895/ices.pub.5985>

- g) With support from the ICES Secretariat, document the stock assessments in the Transparent Assessment Framework (TAF)<sup>5</sup>; and
- h) Develop recommendations for future improvements in the assessment methodology and data collection.

WKBPLAICE will report by 30 January 2025 for the attention of ACOM.

Recurrent advice subject to benchmark				
Stock name	Stock code	Current assessment	Aimed at the benchmark	Link to latest ICES advice
Plaice ( <i>Pleuronectes platessa</i> ) in subdivisions 21–23 (Kattegat, Belt Seas, and the Sound)	ple.27.21-23	Age-based analytical assessment  Model: SAM	Improve model parametrization and consider input data. Update reference points.	<a href="#">HERE</a>
Plaice ( <i>Pleuronectes platessa</i> ) in subdivisions 24–32 (Baltic Sea, excluding the Sound and Belt Seas)	ple.27.24-32	Surplus production model  Model: SPiCT	Age-based analytical assessment  Model: SAM	<a href="#">HERE</a>
Plaice ( <i>Pleuronectes platessa</i> ) in Division 7.e (western English Channel)	ple.27.7e	Survey biomass trend applying a specific ICES rule to provide catch advice	stock-specific management strategy evaluation  AND  tune a category 3 data-limited empirical harvest control rule	<a href="#">HERE</a>

**WKEcoMSE Joint ICES–SEAwise workshop to quality assure methods to incorporate environmental factors and quantifying ecological considerations in Management Strategy Evaluation tools**

*Approved in Resolutions forum February 2024*

2023/WK/FRSG31 The Workshop to quality assure methods to incorporate environmental factors and quantifying ecological considerations in Management Strategy Evaluation tools (WKEcoMSE) will meet on 21–24 May 2024 online chaired by John Trochta (Norway), Marie Savina-Rolland (France) and Piera Carpi (Norway).

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<sup>5</sup> <https://taf.ices.dk/app/procedure>



The WKEcoMSE will work to provide a powerful set of tools for scientists to develop harvest control options that align with management objectives. Most commonly conducted as single-species analyses, MSEs can also address mixed fisheries objectives by using multi-stock and multi-fleet operating models. The EU project, [SEAWise](#), endeavours to develop such multi-stock multi-species models further so that they can be used to define and evaluate fisheries management strategies that address broad Ecosystem Based Fisheries Management (EBFM) objectives, including identifying HCRs that are robust to changes in productivity.

As such, a key deliverable of this workshop is to develop robust and consistent environment-productivity relationships for commercial stocks across selected case studies, which potentially can be integrated in models used by ICES and the SEAWise project. The methods put forward in the workshop will be peer-reviewed to ensure that they are scientifically robust and fit-for-purpose for the advisory frameworks, policy, and management needs in FAO areas 27 and 37 (the ICES area (i.e. North Atlantic) and the Mediterranean Sea).

#### **Terms of reference**

- a) Methods for consideration by the WK and reviewers will be proposed by project participants, including those methods specifically examined by the SEAWise project.
- b) Review the proposed methods regarding their capacity to incorporate the impact of environmental factors on the productivity of commercial stocks in the Fisheries Management Strategy Evaluation tools.
- c) Evaluate the guidelines for each of the different processes controlling productivity, i.e. recruitment, growth and maturity, and survival, including:
  - 1) the biological and environmental datasets to be used and potential pre-processing procedures;
  - 2) the statistical models to use;
  - 3) methods and metrics to assess the predictive capacity of the statistical models developed; and,
  - 4) procedures to assess the uncertainty added to the considered management tool.
- d) Review the proposed approaches and make recommendations to end users on whether the studied environment-productivity relationships should be considered or not. Recommend alternative, more generic approaches if the targeted approach is inconclusive.

**WKEcoMSE** will report to ACOM no later than 23 June 2024.

## Supporting Information

Priority:	High. ICES is a partner in this European project, SEAWise, facilitating workshops aligned with agreed project work packages and deliverables that are core to ICES Advice and Science plans regarding the development of science and provision of advice on the Ecosystem Based Fisheries Management (EBFM).
Scientific justification:	ICES mission is to advance and share scientific understanding of marine ecosystems and the services they provide and to use this knowledge to generate state-of-the-art advice for meeting conservation, management, and sustainability goals. This workshop should help to advance this mission.  SEAWise is a dynamic research programme aimed at understanding the current state-of-play of fisheries management across Europe and facilitating the widespread implementation of Ecosystem Based Fisheries Management (EBFM) in the region. Through a targeted research programme, and in close collaboration with its stakeholder network, SEAWise is working to develop a fully operational, synthesised management advice tool that highlights the benefits – or potential trade-offs – of fisheries management decisions. To do this, SEAWise is working to identify and address the key challenges currently inhibiting EBFM through workshops like this.
Linkages to advisory committee	The ICES Advisory Plan establishes the ecosystem approach as the central tenet that governs how ICES provides independent advice on the management of human activities in our seas and oceans.
Linkages to other committees or groups	It is expected that this workshop will be of interest to a range of end-users both within ICES and outside, reflecting the increasing interest in the ecosystem approach to fisheries.
Linkages to other organizations	Outcomes of this workshop should apply to both the ICES area and the area of the GFCM (FAO areas 27 and 37).
Resource requirements:	-
Participants:	SEAWise project participants and modellers, with a special focus on MSE.
Secretariat facilities:	SharePoint site, report formatting, and publication
Financial:	Staff and reviewer costs are supported by the ICES SEAWise project budget.