26 March 2020

2019 FRSG Expert Group ToR's

Contents

Generic ToRs for Regional and Species Working Groups

2018/2/FRSG01   The following ToRs apply to: AFWG, HAWG, NWWG, NIPAG, WGWIDE, WGBAST, WGBFAS, WGNSSK, WGCSE, WGDEEP, WGBIE, WGEEL, WGEF, WGHANSA and WGNAS.

The working group should focus on:

a) Consider and comment on Ecosystem and Fisheries overviews where available;

b) For the aim of providing input for the Fisheries Overviews, consider and comment for the fisheries relevant to the working group on:

    i) descriptions of ecosystem impacts of fisheries

    ii) descriptions of developments and recent changes to the fisheries

    iii) mixed fisheries considerations, and

    iv) emerging issues of relevance for the management of the fisheries;

c) Conduct an assessment on the stock(s) to be addressed in 2019 using the method (analytical, forecast or trends indicators) as described in the stock annex and produce a **brief** report of the work carried out regarding the stock, summarising where the item is relevant:

    i) Input data and examination of data quality;

    ii) Where misreporting of catches is significant, provide qualitative and where possible quantitative information and describe the methods used to obtain the information;

    iii) For relevant stocks (i.e., all stocks with catches in the NEAFC Regulatory Area) estimate the percentage of the total catch that has been taken in the NEAFC Regulatory Area in 2018.

    iv) Estimate MSY proxy reference points for the category 3 and 4 stocks

    v) The developments in spawning stock biomass, total stock biomass, fishing mortality, catches (wanted and unwanted landings and discards) using the method described in the stock annex;

    vi) The state of the stocks against relevant reference points;

    vii) Catch scenarios for next year(s) for the stocks for which ICES has been requested to provide advice on fishing opportunities;

    viii) Historical and analytical performance of the assessment and catch options with a succint description of quality issues with these. For the analytical performance of category 1 and 2 age-structured assessment, report the mean Mohn's rho (assessment retrospective (bias) analysis) values for R, SSB and F. 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.Produce a first draft of the advice on the stocks under considerations according to ACOM guidelines.

d) Review progress on benchmark processes of relevance to the Expert Group;

e) Prepare the data calls for the next year update assessment and for planned data evaluation workshops;

f) Identify research needs of relevance for the work of the Expert Group.

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

AFWG – Arctic Fisheries Working Group

2018/2/FRSG02   The **Arctic Fisheries Working Group** (AFWG), chaired by Daniel Howell, Norway, will meet Lisbon, Portugal, 24–30 April 2019 to:

a) Address generic ToRs for Regional and Species Working Groups, for relevant stocks except the Barents Sea capelin, which will be addressed at a meeting in the autumn;

b) For Barents Sea capelin oversee the process of providing intersessional assessment;

c) Address generic ToRs for Regional and Species Working Groups for the Barents Sea capelin stock.

d) Conduct reviews as required of any new time series computed using the STOX and ECA open source software for use in assessments in the Barents 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 specified in the 2019 ICES data call.

AFWG will report by 14 May 2019 and 4 October 2019 for Barents Sea capelin 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

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

2018/2/FRSG03   The **Herring Assessment Working Group for the Area South of 62ºN** (HAWG), chaired by Susan Lusseau, UK, and Valerio Bartolino, Sweden, will meet at ICES Headquarters:

29–31 January 2019 to:

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

13–21 March 2019 to:

b) compile the catch data of North Sea and Western Baltic herring on 13–14 March;

c) address generic ToRs for Regional and Species Working Groups 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 2019 ICES data call. HAWG will report by xx February and xx April 2019 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

2018/2/FRSG04   A sub group of The **Joint NAFO/ICES *Pandalus* Assessment Working Group** (NIPAG), chaired by Ole Ritzau Eigaard, Denmark (ICES) and Brian Healey, Canada (NAFO), will meet at ICES, in Copenhagen, Denmark, 25–27 February, 2019, to:

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

NIPAG will report by 11 March 2019 on the ICES Northern shrimp in divisions 3.a and 4.a East stock for the attention of ACOM.

    And:

The **Joint NAFO/ICES *Pandalus* Assessment Working Group** (NIPAG), chaired by Ole Ritzau Eigaard, Denmark (ICES) and Brian Healey, Canada (NAFO), will meet at the Havforskningsinstituttet (IMR), Tromsø, Norway from the 8–13 November 2019, to:

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

NIPAG will report by 19 November 2019 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 – North-Western Working Group

2018/2/FRSG05   **The North-Western Working Group** (NWWG), chaired by Kristján Kristinsson, Iceland, will meet:

   25 April – 1 May 2019 in ICES Headquarters, Copenhagen, Denmark to:

  a)   Address generic ToRs for Regional and Species Working Groups for all stocks, except stocks mentioned in ToR c).

  b)   Update MSY and precautionary reference points according to ICES guidelines (see Technical document on reference points) for the stock cod.21.1, and update its stock annex.

  4-8 November by correspondence to:

  c)   Address generic ToRs for Regional and Species Working Groups for Capelin (*Mallotus villosus*) in subareas 5 and 14 and Division 2.a west of 5°W, Cod (*Gadus morhua*) in Subdivision 5.b.1 (Faroe Plateau), 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 2019 ICES data call.

NWWG will report by 14 May and 7 November 2019 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

WGBAST – Baltic Salmon and Trout Assessment Working Group

2018/2/FRSG06   The **Baltic Salmon and Trout Assessment Working Group** (WGBAST), chaired by Stefan Palm, Sweden, will meet in St. Petersburg, Russia, 27 March – 4 April 2019 to:

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

b) Prepare a draft plan for a scoping workshop on the management needs for Baltic salmon.

c) In relation to EU Member States and their obligations to collect data on salmon fisheries and stocks under the EU Data Collection Framework (DCF) and EU-MAP, and to address Commission and Regional Coordination Group (RCG) requirements ahead of June 2019:

   i) Comment on specific data needs of the WG from those specified in the DCF and recommend actions to improve data quality for the work of the WG and in the context of future usage of the RDBES database as the source of ICES data for analyses on salmon.

   ii) Address the following recommendations from the RCG in 2018:

      1) Explain and review the selection of national index rivers by the various Member States (noting that "rivers" in the Legal Text is interpreted to represent "water bodies" (STECF 2017)), and comment on whether these selections are appropriate and sufficient for the WG to perform analyses and provide stock advice.

      2) Identify the stocks from which salmon variables should be collected (for parr, smolts, and adults), and advise on sampling frequency and effort (sampling level) to collect these variables.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2019 ICES data call. WGBAST will report by 11 April 2019 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

WGBFAS – Baltic Fisheries Assessment Working Group

2018/2/FRSG07   The **Baltic Fisheries Assessment Working Group** (WGBFAS), chaired by Mikaela Bergenius*, Sweden, will meet at ICES, Denmark, 8–15 April 2019 to:

a) Address generic ToRs for Regional and Species Working Groups

b) Review the main result from WGIAB, WGSAM, SGSPATIAL 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 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 2019 ICES data call.

WGBFAS will report by 29 April 2019 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

2018/2/FRSG08   The **Working Group for the Bay of Biscay and Iberian waters Ecoregion** (WGBIE), chaired by Ching Villanueva*, France and Lisa Readdy, UK, will meet in Lisbon, Portugal, 2–9 May 2019 to:

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

b) Review and evaluate the potential for assessing FU29 and FU30 as one stock;

c) Review and assess the progress on the benchmark preparation of hake stocks;

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 2019 ICES data call.

WGBIE will report by 23 May 2019 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

WGCSE – Working Group for the Celtic Seas Ecoregion

2018/2/FRSG09   The **Working Group for the Celtic Seas Ecoregion** (WGCSE), chaired by Timothy Earl, UK and Sofie Nimmegeers*, Belgium will meet in Ghent, Belgium, 8–17 May 2019 and by correspondence September / October 2019 to:

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

b) 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 2019 ICES data call.

WGCSE will report by 31 May 2019 for the attention of ACOM, and by 7 October 2019 for *Nephrops* stocks, anglerfish and megrim in Rockall. Concerning ToR b) the group will report on the ACOM guidelines on reopening procedure of the advice before 12 October and will report on reopened advice before 28 October.

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

2018/2/FRSG10 **Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources** (WGDEEP), chaired by Pascal Lorance, France, and Elvar Halldor Hallfredsson*, Norway, will meet at ICES Headquarters, 2–9 May 2019 to:

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

    b) Complete the development of Stock Annexes for all the stocks assessed by WGDEEP, based on the most recent agreed assessment.

    c) Update the description of deep-water fisheries in both the NEAFC Regulatory Area 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 Area. In particular, describe and prepare a first advice draft of any new emerging deep-water fishery with the available data in the NEAFC Regulatory Area.

    d) Continue work on exploratory assessments for deep-water species.

    e) Evaluate the stock status of stocks in Icelandic waters for the provision of annual advice in 2019.

    f) Evaluate the stock status of stocks for the provision of biennial advice due in 2019.

    g) Undertake work on the Special Request from DGMARE on the deletion of TACs. For Greater Silversmelt in subarea 7 ([aru.27.6b7-1012](#)), assess the role of the Total Allowable Catch instrument, assessing the risks of limiting the TAC to areas 5 and 6. Assess the potential contribution of the application of other conservation tools in the absence of a TAC.

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 2019 ICES data call.

WGDEEP will report by 16 May 2019 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

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

2018/2/FRSG11 The J**oint EIFAAC/ICES/GFCM Working Group on Eels** (WGEEL), chaired by Alan Walker (UK), will meet in Bergen, Norway, from 27 August – 2 September 2019 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) Consider the consequences of the Precautionary Approach on advice for European eel.

Material and data relevant for the meeting must be available to the group on the dates specified in the 2019 ICES data call.

WGEEL will report by 16 September 2019 for the attention of ACOM, WGDIAD, SSGEF and FAO, EIFAAC and GFCM.

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

Supporting Information

Priority	1. The status of the European eel stock remains outside safe biological limits and continuing and further management actions are required to recover the stock.
	2. 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 to stock nor the time scale over which recovery might be achieved. Therefore, the development and application of further status assessment methods are urgently required.
	3. The EU 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.
	4. 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).
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 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.
	Other forms of anthropogenic mortality (e.g. hydropower, pumping stations) also impact on eel and vary in distribution and local relevance.
	Most but not all EU Member States reported quantitative estimates of the required stock indicators to the EU in 2012, 2015 and 2018. 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.
Resource requirements	Sharepoint
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, SSGEF
Linkages to other organizations	FAO EIFAAC, GFCM, EU DG-MARE, EU DG-ENV

WGEF – Working Group on Elasmobranch Fishes

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

2018/2/ACOM16   The **Working Group Elasmobranch Fishes** (WGEF), chaired by Paddy Walker (Netherlands) and Sam Shephard (Ireland), will meet at IPMA, Lisbon from 18–27 June 2019 to:

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

b) 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 Area. 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);

c) Evaluate the stock status for the provision of biennial advice due in 2019 for: (i) skate stocks in the North Sea ecoregion, the Azores and MAR; (ii) catsharks (*Scyliorhinidae*) in the Greater North Sea, Celtic Seas and Bay of Biscay and Iberian Coast ecoregions; (iii) smooth-hounds in the Northeast Atlantic; and (iv) tope in the Northeast Atlantic)

d) Conduct exploratory analyses and collate relevant data in preparation for the evaluation of other stocks (spurdog in the NE Atlantic; and skates in the Celtic Seas and Bay of Biscay and Iberian Coast ecoregions) in preparation for more detailed biennial assessment in 2020;

e) Evaluate the stock status for the provision of quadrennial advice due in 2019 for the following widely-distributed shark stocks: (i) Portuguese dogfish; (ii) Leafscale gulper shark; (iii) Kitefin shark; (iv) Porbeagle, and the following species that are on the prohibited species list: (v) angel shark, (vi) basking shark and (vii) white skate;

f) Collate 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; and (ii) advise on how to include discard information in the advisory process;

g) Further develop MSY proxy reference points relevant for elasmobranchs and explore/apply in MSY Proxies analyses for selected stocks;

h) Further develop the ToR for the proposed joint ICCAT-ICES meeting in 2020 to (i) assess porbeagle shark and (ii) collate available biological and fishery data on thresher sharks in the Atlantic;

i) Work intersessionally to draft/update stock annexes and then develop a procedure and schedule for subsequent reviews.

j) Address the joint special request from NEAFC-OSPAR for advice on deep sea sharks, rays and chimaeras following the process agreed by WGEF experts, clients and ACOM:

   i) Screening of data received from ICES Member States on occurrence of deep water sharks, skates and chimaeras on the extended list provided in the request.

   ii) Advance on part of request pertaining to the bycatch and mitigation measures and allocate work for the rest of the request.

   iii) Formulate ToR for a WKSHARK6 meeting to be held in early 2020.

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 must be available to the group no later than 14 days prior to the starting date.

WGEF will report by 8 August 2019 for the attention of ACOM.

WGHANSA – Working Group on Southern Horse Mackerel Anchovy and Sardine

2018/2/FRSG13   The Working Group on Southern Horse Mackerel Anchovy and Sardine (WGHANSA), chaired by Alexandra Silva, Portugal, will meet by correspondence on 3-7 June 2019 (WGHANSA1) and in Madrid, Spain, on 25-28 November 2019 (WGHANSA2) to:

   a) Address generic ToRs for Regional and Species Working Groups for relevant stocks (hom.27.9a and ane.27.9a in WGHANSA1 and pil.27.7, pil.27.8abd, pil.27.8c9a, ane.27.8, jaa.27.10a2 in WGHANSA2);

   b) Explore data from juvenile surveys (e.g. JUVESAR, JUVENA, ECOCADIZ, RECLUTAS) for for future incorporation in the assessments;

   c) Propose geographical subdivisions within Division 8.c and Division 9.a. WGHANSA to report data and stock biomass trends for sar.27.8c9a and ane.27.9a.

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 2019 ICES data call.

WGHANSA1 will report by 18 June 2019 and WGHANSA2 will report by 11 December 2019 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

2018/2/FRSG14   The **Working Group on Mixed Fisheries Advice** (WGMIXFISH-ADVICE), chaired by Claire Moore*, Ireland, will meet at ICES Headquarters on 28 October – 1 November 2019 to:

a) Carry out mixed demersal fisheries projections for the North Sea taking into account the single species advice and the management measures in place for 2019 for cod, haddock, whiting, saithe, plaice, sole, turbot, *Nephrops norvegicus*, sole 7.d and plaice 7.d that is produced by WGNSSK in May 2019,;

b) Carry out mixed demersal fisheries projections for the Celtic Sea taking into account the single species advice and the management measures in place for 2019 for cod, haddock, and whiting that is produced by WGCSE in 2019, and further develop mixed fisheries analyses for the region;

c) Carry out mixed fisheries projections for the Bay of Biscay and for the Iberian waters taking into account the single species advice and the management measures in place for 2019 for hake, four-spot megrim, megrim and white anglerfish that is produced by WGBIE in May 2019, and further develop mixed fisheries analyses for the region;

d) Produce draft mixed-fisheries sections for the ICES advisory report 2019 that includes a dissemination of the fleet and fisheries data and forecasts for the North Sea, Celtic Sea, Bay of Biscay, and Iberian waters.

e) Increasing the number of species included in the current Celtic Sea mixed fisheries considerations. Priority will be given to target species identified based on knowledge of identified mixed fisheries interactions in the Celtic Sea. Primary analysis shown that stocks assessed by WGCSE and WGBIE can potentially take part to mixed fisheries interaction in the Celtic Sea. These species should be defined before WGCSE and WGBIE to allow data compilation and model parametrization before WGMIXFISH

WGMIXFISH-Advice will report by 10 December 2019 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

WGNAS – Working Group on North Atlantic Salmon

2018/2/FRSG15   The **Working Group on North Atlantic Salmon** (WGNAS), chaired by Martha Robertson, Canada will meet in Bergen, Norway, 25 March–4 April 2019 to:

a) Address relevant points in the Generic ToRs for Regional and Species Working Groups for each salmon stock complex;

b) In relation to EU Member States and their obligations to collect data on salmon fisheries and stocks under the EU Data Collection Framework (DCF) and EU-MAP, and to address Commission and Regional Coordination Group (RCG) requirements ahead of June 2019:

i) Comment on specific data needs of the WG from those specified in the DCF and recommend actions to improve data quality for the work of the WG and in the

context of future usage of the RDBES database as the source of ICES data for analyses on salmon;

ii) Address the following recommendations from the RCG in 2018:

1) Explain and review the selection of national index rivers by the various Member States (noting that "rivers" in the Legal Text is interpreted to represent "water bodies" (STECF 2017)), and comment on whether these selections are appropriate and sufficient for the WG to perform analyses and provide stock advice.

2) Identify the stocks from which salmon variables should be collected (for parr, smolts, and adults), and advise on sampling frequency and effort (sampling level) to collect these variables.

c) Address questions posed by NASCO:

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 2018[1].

1.2 report on significant new or emerging threats to, or opportunities for, salmon conservation and management[2]

1.3 provide a compilation of tag releases by country in 2018; and

1.4 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 2018 fisheries[3];

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;
In the event that NASCO informs ICES that the Framework of Indicators (FWI) indicates that reassessment is required:* (The aim should be for NASCO to inform ICES by 31 January of the outcome of utilising the FWI).

2.4 provide catch options or alternative management advice for the 2019 *I* 2020 - 2021 / 2022 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[4];

2.5 update the Framework of Indicators used to identify any significant change in the previously provided multi-annual management advice.

3 - With respect to Atlantic salmon in the North American Commission area:

3.1 describe the key events of the 2018 fisheries (including the fishery at St Pierre and Miquelon)[3]

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;

In the event that NASCO informs ICES that the Framework of Indicators (FWI) indicates that reassessment is required:* (The aim should be for NASCO to inform ICES by 31 January of the outcome of utilising the FWI).

3.4   provide catch options or alternative management advice for 2019-2022 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[4]; and

3.5   update the Framework of Indicators used to identify any significant change in the previously provided multi-annual management advice.

4 - With respect to Atlantic salmon in the West Greenland Commission area:

4.1   describe the key events of the 2018 fisheries[3];

4.2   describe the status of the stocks[5];

In the event that NASCO informs ICES that the Framework of Indicators (FWI) indicates that reassessment is required:* (The aim should be for NASCO to inform ICES by 31 January of the outcome of utilising the FWI).

4.3   provide catch options or alternative management advice for 2019-2021 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[4];

4.4   update the Framework of Indicators used to identify any significant change in the previously provided multi-annual management advice.

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NOTES:

[1] With regard to question 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

[2] With regard to question 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, including iriformation on any new research into the migration and distribution of salmon at sea and the potential implications of climate change for salmon management.

[3] In the responses to questions 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 4.1, if any new phone surveys are conducted, ICES should review the results and advise on the appropriateness for incorporating resulting estimates of unreported catch into the assessment process).

[4] In response to questions 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.

WGNAS will report by 17 April 2019 for the attention of ACOM.

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

2018/2/FRSG16   The **Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak** (WGNSSK), chaired by José De Oliveira, UK, and XXX, XXX, will meet in Bergen, Norway, 24 April – 3 May 2019 and by correspondence in September 2019 to:

a)   Address generic ToRs for Regional and Species Working Groups.
b)   Assess Norway pout assessments by correspondence.

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 2019 ICES data call.

WGNSSK will report by 17 May 2019, and by 24 September 2019 (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

WGWIDE– Working Group on Widely Distributed Stocks

2018/2/FRSG17   The **Working Group on Widely Distributed Stocks** (WGWIDE), chaired by Gudmundur J. Óskarsson, Iceland, will meet in Tenerife, Spain, 28 August – 3 September 2019 to:

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

b)   Prepare a draft plan for a scoping workshop on the management needs for Atlantic mackerel

c)   An RFID tag data preparation group should be established for mackerel and Norwegian spring spawning herring to:
   i)   Carry out quality assurance of the tag-recapture data for use in stock assessment
   ii) Explore potential sources of bias in the tag-recapture data that may affect the stock assessment
   iii) Explore the trends (indexes of abundance by age and biomass) in the tag data outside stock assessment
   iv) Explore the basis for the low survival rate estimated for the tagged mackerel when scaling the data in the SAM stock assessment
   The RFID tag data preparation group will be chaired by Aril Slotte, Norway, and meet in spring on an annual basis and report to WGWIDE members no later than one month prior the WGWIDE meeting.

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.

WGWIDE will report by 10 September 2019 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

IBPBrisol – Inter-benchmark process on Sole (*Solea solea*) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)

2018/2/FRSG18 **Inter-benchmark process on Sole (*Solea solea*) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)** (IBP-Brisol), chaired by ICES Chair Noel Cadigan*, Canada, and attended by the invited external experts John Wiedenmann, USA and Helen Dobby, Scotland, UK will be established and meet by correspondence on the 29–31 January 2019 to:

a) Evaluate the present analytical assessment method of sole with emphasis on:
   - Estimate and provide the basis for a suitable time-series of effort data for the UK commercial beam trawl to account for the recent change in e-logbook effort recording;
   - Evaluate the appropriateness of the selectivity pattern used to calculate the indices derived from the Belgian commercial tuning fleet over time and provide updated time-series if applicable;

   - Investigate if additional survey information (e.g. UK-Q1SWBeam, started in 2006) is available and can be incorporated in the assessment
b) Update the stock annex as appropriate;
c) Re-examine and update MSY and PA reference points according to ICES guidelines (see Technical document on reference points);
d) Develop recommendations for future improving of the assessment methodology and data collection.

Stocks	Stock leader
Sole (Solea solea) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)	Sofie Nimmegeers

The Benchmark Workshop will report by 20th March 2019 for the attention of ACOM.

IBPhake – Inter-Benchmark Protocol on hke.27.3a46–8abd

2018/2/FRSG18 An **Inter-Benchmark of Hake (*Merluccius merluccius*) in subareas 4, 6, and 7, and divisions 3.a, 8.a–b, and 8.d, Northern stock (Greater North Sea, Celtic Seas, and the northern Bay of Biscay)** (IBPhake), chaired by Michel Bertignac* (France) and attended by one invited external expert, Santiago Cerviño, Spain, will be established and work by correspondence in January 2019 to:

a) To include all discard series in the stock assessment
b) To include the egg index in the stock assessment

c) To re-examine and update, if appropriate, MSY and PA reference points according to ICES guidelines (see Technical document on reference points);

Stocks	Stock leader	Stock assessor
Hake (*Merluccius merluccius*) in subareas 4, 6, and 7, and divisions 3.a, 8.a–b, and 8.d, Northern stock (Greater North Sea, Celtic Seas, and the northern Bay of Biscay)	Dorleta Garcia	Dorleta Garcia

The Inter-Benchmark Workshop will report by 31 January 2019 for the attention of ACOM.

IBPHer6a7bc– Inter–Benchmark Protocol for Herring in 6a,7bc 2019

2018/2/FRSG19   An **Inter-Benchmark Protocol for herring in 6a,7bc**, chaired by Richard Nash*, Norway and attended by external experts Jonathan Deroba, USA, and Piera Carpi, USA, will be established and work by correspondence 19–20 February 2019 to:

a) Review re-calculated and extended SWC IBTS Q1 and Q4 indices for use in the assessment of herring in 6a,7bc;

b) Review the final model configuration following model optimisation to minimise retrospective bias;

c) Re-examine (and update if necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points)

IBPHer6a7bc will report by 8 March 2019 for the attention of ACOM.

Supporting information

Priority	The activities of this Group will improve the stock assessment for herring in 6a,7bc.

Scientific justification	The most recent assessment of the combined herring stocks in 6a,7bc at HAWG 2018 showed a strong retrospective bias in SSB, pulling down the series as far back as the mid-1980s. The retrospective pattern seems to be linked to the fitting of the SWC IBTS Q1 and Q4 indices in the assessment. The assessment results were sensitive to changes in the bindings of the catchabilities in these survey indices although the changes to the bindings only leads to very minor changes in the estimated catchability at age themselves. The survey indices have only been included up to 2010 in the model although the data is available to the present. It is possible that this is causing some of these sensitivities.

It is proposed to address the retrospective bias by recalculating the SWC IBTS Q1 and Q4 indices using spatial models similar to those used to generate indices from trawl surveys for the assessments of North Sea Autumn Spawning herring and Western Baltic Spring Spawning herring. This will allow to extend the indices up to present time.

The configuration of the SAM model will subsequently be explored and optimised with the inclusion of the updated indices with the aim to minimise retrospective bias.

The Inter-benchmark is needed to review the inclusion of the re-calculated and extended SWC IBTS Q1 and Q4 indices in the assessment of herring in 6a,7bc as well as review the final optimal configuration of the SAM model. |

Resource requirements	Two external reviewers and work from WG members.
Participants	The Group is expected to be attended by 8-10 members and guests.
Secretariat facilities	Web conference
Financial	No financial implications.
Linkages to advisory committees	ACOM.
Linkages to other committees or groups	AWG
Linkages to other organizations	None.

IBPNEAMac – Interbenchmark Workshop on the assessment of northeast Atlantic mackerel

2018/2/FRSG20   A Interbenchmark Workshop on the assessment of northeast Atlantic mackerel (IBPNEAMac), chaired by Niels Hintzen* will meet in Copenhagen, Denmark, 11-13 December 2018 for a preliminary meeting and in the Netherlands, 4-7 March 2019 for the final Benchmark meeting to:

    a) Improve the understanding on the behaviour of the current model and its sensitivity to each data source

- Understand the behavior and the importance of the process error in the current assessment.
- Quantify the relative weight of the different data sources.
- Understand how the tagging data influences the model

b) Investigate possible changes in the model :
- Revisit the formulation used to incorporate the tagging data.
- Reassess the relevance of using a correlation structure for the IESSNS
- Revisit other aspect of model configuration (is it overparameterised or should we give it more freedom, for instance in the observation error for the catches)
- Revisit the down weighting of the catches prior to 2000, and consider either estimating a catch multiplier in the model or fixing the multiplier based on external information (and test the sensitivity to the multiplier used).

c) Re-examine and update (if necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);

d) Develop recommendations for future improving of the assessment methodology and data collection;

Stocks	Stock leader
Mac.27.nea	Thomas Brunel, Netherlands

The Benchmark Workshop will report by 04 March 2019 for the attention of ACOM.

Supporting Information

Priority	High. The use of the mackerel assessment as a basis for advice for this stock has been heavily questioned by both scientists at WGWIDE and the clients (Coastal States, PECMAS). It is essential that such an important stock has an adequate analytical basis for advice.
Scientific justification	In order to get a better understanding to this behavior of the current assessment, and investigate potential modifications to remediate to some of the issues identified, WGWIDE recommends that an interbenchmark process should be conducted as soon as possible, preferably early in 2019. This interbenchmark would have the following tasks:

1) Improve the understanding on the behavior of the current model and its sensitivity to each data source :
- Understand the behavior and the importance of the process error in the current assessment.
  o Look for any retrospective pattern in the process error
  o Investigate the process error for leave one out runs (to check if the pattern is due to any particular survey)
  o Exploration of model behavior with a process error variance fixed at a very low value.
- Quantify the relative weight of the different data sources. Compute a metrics that would measure the weight of each individual data point. . Individual data sources are not necessary ignored but their weight reduced/increased and the contribution to the likelihood of that and other components investigated

similar what is done in the Gadget model (Stefánsson 2003 and Taylor et al. 2007)

- Understand how the tagging data influence the model :
    o Why does their exclusion result in a much larger stock
    o How does each new year of recapture influence abundance at age estimates (i.e. how far back in time, which age range).

2) Investigate possible changes in the model :
- Revisit the formulation used to incorporate the tagging data. (e.g. how to interpret output of a model having at the same time normal and negative binomial error distributions)
- Revisit the selection operated on the RFID tag data (inclusion of age 2, age 12 not treated as a plus group, number of years spent before recapture)
- Consider fixing the relative weight of the tags (probably down weight them) compared to the surveys (possibly based on external information).
- post release survival estimated by periods of years (reflecting the tagging practices) instead of estimated by type of tag used. The idea is that post release survival for the last years of the steel tags should be similar to the survival for the RFID tags (since tagging protocol changed before steel tags where replaced by RFID tags).
- Revisit the down weighting of the catches prior to 2000, and consider either estimating a catch multiplier(as it is possible to do in SAM) or fix the multiplier based on external information (and test the sensitivity to the multiplier used).
- Investigate alternative use of the tagging data (e.g. as an biomass index or a Z estimate)
- Reassess the relevance of using a correlation structure for the IESSNS. Potentially use the empirical correlation in the index (estimated by stoX) with an additional variability.
- Revisit other aspect of model configuration (is it overparameterised or should we give it more freedom, for instance in the observation error for the catches).

Resource requirements	One meeting room at ICES Secretariat.
Participants	WGWIDE members and scientists with experience and interest in assessment modelling and tagging data.
Secretariat facilities	Secretariat administrative and scientific support.
Financial	
Linkages to advisory committees	ACOM. The results of this work will feed in directly in the ICES advisory process.
Linkages to other committees or groups	
Linkages to other organizations	

This IBP did not take place. The cod part was moved to IBPNEACod 2019. The Horse mackerel was cancelled.

IBPRefPts – Inter-Benchmark Protocol on reference points for Cod (*Gadus morhua*) in NAFO Subarea 1, inshore (West Greenland cod) and Western Horse mackerel (*Trachurus trachurus*) in divisions 3.a, 4.b–c, and 7.d (Skagerrak and Kattegat, southern and central North Sea, eastern English Channel)

2018/2/FRSG21 An **Inter-Benchmark of Cod (Gadus morhua) in NAFO Subarea 1, inshore (West Greenland cod) and Horse mackerel (*Trachurus trachurus*) in divisions 3.a, 4.b-c, and 7.d** (Skagerrak and Kattegat, southern and central North Sea, eastern English Channel), chaired by tbd. and attended by one invited external expert, tbd, will be established and work by correspondence to:

   a) For western horse mackerel, determine which category of assessment (1 vs 2) is appropriate given the observed retrospective re-scaling behaviour of the current assessment.

   b) Re-examine and update, if appropriate, MSY and PA reference points according to ICES guidelines (*see* Technical document on reference points);

Stocks	Stock leader	Stock assessor
Cod (*Gadus morhua*) in NAFO Subarea 1, inshore (West Greenland cod)	Anja Retzel	Rasmus Hedeholm
Horse mackerel (*Trachurus trachurus*) in divisions 3.a, 4.b-c, and 7.d (Skagerrak and Kattegat, southern and central North Sea, eastern English Channel)	Jens Ulleweit	Piera Carpi

The Inter-Benchmark Workshop will report by 15 March 2019 for the attention of ACOM.

WKBALTCOD2 – Benchmark Workshop on Baltic Cod Stocks

2018/2/FRSG22 A **Benchmark Workshop on Baltic Cod Stocks** (WKBALTCOD2), attended by invited external experts Vladlena Gertseva, US, and Verena Trenkel, France, will be established and will meet in Copenhagen, Denmark, 15–19 October 2018 for a data evaluation meeting (chaired by ICES Chair Johan Lövgren*) and in Copenhagen, Denmark 4–8 February 2019 for a Benchmark meeting (chaired by External Chair Meaghan Bryan*, US, and ICES Chair Michele Casini*, Sweden) to:

   a) Evaluate the appropriateness of data and methods to determine stock status and investigate methods for short term outlook taking agreed or proposed management plans into account for the stocks listed in the text table below. The evaluation shall include consideration of:

   i. Stock identity and migration issues;

   ii. Life history data;

   iii. Fishery-dependent and fishery independent data;

   iv. Further inclusion of environmental drivers, multi-species information, and ecosystem impacts for stock dynamics in the assessments and outlook

b) Agree and document the preferred method for evaluating stock status and (where applicable) short term forecast and update the stock annex as appropriate. If a category 1 assessment method can not be agreed, then an alternative method (the former method, or following the ICES data-limited stock approach) should be put forward as a basis for the assessment and advice;

c) Re-examine and update (if necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);

d) Prioritize recommendations for future improving of the assessment methodology and data collection;

e) As part of the evaluation:

i) Conduct a 5-day data evaluation workshop (DEWK). Stakeholders are invited to contribute data (including data from non-traditional sources) and to contribute to data preparation and evaluation of data quality. As part of the data evaluation workshop consider the quality and compiling methodology for all input data for stock assessment, including catch data. For both stocks, produce working documents at least 7 days prior to the meeting, describing the input data intended to be used in stock assessment, to be discussed, reviewed and approved during DEWK.

ii) Following the DEWK, produce working documents to be reviewed during the Benchmark meeting at least 7 days prior to the meeting

Stocks	Stock leader
Cod (*Gadus morhua*) in subdivisions 22–24, western Baltic stock (western Baltic Sea)	Marie Storr-Paulsen
Cod (Gadus morhua) in subdivisions 24–32, eastern Baltic stock (eastern Baltic Sea)	Margit Eero

The Benchmark Workshop will report by 8 March 2019 for the attention of ACOM.

WKCELTIC – Benchmark workshop on Celtic Sea stocks

2018/2/FRSG23 A **Benchmark Workshop on Celtic Sea Stocks** (WKCELTIC), chaired by ICES Chairs Jonathan White*, Ireland, and Ana Ribeiro Santos*, UK (for the data evaluation WK) and ICES Chair xxx and External Chair Einar Hjörleifsson, Iceland and attended by two invited external experts Casper Berg, Denmark and xx (for the benchmark) will be established and will meet for a first 3-day Data Evaluation Workshop in Galway on 6–8 February 2019, for a second 3-day Data Evaluation Workshop in Copenhagen on 1–3 October 2019 and for a 5-day Benchmark meeting in Copenhagen on 10–14 February 2020 to:

a) Evaluate the appropriateness of data and methods to determine stock status and investigate methods for short term outlook taking agreed or proposed management plans into account for the stocks listed in the text table below. The evaluation shall include:

i. Document current and past National sampling and estimation procedures, commenting on their statistical soundness and the quality of estimates and data gaps;

ii. Review current sampling levels and adjust stratification levels for landings and discards accordingly;

iii. Review and standardizehistorical catch data, with common estimation procedurestaking into account the statistical differences between national data compilation;

iv. Provide general guidelines for commercial data compilation at the regional (stock) level;

v. Review changes in mean weights and maturity;

vi. Explore impact of all tuning fleets on assessment estimates;

vii. Examine alternative assessment models to XSA (e.g. A4A, ASAP, SAM);

viii. Examine mixed fisheries interaction for the three species included in this benchmark;

ix. Stock identity and migration issues;

x. Life-history data including recruitment assumptions;

xi. Further inclusion of environmental drivers, and ecosystem impacts.

b) Agree and document the preferred statistical 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

c) If no analytical assessment method can be agreed, then an alternative method (the former method, or following the ICES data-limited stock approach) should be put forward;

d) Re-examine and update (if necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);

e) Develop recommendations for future improving the assessment methodology and data collection;

f) As part of the evaluation:

i. Conduct two 3-day data evaluation workshops (DEWK). Stakeholders are invited to contribute data (including data from non-traditional sources) and to contribute to data preparation and evaluation of data quality. As part of the data evaluation workshops consider the quality of all input data for stock assessment, including catch data. For each stock, produce working documents at least 7 days prior to the meeting, describing the input data intended to be used in stock assessment, to be discussed, reviewed and approved during DEWK.

ii. Following the DEWK, produce working documents to be reviewed during the Benchmark meeting at least 7 days prior to the meeting.

Stocks	Stock leader
Cod (Gadus morhua) in divisions 7.e-k (eastern English Channel and southern Celtic Seas); cod.27.7e-k	Marianne Robert
Whiting (Merlangius merlangus) in divisions 7.b-c and 7.e-k (southern Celtic Seas and eastern English Channel); whg.27.7b-ce-k	David Stokes
Haddock (Melanogrammus aeglefinus) in Divisions 7.b-k (southern Celtic Seas and English Channel); had.27.7b-k	Jonathan White

The Benchmark Workshop will report by 1 March 2020 for the attention of ACOM

WKROCK – Benchmark Protocol on Rockall haddock

2018/2/FRSG24　　　A **Benchmark of Rockall haddock (*Melanogrammus aeglefinus*) in Division 6.b (Rockall)** (WKROCK), chaired by Helen Dobby*, Scotland, UK for ICES and External Chair Alexander Kempf,* Germany and attended by two invited external experts, Daniel Ricard, Canada and Michel Bertignac, France will be established and meet for a workshop meeting at ICES, Copenhagen, Denmark 2–5 April 2019.

a) Examine data sources, as necessary
b) Update assessment, as necessary
c) Re-examine and update, if appropriate, MSY and PA reference points according to ICES guidelines (see Technical document on reference points); and,
d) Conduct an MSE for use in the ICES advice in 2019.

Stocks	Stock leader	Stock assessor
Rockall haddock Haddock (*Melanogrammus aeglefinus*) in Division 6.b (Rockall)	Vladimir Khlivnoi	Vladimir Khlivnoi

The Benchmark Workshop will report by 5 May 2019 for the attention of ACOM.

IBPNSsaithe – Interbenchmark protocol on saithe (Pollachius virens) in subareas 4, 6 and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)

2018/2/FRSG25　　　The **Interbenchmark protocol on saithe (*Pollachius virens*) in Subareas 4, 6 and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat) (IBPNSsaithe),** chaired by Daniel Howell*, Norway, and reviewed by David Miller, Denmark, will meet by correspondence, 28–29 January 2019 to:

a) Review the changes to the assessment outputs in light of the current SAM model configuration and corrected handling of the CPUE series to tune the assessment. Evaluate if the benchmark decisions on model settings remain valid and if the assessment is a suitable basis for providing management advice.
b) If required, update the reference points for the stock following ICES guidelines.

Stocks	Stock leader
saithe (*Pollachius virens*) in Subareas 4, 6 and Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	Jennifer Devine

IBPNSsaithe will report by 15 February 2019 for the attention of ACOM.

2018/2/FRSG26   The **Workshop on the benchmark assessment and management plan evaluation for Icelandic haddock and saithe** (WKICEMSE2019) will meet at ICES HQ, Copenhagen, Denmark on 26–28 March 2019 chaired by ICES Chair Morten Vinther* (Denmark) and External Chair Jim Ianelli* (USA) and attended by two invited external experts Paul Spencer (USA), and Christoph Konrad (Italy), to evaluate the benchmark assessments and management plan evaluations for Icelandic haddock (had.27.5a) and saithe (pok.27.5a). The work will be to:

a) Evaluate the appropriateness of data and methods to determine stock status and investigate methods for short term outlook taking agreed or proposed management plans into account for the stocks listed in the text table below. The evaluation shall include consideration of (where applicable):

    i. Stock identity and migration issues;

    ii. Life-history data;

    iii. Fishery-dependent and fishery-independent data;

    iv. Further inclusion of environmental drivers, multi-species information, and ecosystem impacts for stock dynamics in the assessments and outlook

b) Agree and document the preferred 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. If no analytical assessment method can be agreed, then an alternative method (the former method, or following the ICES data-limited stock approach) should be put forward;

c) Re-examine and update (if necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);

d) Develop recommendations for future improving of the assessment methodology and data collection;

e) Evaluate the Icelandic management plans for the stocks listed in the text table below against precautionary and MSY criteria.

Stock	Stock leader
had.27.5a	Bjarki Thor Elvarsson <bjarki.elvarsson@hafogvatn.is>
pok.27.5a	Höskuldur Björnsson <hoskuldur.bjornsson@hafogvatn.is>

WKICEMSE2019 will report by 1 April 2019 for the attention of the Advisory Committee.

Supporting Information

Priority:	High
Scientific justification and relation to action plan:	The Ministry of Industries and Innovation in Iceland has confirmed the adoption of the current management plans for Icelandic haddock

	and saithe for the period of 5 years , but require an independent review of the analyses done.
Resource requirements:	Work to be conducted by national experts in Iceland.
Participants:	National experts from Iceland and NWWG members
Secretariat facilities:	SharePoint site and meeting room for the workshop in March.
Financial:	A budget will eb agreed with Iceland.
Linkages to advisory committees:	Reports to ACOM
Linkages to other committees or groups:	NWWG
Linkages to other organizations:	

WKGMSE2 – Workshop on guidelines for management strategy evaluations

2018/2/FRSG27 **The second Workshop on guidelines for management strategy evaluations** [WKGMSE2] chaired by Carmen Fernández*, Spain, will meet from 4–8 February 2019 at the JRC, Ispra, Italy, to:

a) Review recent methodological and practical MSE work conducted in ICES and in other fora around the world. Based on the work of WKGMSE (2013) and this review, bring up to date the methodologies and technical specifications that should be incorporated in MSE work in ICES.

b) The methodological and technical revision should include all aspects involved in MSE, and pay specific attention to the following issues that have been identified through recent work in the ICES system:

- Evaluation of performance in the short-term versus the long-term, including treatment and interpretation of MSE projection results relative to forecasts from stock assessment models used to annually assess the resource;
- Appropriate range of scenarios to consider in the MSE and how to deal with outcomes from multiple scenarios, including "worst-case" scenarios;
- With reference to the work of WKGMSE (2013), review risk definition and computation in MSE;
- How to deal in the context of MSE with the broad range of models currently used for stock assessment in ICES (e.g. stock assessment models that include process error);
- Evaluate the efficiency and effectiveness of "short-cut" approaches versus "full-feedback" simulation incorporating annual stock assessment models in the MSE loop;
- Presentation of MSE results e.g. properly describing the process, standardising outputs to present results, etc;

- Review initiatives on the science side, including model developments, operating frameworks, etc. that could be incorporated in the ICES system.

c) Update the guidelines for MSE evaluations in ICES originally prepared by WKGMSE (2013).

d) Consider how to best disseminate the guidelines to experts within the ICES community and the need for training courses.

WKGMSE2 will report to ACOM by March 4 2019.

Supporting Information

Priority	High. ICES regularly evaluates harvest control rules in management plans and gives advice on their performance. After original work conducted by the ICES group SGMAS in 2008, ICES held the WKGMSE workshop in January 2013 in which an up-to-date set of guidelines was prepared to serve as reference for MSE in ICES.
	In their annual meeting of November 2017, ACOM agreed that a new workshop should be held to review recent developments in Management Strategy Evaluation. The following extract from the ACOM meeting report indicates some of the issues noted:
	"The management strategy evaluation forming the basis for ICES advice on a long-term management strategy for mackerel did for several reasons not use the results of the 2017 assessment as the starting point for the simulations. This made it difficult to use the advice to explore short-term consequences of different harvest rules. Norway, the EU and Faroe Islands commended on this in a response to ICES.
	ACOM agreed that a workshop should be held to review recent developments in Management Strategy Evaluation. The ICES MSE guidelines (produced in 2013) should be reviewed and updated as needed to reflect best practice. Attention should be paid to the issue of short-term versus long-term evaluations, how to deal with the broad range of stock assessment models currently used in ICES in the context of MSE, and "short-cut" approaches versus those that include the assessment model in the MSE loop.
	Similar initiatives on the science side with model developments, etc. would be con-sidered very useful. Also the presentation of the MSE's should be considered; some-times they are read/interpreted as forecasts which certainly isn't the case."
	In addition to the issues discussed at the ACOM meeting, the new workshop aims to review other aspects of MSE identified through recent ICES work, as well as through MSE work conducted elsewhere in the world, with the aim to produce up-to-date guidelines for MSE in ICES.
Scientific justification	Since evaluating and advising on the performance of management plan is a regular activity in ICES, the scientific justification for this work is clear.
Resource requirements	One meeting room at JRC, Ispra, Italy.
Participants	Scientists with experience and interest in MSE.
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	
Linkages to other organizations	

WKNephrops – Workshop on Methodologies for Nephrops Reference Points

2018/2/FRSG28   The **Workshop on Methodologies for Nephrops Reference Points (WKNephrops)**, chaired by Michael Bell*, UK and attended by Invited Expert, Robin Cook, UK will be established and will meet in Lisbon, Portugal 25–29 November 2019 to evaluate reference point estimation methods for stocks with UWTV surveys.

The workshop will work to:

a) Review the methodology and performance of the current approaches to estimating reference points for Category 1 *Nephrops* stocks.
b) Based on a) develop a standard method and apply this method to estimate reference points (MSY, ranges, precautionary and limit) for fishing pressure and stock size for all *Nephrops* stocks which have sufficient data.
c) Evaluate the utility of other modelling frameworks to assess and provide reference points for *Nephrops* stocks (e.g. length based models, VPA type models and production models).
d) For *Nephrops* stocks which are more data-limited propose a consistent methodology to determine stock status and provide catch advice taking into account available data and knowledge from other areas.
e) In cases where transitioning from PA advice to MSY advice results in significant changes in the advice consider the need for a gradual approach by means of a Harvest Control Rule

WKNephrops will report by31 December 2019 for the attention of the Advisory Committee.

Supporting information

Priority	Sound methods that reliably produce high-quality reference point estimates for Nephrops in the ICES area are needed given the outcomes of recent benchmarks (e.g. WKNeph). Consequently, these activities are considered to have a very high priority the ICES advisory programme.
Scientific justification	ICES delivers advice for 29 *Nephrops* stocks using a range of data-rich and data-limited methodologies which are generally bespoke to *Nephrops* issues. *Nephrops* fisheries themselves have a high commercial value some stocks have strong mixed-fishery interations and therefore reliable science and advice is of paramount importance.
	The current ICES method for assessing and providing catch advice based on UWTV surveys has been in place since 2009 (ICES, 2009). A review is timely for a number of reasons:
	• New studies on discard survival raise concern about the discard survival assumptions used in the ICES assessments and advice.

- The number of Cat 1 stocks and the time serise of their dynamics has increased since 2019.
- The length based yeild per recruit metods have developed since 2009.
- When reviewing the data and methods for three stocks proposed to be Category 1, WKNeph 2016 had an issue in reconciling some of the data and methods for generating reference points. The proposed MSY reference points suggested that fishing could dramatically increase despite some histories of fishery reduction and concern over stock status. The benchmark recommended a workshop be convened to explore these issues and to derive appropriate CRs for transitioning between data -limited and data-rich categories.

The workshop will therefore address the issues with the following plan.

Term of Reference a)

Use the data from stocks for which there are >10 years of concurrent UWTV data and length sampling to see if changes in the calculated harvest ratio are reflected in the length-frequency.

Term of Reference b)

Explore the use of some of the data-limited methods (size or life-history based) in conjunction with UWTV surveys to propose initial Rs.

Term of Reference c)

Seek to develop an appropriately robust transition rules for stocks moving to data-rich categories (ie. with new UWTV surveys) so that any stock response to radical changes in harvesting are monitored effectively.

Term of Reference d)

Revisit the use of dynamic assessment models for use on *Nephrops* stocks.

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.
	Communication with clients, a review group, etc., may be required based on the outcomes of this workshop.
Participants	The Workshop is open to all interested participants. Methods experts, *Nephrops* stock assessors and data providers are expected to participate.
Secretariat facilities	Sharepoint site, staff support
Financial	No financial implications
Linkages to advisory committees	Direct link to providing ICES advice on *Nephrops*.

WKFORBIAS – Workshop on catch forecasts from biased assessments

A prior version of this resolution was approved by ACOM in March but the Workshop was postponed and the ToRs have since then been modified.

2018/2/FRSG29   The **Workshop on catch forecasts from biased assessments** (WKFORBIAS), chaired by Larry Alade* (USA) and Chris Legault* (USA) will meet at Woods Hole, USA from 11–15 November 2019 to:

a) Document the extent and magnitude of bias as identified in ICES category 1 and 2 stock assessments through the retrospective analysis performed by the ICES expert groups in 2018

b) Categorize the potential causes for bias as identified in ICES stock assessments with respect to factors like stock longevity, quality of input data (catch and survey), model assumptions and environmental changes

c) Develop criteria for characterizing a major or minor bias through retrospective analysis as it pertains to:
   i)   acceptability of an assessment,
   ii) consideration for correction (using the results of the retrospective analysis) for stock status determination and catch forecast, while taking into consideration other model diagnostics from the assessments.

d) Investigate through simulations the performance of using Mohn's rho to correct biased assessments for the purpose of making catch projections or, alternatively, to directly correct catch forecasts, particularly as it relates to the short and long-term tradeoffs in achieving MSY targets.

e) In cases where Mohn's rho can be used, develop criteria for its use including a description of the methodology for correcting population metrics (for example, indicate whether the correction should be applied to spawning stock biomass or numbers at age) or the catch forecasts
   i)   Develop standard methods for the presentation of bias corrected values in advice sheets.
   ii) In cases where Mohn's rho should not be used, recommend other approaches.

WKFORBIAS will report by 6 January 2020 for the attention of ACOM.

Supporting information

Priority	High. A consistent approach in the methodology for catch projections when category 1 and 2 age or length-based stock assessments display bias is required.
Scientific justification	Provision of credible advice on fishing opportunities requires that advice is based on the best available unbiased estimates of population metrics. In some of the ICES assessments, there is evidence of some bias in category 1 and 2 age or length-based assessments and the approach followed in providing advice has varied between stocks. In some cases, the assessment is rejected with advice delayed and a benchmark (or interbenchmark) is organized to resolve the issue while in other cases the values are either used as is to provide advice in the category 1-2 framework or the population estimates are used as indicative of trends in a category 3 frameword. In this context, it is desired that a more consistent approach be defined when there is evidence of bias in these assessments. It has been proposed that a measure of bias in the form of the Mohn's rho be used to correct population estimates for the purpose of catch projections however it is considered that the approach needs to be thoroughly examined to determine whether it should be used or if ome other approach should be followed.
	The worshop will focus on first documenting the extent of the problem (ToR a) based on data produced by assessment working groups during 2018 as per a generic ToR on the calculation of Mohn's rho that was incorporated in their work deliverables. ToR b would be addressed by compiling the causes identified for retrospective bias by the assessment working groups. Investigation of these causes for some stocks would be desirable but is not the main focus of the workshop. Based on existing litterature, studies, general rules should be determined for accepting or

rejecting stock assessments with retrospective bias (ToR c). It is expected that for some of the stocks where a significant bias was identified in 2018, some simulations could be conducted to determine whether a correction using Mohn's rho would have been likely to reduce the bias in catch projections (ToR d). In those cases, the methodology that should be used should be thoroughly described. If not, then other approaches should be considered (ToR e).

Resource requirements	Some support will be required from the ICES Secretariat.
Participants	We expect 10-20 attendees. It is expected that some of the participants would prepare case studies.
Secretariat facilities	None
Financial	
Linkages to advisory committees	ACOM
Linkages to other committees or groups	All stock assessment Working Groups
Linkages to other organizations	Relevant to all national laboratories contributing to ICES advice on fishing opportunities

WKRDB–POP – Workshop on Populating the RDBES data model

2018/2/FRSG30 The **Workshop on Populating the RDBES data model (WKRDB-POP)** co-chaired by David Currie*, Ireland and Edvin Fuglebakk*, Norway, will meet in ICES HQ, Copenhagen, 18–22 February 2019 to:

a) Describe and explain the RDBES data model to national data submitters using worked examples.

b) Provide hands-on guidance and assistance in converting data to the RDBES data format for national data submitters.

c) Identify and document any problems in converting national data formats to the RDBES format.

WKRDB-POP will report by 30 April 2019 for the attention of ACOM

Supporting information

Priority	The activities of this workshop will promote the development of the Regional Database and Estimation System, RDBES. This workshop will help countries to correctly convert their national data formats to the RDBES format. The RDBES when it is implemented works as a database for the Baltic Sea, North Sea & Eastern Arctic, and North Atlantic Regional Coordination Groups (RCGs). The RDBES will also function as a database and estimation system for ICES Fisheries Advice. The development will concentrate on harmonisation, quality assuring, documentation, approved estimation methods and transparency. Consequently, these activities are considered to have a very high priority.

Scientific justification	The RDBES will be extensively used by the RCGs and ICES both to store detailed fisheries sample data and use it for estimation - therefore it is essential that national data submitters are familiar with the RDBES format and confident in correctly converting their national data to this format.
	ToR a) – Describe and Explain the Data Model
	The RDBES data format will be explained using its documentation, and a number of worked examples. These worked examples will play an important role in illustrating the types of decisions that data submitters will need to make.
	ToR b) – Provide hands-on guidance and assistance
	This is the most important part of the workshop and will occupy the majority of the workshop's time - it will entail the RDBES Core Group providing practical assistance to the attendees. The workshop attendees must be familiar with their own national sampling programme designs, and must have made preparations necessary to provide real data sets of their national samples to the workshop. The Core Group will then help them to convert their data to the new RDBES format. The more work that attendees have done in trying to populate the RDBES format with their own data before the workshop the more value they will gain from this work.
	When new questions are identified and resolved they can be added to the RDBES "Frequently Asked Questions" so that other people can benefit from the answers.
	ToR c) – Identify problems
	If it is not clear how particular data should be converted to the RDBES format then this will be recorded for future discussion and resolution.
Resource requirements	The two co-chairs, and potentially the rest of the 5 active members of the RDBES Development Support Core Group will be requested to participate as hands-on instructors/demonstrators.
Participants	~20 people excluding the Core Group.
Secretariat facilities	ICES Q meeting room and facilities
Financial	No financial implications.
Linkages to advisory committees	There are no direct linkages with the advisory committees, but there is a link to WGCATC and PGDATA and most of the stock assessment Work ing Groups will benefit from the development of the RDBES.
Linkages to other committees or groups	The group and the development of the RDBES will support and benefit from the fishPi2 project.
Linkages to other organizations	The RDBES will support the work done by the RCGs under the European Commission, EC. The aim is also make the RDBES support the countries in providing data for the data calls under the EC.

WKSARMP– Workshop on the Iberian Sardine Management and Recovery Plan

2018/2/FRSG31   A **Workshop on the Iberian Sardine Management and Recovery Plan**, chaired by Manuela Azevedo*, Portugal, and attended by the invited external experts Martin Dorn, US, and Sonia Sanchez, Spain, will work by correspondence from November 2018 to March 2019 and meet in Lisbon, Portugal on the 1–5 April 2019 to;

a) Re-examine and update (if necessary) reference points according to ICES guidelines taking into account two alternative scenarios of recruitment: the recent low productivity (2006–2017) and the historical productivity (1993–2017);

b) Develop the tools to be used in the analyses (e.g. integration of Stock Synthesis into FLBEIA);

c) Agree on the setup of the Operating Model and scenarios to be tested;

d) Ensure that the minimum requirements for conducting MSE, as developed by WKGMSE2 (The second Workshop on guidelines for management strategy evaluations, February 2019), are met for the harvest rules analysed;

e) Conclude on whether the proposed harvest control rule (or rules) meet the objectives defined in the request;

f) Conclude in relation to ICES guidelines on whether the proposed management strategies (see Annex 1) are precautionary or not.

WKSARMP will report by 24 April 2019 for the attention of ACOM.

Supporting information

Priority	igh.
Scientific justification	ICES received a Special Request from Portugal-Spain to evaluate the multiannual management and recovery plan for the Iberian sardine (2018–2023). The request also includes the re-examination of reference points for this stock. WKSARMP plans to agree and develop the tools to be used in the analyses and produce a report describing the Harvest Control Rules evaluated, the results and conclusions. The workshop will ensure that the analyses meet the minimum requirements for conducting an MSE, as agreed by WKGMSE2.
Resource requirements	Two external reviewers and work from WG members.
Participants	The Group is expected to be attended by 15–20 members and guests.
Secretariat facilities	Web conference
Financial	
Linkages to advisory committees	ACOM.
Linkages to other committees or groups	WGANSA
Linkages to other organizations	

WKSHARK5 – Workshop on incorporating discards into the assessments and advice of elasmobranch stocks (WKSHARK5)

2018/2/FRSG32   The **Workshop on incorporating discards into the assessments and advice of elasmobranch stocks** (WKSHARK5), chaired by Paddy Walker (Netherlands) will meet in Leeuwarden, Netherlands from 25 February – 1 March 2019 to:

a) Investigate and propose a raising method for elasmobranch fishes when a species is mostly discarded, as standard raising procedures are not applicable;

b) Evaluate and define the data quality and onboard coverage; discard retention patterns between fleets and countries; discard survival, as well as the definition of acceptable types/sources of data required for advice;

c) propose how to include discard information into the advisory process for elasmobranch fishes;

d) Propose a method to provide fishing opportunities that ensure that exploitation is sustainable when a species has been under moratorium, as is the case with the undulate ray

It is envisaged that this workshop will be part of a process to ultimately develop an advice framework for elasmobranches that incorporate DC-MAP data on discards as well as explore the use of fisheries dependant data.

It will investigate and propose options for advice on fishing opportunities of bycatch of elasmobranch fishes, when raising procedures and survivability greatly influence the estimates of catch and landings.

A subsequent Management Strategy Evaluation may be required in order to identify how possible changes in estimated stock biomass and associated catch advice might affect stocks.

Considering the scope of the meeting, it is recommended to invite experts from WGMEDS, WKLIFE, WGBIOP and WGBYC.

WKSHARK5 will report by 25 March 2019 for the attention of ACOM.

Supporting information

Priority	Stock assessments conducted by ICES WGEF are currently based predominately on either survey data or landings data. However, elasmobranchs are frequently discarded, due to quota limitation and/or low market value. Many of these species potentially have a high discard survival rate. Discard sampling programmes in several countries are now collecting data that may inform on total catch and support more robust assessments. It is necessary to determine how ICES assessments for elasmobranchs will handle and integrate data from discard sampling programmes.
Scientific justification	Assessments based on landings data may strongly underestimate biomass for elasmobranch species with high discarding and discard survival rates. This issue needs to be resolved in order to provide appropriate catch advice to customers.
Resource requirements	A meeting room has been provided at Van Hall Larenstein University of Applied Sciences in Leeuwarden, Netherlands.
Participants	Scientists with expertise in elasmobranch fisheries, and in discarding and discard data.
Secretariat facilities	None
Financial No financial implications	No financial implications

Linkages to advisory committees	The results of this work will feed in directly in the ICES advisory process.
Linkages to other committees or groups	This workshop is relevant to: WGEF, WGMEDS, WKLIFE, WGBIOP and WGBYC
Linkages to other organizations	

WKTARGET: The joint ICES/Probyfish Workshop on identification of target and bycatch species

2018/2/FRSG33   The joint **ICES/Probyfish Workshop on identification of target and bycatch species** (WKTARGET), chaired by Youen Vermard*, France, will meet in Nantes, France, 10–11 January 2019, and in ICES, Denmark, March 2019, to:

a) Assess data from observer trips and on catches by metier as available in the RDBES and their possible use in the following analyses

b) Apply common procedures based on RDBES formats to assign stocks to the four catch categories target, valuable bycatch, collateral bycatch and hybrid species in each métier and integrate this to a status at fleet level

c) Apply common procedures to assess the annual proportion landed of each stock at métier and fleet level

d) Develop a method to visualize data on the distribution of stocks across catch categories within métier, fleets and management area.

WKTARGET will report by 11 February 2019 to the attention of the Advisory Committee.

Supporting Information

Priority	The workshop the objective to provide a scientifically based categorization of the different species in the catch according to the degree to which they are targeted by the fishery ("target", "hybrid", "valued bycatch" and "collateral bycatch") and to provide a tool which can be used to provide a quick overview of the importance of a given species as target, valued bycatch and collateral bycatch in different fleets. The necessary analysis are based on catch data (including wanted and unwanted catches i.e. former landings and discards) as most of the collateral bycatch do not appear in the landings statistics. The analyses are performed at the finest possible scale to avoid any false technical interaction created by data aggregation. The Regional DataBase (RDB) contains data at the appropriate scale to perform the analyses to identify species category.
	The Work Shop will focus on developing methods, based on trip data, to identify "target", "hybrid", "valued bycatch" and "collateral bycatch" for each of the areas Bay of Biscay, Celtic Sea, English Channel and North Sea and the degree to which these stocks are concentrated across fleets, métier's, subareas and seasons.

Scientific justification	**Term of Reference a)**
	Preliminary multivariate analyses have been tested on national data but should be applied generically on all countries/areas based on the RBD. Under this ToR, tests will be applied to check the database consistency.
	Term of Reference b)
	Preliminary methods have been developed based on multivariate analyses and tested on selected métiers. Under this ToR, the procedure will be reviewed and amended if necessary and applied to a wide range of data.
	Term of Reference c)
	To use in the visualisation of data, the degree to which a species is landed when caught will be estimated.
	Term of Reference d)
	Once the status is defined for each species/métier/country/area is defined, then the degree to which the species are associated to the different métiers/areas need to be s hown in an easily understandable graphical overview which can be reproduced automatically and used interactively by users. This ToR will develop a format to store the results of the multivariate analyses and a dynamic web interface.
Resource requirements	The research programme which provide the main input to this group is already underway, and resources are already committed. The additional resource required to undertake the meeting is negligible.
	The ToRs require access to observer data at trip level and to catches at metier level, both available in the RDB.
Participants	The Group plans to be attended by some 10–15 members and guests. Attendance by webex is also possible.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to advisory committees	There are no current direct linkages with the advisory committees.
Linkages to other committees or groups	WGMIXFISH.
Linkages to other organizations	DGMARE

The Workshop for the review of the scientific basis for a UK non-detriment finding (NDF) for the international trade in European eel, in relation to CITES legislation

2018/2/FRSG34　　　The **Workshop for the review of the scientific basis for a UK non-detriment finding (NDF) for the international trade in European eel, in relation to CITES legislation** (WKEELNDF), chaired by Eugene Nixon*, will be established and work by correspondence in December 2018 to January 2019 to:

Review the scientific basis (i.e. analytical methods and interpretation) described in two papers (listed below) of the proposed case for a Non-Detriment Finding (NDF) for international trade in European eel caught in some UK fisheries;

Make recommendations for improvements or modifications if appropriate;

Deliver a draft advice containing the key points of the reviews and short independent review reports.

Papers for the proposal for a non-detriment finding for trade in European eel from some UK eel fisheries:

1. *Draft non-detriment finding for the export from the United Kingdom (UK) of European eel Anguilla anguilla. (link)*

2. Population Dynamics of Lough Neagh eel. (link)

The core work of WKEELNDF will be carried out by three independent reviewers.

WKEELNDF will report by 10 January 2019 for the attention of the Advisory Committee.

Supporting information

Priority	igh.
Scientific justification	ICES received a request form the UK for independent review of the scientific basis for a UK non-detriment finding (NDF) for the international trade in European eel, in relation to CITES legislation.
Resource requirements	This work will require access to the ICES SharePoint and web conference facilities.
Participants	
Secretariat facilities	Support to provide access to the SharePoint and formatting the report.
Financial	A budget has been agreed with UK, also covering the hiring and travel costs of the core experts.
Linkages to advisory committees	There are no current direct linkages with the advisory committees.
Linkages to othe committees or groups	WGEEL
Linkages to othe organizations	DEFRA, UK

WKECO3 – Workshop on the design and scope of the 3rd generation of ICES Ecosystem Overviews

2018/2/FRSG35   The **Workshop on the design and scope of the 3rd generation of ICES Ecosystem Overviews** chaired by Mette Skern Mauritzen*, Norway, and Henn Ojaveer*, Estonia, will be established and will meet in Copenhagen, Denmark, 2–4 April 2019 to:

   a) Define a long term strategy (e.g., 10 years) for Ecosystem Overviews (EOs) by focusing on purpose and links with ICES Ecosystem Advice framework and other advisory processes (e.g., OSPAR, HELCOM) and management objectives. Establish a plan for the main steps and how they should be developed and updated.

b) Based on gap analyses from current EOs and WGCHAIRS 2018 group discussions; Identify products to be incorporated on short term (e.g., next 3 years or next update cycle) that fit with the narrative developed with managers during the scoping for the 2nd generation and new inputs needed. Identity relevant Expert Groups responsible for these products (review the experience of Climate Change issues through SICMME).

c) Liaise with the ICES Data Centre to clarify expectations for data provision for the ICES EOs that conform with the FAIR principles for the products highlighted in ToR ii.

d) Update cycles and protocols to develop the conceptual EO figures. Modify ICES technical guidelines accordingly.

e) Assess how the visual presentation of EOs at ICES.dk can be improved, and explore options to secure capacity of technical staff to further develop the presentation of EOs focusing on operational outcomes.

WKECO3 will report by 19th of April 2019 for the attention of the ACOM/SCICOM Committee.

Supporting information

Priority	igh priority, the EOs are part of the recurrent advice in the Administrative Agreement (AA) signed between the EU and ICES and key mechanism for ICES to deliver its advice on ecosystem based management EBM.
Scientific justification	The EOs explicitly summarize the ecosystem effects of fisheries and other human activities of relevance in different ecorregions providing updated trends on pressures and state of the ecosystem and integrating climate change effects in the document.
Resource requirements	The national research programmes and ICES WG 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 WK will be attended by experts covering the areas of knowledge related t the ToRs, with a wide range of area coverage and with a room limit of 22 participants .
Secretariat facilities	ICES Q room facilities and participation form Data Centre, Communication and Science/Advice.
Financial	No financial implications.
Linkages to advisory committees	Direct link to ACOM/SCICOM
Linkages to other committees or groups	WGINOSE, WGINOR, MFRI, WGIBAR, WGEAWESS, WGIAB, WGITMO, WGMME, WGZE, WGSAM, BEWG, JWGBIRD, WKSICCME-CVA, WGSFD.
Linkages to other organizations	Links to OSPAR, ELCOM, NEAFC, PICES, etc.

WKBALTIC – Workshop on the Ecosystem Based Management of the Baltic Sea

2018/2/FRSG36   The **Workshop on the Ecosystem Based Management of the Baltic Sea** (WKBALTIC), chaired by Rudi Voss*, Germany and David Reid*, Ireland will be established and will meet in ICES HQ, Copenhagen, 20–24 May 2019 to:

d) With stakeholders, identify issues necessary for management needs regarding mixed-fisheries interactions, ecosystem drivers of fisheries productivity and inter- and intra-specific interactions;

e) Prioritize recommendations for future improvements to mixed-fishery methodology, particularly in regards to a new models for pelagic species;

f) Expand on preliminary work exploring data in the Regional Database (RDB) on the mixing of pelagic species in the Baltic, and mixed demersal species in particular evaluating the quality of catch data,

g) Consider and potentially adapt existing mixed fisheries methodology for application in the Baltic, and prioritise recommendations for a new mixed fisheries model for pelagic species

h) Develop a roadmap for the delivery of future research needs for EBM and mixed fisheries management of Baltic Sea fisheries.

WKBALTIC will report by 25 June for the attention of ACOM/SCICOM.

Supporting information

Priority	
Scientific justification	
Resource requirements	
Participants	10-15 people. Experts on integrated assessment, fish stock assessment models, Baltic Sea ecosystem, stakeholders (industry, administrations, NGOs).
Secretariat facilities	Professional assisstance by the ICES secretariat
Financial	No financial implications
Linkages to advisory committees	There are close links with ACOM and SCICOM
Linkages to other committees or groups	This work requires collaboaration with WGSAM, WGMIXFIS and WGIAB. The work should also feed into the Fisheries Overviews.
Linkages to other organizations	

WKRRMAC – Workshop on a Research Roadmap for Mackerel

2018/2/FRSG37   The **Workshop on a Research Roadmap for Mackerel (WKRRMAC)** chaired by Carl O'Brien*, UK, and Mark Dickey-Collas*, Denmark, will be established and will meet in Bremerhaven, 7–9 May 2019 to:

a) With stakeholders, identify issues necessary for management needs of NE Atlantic mackerel regarding management plans, optimizing yield, distributional shifts, density dependent changes in growth and ecosystem drivers of fisheries productivity;

b) List additional concerns from fisheries managers and stakeholders which they perceive as suffering from a knowledge deficit:

c) Prioritize recommendations for research to lead to future improvements of the scientific advice for mackerel;

d) Consider knowledge and data sources, and potential methods and timetables by which those methods can be incorporated into the advice system;

e) Produce a roadmap for the delivery of future research needs for the management of fisheries on mackerel in the NE Atlantic.

WKRRMAC will report by DATE for the attention of ACOM/SCICOM.

Supporting information

Priority	
Scientific justification	
Resource requirements	
Participants	30 people. Experts and stakeholders on mackerel and advice for management of pelagic fish.
Secretariat facilities	Professional assisstance by the ICES secretariat
Financial	No financial implications
Linkages to advisory committees	There are close links with ACOM and SCICOM
Linkages to other committees or groups	This work requires collaboaration with WGWIDE, WGIPS, WGECO and ACOM.
Linkages to other organizations	

WKDLSSLS – Workshop on Data Limited Stocks of Short–Lived Species

2018/2/FRSG38 The **Workshop on Data Limited Stocks of Short-Lived Species (WKDLSSLS)**, chaired by Andres Uriarte*, Spain and Mollie Brooks*, Denmark will meet in San Sebastian, Spain, 16–20 September 2019.

The life-history characteristics of short-lived species, and large fluctuations in annual recruitment, pose specific challenges for management. Alternatives to the current advice rules for data-limited stocks (category 3 and 4) used within ICES should be evaluated for use on these short-lived species. On the basis of the outcome of WKLIFE7, WKLIFE8, WKSPRAT 2018 and WKSPRAT-MSE 2018, the following issues should be addressed:

a) Test different assessment methods for data-limited short-lived species (seasonal SPiCt, two-stage Biomass model, others).

b) Provide guidelines on the estimation of MSY proxy reference points for category 3–4 short-lived species.

c) Evaluate the management procedures currently in use and their appropriateness for short-lived species by means of Long-Term Management Strategy Evaluations (LT-MSE). This will imply the revision of the advice rules used, the time lag between assessment and enforcement, the suitability and magnitude of the uncertainty caps.

WKDLSSLS will report by the 14 October 2019 for the attention of ACOM.

WKIrish6 – Workshop on an Ecosystem Based Approach to Fishery Management for the Irish Sea

2018/2/FRSG39   The **Workshop on an Ecosystem Based Approach to Fishery Management for the Irish Sea (**WKIrish6), chaired by Daniel Howell*, Norway and Mathieu Lundy*, United Kingdom, will meet in Dublin, Ireland, 25–29 November 2019.

To finalise and operationalise the WKIrish regional benchmark process, WKIrish6 will finalise and review the ecosystem modelling work initiated at the Scoping Workshop (WKIrish1), the Stakeholder Input Workshop (WKIrish4) and the EBFM workshop (WKIrish5) to:

a) Review and report on the results from the EwE and Le Mans modelling carried out following WKIrish5, with particular focus on the key runs and conclusions from WGSAM.

b) Review and report on the analyses of likely future scenarios derived from stakeholder discussions at WKIrish5.

c) Synthesise the results from the ecosystem modelling and any available fleet based modelling, and make recommendations for future EBFM in the Irish Sea.

d) Evaluate progress towards implementation of the use of ecosystem information into management advice including the choice of F_{msy} within the ICES approved precautionary F_{MSY} ranges.

e) Report on links with WGEAWESS and produce a shared vision document that integrates the WKIRISH process with WGEAWESS.

WKIrish6 will report by 30 January 2020 for the attention of ACOM and SCICOM.

WKEELDATA2 – The second Workshop on designing eel data call

2018/2/FRSG40   A **Workshop on Designing an Eel Data Call** (WKEELDATA2), chaired by Cedric Briand* (France) and Jan-Dag Pohlmann* (Germany), will meet in Rennes, France, 18–22 March to design a data call to all countries having natural production of European eel. To achieve this aim, the WK will:

a) Review WGEEL data requirements and define data quality standards;

b) Define standards and guidelines for reported data, including analytical methods;

c) Modify WGEEL data call spreadsheets to make them more efficient for data entry and analysis, in particular create automated tools to extract current data from the PostgreSQL database and send it back to national data correspondents; Those will have to contain both actual and discarded data.

d) Integrate information on the public status of data. Include questions in the spreadsheet and information cover letter. Modify database and integrations scripts to ensure the storage of this information into the database;

e) Complete the database suitable for WGEEL data and associated shiny interface;

f) Draft proposal for eel data call working with ICES (ACOM), EIFAAC and GFCM. The data call to be announced with a submission deadline suitable for the 2019 meeting of the WGEEL, and future meetings;

g) Set up a server allowing distance access to the database to facilitate the (guided) data integration by the reporting countries. To facilitate this work

we aim at: (1) set up a shiny / Postgres server hosted in one institute to give access to the shiny interface. This tool would help national representatives from each country to connect to the interface, load their data and apply the quality checks themselves; (2) Set up a raspberry pie to act as a router to get access to the database and shiny app to all users during WGEEL.

WGEELDATA2 will report by 15 April 2019 for the attention of WGEEL, WGDIAD, ACOM, SCICOM, EIFAAC, GFCM.

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. This also addresses a recommendation of WKEMP 2018.
Scientific justification	The WGEEL annually collates data on recruitment, catches and landings from commercial and recreational fisheries, restocking, aquaculture production, rates of other human-induced mortalities on eel, biological characteristics of eel, etc. These data are provided by countries attending the WGEEL in a large number of complex spreadsheets. Reporting is far from complete at present, and the reasons for failing to report data are diverse. A refinement and standardisation of the data reporting process is urgently required, and a data call hosted by ICES, EIFAAC and GFCM is considered an effective mechanism to significantly improve the situation.
Resource requirements	The host institution will resource the meeting itself. Attendees will be self-funding.
Participants	National representatives of eel data collection and provision to WGEEL; experts in developing, implementing and maintaining regional databases.
Secretariat facilities	The standard support for arranging the meeting, providing access to sharepoint, and for formatting the report. Plus access to ICES Data Centre staff to find way for the data etc to be hosted by ICES.
Financial	No financial implications.
Linkages to advisory committees	Links to ACOM as eel stocking is a significant management measure of some national eel management plans and is to be taken account of in the international stock assessment of European eel and the associated stock status advice from ICES to the European Commission.
Linkages to other committees or groups	The findings will be of direct benefit to the WGEEL, and wider to WGDIAD.
Linkages to other organizations	The findings 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.

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

This EG was moved from Ecosystem Processes and Dynamics Steering Group (EPDSG) to Fisheries Resources Steering Group (FRSG) in 2019.

2017/MA2/EPDSG08 The **Working Group on the Science Requirements to Support Conservation, Restoration and Management of Diadromous Species** (WGRECORDS), will be renamed the **Working Group on Science to Support Conservation, Restoration and Management of Diadromous Species** (WGDIAD), chaired by Dennis Ensing, UK, and Hugo Maxwell, Ireland, will work on ToRs and generate deliverables as listed in the Table below.

	Meeting dates	Venue	Reporting details	Comments (change in Chair, etc.)
Year 2018	25 September (during ASC)	Hamburg, Germany	Interim report by 31 December	
Year 2019	DATE September (during ASC)		Interim report by 31 December	**Change of Chair:** **Outgoing**: Johan Dannewitz, Sweden **Incoming**: Hugo Maxwell, Ireland
Year 2020	September (during ASC)		Final report by 31 December	

ToR descriptors

ToR	Description	Background	Science Plan codes	Duration	Expected Deliverables
a	Raise the profile of the group by maintaining international scientific co-operation in the study of diadromous fish species and provide a mechanism through which issues relating to these species and their environment, including also aspects connected to estaurine and fresh water habitats used by these species, can be addressed and coordinated within the ICES science plan.	There is a need to coordinate and draw the various elements of ICES work together to support the management advice provided for multiple species of diadromous fish, particularly in delivering commitments under various regulations, including the EU-Habitats and Water Framework Directives and the EU Eel Regulation.	1.4; 2.1; 3.1	Year 1, 2 and 3	Report of the WG and maintenance of a previously established network of diadromous fish experts.
b	Identify scientific needs and propose activities, including experts groups, theme sessions and symposia, to support the implementation of the Science Plan and the work of SCICOM and ACOM Experts Groups on diadromous species and review their outputs.	ICES is well placed to coordinate scientific activities which generate up to date information on the biology and ecology of diadromous species, threats to their status, including climate change, and advice on measures to be taken to restore habitats and ecosystems, and rebuild depleted populations.	1.7; 5.1; 6.1	Year 1, 2 and 3	Organise theme sessions, symposia or expert groups. Co-ordinate feedback from these sources for use in publications and CRR documents. Liaise with and support chairs of EGs and WKs to achieve their aims.
c	Assist EPDSG and ICES to integrate important activities with those of other Expert Groups reporting to EPDSG, other SGs and/or ACOM.	Issues relating to, for example, rare and data limited species are widely dispersed across the ICES Science plan. This group provides a focal point for both internal and external communication and reporting of new developments and concerns regarding diadromous fish.	4.4; 5.2; 5.4	Year 1, 2 and 3	Keep ICES abreast of important issues relating to Diadromous fish species and ensure these issues are communicated within the ICES community to relevant EGs and SGs.

Summary of the Work Plan

Year 1	Coordinate scientific activities (theme sessions, symposia, EGs, CRRs and reports to EPDSG)
Year 2	Coordinate scientific activities (theme sessions, symposia, EGs, CRRs and reports to EPDSG)
Year 3	Coordinate scientific activities (theme sessions, symposia, EGs, CRRs and reports to EPDSG)

Supporting information

Priority	The Working Group will provide the mechanism to coordinate scientific activities relating to diadromous fish species and their environment in support of the ICES Science Plan. It will also permit ICES to respond fully to requests from NASCO and the EU/FAO/IUCN/CITES for scientific advice on management strategies, research needs and data deficiencies.
Resource requirements	Meeting facilities at the ASC in 2018–2020
Participants	National representatives and other invited experts working with diadromous species
Secretariat facilities	Secretarial support for organisation of the meeting and preparation of the report.
Financial	No financial implications.
Linkages to ACOM and groups under ACOM	The proposal originates from EPDSG but will have direct significance to ACOM, in particular for advice from WGNAS, WGBAST, WGEEL, WKSalmon.
Linkages to other committees or groups	Besides EPDSG, there are linkages to the SCICOM steering groups HAPISG and EOSG and all Expert Groups working on issues of relevance for diadromous species in relation to improving scientific understanding and coordinating scientific activities.
Linkages to other organizations	NASCO, FAO, EIFAAC and GFCM, HELCOM, CITES

WKTAF-NSCS – Workshop on Training for the Transparent Assessment Framework: North Sea and Celtic Seas

2018/2/FRSG42 **The Workshop on Training for the Transparent Assessment Framework: North Sea and Celtic Seas (WKTAF-NSCS)**, chaired by Arni Magnusson (ICES), and Colin Millar (ICES) will meet 27–28 May 2019 in Galway, Ireland and 29–31 May 2019 in Aberdeen, Scotland, to address the objectives in the table below:

a) Give an overview of existing analyses on TAF. These include fully completed assessments, partially completed assessments, data-limited stocks, and analyses that only focus on preparation of survey indices, maturity, etc.

b) Practical demonstrations and training of how assessments are transferred into, and run from within TAF. Assist people and answer any technical questions that arise. The Sessions are:

    i) Overview of GitHub and git
    ii) Documenting and downloading data and software
    iii) Creating csv input data tables
    iv) Running the model

v) Creating unrounded csv results tables for upload to ICES databases

vi) Creating formatted csv tables and plots for the report

vii) Generating a dynamic document containing plots and tables for the report

c) Discussion and collection of user feedback on:

i) R-scripts and workflow

ii) Web application (https://taf.ices.dk).

d) Talk about TAF governance and quality assurance. A governance group should be set up to guide TAF development and how it is used. An idea is to recognize assessments and users for various achievements through badges that indicate how transparent and reproducible an assessment is. It is not a small task to make ICES assessments open and reproducible, thus improving the quality assurance and peer review process that ICES stands for. TAF aims to provide a working environment, but in the end it's the stock assessment experts who do the work and deserve credit for that.

WKTAF-NSCS will report by XX November 2019 for the attention of the Advisory Committee.

Supporting Information:

Priority:	Very high
Scientific justification and relation to action plan:	It is important to train stock assessors as efficiently as possible in the TAF framework in order to maximise the uptake of this initiative within the ICES stock assessment community.
	Previous training workshops have proven to be very successful in transferring stock assessments into the TAF framework and training stock assessors in its use. The limiting factor was the ability of participants to attend in person. This TAF workshop is the first in a set of regional workshops which will allow many more stock assessors and stock coordinators access to hands on training in TAF.
Resource requirements:	2 ICES staff (TAF developers)
Participants:	Stock assessors and stock coordinators.
Secretariat facilities:	SharePoint site.
Financial:	
Linkages to advisory committee:	ACOM
Linkages to other committees or groups:	Stock assessment EGs: WGNSSK, WGCSE
Linkages to other organizations:	

WGMIXFISH-METHODS – Working Group on Mixed Fisheries Advice Methodology

2018/2/FRSG43 The Working Group on Mixed Fisheries Advice Methodology (WGMIXFISH-METHODS), chaired by Claire Moore, Ireland, will meet in Nantes, France 10 -14 June, 2019 to:

    a) Document the complete workflow of WGMIXFISH-ADVICE, from data submission to advice production, in order to improve the workflow and increase understanding of the process, both within and outside the working group.

    b) Update and develop data call for WGMIXFISH-ADVICE, identifying possible areas of improvements, expansion, and cohesion across ecoregions.

    c) Continue to explore the impacts of including additional species in the Celtic Sea FCube model.

    d) Investigate and where possible improve the fleet/*métier* definition in Bay of Biscay.

    e) Develop the Irish Sea FCube.

    f) Continue development of the combined implementation of FCube and FLBEIA in conjugation with economists.

    g) Present work from ProByFish group and explore future collaborations with WGMIXFISH.
(https://wwz.ifremer.fr/emh/content/download/118221/file/ProbyfishPres.pdf).

WGMIXFISH-METHODS will report by 16 August 2019 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

IBPWHM – Inter-Benchmark Protocol on reference points for Western Horse mackerel (Trachurus trachurus) in Subarea 8 and divisions 2.a, 4.a, 5.b, 6.a, 7.a-c,e-k (the Northeast Atlantic)

2018/2/FRG44 An Inter-Benchmark Protocol on reference points for Western Horse mackerel (*Trachurus trachurus*) in Subarea 8 and divisions 2.a, 4.a, 5.b, 6.a, 7.a-c,e-k (the Northeast Atlantic), chaired by Andrew Campbell*, Ireland, and reviewed by two invited external experts, Jim Ianelli, US, and Larry Alade, US, will be established and work by correspondence to:

    a) Review the basis of reference points and investigate the possibility of relative reference points;

    b) Update, if appropriate, MSY and PA reference points;

    c) Explore alternative assessment models for comparison with the current model, with a particular emphasis on reducing retrospective bias.

Stocks	Stock leader	Stock assessor

Horse mackerel (*Trachurus trachurus*) in Subarea 8 and divisions 2.a, 4.a, 5.b, 6.a, 7.a-c,e-k (the Northeast Atlantic)	Jens Ulleweit	Lisa Readdy

The Inter-Benchmark Workshop will report by 15 July 2019 for the attention of ACOM.

WKSalmon – Workshop for North Atlantic Salmon At-Sea Mortality

2018/FRSG45:   A **Workshop for North Atlantic Salmon At-Sea Mortality** (WKSalmon), chaired by Gerald Chaput* and Niall Ó Maoiléidigh*, will meet at ICES HQ, Copenhagen, Denmark on 24–28 June 2019 for a 5-day scoping meeting; then in 2020 for a 3-day data evaluation meeting; and then for a 5-day modelling meeting in 2020/2021 to:

a.   Identify data sources that could inform estimates of at-sea salmon mortality and the associated available data, including data from North Atlantic salmon as well as ecosystem data (such as oceanographic time series, plankton surveys, International Ecosystem Summer Survey in the Nordic Seas (IESSNS), pelagic or demersal fish surveys);

b.   Develop a data call that will integrate these sources with existing ICES databases;

c.   Evaluate the appropriateness of data and methods used to estimate at-sea salmon mortality;

d.   Identify data gaps and develop recommendations for future data acquisition;

e.   Evaluate modelling approaches to integrate marine data fully to cover the whole life-cycle of Atlantic salmon in the context of the 'Likely Suspects' Framework (see http://www.nasco.int/sas/pdf/archive/papers/2018/SAG_18_04_AST%20Likely%20Suspects%20Framework%20Update.pdf);

The workshop will report by tbd for the attention of ACOM.

Supporting Information

Priority	High
Scientific justification	The goal is to improve the scientific assessments and advice for the conservation of wild Atlantic salmon through a series of workshops that explore how best to integrate available data on salmon, specifically data on marine survival, within the appropriate ICES database(s) for use in models to advance the conservation of wild salmon at sea. Parallel initiatives are being planned elsewhere to refine and integrate freshwater and inshore marine data, particularly on the survival of migrating smolts and post-smolts, so as to provide a comprehensive understanding of the key mortality factors affecting the whole lives of Atlantic salmon. These data will be used to populate the Likely Suspect Framework, which will link patterns in at-sea mortality of Atlantic salmon to appropriate geographic and temporal scales.
	Ultimately these workshops will result in an improvement in the ICES advice for Atlantic salmon through enabling the provision, collation and standardisation of salmon data that are currently unavailable to ICES.
Resource requirements	-

Participants	Data providers, diadromous experts, scientists and experts involved in salmon research, stock assessments, and ecosystem approaches
Secretariat facilities	Meeting rooms, secretariat staff
Financial	-
Linkages to advisory committees	ACOM
Linkages to other committees or groups	WGNAS; EPDSG; WGOOFE; WGZE; WGSPEC; WGMEDS
Linkages to other organizations	NASCO

IBPsol7d – Inter-benchmark Protocol for sole in the Eastern English Channel

2018/2/FRSG46   **An Inter-benchmark Protocol for sole in the Eastern English Channel** (IBPSol7d), chaired by Raphael Girardin*, France, and attended by one invited external experts Alexander Kempf, Germany, will meet in Ostend, Belgium, 21–22 August 2019 to:

a) Revise the UK commercial beam trawl tuning fleet (UK-CBT), in light of recent changes to theUK national fishery activity database. This revision should include the 2017 and 2018 data, and should ensure that the time series is self-consistent (e.g. the effort data is comparable throughout).

b) Revise the assessment to include the revised UK-CBT time series developed in (a).

c) Re-examine and update (if necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);

Stocks	Stock leader
sol.27.7d	Lies Vansteenbrugge

The inter-benchmark workshop will report by 31 August 2019 for the attention of ACOM.

WKCOLIAS– Workshop on Atlantic chub mackerel (Scomber colias)

2018/2/FRSG47 The **Workshop on Atlantic chub mackerel** (WKCOLIAS), chaired by Alexandra Silva* (Portugal) and Teresa G. Santamaría* (Spain), will work by correspondence during 2019 and meet in 13–17 January 2020, in Santa Cruz de Tenerife, to:

a) Collate and analyse data on Atlantic chub mackerel abundance, distribution and biology from surveys (acoustic and bottom trawl) and fisheries in Atlantic European waters;

b) Propose scenarios of Atlantic chub mackerel stock structure and dynamics;

c) Identify potential stock assessment approaches for Atlantic chub mackerel that would be appropriate to provide advice given the fishery management needs;

d) Explore the connectivity between Atlantic chub mackerel in Atlantic European and Northwest African waters.

WKCOLIAS will report by 7 February 2020 for the attention of ACOM.

Supporting information

Priority	igh. This workshop will provide ICES with the necessary data and biological knowledge to assess chub mackerel stocks in the northeast Atlantic waters and to provide fisheries advice if requested. Further knowledge of the species is essential to progress to multispecies assessments and ecosystem models.
Scientific justification	Atlantic chub mackerel (*Scomber colias* Gmelin, 1978) is a middle-sized pelagic fish distributed in warm and temperate northeast Atlantic waters. The bulk of the catches used to take place in north western waters of Africa (CECAF), with also a rather stable fishery in the Gulf of Cadiz, and also a small one in the inner part of the Bay of Biscay. owever, in the last 15 years, landings in both Portuguese waters and in the Cantabrian Sea (ICES Division 9a and 8c) have increased exponentially and are currently around 80 000 t per year. Atlantic chub mackerel has become an important resource for the purse seine fishery, partly compensating for the decrease of fishing opportunities for sardine in Iberian waters, the traditional target of the fishery. Yet, the dynamics, stock identity, and stock status of Atlantic chub mackerel in Atlantic European waters, and also the connectivity with the Atlantic African waters populations are unknown. While there are technical management measures at the national level, catches are not limited, and there are concerns about the long-term sustainability of this resource. Atlantic chub mackerel is a key species of the pelagic ecosystem in Atlantic waters and it is very important to improve knowledge on this species and the interactions with other pelagic fish species (e.g., Atlantic mackerel, sardine, anchovy or horse mackerel) in order to improve assessment and management at the multispecies/ecosystem level.
Resource requirements	Atlantic chub mackerel is sampled within the Data Collection Framework including the Canary Island. 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 are negligible.
Participants	The Workshop will be attended by 15–20 members, including experts in bottom trawl and acoustic surveys and stock assessment.
Secretariat facilities	None.
Financial	No financial implications.

Linkages to advisory committees	The Workshop has links to ACOM and SCICOM
Linkages to other committee or groups	Workshop on age estimation of Atlantic chub mackerel otoliths (WKARCM), WGWIDE, WGANSA, WGBIOP, SIDWG.
Linkages to other organizations	Not applicable.

WKRDB–EST –Workshop on Estimation with the RDBES data model

2018/2/FRSG48 The **Workshop on Estimation with the RDBES data model (WKRDB-EST)** co-chaired by Nuno Prista, Sweden and Kirsten Birch Håkansson, Denmark, will meet in ICES HQ, Copenhagen, from 30 September to 4 October 2019 to:

a) Develop and document R scripts for design based estimation for each hierarchy in the RDBES data model.

b) Identify and document any problems with RDBES data model relating to design based estimation.

WKRDB-EST will present a written report to ACOM by 20 December 2019.

Priority	This workshop is considered of very high priority. The activities of this workshop will promote the development of a Regional Database and Estimation System, RDBES by producing the algorithms required for design based estimation under the RDBES data model. The RDBES will work as a database for the Baltic Sea, North Sea & Eastern Arctic, and North Atlantic Regional Coordination Groups (RCGs) and produce the estimates used in ICES Fisheries Advice. The development of the RDBES is concentrating on harmonisation, quality assuring, documentation, approved estimation methods and transparency.
Scientific justification	The RDBES will be extensively used by the RCGs and ICES both to store detailed fisheries sample data and to estimate fisheries related variables used in advice. The RDBES data model secures the structure and variables necessary for design-based estimation but algorithms are necessary that implement the estimation methods and produce the final estimates.
	ToR a) Develop and document R scripts for design based estimation for each hierarchy in the RDBES data model.
	R-scripts will be developed that implement design-based estimation for the upper and lower hierarchies of the RDBES and produce point estimates of fisheries variables such as catch volumes, numbers-at-length and number-at-age. Development will be based on a set of populated data sets from the different hierarchies, compiled prior to the meeting. The R-code will be documented with associated statistical formulas and used in RDBES documentation. The development of scripts for other estimation methods (e.g., ALK-based estimation, Ratio-Estimation) will not be addressed during the WK (they are left for a future occasion.
	ToR b) Identify and document any problems with RDBES data model relating to design based estimation.
	The development of R scripts for design-based estimation based on the RDBES data model is an important test point within the development of the RDBES. If during the WK issues are identified that limit the application of design-based

	estimation in the RDBES, these will be documented and forwarded to the RDBES development group for further discussion.
Resource requirements	The two co-chairs, and potentially the rest of the 5 active members of the RDBES Development Support Core Group will be requested to participate and coordinate algorithm development.
Participants	Max 20 people. Participants should be proficient in writing own scripts and functions in R language.
Secretariat facilities	ICES Q meeting room and facilities
Financial	No financial implications.
Linkages to advisory committees	There are no direct linkages with the advisory committees, but there is a link to WGCATC, WGBIOP, WGBYC, PGDATA and the stock assessment Working Groups that will ultimately use the estimates produced within the RDBES.
Linkages to other committees or groups	
Linkages to other organizations	The RDBES estimates are connected to regional data collection defined by the RCGs under the European Commission, EC. The RDBES will also support the ICES countries in providing data for assessment. In the case of EU MS, the RDBES is expected to facilitate and improve the quality of provision of commercial catch data requested under different data calls.

WKFlatNSCS A Benchmark Workshop for Flatfish stocks in the North Sea and Celtic Sea

2018/2/FRSG49 **A Benchmark Workshop for Flatfish stocks in the North Sea and Celtic Sea** (WKFlatNSCS), chaired by External Chair Meaghan Bryan, USA and ICES Chair Timothy Earl, UK, and attended by two invited external experts Eoghan Kelly, Ireland, and Morten Vinther, Denmark will be established and will meet in Ghent, Belgium 20–22 November 2019 for a data evaluation meeting and at ICES HQ, Copenhagen, Denmark, for a 5 day Benchmark meeting 17–21 February 2020 to:

a) Evaluate the appropriateness of data and methods to determine stock status and investigate methods for short term outlook taking agreed or proposed management plans into account for the stocks listed in the text table below. The evaluation shall include consideration of:

    i.   Stock identity and migration issues;

    ii.   Life-history data. For sole, fluctuations in mean weights at age will be explored;

    iii.   Review current sampling levels and adjust stratification levels for landings and discards accordingly;

    iv.   Examine alternative assessment models to the current model

    v.   Explore impact of all tuning fleets on assessment estimates;

      vi.   Further inclusion of environmental drivers, multi-species information, and ecosystem impacts for stock dynamics in the assessments and outlook;

      vii.   Examine mixed fisheries interaction;

b) Agree and document the preferred 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. If no analytical assessment method can be agreed, then an alternative method (the former method, or following the ICES data-limited stock approach) should be put forward;

c) Re-examine and update (if necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);

d) Develop recommendations for future improving of the assessment methodology and data collection;

e) As part of the evaluation:

i) Conduct a 3 day data evaluation workshop. Stakeholders are invited to contribute data (including data from non-traditional sources) and to contribute to data preparation and evaluation of data quality. As part of the data compilation workshop consider the quality of data including discard and estimates of misreporting of landings;

ii) Following the Data evaluation, produce working documents to be reviewed during the Benchmark meeting at least 7 days prior to the meeting.

Stocks	Stock leader
tur.27.3a	Jon Svendsen
sol.27.7h-k	Claire Moore
sol.27.7fg	Sofie Nimmegeers
sol.27.4	Ruben Verkempynck

WKBEDPRES2 – Workshop on evaluation and operational application of human activities causing physical disturbance and loss to seabed habitats (D6C1–C4)

2018/2/FRSG50 The **Workshop to evaluate and test operational application of human activities causing physical disturbance and loss to seabed habitats (D6C1-C4)** (WKBEDPRES2), chaired by Phillip Boulcott*, Scotland will meet in Copenhagen, Denmark, 30 September – 2 October. Given the findings of WKBEDPRES1 and WKBEDLOSS and the data collected, the workshop is tasked to:

a) Prepare guidance on the appropriate spatial and temporal scales for assessing physical disturbance and loss, and how this relates to benthic impact. This should include guidance on the benefits of knowing the variation and trends in the data during a six-year assessment periods (e.g. for environmental status or management purposes), and on the most appropriate spatial resolution for the data (e.g. in relation to spatial variation in the broad habitat types)

b) Prepare guidance on the possibilities and limitations of how collected pressure layers can be used to determine benthic impact. This should include guidance on how to interpret surface and subsurface abrasion from different human activities and on different seabed habitat types.

c) Demonstrate operational use of collected pressure layers to assessing spatial extent and distribution and to determine benthic impact, by:
   i. producing an assessment of spatial extent and distribution of physical disturbance and loss by broad benthic habitat types for at least one ecoregion (assessment of D6C1-C4)
   ii. suggest ways to combine different human activities that cause physical loss/ disturbance to determine benthic impact and/or to report on the spatial extent and distribution of physical disturbance/loss
   iii. recommend any key improvements needed in the proposed methods and/or associated data needed.

d) Prepare generic EU-wide technical guidance on how to assess and report on both disturbance (based on WKBEDPRES1) and loss (based on WKBEDLOSS) using the demonstration product.

e) Assess the applicability of AIS and VMS data derived products (produced by WGSFD) to increase spatial and temporal coverage of fishing pressure layers. This should include technical guidance of how AIS and VMS data derived products can be used (together) for assessing physical disturbance from different fishing activities.

In preparation for the workshop, the Chair Phillip Boulcott (Scotland), together with ACOM approved invited attendees (tbc) will facilitate coordination and consolidation of work on TOR a-d from respective working groups (WGSFD, WGEXT, WGFBIT). This group will also help ensure that the workshop report is finalized.

WKBEDPRES2 will report to the attention of ACOM by 18 October 2019.

Supporting information

Priority	High, in response to a special request from DGENV on the Common Implementation (CIS) of the MSFD. The advice will feed into ongoing efforts to provide guidance on the operational implementation of the MSFD.
Scientific justification	This workshop focuses on the requirement of D6C1-C4 to assess the spatial extent and distribution of human activities causing physical loss and disturbance on the seabed (including the intertidal area) for each subdivision and per MSFD broad habitat type within each subdivision. Physical disturbance and loss by all relevant human activities should be considered, following the work in WKBEDPRES1 and WKBEDLOSS. Central to this is to identify methods that express the intensity of the pressure in a way appropriate to: 1) derive the cumulative of all disturbance pressures, and 2) assess adverse effects under D6C3, D6C4 and D6C5, both for the single pressure and the cumulative of all pressures.
	Given the findings of WKBEDPRES1 and WKBEDLOSS and the resultant data collected, WKBEDPRES2 will evaluate the work done and demonstrate its operational application. The following supporting material is provided to guide the interpretation of TORs a-d:

a) Provide guidance on the benefits of knowing the variation and trends in the data during a six-year assessment period (e.g. for environmental status or management purposes), and on the most appropriate spatial resolution for the data (e.g. in relation to spatial variation in the broad habitat types).

b) Provide guidance on the relevance of distinguishing surface and subsurface abrasion for different human activities (including dredging, depositing of materials, extraction of minerals, fish and shellfish harvesting), given that the demonstration advice for fishing impact (ICES advice sr.2017.13) only used surface abrasion to assess benthic impact.

c) Demonstrate the application of the methods based on the WGFBIT assessment approach to give the distribution and extent of physical disturbance and loss for each MSFD (sub)region (i.e. assessment of D6C1-C4). Provide estimates of the total extent of physical disturbance and loss, in km^2 and as a proportion (%), per subdivision/subregion and per MSFD broad habitat type. Distinguish the proportion of the total extent of the pressure which is attributable to each activity, including the different fishing metiers separately. Provide an indication of the data precision, accuracy and likely data gaps for the areas used in the demonstration.

d) An assessment of applicability to D6C2 of the work done by WGSFD in the comparison of AIS and VMS data. WGSFD were tasked to compare the use of VMS and AIS data, listing associated data required to determine fishing effort and type, such as fishers' logbooks, in the context of use for MSFD D6 assessments. This should include a side-by-side comparison against a number of parameters, including source of the data (who holds the raw data), availability (e.g. legal requirements, including vessels to be covered), accessibility (including any costs, restrictions such as due to data sensitivity, ease of access), use (e.g. restrictions on its release), spatial coverage in European waters, temporal coverage (historic, and within year), resolution (spatial granularity), accuracy, technical requirements for processing (to define when vessels are physically disturbing the seabed), resources needed (e.g. technical expertise, time per unit area). The comparison should include maps showing the distribution of bottom-fishing activity from the two data sources for the same time period, indicating where the distribution overlaps and where not, with an associated quantification of this (e.g. number/proportion of grid cells per subdivision for AIS only, VMS only and both) and explanations for any differences. Note: this work will be carried out in close collaboration with EMODnet and JRC Bluehub

Resource requirements	ICES data centre, secretariat and advice process.
Participants	Workshop with researchers and RSCs investigators
	If requests to attend exceed the meeting space available ICES reserves the right to refuse participants. Choices will be based

	on the experts' relevant qualifications for the Workshop. Participants join the workshop at national expense.
Secretariat facilities	Data Centre, Secretariat support and meeting room
Financial	Covered by DGENV special request.
Linkages to advisory committees	Direct link to ACOM.
Linkages to other committees or groups	Links to WGSFD, WGFBIT, WGEXT, WGMHM, and SCICOM.
Linkages to other organizations	Links to OSPAR, HELCOM, Barcelona Convention, Bucharest Convention

WKMSEDEV – Workshop on MSE development

2018/2/FRSG51   The Workshop on MSE development (WKMSEDEV), chaired by Daniel Howell, Norway, will be established and will meet at ICES HQ, Copenhagen, Denmark on 3–5 December 2019 to:

a) Allow developers to compare the different MSE tools under development in different regions around the world
b) Identify areas where collaboration between development teams could be beneficial.
c) Produce a catalogue of different MSE tools available, with the different areas of emphasis described for each.

WKMSEDEV will report by 19 December 2019 for the attention of ACOM and SCICOM.

Supporting information

Priority	The
Scientific justification	Term of Reference a)
	Multiple tools for conducting Management Strategy Evaluations (MSEs) / arvest Control Evaluations are in use and under development around the world. owever, there is limited visibility of these tools outside their spoecific geographic area of use. It is likely that this isolation is resulting in much duplication of effort and giving greater possibilities for errors than a more collaborative approach would imply.
	Term of Reference b)
	Different MSE tools have been developed with different aims in mind (dat rich, data poor, socio-economic,…), but there is limited visibility outside th geographic area that these tools have been applied to. Such a catlogue would both enable those contemplating running a MSE to be aware of existing tools that migh aid them, and allow developers to identify and contact researchers with experience in specific topics.
	Term of Reference c)
	By having the development teams of a range of MSE tools in one place, it will be possible to compare the different tools, and identify the extent to which collaboration is possible. Specifically, the meeting will aim to produce guidelines about a common set of outputs, which would allow for greater transparency between MSE exercises, as well as making reviews easier.
	Term of Reference d)
	Produce a short document with MSE design and debugging tips based on the experiences of the MSE developers attending the meeting.

Resource requirements	The research programs developing these MSE tools are under way, the onl[y] requirement is to provide a forum to allow the developers to share experiences
Participants	Those directly involved in developing MSEs.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to advisory committees	This would have an indirect link to ACOM, but there are no obvious direct linkages.
Linkages to other committees or groups	WKGMSE2, Fisheries Resources Steering Group
Linkages to other organizations	This would link to work going in other fisheries institutes and juristictions (for example NOAA in the US, UBC in Canada, Maram in South Africa).

WKREG – stakeholder workshop to disseminate the ICES deep-sea access regulation technical service, and scope the required steps for regulatory purposes

2018/2/FRSG52   The **stakeholder workshop to disseminate the ICES deep-sea access regulation technical service, and scope the required steps for regulatory purposes** (WKREG), chaired by Katell Hamon (The Netherlands), Maurice Clarke (Ireland), and Peter Hopkins (Belgium) will meet in Copenhagen, Denmark, 22 – 23 October 2019. The workshop is tasked to:

a) Review maps/coordinates generated by the ICES deep-sea access regulation technical service for its suitability for regulatory purposes. Review should involve the active participation of persons involved in the deep-sea access regulation (EU) 2016/2336 (i.e. representatives of EU member states, stakeholders and scientists).

b) Produce a prioritized list of objectives and constraints that are in line with the deep-sea access regulation (EU) 2016/2336 and can be used to produce NEAFC-like regulatory areas. The following should be considered:

     i. objectives (e.g. minimize fishing displacement, maximize VME protections);

     ii. constraints (e.g. depth limits, enforceable areas, number of coordinates per area, etc.); and

     iii. to suggest relevant currencies that are in line with the deep-sea access regulation (EU) 2016/2336 that can be used to assess any proposed area closures.

c) The workshop will assess the technical feasibility of a combination of objectives, constraints and relevant currencies. This feasibility evaluation should ensure that a suggestion(s) is put forward, can serve as the required input for further technical work to produce a tool that can evaluate the benefits of any closed area choices, and that areas can be drawn so that they meet the agreed upon objectives and constraints.

In preparation for the workshop, the Chairs Neil Campbell (Scotland), Katell Hamon (The Netherlands) and Fernando Nieto Conde (Spain), together with ACOM invited attendees (tbc) will facilitate coordination and consolidation of work on TOR a-b. This group will also help ensure that the workshop report is finalized.

WKREG will report to the attention of ACOM by 12 November 2019.

Supporting information

Priority	High, in response to a special request from DGMARE on the implementation of the deep-sea access regulation (EU) 2016/2336.
Scientific justification	This workshop will focus on disseminating an updated set of maps and coordinates produced by the ICES as a technical service (delivery by 3 October 2019) for DGMARE's process to implement the deep-sea access regulation. This workshop build on from earlier ICES advice to DGMARE (28 June 2018) on "locations and likely locations of VMEs in EU waters of the NE Atlantic, and the fishing footprint of 2009-2011", as well as the technical service to DGMARE (30 November 2018) to aid the interpretation of the advice.
	It has been noted that for ICES to successfully run this dissemination workshop, that in addition to scientific/technical expertise that ICES has, active participation via of DGMARE with EU member states and stakeholders involved in the deep-sea access regulation (EU) 2016/2336 will be essential.
	The following supporting material is provided to guide the interpretation of TORs a-b:
	a) New VMS and logbook data has recently been submitted to ICES, making it possible to better describe the overall bottom fishing footprint of 2009-2011 in EU waters of the NE Atlantic. However, translating these maps into coordinates may produce an excessive number of coordinates which may not directly be suitable for regulatory purposes. The workshop aims to bring together persons involved in the deep-sea access regulation (EU) 2016/2336 (i.e. representatives of EU member states, stakeholders and scientists) to review maps/coordinates generated by the ICES deep-sea access regulation technical service and discuss its suitability for regulatory purposes.
	b) As also stated in the 2018 ICES advice, in order to establish areas for regulatory purposes (that have a limited number of coordinates) a set of agreed upon management objectives and constraints may be required. These will need to be worked up by those persons involved in the deep-sea access regulation (EU) 2016/2336 (i.e. representatives of EU member states, stakeholders and scientists) so that they are in line with the deep-sea access regulation (EU) 2016/2336 and can be used to produce NEAFC-like regulatory areas.
	c) The workshop will prioritize and do an initial evaluation of the feasibility of any suggested management objectives and constraints. This will be done to ensure WKREG output can serve as the required input to carry out further technical work to evaluate closed area choices. Based on a set of management objectives and constraints further technical work should be able to calculate the benefit of any closed

	area, and can draw areas, that are optimized based on agreed upon constraints and produce NEAFC-like regulatory areas.
Resource requirements	ICES data centre, and secretariat.
Participants	Workshop with participation of persons involved in the deep-sea access regulation (EU) 2016/2336 (i.e. representatives of EU member states, stakeholders and scientists)
	If requests to attend exceed the meeting space available ICES reserves the right to refuse participants. Choices will be based on the experts' relevant qualifications for the Workshop. Participants join the workshop at national expense.
Secretariat facilities	Data Centre, Secretariat support and meeting room
Financial	Covered by DGMARE special request.
Linkages to advisory committees	Direct link to ACOM.
Linkages to other committees or groups	Links to WGSFD, WGFBIT, WGECO, WGDEC, FRSG, and SCICOM.
Linkages to other organizations	Links to NEAFC, OSPAR, DGENV

IBPsardine– Inter-benchmark Process on sardine in the Bay of Biscay

2018/2/FRSG53 **Inter-benchmark process on sardine (*Sardina pilchardus)* in the Bay of Biscay** (IBP-sardine), chaired by John Walters, US, and attended by two invited external experts, Kiersten Curti, US and Larry Alade, US, will meet by correspondence on 21–23 October 2019, to:

a) Evaluate the present analytical assessment method for the stock, particularly;

    i. Investigate the causes of the retrospective patterns in the assessment and potential solutions, including an investigation of fleet's selection patterns and of noise in cohort tracking,

    ii. Update the historical French catch time series.

b) Update the stock annex as appropriate;

c) Re-examine and update MSY and PA reference points according to ICES guidelines (see Technical document on reference points);

d) Develop recommendations for future improving of the assessment methodologies and data collection.

Stock code	Stock name	Stock leader
pil.27.8abd	Sardine (*Sardina pilchardus*) in divisions 8.a-b and 8.d (Bay of Biscay)	Lionel Pawlowski

IBPsardine will report by 14 November 2019 for the attention of ACOM.

WKLIFE IX – The Workshop on the Development of Quantitative Assessment Methodologies based on Life-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks

2018/2/FRSG54:   The **Workshop on the Development of Quantitative Assessment Methodologies based on Life-history traits, exploitation characteristics, and other relevant parameters for data-limited stocks** (WKLIFE IX), chaired by Carl O'Brien (UK) and Manuela Azevedo (Portugal) will meet in Lisbon, Portugal, 30 September-4 October 2019, to further develop methods for stock assessment and catch advice for stocks in categories 3–6, focusing on the provision of sound advice rules that are within the ICES MSY framework. The workshop should address the following Terms of Reference:

a) Evaluate potential improvements to the performance of the WKMSYCat34 catch rule 3.2.1 (ICES 2017) as follows:

   i) Investigate the impact of relative weighting of the r, f and b components of the rule on the performance of the rule;

   ii) Investigate more extensively the time-lag properties of the r component, including alternative formulations;

   iii) Explore the setting of appropriate reference levels in the f and b component of the rules, and the extent to which this could be done with tuning that depends on life-history traits and/or the nature of the time-series;

   iv) Investigate the use of trends in an index without a reference level.

b) Evaluate "MSY-PA" advice rules (WKLIFE VIII; ICES 2018) for stock production models (e.g., SPiCT), and develop recommended guidelines for use in determining catch advice.

c) Establish relationships between simple measures of the life-history (e.g M, K, Lmat) and %SPR reference points to estimate data-limited proxies corresponding to FMSY and Flim.

d) Review and further investigate modelling approaches that incorporate both data-rich and data-limited stocks within mixed fisheries/multi-species frameworks and their ability to provide sea area-based stock assessments and catch advice.

e) Review the draft report of, and recommendations from, the ICES' workshop on data limited stocks of short-lived species (WKDLSSLS) and the need for specific advice rules for these stocks.

WKLIFE IX will report to ACOM no later than 18 November 2019.

Supporting Information

Priority:	igh. ICES provides advice on more than 260 stocks on an annual basis and more than 60% of these stocks are in categories 3-6. The development and testing of operational advice rules for these stocks is urgently needed. WKLIFE is the premier venue for method development and discussion of stock assessments and advice approach for stocks in categories 3-6.
Scientific justification and relation to action plan:	There is an increasing number of fish stocks in Categories 3 and 4 for which assessment of status relative to MSY proxy reference points is available but for which short-term forecasts and MSY-based advice are

not available. At this year's meeting of WKLIFE, ICES wishes to address this issue.

WKMSYCat34 identified a suite of potential MSY-consistent advice rules for category 3 and 4 stocks. The rules need to be tested by Management Strategy Evaluation (MSE) in order to check that they perform adequately in terms of meeting MSY objectives (i.e. maximising long-term yield) in a manner that is consistent with precautionary principles (i.e. having a low probability of falling outside biologically sustainable limits).

ToRs a)-c) address these rules and their evaluation using MSE.

ToR d) will explore methods of including data-limited stocks in mixed fisheries analyses.

ToR e) addresses the need for specific advice rules for stocks of short-lived species. The current advice rule for category 3-6 is targeted at stocks of medium- and long-lived species and has proven difficult to apply for stocks of short-lived species. WKLIFE IX will review the draft report by WKDLSSLS (workshop concluded Sept 2019).

Resource requirements:	-
Participants:	Stock assessment experts and modellers, with a special focus on MSE.
Secretariat facilities:	SharePoint site and report formatting
Financial:	-
Linkages to advisory committee:	ACOM
Linkages to other committees or groups:	All assessment fish stock assessment working groups, WGMG
Linkages to other organizations:	ICCAT, GFCM

WKBaltSalMP – Workshop on Evaluating the Draft Baltic Salmon Management Plan

2018/2/FRSG55   The **Workshop on Evaluating the Draft Baltic Salmon Management Plan** (WKBaltSalMP I) will meet in Copenhagen, Denmark, on 4-5 November 2019, chaired by ICES Chair Stefan Palm (Sweden) and External Chair Eskild Kirkegaard (Denmark) and attended by invited external expert, Carrie Holt (Canada), to scope what efforts are needed in order to evaluate the draft of a multiannual management plan for the salmon stocks in the Baltic Sea proposed by BALTFISH.

The first workshop should address the following Terms of Reference:

ToR a) Clarify the essential factors in the draft management plan upon which basis ICES will give advice. This should include principal discussions regarding:

      i)   Use of the current MSY proxy versus river-specific MSYs as management targets;

      ii)   "Adequate timelines" for stocks to achieve management targets, including whether biological reference points (PSPC) and estimates of current smolt production should be based on the most recent year or an average of several years;

      iii)   Probability levels of attaining management targets.

ToR b) If required following on the discussions under ToR a), identify potential modifications to the proposed management plan that would improve its effectiveness.

ToR c) Produce a clear plan and timeline for the work to be completed by WKBaltSalMP II (anticipated to take place early 2020).

The second workshop WKBaltSalMP II will take place in Riga, Latvia on 24-28 February 2020 to address the specific questions in the request from DGMARE. WKBaltSalMP will report to ACOM 15 April 2020.

Supporting information

Priority	igh
Scientific justification	The goal of this process is to evaluate certain aspects of the proposed multiannual plan for the Baltic salmon stock and the fisheries exploitnig it (COM(2011) 470 of 12 August 2011), which aims to restore and maintain stocks of salmon in the Baltic Sea to sustainable levels. This includes evaluating the appropriateness of management targets in alignment with the requirements of the Common Fisheries Policy adopted in 2013.
	This scoping workshop serves to clarify essential factors in the draft plan between managers and scientists, which will inform on the basis for which ICES gives advice for Baltic salmon.
Resource requirements	-
Participants	Experts from WGBAST; members of relevant management bodies (e.g., BALTFIS); scientific experts familiar with aspects of modeling, salmon assessment, and management issues.
Secretariat facilities	Secretariat support; meeting room at ICES HQ
Financial	-
Linkages to advisory committees	ACOM
Linkages to other committees or groups	WGBAST; WGDIAD; FRSG; ACOM.
Linkages to other organizations	-