



ICES
CIEM

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

Advisory Committee

11 September 2018

2018 ACOM and ACOM Expert Group ToR's

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Advisory Committee

2017/2/ACOM01 The **Advisory Committee** (ACOM), chaired by Eskild Kirkegaard will work on the following tasks:

- a) Meet in plenary in Copenhagen, 27–30 November, 2018 to:
 - i) Review directions and guidelines provided by Council, Bureau and client requests for information and advice;
 - ii) Review the performance of the advisory work in 2018 and agree on actions to enhance the work as appropriate;
 - iii) Review progress on Advisory Services in 2018;
 - iv) Review ACOM Work-plan for 2018;
 - v) Review the implementation of the Advice Plan;
 - vi) Review ICES Strategic Plan for 2019 - ;
 - vii)
 - viii) Review recommendations to ACOM and agree on actions as appropriate;
 - ix) Finalise the 2019 advisory work-plan;
 - x) Agree on the 2019 ACOM work-plan;
 - xi) Review guidelines for the advisory work and amend as appropriate
 - xii) Identify future research needs related to the work of ACOM as input to the Scientific Committee.
- b) Work by correspondence (web conferences) according to the work-plans, *inter alia* to adopt advice;
- c) Hold Consultations at national expense in Hamburg, Germany in September 2018 during the ASC Meeting to:
 - i) Discuss the 2019 work-plan including Terms of Reference, dates and venues for groups to be involved in the advisory process in 2019;
 - ii) Conduct other business related to the functioning of ACOM.

Supporting Information

Priority:	High.
Scientific Justification and relation to Action Plan:	Benchmark workshops will be held to review data and develop and review methods. Expert groups will address the ToRs agreed for the groups, develop draft advice as appropriate, and conduct internal audit of the work. Advice drafting groups will develop the draft advice text for adoption by ACOM.
Resource Requirements:	
Participants:	Chair, Vice-Chairs, and nationally nominated, <i>ex officio</i> members and Steering Group Chairs. Chairs of the Expert groups with advisory tasks are invited to the ACOM Consultations in September. The ACOM Chair may invite experts to the September Consultations and the November Plenary meeting as appropriate.
Observers	Recipients of advice, Observers to the advisory process
Secretariat Facilities:	The ACOM Plenary meeting will normally be held at ICES HQ to benefit from WebEx facilities and full Secretariat support
Financial:	Included in the Secretariat budget

Linkages to other Committees or Groups: SCICOM, Steering Groups, Council, Bureau

Linkages to other Organisations: EU, HELCOM, OSPAR, NASCO, NEAFC, , ICCAT, GFCM, FAO, ICES Member Countries

MIRIA – Meeting between ICES and Recipients of ICES Advice

2017/2/ACOM02 ICES will invite recipients of ICES advice (Partner Commissions, governments) to meet with the ACOM leadership, chaired by ACOM Chair, Eskild Kirkegaard, 16–17 January 2018 to:

- a) Review the performance of the ICES advisory system in 2017 and discuss issues and concerns arising since the 2017 MIRIA meeting
- b) Discuss the coordination and availability of expert resources for ICES advisory work;
- c) Review the development of ICES advisory framework in relation to advice on fishing opportunities and ecosystem advice;
- d) Discuss reference points used in ICES advice and the process for updating them;
- e) Discuss policy developments of relevance to ICES advice;
- f) Discuss the basis for ICES advice in relation to fisheries management strategies/plans and agreed environmental policy measures;
- g) Discuss the frequency of advice and criteria for updating fish stocks advice;
- h) Provide information on and discuss the Workplan for ICES advice in 2018 including issues of timing, transparency, and quality assurance;
- i) Any other issues regarding future ICES advice as raised by the advice recipients

MIRIA will report by 9 February 2018 for the attention of the Advisory Committee.

MIACO – Meeting between ICES, Advisory Councils and other Observers

2017/2/ACOM03 ICES will invite the Advisory Councils (ACs) and other ICES observer organizations to meet with the ACOM leadership, chaired by ACOM Chair, Eskild Kirkegaard, at ICES Headquarters 18–19 January 2018 to:

- a) Invite ACs/observers to report on their experience of working with ICES during 2017 and to present their research and advisory needs, and discuss ICES' experience of participating in AC meetings in 2017;
- b) Review progress on following up of action points from the 2017 MIACO meeting;
- c) Discuss practical arrangements in 2018 for cooperation between ACs/observers and ICES, including procedures for delivering and discussion of the ICES advice;
- d) Discuss ICES benchmark system and how stakeholder information can be brought into ICES advisory process;
- e) Discuss the plan for further development of ICES advisory framework in relation to advice on fishing opportunities and ecosystem advice;
- f) Discuss options for further development of the accessibility of ICES advice.

MIACO will report 12 February 2018 for the attention of the Advisory Committee.

WGCHAIRS – Annual Meeting of Advisory Working Group Chairs

2017/2/ACOM04 The **Annual Meeting of the Chairs of Expert Groups** (WGCHAIRS), chaired by ACOM Chair, Eskild Kirkegaard and SCICOM Chair, Simon Jennings, will meet in, Copenhagen, Denmark, 23–25 January 2018 to:

WGCHAIRS will report by 13 February 2018 for the attention of ACOM and SCICOM.

Fisheries related Expert Groups

Generic ToRs for Regional and Species Working Groups

2017/2/ACOM05 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 2018 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 area) estimate the percentage of the total catch that has been taken in the NEAFC Regulatory Area in 2017.
 - iv) 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;
 - v) The state of the stocks against relevant reference points;
 - vi) Catch options for next year(s) for the stocks for which ICES has been requested to provide advice on fishing opportunities;
 - vii) Historical and analytical performance of the assessment and catch options and brief description of quality issues with these;
 - viii) For the purpose of conducting further analyses relative to the issue of catch forecasts from biased assessment for category 1 and 2 age-structured assessment, report the mean Mohn's rho (assessment retrospective 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.
- d) Produce a first draft of the advice on the fish stocks and fisheries under considerations according to ACOM guidelines.

- e) Review progress on benchmark processes of relevance to the expert group;
- f) Prepare the data calls for the next year update assessment and for the planned data evaluation workshops;
- g) Identify research needs of relevance for the expert group.

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

AFWG – Arctic Fisheries Working Group

2017/2/ACOM06 The **Arctic Fisheries Working Group** (AFWG), chaired by Daniel Howell, Norway, will meet at the JRC Ispra, Italy, 16–24 April 2018 to:

- a) Address generic ToRs for Regional and Species Working Groups, for all 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 of time series computed using the STOX and ECA open source software for use in assessment in the Barents Sea.
- e) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 - i) For those stocks without reference points listed below, collate necessary data and information on length and life history parameters prior to the Expert Group meeting. Propose appropriate MSY proxies for each of the stocks listed below by using methods provided in the ICES Technical Guidelines (ICES, 2017) along with available data and expert judgement.
 - ii) Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data.

Stock Code	Stock name description	EG	Data Category
cod.27.1-2coast	Cod (<i>Gadus morhua</i>) in subareas 1 and 2 (Norwegian coastal waters cod)	AFWG	3.8

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 2018 ICES data call.

AFWG will report by 8 May 2018 and **XX October** 2018 for Barents Sea capelin for the attention of ACOM

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

2017/2/ACOM07 The **Herring Assessment Working Group for the Area South of 62°N** (HAWG), chaired by Susan Lusseau*, UK, and Valerio Bartolino*, Sweden, will meet at ICES Headquarters:

29–31 January 2018 to:

- a) Compile the catch data of sandeel in assessment areas 1–7 and address generic ToRs for Regional and Species Working Groups that are specific to sandeel stocks in the North sea ecoregion;

12–20 March 2018 to:

- b) Compile the catch data of North Sea and Western Baltic herring on 12–13 March;
- c) address generic ToRs for Regional and Species Working Groups 14–20 March for all stocks assessed by HAWG (excl. sandeel).
- d) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 - i) Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data. For those stocks without reference points listed below, collate necessary data and information in order to estimate MSY proxy reference points prior to the Expert Group meeting. The official ICES data call included a call for length and life history parameters for each stock in the table below;
 - ii) Propose appropriate MSY proxies for each of the stocks listed below by using methods provided in the ICES Technical Guidelines (ICES, 2017) along with available data and expert judgement.

Stock Code	Stock name description	EG	Data Category
spr.27.7de	Sprat (<i>Sprattus sprattus</i>) in divisions 7.d and 7.e (English Channel)	HAWG	3.2

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 2018 ICES data call.

HAWG will report by 7 February 2018 (on sandeel), and by 13 April 2018 (all stocks except sandeel) for the attention of ACOM.

NIPAG – Joint NAFO/ICES Pandalus Assessment Working Group

2017/2/ACOM08 The **Joint NAFO/ICES *Pandalus* Assessment Working Group** (NIPAG), chaired by Guldborg Søvik, Norway (ICES) and Karen Dwyer, Canada (NAFO), will meet in Halifax, Nova Scotia, Canada 17–23 October 2018, to:

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

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

Material and data relevant for the meeting must be available to the group on the dates specified in the 2018 ICES data call.

NIPAG will report by 30 October 2018 on the ICES shrimp stocks for the attention of ACOM.

NWWG – North–Western Working Group

2017/2/ACOM09 **The North-Western Working Group** (NWWG), chaired by Kristján Kristinsson*, Iceland, will meet at ICES Headquarters, 26 April – 3 May, 2018 to:

- a) Address generic ToRs for Regional and Species Working Groups.
- b) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 - i) Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data. For those stocks without reference points listed below, collate necessary data and information in order to estimate MSY proxy reference points prior to the Expert Group meeting. The official ICES data call included a call for length and life history parameters for each stock in the table below;
 - ii) Propose appropriate MSY proxies for each of the stocks listed below by using methods provided in the ICES Technical Guidelines (ICES, 2017) along with available data and expert judgement.

Stock Code	Stock name description	EG	Data Category
reb.27.14b	Beaked redfish (<i>Sebastes mentella</i>) in Division 14.b, demersal (Southeast Greenland)	NWWG	3.2
reb.27.5a14	Beaked redfish (<i>Sebastes mentella</i>) in Subarea 14 and Division 5.a, Icelandic slope stock (East of Greenland, Iceland grounds)	NWWG	3.2
cod.21.1a-e	Cod (<i>Gadus morhua</i>) in NAFO Subarea 1, inshore (West Greenland cod)	NWWG	3.2

- iii) Incorporate the results from the inter benchmark process (IBPGCod) in the 2018 assessments for Cod (*Gadus morhua*) in NAFO Subarea 1, inshore (West Greenland cod) and Cod (*Gadus morhua*) in ICES Subarea 14 and NAFO Division 1.F (East Greenland, South Greenland) so that the updated 2018 advice for these stocks can be released in June 2018 together with the advice for 2019.

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 2018 ICES data call.

NWWG will report by 17 May 2018 for the attention of ACOM.

WGBAST – Baltic Salmon and Trout Assessment Working Group

2017/2/ACOM10 The **Baltic Salmon and Trout Assessment Working Group** (WGBAST), chaired by Stefan Palm, Sweden, will meet in Turku, Finland, 20–28 March 2018 to:

- a) Address relevant points in the Generic ToRs for Regional and Species Working Groups;
- b) Review the list of Baltic Sea wild salmon rivers in Annex I of the EC Multiannual plan on Baltic Sea salmon. Review existing rivers in Annex I and identify if any other existing rivers with self-sustaining wild salmon populations with no or limited release of reared salmon not currently included on the list.

Wild salmon rivers in Annex I of the EC Multiannual plan on Baltic Sea salmon.

Country/Countries	River
Finland	Simojoki
Finland/Sweden	Tornionjoki/Torneälven
Sweden	Kalixälven, Råneälven, Piteälven, Åbyälven, Byskeälven, Rickleån, Sävarån, Ume/Vindelälven, Öreälven, Lögdeälven, Emån, Mörrumsån, Ljungan
Estonia	Pärnu, Kunda, Keila, Vasalemma
Latvia	Salaca, Vitrupe, Peterupe, Irbe, Uzava, Saka
Latvia/Lithuania	Barta/Bartuva
Lithuania	Nemunas river basin (Zeimena)

Material and data relevant for the meeting must be available to the group no later than six weeks prior to the meeting.

WGBAST will report by 12 April 2018 for the attention of ACOM.

WGBFAS – Baltic Fisheries Assessment Working Group

2017/2/ACOM11 The **Baltic Fisheries Assessment Working Group** (WGBFAS), chaired by Tomas Gröhsler, Germany, and co-chaired by Maris Plikshs*, Latvia, will meet at ICES HQ, Copenhagen, Denmark, 6–13 April 2018 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;
- c) Review progress of the intersessional work agreed in 2017 to improve the assessment of the Baltic cod stocks; and update as appropriate
- d) Advise on how the results of the intersessional work can be applied in the assessment of the Baltic Sea cod stocks.

- e) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 - a. Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data. For those stocks without reference points listed below, collate necessary data and information in order to estimate MSY proxy reference points prior to the Expert Group meeting. The official ICES data call included a call for length and life history parameters for each stock in the table below;
 - b. Propose appropriate MSY proxies for each of these stocks by using methods provided in the ICES Technical Guidelines (ICES, 2017) along with available data and expert judgement
- f) Collate and summarize available information on the pelagic fishery and provide a description of the pelagic fisheries in the Baltic Sea including the degree of mixing of herring and sprat by season, area and metier.
- g) Identify possible data gaps and draft a proposal for a data call to address these gaps.

Stock Code	Stock name description	EG	Data Category
cod.27.21	Cod (<i>Gadus morhua</i>) in Subdivision 21 (Kattegat)	WGBFAS	3
cod.27.24-32	Cod (<i>Gadus morhua</i>) in subdivisions 24–32, eastern Baltic stock (eastern Baltic Sea)*	WGBFAS	3
dab.27.22-32	Dab (<i>Limanda limanda</i>) in subdivisions 22–32 (Baltic Sea)	WGBFAS	3
ple.27.24-32	Plaice (<i>Pleuronectes platessa</i>) in subdivisions 24–32 (Baltic Sea, excluding the Sound and Belt Seas)	WGBFAS	3
tur.27.22-32	Turbot (<i>Scophthalmus maximus</i>) in subdivisions 22–32 (Baltic Sea)	WGBFAS	3

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 2018 ICES data call.

WGBFAS will report by 20 April 2018 for the attention of ACOM.

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

2017/2/ACOM12 The **Working Group for the Bay of Biscay and Iberian waters Ecoregion** (WGBIE), chaired by Lisa Readdy (UK), will meet in ICES HQ, Copenhagen, Denmark, 3–10 May 2018 to:

- a) Address generic ToRs for Regional and Species Working Groups;
- b) Review and assess the progress on the benchmark preparation of hake stocks;
- c) Address the data issue on the different megrim species in area 27.78.
- e) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 - i) Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data. For those

stocks without reference points listed below, collate necessary data and information in order to estimate MSY proxy reference points prior to the Expert Group meeting. The official ICES data call included a call for length and life history parameters for each stock in the table below;

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 2018 ICES data call.

WGBIE will report by 25 May 2018 for the attention of ACOM

WGCSE - Working Group for the Celtic Seas Ecoregion

2017/2/ACOM13 The **Working Group for the Celtic Seas Ecoregion (WGCSE)**, chaired by Timothy Earl, UK and Helen Dobby, Scotland, UK will meet at ICES Headquarters, Copenhagen, Denmark, 9–18 May 2018 and by correspondence September / October 2018 to:

- a) Address generic ToRs for Regional and Species Working Groups;
- b) Report on reopened advice if appropriate;
- c) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 - i) Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data. For those stocks without reference points listed below, collate necessary data and information in order to estimate MSY proxy reference points prior to the Expert Group meeting. The official ICES data call included a call for length and life history parameters for each stock in the table below;
 - ii) Propose appropriate MSY proxies for each of the stocks listed below by using methods provided in the ICES Technical Guidelines (ICES, 2017) along with available data and expert judgement.

Stock Code	Stock name description	EG	Data Category
meg-rock	Megrim (<i>Lepidorhombus</i> spp.) in Division 6.b (Rockall)	WGCSE	3
ple-echw	Plaice (<i>Pleuronectes platessa</i>) in Division 7.e (western English Channel)	WGCSE	3.2
ple-celt	Plaice (<i>Pleuronectes platessa</i>) in divisions 7.f and 7.g (Bristol Channel, Celtic Sea)	WGCSE	3.2
ple-7h-k	Plaice (<i>Pleuronectes platessa</i>) in divisions 7h–k (Celtic Sea South, southwest of Ireland)	WGCSE	3.2
sol-7h-k	Sole (<i>Solea solea</i>) in divisions 7.h–k (Celtic Sea South, southwest of Ireland)	WGCSE	3.2

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 2018 ICES data call.

WGCSE will report by 25 May 2018 for the attention of ACOM, and by 7 October 2018 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

2017/2/ACOM14 The **Working Group on the Biology and Assessment of Deep-Sea Fisheries Resources** (WGDEEP), chaired by Pascal Lorange, France, and Gudmundur Thordarson, Iceland, will meet at ICES Headquarters, 11–18 April 2018 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 and describe and prepare a first Advice draft of any 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 2018.
- f) Evaluate the stock status of all relevant stocks in EU waters for the provision of biennial advice in 2018.
- g) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 - a. Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data. For those stocks without reference points listed below, collate necessary data and information in order to estimate MSY proxy reference points prior to the Expert Group meeting. The official ICES data call included a call for length and life history parameters for each stock in the table below;
 - b. Propose appropriate MSY proxies for each of the stocks listed below by using methods provided in the ICES Technical Guidelines (ICES, 2017) along with available data and expert judgement.

Stock Code	Stock name description	EG	Data Category
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aru.27. 123a4	Greater silver smelt (<i>Argentina silus</i>) in subareas 1, 2, and 4, and in Division 3.a (Northeast Arctic, North Sea, Skagerrak and Kattegat)	WGDEEP	3.2
aru.27. 6b7- 1012	Greater silver smelt (<i>Argentina silus</i>) in Subareas 7–10 and 12, and Division 6.b (other areas)	WGDEEP	3.2
bsf.27. nea	Black scabbardfish (<i>Aphanopus carbo</i>) in Subareas 1, 2, 4–8, 10, and 14, and Divisions 3.a, 9.a, and 12.b (Northeast Atlantic and Arctic Ocean)	WGDEEP	3.2
gfb.27. nea	Greater forkbeard (<i>Phycis blennoides</i>) in subareas 1-10, 12 and 14 (the Northeast Atlantic and adjacent waters)	WGDEEP	3.2
sbr.27. 9	Blackspot seabream (<i>Pagellus bogaraveo</i>) in Subarea 9 (Atlantic Iberian waters)	WGDEEP	3.2
usk.27. 1-2	Tusk (<i>Brosme brosme</i>) in subareas 1 and 2 (Northeast Arctic)	WGDEEP	3.2

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 2018 ICES data call.

WGDEEP will report by 8 May 2018 for the attention of ACOM.

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

2017/2/ACOM15 The **Joint EIFAAC/ICES/GFCM Working Group on Eels** (WGEEL), chaired by Alan Walker, (UK), will meet in Gdansk, Poland, from 5–12 September 2018 to:

- a) Report on developments in the state of the European eel (*Anguilla anguilla*) stock, the fisheries on it and other anthropogenic impacts, based on the responses to the Data Call 2018 and the WGEEL Country Reports.
- b) Produce the first draft of the ICES annual eel advice, and other advisory documents as requested
- c) Report on updates to the scientific basis of the advice, including any new or emerging threats or opportunities
- d) Address the generic EG ToRs from ICES, and any further requests from ICES, EIFAAC or GFCM

WGEEL will report by 31 September 2018 for the attention of ACOM, WGDIAD, SSGEF and FAO, EIFAAC and GFCM.

Supporting Information

Priority	<ol style="list-style-type: none"> 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.
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	<p>3. The EU Regulation (EC 1100/2007) and associated Guidance obliges EU Member States to report national stock indicators against targets, 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 scientific support in implementing and improving such actions.</p> <p>4. The EU has requested annually recurring scientific advice on the European eel because the EU "has adopted or may adopt rules for the protection of anadromous and catadromous species (such as eels or salmon), including for the non-marine part of their life cycle", as described in the 2017 AA between the EU and ICES. Specifically for eel, the advice is sought in support of the Eel Regulation (EC 1100/2007).</p>
Scientific justification	<p>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.</p> <p>Other forms of anthropogenic mortality (e.g. hydropower, pumping stations) also impact on eel and vary in distribution and local relevance.</p> <p>Most but not all EU Member States reported quantitative estimates of the required stock indicators to the EU in 2012, and 2015. The reliability and accuracy of these data have not yet been fully evaluated. Furthermore, the stock indicators of some non-European countries within the natural range are lacking.</p>
Resource requirements	SharePoint
Participants	EIFAAC, ICES and GFCM Working Group Participants, Invited Country Administrations, EU representative, Invited specialists
Secretariat facilities	Support to organize the logistics of the meeting.
Financial	At countries expense
Linkages to advisory committee	ACOM
Linkages to other committees or groups	WGDIAD, SCICOM, SSGEF
Linkages to other organizations	FAO EIFAAC, GFCM, EU DG-MARE, EU DG-ENV, CITES

WGEF – Working Group on Elasmobranch Fishes

2017/2/ACOM16 The **Working Group Elasmobranch Fishes (WGEF)**, chaired by Paddy Walker (Netherlands) and Sam Shephard (Ireland), will meet at IPMA, Lisbon from 19–28 June 2018 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 2018 for:
(i) spurdog in the NE Atlantic; and (ii) skates in the Celtic Seas and Bay of Biscay and Iberian Coast ecoregions
- d) Conduct exploratory analyses and collate relevant data in preparation for the evaluation of other stocks (skate stocks in the North Sea ecoregion, the Azores and MAR; catsharks (*Scyliorhinidae*) in the Greater North Sea, Celtic Seas and Bay of Biscay and Iberian Coast ecoregions; smooth-hounds in the Northeast Atlantic and tope in the Northeast Atlantic) in preparation for more detailed biennial assessment in 2018;
- e) Conduct exploratory analyses and collate relevant data in preparation for the evaluation of 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: (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) Classify the elasmobranch stocks currently assessed by ICES as target or bycatch stocks. A target stock is in this context a stock for which the TAC is a main driver for the regulation of fishing activities, and a bycatch stock a stock which is mainly caught as a bycatch and for which the TAC has no or very limited influence on the fishing activities. Explore the possibility of identifying elasmobranch stocks (or species) that can be used as community state indicators within the context of managing mixed fisheries
- i) Further develop the ToR for the proposed joint ICCAT-ICES meeting in 2019 to (i) assess porbeagle shark and (ii) collate available biological and fishery data on thresher sharks in the Atlantic;
- j) Work intersessionally to draft/update stock annexes to be made available by 31st January 2018, and then develop a procedure and schedule for subsequent reviews.
- k) Address the special request from France to revise the advice provided in 2016 on fishing opportunities for 2018 for the stocks of undulate ray (*Raja undulata*) in 7.de and in 8.ab by:
 - i) validating new data provided by France from:
 - industry self-sampling programme
 - observer programme
 - ii) update the catch advice for 2018 based on the results of the data validation, the STECF report on survivability and updated assessment. Prepare a draft advice document for these two stock

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 12 July for the attention of ACOM.

WGHANSA – Working Group on Southern Horse Mackerel Anchovy and Sardine

2017/2/ACOM17 The **Working Group on Southern Horse Mackerel, Anchovy and Sardine** (WGHANSA), chaired by Alexandra (Xana) Silva*, Portugal, will meet at IPMA in Lisbon, Portugal, 26–30 June 2018 to:

- a) address generic ToRs for Regional and Species Working Groups
- b) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 1. Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data. For those stocks without reference points listed below, collate necessary data and information in order to estimate MSY proxy reference points prior to the Expert Group meeting. The official ICES data call included a call for length and life history parameters for each stock in the table below;
 2. Propose appropriate MSY proxies for each of these stocks by using methods provided in the ICES Technical Guidelines (ICES, 2017) along with available data and expert judgement.
- c) Agree and standardize subdivisions within Division 8.c and Division 9.a. WGHANSA reports data and stock biomass trends for sar.27.8c9a and ane.27.9a by 9a Subdivision (i.e. 8c-East, 8c-West, 9a-North, 9a-Central-North, 9a-Central-South, 9a-South). The Subdivision definitions agreed by WGHANSA in 1992 are not presently followed. WGHANSA is asked to re-define the limits of the 8c and 9a subdivisions used by the WG. WGHANSA is further asked to define the limit between Subdivision 9a-South Portugal and Subdivision 9a-South Spain.

Stock Code	Stock name description	EG	Data Category
jaa.27.10a2	Blue jack mackerel (<i>Trachurus picturatus</i>) in the waters of the Azores	WGHANSA	3

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 2018 ICES data call.

WGHANSA will report by 7 July 2018 for all stocks except Bay of Biscay anchovy and by 24 November for Bay of Biscay anchovy stock for the attention of ACOM.

WGHARP – Group on Harp and Hooded Seals

2017/2/ACOM18 The **Working Group on Harp and Hooded Seals (WGHARP)** (Chair: Mike Hammill) proposed to meet in Nuuk, Greenland, for 4-5 days during late 2018 (tbc) to:

- a) Review results of new surveys as available for harp seals in the White Sea and southeastern portion of Barents Sea
- b) Review results from the biological samples obtained from the harp seals

WGHARP will report xx 2018 for the attention of the ACOM.

WGMIXFISH-ADVICE – Working Group on Mixed Fisheries Advice

2017/2/ACOM19 The **Working Group on Mixed Fisheries Advice (WGMIXFISH-ADVICE)**, chaired by Youen Vermard, France, will meet at ICES Headquarters 21–26 May, 2018 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 2017 (e.g. Landing Obligation) for cod, haddock, whiting, saithe, plaice, sole, turbot, *Nephrops norvegicus*, sole 7.d and plaice 7.d that is produced by WGNSSK in May 2017,;
- 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 2017 (e.g. Landing Obligation) for cod, haddock, and whiting that is produced by WGCSE in 2017, and further develop mixed fisheries analyses for the region;
- c) Carry out mixed fisheries projections for the Iberian waters taking into account the single species advice and the management measures in place for 2017 (e.g. Landing Obligation) for hake, four-spot megrim, megrim and white anglerfish that is produced by WGBIE in May 2017, and further develop mixed fisheries analyses for the region;
- d) Produce draft mixed-fisheries sections for the ICES advisory report 2018 that includes a dissemination of the fleet and fisheries data and forecasts for the North Sea, Celtic Sea, 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
- f) Gather data and knowledge on sprat and herring fisheries to be able to assess the potential development of mixed-fisheries considerations for pelagic stocks in the Baltic Sea conjointly with WGBFAS

WGMIXFISH-Advice will report by 1 June 2018 for the attention of ACOM.

WGMIXFISH–METH – Working Group on Mixed Fisheries Advice Methodology

To be updated after 2017 meeting

2017/2/ACOM20

WGNAS – Working Group on North Atlantic Salmon

2017/2/ACOM21 The **Working Group on North Atlantic Salmon** (WGNAS), chaired by Martha Robertson*, Canada will meet in Woods Hole, Massachusetts, U.S.A., 4–13 April 2018 to:

- a) Address relevant points in the Generic ToRs for Regional and Species Working Groups for each salmon stock complex;
- b) Address questions posed by NASCO:
 - 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 2017¹;
 - 1.2 report on significant new or emerging threats to, or opportunities for, salmon conservation and management²;
 - 1.3 provide a review of examples of successes and failures in wild salmon restoration and rehabilitation and develop a classification of activities which

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 information on any new research into the migration and distribution of salmon at sea and the potential implications of climate change for salmon management.*

3. *with respect to question 1.3, NASCO is aware that the WGERAAS final report is being prepared and will be submitted to ICES in 2017*

4. *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 ICES should review the results of the recent phone surveys and advise on the appropriateness for incorporating resulting estimates of unreported catch into the assessment process.*

5. *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.*

6. *In response to question 4.2, ICES is requested to provide a brief summary of the status of North American and North-East Atlantic salmon stocks. The detailed information on the status of these stocks should be provided in response to questions 2.3 and 3.3.*

could be recommended under various conditions or threats to the persistence of populations³;

- 1.4 provide a compilation of tag releases by country in 2017; and
- 1.5 identify relevant data deficiencies, monitoring needs and research requirements.
- 2. With respect to Atlantic salmon in the North-East Atlantic Commission area:**
 - 2.1 describe the key events of the 2017 fisheries⁴;
 - 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;
 - 2.4 provide catch options or alternative management advice for the 2018/19-2020/21 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 rebuilding⁵; and
 - 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 2017 fisheries (including the fishery at St Pierre and Miquelon)⁴;
 - 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;
 - 3.4 provide catch options or alternative management advice for 2018-2021 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 rebuilding⁵; 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 2017 fisheries⁴;
 - 4.2 describe the status of the stocks⁶;
 - 4.3 provide catch options or alternative management advice for 2018-2020 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 rebuilding⁵;
 - 4.4 update the Framework of Indicators used to identify any significant change in the previously provided multi-annual management advice.

WGNAS will report by 20 April 2018 for the attention of ACOM.

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

2017/2/ACOM:22 The **Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak** (WGNSSK), chaired by José De Oliveira, UK, in meet in Ostend, Belgium, 24 April – 3 May 2018 and by correspondence in September 2018 to:

- a) Address generic ToRs for Regional and Species Working Groups. The Norway pout assessments shall be developed by correspondence.
- b) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 - i. Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data. For those stocks without reference points listed below, collate necessary data and information in order to estimate MSY proxy reference points prior to the Expert Group meeting. The official ICES data call included a call for length and life history parameters for each stock in the table below;
 - i. Propose appropriate MSY proxies for each of the stocks listed below by using methods provided in the ICES Technical Guidelines (ICES, 2017) along with available data and expert judgement.

Stock Code	Stock name description	EG	Data Category
gug.27.3a47d	Grey gurnard (<i>Eutrigla gurnardus</i>) in Subarea 4 and divisions 7.d and 3.a (North Sea, eastern English Channel, Skagerrak and Kattegat)	WGNSSK	3.2
nep.fu.32	Norway lobster (<i>Nephrops norvegicus</i>) in Division 4.a, Functional Unit 32 (northern North Sea, Norway Deep)	WGNSSK	4.14
nep.fu.10	Norway lobster (<i>Nephrops norvegicus</i>) in Division 4.a, Functional Unit 10 (northern North Sea, Noup)	WGNSSK	4.14
nep.fu.33	Norway lobster (<i>Nephrops norvegicus</i>) in Division 4.b, Functional Unit 33 (central North Sea, Horn's Reef)	WGNSSK	4.14
nep.fu.34	Norway lobster (<i>Nephrops norvegicus</i>) in Division 4.b, Functional Unit 34 (central North Sea, Devil's Hole)	WGNSSK	4.14
nep.fu.5	Norway lobster (<i>Nephrops norvegicus</i>) in divisions 4.b and 4.c, Functional Unit 5 (central and southern North Sea, Botney Gut–Silver Pit)	WGNSSK	4.14

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. WGNSSK will report by 18 May 2018, and by 24 September 2018 (Norway pout) for the attention of ACOM.

WGWIDE– Working Group on Widely Distributed Stocks

2017/2/ACOM23 The Working Group on Widely Distributed Stocks (WGWIDE), chaired by Gudmundur J. Óskarsson, Iceland, will meet at The Faroe Marine Research Institute, Torshavn, Faroe Island, 28 August – 3 September 2018 to:

- a) Address generic ToRs for Regional and Species Working Groups.
- b) Estimate MSY proxy reference points for the category 3 and 4 stocks in need of new advice in 2018:
 - i) Update the MSY proxy reference points for those category 3 and 4 stocks with existing proxy reference points using most recent data. For those stocks without reference points listed below, collate necessary data and information in order to estimate MSY proxy reference points prior to the Expert Group meeting. The official ICES data call included a call for length and life history parameters for each stock in the table below;
 - ii) Propose appropriate MSY proxies for each of the stocks listed below by using methods provided in the ICES Technical Guidelines (ICES, 2017) along with available data and expert judgement.
- c) Address the special request from the European Commission on inter-area flexibility in catches for horse mackerel in divisions 8c and 9a. by
 - i) evaluating the possible impacts on F in 2018 and SSB in 2019 of the two horse mackerel stocks (horse mackerel in Subarea 8 and divisions 2.a, 4.a, 5.b, 6.a, 7.a–c, and 7.e–k (the Northeast Atlantic) and horse mackerel in Division 9.a (Atlantic Iberian waters)) of an increased inter-area flexibility in the TACs for divisions 8c and 9a, from 5% to 15%, and whether such an increase would be in line with the precautionary approach
 - ii) evaluate what % of inter-area flexibility could be considered to be in line with the precautionary approach, if 15% is found to be not precautionary.

The EU has for 2018 set a TAC of 16 000 t for horse mackerel in division 8c and of 55 555 t for division 9a. The TACs include an inter-area flexibility allowing for fish up to 5% of each TAC to be fished in the other management area. The European Commission is requesting advice on the impacts of increasing the flexibility from 5% to 15%.

Stock Code	Stock name description	EG	Data Category
Boc.27.nea	Boarfish (<i>Capros aper</i>) in subareas 6–8 (Celtic Seas, English Channel, and Bay of Biscay)	WGWIDE	3
hom.27.3a4bc7d	Horse mackerel (<i>Trachurus trachurus</i>) in divisions 3.a, 4.b–c, and 7.d (Skagerrak and Kattegat, southern and central North Sea, eastern English Channel)	WGWIDE	3

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 2018 for the attention of ACOM.

Ecosystem related Expert Groups

JWGBIRD – OSPAR/HELCOM/ ICES/Working group on Seabirds

ToRs to be updated after JWGBIRD meeting in October

2017/2/ACOM24

WGBYC – Working Group on Bycatch of Protected Species

2017/2/ACOM25 The **Working Group on Bycatch of Protected Species** (WGBYC), co-chaired by Sara Königson*, Sweden and Kelly Macleod*, UK will meet in Reykjavik Iceland, during 1–4 May in 2018 to:

- a) Review and summarize annual national reports submitted to the European Commission under Regulation 812/2004 and other published documents to collate bycatch rates and estimates in EU waters;
- a) Collate and review information from National Regulation 812/2004 reports and elsewhere relating to the implementation of bycatch mitigation measures and ongoing bycatch mitigation trials, compile recent results and coordinate further work on protected species bycatch mitigation;
- b) Evaluate the range of (min/max) impacts of bycatch on protected species where possible by assessment unit, furthering the bycatch risk approach to assess likely conservation level threats and prioritize areas where additional monitoring is needed;
- c) Continue to develop, improve and coordinate with other ICES WGs on methods for bycatch monitoring, research and assessment within the context of European legislation (e.g. MSFD) and regional conventions (e.g. OSPAR) (intersessional);
- d) Continue to develop collaborative research proposals among WGBYC members to pursue research projects and funding opportunities in support of researching protected and target species behaviour in relation to fishing gear;
- e) Continue, in cooperation with the ICES Data Centre, to develop, improve, populate through formal Data Call, and maintain the database on bycatch monitoring and relevant fishing effort in European waters. (Intersessional);
- f) Convene a joint workshop with WGCATCH in 2018 (subject to joint approval of workshop ToR's). The aim of the workshop is to design the collection of data on incidental bycatch of protected and other species at risk (i.e. rare bycatch events) in the sampling protocols of national catch, bycatch and discards sampling schemes pursuant to EU 2016/1251 Chapter III, Sec. 3.

WGBYC will report no later than 1 June 2018 to the attention of the Advisory Committee.

WGDEC – ICES/NAFO Joint Working Group on Deep-water Ecology

2017/2/ACOM26 The Working Group on Deep-water Ecology (WGDEC), chaired by Neil Golding, Falklands, will meet 5–9 March 2018 in Dartmouth, Nova Scotia, Canada to:

- a) Collate new information on the distribution of vulnerable habitats as well as important benthic species and communities in the North Atlantic and adjacent waters, and archive appropriately using the ICES VME Database for dissemination via the Working Group report and ICES VME Data Portal. In addition, prepare spatial layers and a list of areas where VMEs are likely to occur in the Northeast Atlantic, in particular in areas deeper than 800 m;
- b) Provide all available new information on the distribution of vulnerable habitats (VMEs) in the NEAFC Convention Area. In addition, provide new information on location of habitats sensitive to particular fishing activities (i.e. vulnerable marine ecosystems, VMEs) within EU waters;
- c) Summarize existing knowledge of ecosystem functioning of deep-sea benthic communities and habitats and the ecosystem roles of chemical/physical structures such as vents, seeps, seamounts, canyons, etc.;
- d) Review how vulnerable marine ecosystems (VMEs) have been defined previously (e.g. from other RFMOs or States) and through the use of case studies for specific VMEs (e.g. seapen fields and cold-water coral reefs), suggest a procedure and consider approaches relevant to the available data and species of the NE Atlantic for developing a biological basis for defining how VMEs are identified, which will allow us in future to have an ecological basis for determining when a VME indicator record (or group of) transitions into a VME;
- e) Propose parameters for use within the VME database that would serve to remove the effect of the passage of time in the evaluation of confidence in the weighting system, associated with each data entry. In addition, consider anthropogenic impacts that might be used to reintroduce uncertainty in such records.

WGDEC will report by 28th May 2018 to the attention of the ACOM Committee.

Supporting Information

Priority	The current activities of this Group will enable ICES to respond to advice requests from a number of clients (NEAFC/EC). Consequently, these activities are considered to have a high priority.
Scientific justification	<p>ToR [a]</p> <p>The Joint ICES/NAFO Working Group on Deep-water Ecology undertake a range of Terms of Reference each year; the scope of these cover the entire North Atlantic, and include aspects such as ocean basin processes. Therefore, collating information on vulnerable habitats (including important benthic species and communities) preparation of spatial layers and lists of areas where VMEs are likely to occur across this wide geographic area (and adjacent waters) is essential.</p> <p>This ToR will address a special request from the EC to advice on a list of areas where VMEs are likely to occur and should be closed off from bottom fishing, in particular in areas deeper than 800m.</p> <p>To this end, a VME data call will be run from November 2017 to February 2018, facilitated by the ICES Data Centre. Data will be quality checked/prepared one month in advance of WGDEC 2018. New data will be</p>

incorporated into the ICES VME Database and ICES VME Data Portal. This ToR includes any development work on the ICES VME Database and Data Portal, as identified by WGDEC, with support from the ICES Data Centre.

ToR [b]

This information and associated maps are required to meet the NEAFC recurring advice “ to continue to provide all available new information on distribution of vulnerable habitats in the NEAFC Convention Area and fisheries activities in and in the vicinity of such habitats, and provide advice relevant to the Regulatory Area.....” as well as part of the European Commission MoU request to “provide any new information regarding the impact of fisheries on sensitive habitats”. The location of newly discovered/mapped sensitive habitats is critical to these requests.

ToR [c]

In the past five years there have been new insights into the role of benthic species in deep-sea ecosystems. Examples include the filtration capacity of deep-sea sponges, the draw-down of surface production by *Lophelia* reefs and the microbial loop associated with deep-sea sponges. Collating this information will provide greater insight into functioning of these ecosystems, identify knowledge gaps and inspire research to fill those gaps. This information can be used to describe ecosystem services and assess anthropogenic impacts on these areas.

ToR [d]

With WGDEC now considering records of *bona fide* VME from Remotely Operated Vehicle (ROV) or towed video observations, there is a need to better define VMEs using quantitative approaches linked to the biology. This is needed to ensure we are consistent in how we interpret new evidence of VME brought to the group, as well as to identify if/when we can consider groups of VME indicator records as VME, and can be done through reviewing existing definitions and quantitative approaches used by existing RFMOs and States.

ToR [e]

When the VME Database was first developed there was a need to give a lower confidence in the weighting system to some of the historical data for which there was no expert available to validate the records. As data has been collected more recently, WGDEC feel the data are robust, yet they still reduce in confidence with the passage of time, due to criteria in the VME weighting algorithm. This ToR will allow those records to stand equal with newer records, which is appropriate given the biology of the VME species, unless certain anthropogenic events intervene to change the value of the record. New data will be incorporated into the ICES VME Database and ICES VME Data Portal. This ToR includes any development work on the ICES VME Database and Data Portal, as identified by WGDEC, with support from the ICES Data Centre.

Resource requirements	Some support will be required from the ICES Secretariat
Participants	The Group is normally attended by some 15–20 members and guests.
Secretariat facilities	None, apart from WebEx provision and SharePoint site
Financial	No financial implications.
Linkages to advisory committees	ACOM is the parent committee. Links to work undertaken by WGSFD and to WGDEEP (although no explicit overlap with the latter this year).
Linkages to other	No direct linkages, but better links in 2018 to WGMHM and BEWG will be explored

committees or
groups

Linkages to other organizations As a Joint ICES/NAFO group, the work of this group links to work being undertaken by Working Groups under the NAFO Scientific Council, such as WGESA

WGECO – Working Group on the Ecosystem Effects of Fishing Activities

2017/2/ACOM27 The **Working Group on the Ecosystem Effects of Fishing Activities** (WGECO), chaired by Jeremy Collie, US and Stefan Ragnarsson, Iceland, will meet in San Pedro del Pinatar, Spain 12–19 April 2018 to:

- a) Investigate the ecological consequences of stock rebuilding, with particular emphasis on benthivorous fish and invertebrates.
 - i) Make first-order estimates of predation pressure on benthos;
 - ii) Examine evidence of food limitation and density-dependent growth;
 - iii) Compare the footprints of trawling to the footprints of predation pressure on benthos.
- b) Use empirical data and available multispecies models to examine how the degree of fisheries balance relates to ecosystem status.
 - i) Compare the length composition of total catch (landings and discards) to the length composition in the survey for one region (e.g. Irish Sea);
 - ii) Use multispecies models (developed by WGSAM) to identify targets for ecological indicators of state (i.e. status) that relate to an acceptable risk of species diversity loss; and
 - iii) Use output of multispecies models to investigate how proposed management strategies affect fisheries balance.
- c) Examine individual species abundance trends to improve interpretation of assessment outcomes based on the “abundance of a suite of sensitive fish species” indicator. Apply the sensitive species indicator in additional ICES areas.
- d) Investigate and report on potentially valuable ecosystem indicators for which full methodology has yet to be developed, and propose methodologies and data sources. To include *inter alia*: Total mortality, Productivity of key predators, Primary production required to support fisheries, Guild level biomass, Total biomass of small fish, Pelagic-to-demersal ratio, and Benthic indicators. The current progress in the development of distributional indicators will be reviewed. Furthermore, this ToR should scope and evaluate methods to integrate indicators.
- e) Prepare a list of topics to be considered by WGELECTRA (17–19 April 2018) when answering a request from the Dutch Ministry of Agriculture, Nature and Food Quality to compare the ecological and environmental effects of using traditional beam trawls or pulse trawls when exploiting the TAC of North Sea sole, on (i) the sustainable exploitation of the target species (species and size selectivity); (ii) target and non-target species that are exposed to the gear but are not retained (injuries and mortality); (iii) the mechanical disturbance of the seabed; (iv) the structure and functioning of the benthic ecosystem; and to assess (v) the impact of repetitive exposure to the two gear types on marine organisms.

WGECO must report to WGELECTRA on ToR e) before 17 April 2018.

WGECO will report by 3 May 2018 to the attention of the Advisory Committee.

Supporting Information

Priority	The current activities of this Group will lead ICES into issues related to the ecosystem affects of fisheries, especially with regard to the application of the Precautionary Approach. Consequently, these activities are considered to have a very high priority.
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Scientific justification	<p><u>Term of Reference a)</u></p> <p>Many stocks are rebuilding and will likely have higher abundance and biomass than we have seen in recent times. This in turn will likely have effects through trophic interactions both up and down the foodweb. At ICES, WGECO and WGSAM have been tasked previously with similar ToRs. WGECO will investigate the potential consequences of stock recovery of benthivorous fish and invertebrates, their ensuing risks for fish stock management and the use of MSFD indicators. It is hypothesized that a large increase in benthivorous fish will have an impact on benthic productivity and biodiversity. This ToR requires data on the spatial distribution of benthivorous predators, their prey consumption rates and diet composition. This ToR links to ToR d.</p> <p><u>Term of Reference b)</u></p> <p>Identifying thresholds and limits for ecosystem indicators remains a central challenge for ecosystem based fisheries management. This ToR will examine if MSY targets implemented in the current management regime will lead to acceptable ecosystem status. This ToR aims to identify reference levels for a range of ecosystem indicators with the use of size-based models. This proposed ToR links to new ToR d and to WGSAM.</p> <p><u>Term of Reference c)</u></p> <p>This work involves further development and refinement of the sensitive species indicator. This includes consideration of including species reproductive potential, but to date the indicator only uses mortality prior to spawning. The current suite of sensitive species includes species that experience any fishing mortality prior to spawning. It would be of interest to examine the effects of using various levels of fishing mortality. This ToR should also evaluate whether commercial species that are managed directly under the CFP should be included in suites of sensitive species (i.e. species with a TAC that have a stock assessment).</p> <p><u>Term of Reference d)</u></p> <p>WGECO has traditionally had a leading role in developing and testing indicators, and their use for provision of advice. The work of this ToR facilitates operationalization of these indicators, by identifying data sources, refining, evaluating their strengths and weaknesses and gaps in indicator availability.</p> <p><u>Term of Reference e)</u></p> <p>This ToR will help address a special request from The Netherlands to compare the ecological and environmental effects of using traditional beam trawls or pulse trawls when exploiting the TAC of North Sea sole. To increase ICES expertise applied to this request, WGECO will discuss the issue and recommend issues and evidence that need to be considered by WGELECTRA, and select 2 reviewers that are independent of WGELECTRA from WGECO members to review the draft response from WGELECTRA.</p>
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Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
Participants	The Group is normally attended by some 20–25 members and guests.
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	There is a very close working relationship with the groups of the Fisheries Technology Committee, WGBIRD, BEWG, WGBIODIV and WGSAM.
Linkages to other organizations	OSPAR, HELCOM

WGMME - The Working Group on Marine Mammal Ecology

2017/2/ACOM28 The **Working Group on Marine Mammal Ecology** (WGMME), chaired by Anders Galatius*, Denmark, and Anita Gilles*, Germany, will meet in La Rochelle, France, 19–22 February 2018 to:

- a) Review and report on any new information on seal and cetacean population abundance, population/stock structure, management frameworks (including indicators and targets for MSFD assessments), and anthropogenic threats to individual health and population status;
- b) Review current issues in relation to indirect impacts of seals on fisheries;
- c) Review additional aspects of marine mammal fishery interactions not covered by WBYC. Details of this ToR to be agreed with WGBYC
- d) Update the database for seals;

WGMME will report by 23 March to the attention of the ACOM.

Priority	
Scientific justification	<p>ToR a is a standing term of reference. However, the group proposes to expand its scope since it would be useful to include information on threats to population status.</p> <p>ToR b aims to address current issues in indirect seal–fisheries interactions (e.g. competition for food, transmission of codworm), complementing the review of direct interactions completed in 2017.</p> <p>ToR c is proposed in the recognition of common interests between WGMME and WGBYC, recognising that some issues related to marine mammal–fishery interactions may finally be covered by neither group.</p> <p>ToR d is a standing term of reference.</p>
Resource requirements	
Participants	
Secretariat facilities	
Financial	
Linkages to advisory committees	

Linkages to other committees or groups

Linkages to other organizations

Regional database

SCRDB – Steering Committee for the Regional Fisheries Database

ToRs to be provided after SC-RDB 2017 meeting

2017/2/ACOM29

Benchmark ToRs

IBPGCod – Inter-benchmark workshop on Greenland cod

2017/2/ACOM30 An **Inter-benchmark of Greenland cod (IBPGCod)**, chaired by ICES Chair Marie Storr-Paulsen, Denmark, and external chair Bjarki Elvarsson, Iceland attended by two invited external experts, Rasmus Nielsen, Denmark and Arved Staby, Norway, will be established and meet at ICES Headquarters for a Benchmark meeting, 8–9 January 2018 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. 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 appropriate necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);
- d) Develop recommendations for future work to improve the assessment and data collection and processing;

Stocks	Stock leader
Cod (<i>Gadus morhua</i>) in NAFO Subarea 1, inshore (West Greenland cod)	Rasmus Hedeholm, Greenland

Cod (<i>Gadus morhua</i>) in ICES Subarea 14 and NAFO Division 1.F (East Greenland, South Greenland)	Anja Retzel, Greenland
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The Benchmark Workshop will report by 8 February 2018 for the attention of ACOM.

WKAnglerfish – Benchmark Workshop on Anglerfish

2017/2/ACOM31 A **Benchmark of Anglerfish** (WKAnglerfish), chaired by ICES Chair Lisa Readdy, UK, and External Chair Larry Alade, US and attended by two invited external experts, Noel Cadigan, Canada and Crista Bank, US will be established and meet for a five-day data evaluation meeting in Lisbon, 27 November – 1 December 2017 and at ICES Headquarters for a Benchmark meeting, 12–16 February 2018 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. 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 appropriate necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);
- d) Develop recommendations for future work to improve the assessment and data collection and processing;
- 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 compilation workshop consider the quality of data including discard and estimates of misreporting of landings;
 - 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
Black-bellied anglerfish (<i>Lophius budegassa</i>) in Divisions 7b-k and 8a,b,d (West and Southwest of Ireland, Bay of Biscay)	Joana Silva

Black-bellied anglerfish (<i>Lophius budegassa</i>) in Divisions 8c and 9a (West and Cantabrian Sea, Atlantic Iberian Waters)	Ricardo Alpoim
White anglerfish (<i>Lophius piscatorius</i>) in Divisions 7b-k and 8a,b,d (West and Southwest of Ireland, Bay of Biscay)	Agurtzane Urtizbera
White anglerfish (<i>Lophius piscatorius</i>) in Divisions 8c and 9a (West and Cantabrian Sea, Atlantic Iberian Waters)	Paz Sampredo
Anglerfish (<i>Lophius budegassa</i> , <i>Lophius piscatorius</i>) in subareas 1 and 2 (Northeast Arctic)	Kjell Nedreaas
Anglerfish (<i>Lophius Budegassa</i> , <i>Lophius piscatorius</i>) in subareas 4 and 6, and in Division 3.a (North Sea, Rockall and West of Scotland, Skagerrak and Kattegat)	Helen Holah

The Benchmark Workshop will report by 2 March 2018 for the attention of ACOM.

WKPELA2018 – Benchmark Workshop on pelagic stocks 2018

2017/2/ACOM32 A **Benchmark on pelagic stocks** (WKPELA2018), chaired by External Chair Katja Enberg*, Norway, and ICES Chair Pieter-Jan Schon*, UK, and attended by three invited external experts, Verena Trenkel, France, Ashleen Benson, US, and Bjarki Elvarsson, Iceland, will be established and meet for a three-day data evaluation meeting at ICES Headquarters 4–6, December 2017 and at ICES Headquarters for a Benchmark meeting, 12–16 February 2018 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. 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 appropriate necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);
- d) Develop recommendations for future work to improve the assessment and data collection and processing;
- e) As part of the evaluation:
 - iii) Conduct a 3 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 compilation workshop consider the quality of data including discard and estimates of misreporting of landings;

- iv) Following the DEWK, produce working documents to be reviewed during the Benchmark meeting at least 7 days prior to the meeting
- f) Conduct an inter-benchmark of herring in the Celtic Sea. The existing assessment in the ASAP framework must be adjusted to deal with alternating states of apparent behaviour patterns pre and post 2014, in the acoustic tuning index to incorporate changes in apparent behaviour of herring as they are available to the acoustic survey.

Stocks	Stock leader
Herring (<i>Clupea harengus</i>) in subdivisions 20-24, spring spawners (Skagerrak, Kattegat, and western Baltic)	Valerio Bartolino
Herring (<i>Clupea harengus</i>) in Subarea 4 and divisions 3.a and 7.d, autumn spawners (North Sea, Skagerrak and Kattegat, eastern English Channel)	Niels Hintzen
Herring (<i>Clupea harengus</i>) in divisions 7.a South of 52°30'N, 7.g-h and 7.j-k (Irish Sea, Celtic Sea, and southwest of Ireland)	Maurice Clarke
Anchovy (<i>Engraulis encrasicolus</i>) in Division 9a (Atlantic Iberian Waters)	Fernando Ramos

The Benchmark Workshop will report by 2 March 2018 for the attention of ACOM.

WKNSEA – Benchmark Workshop for North Sea Stocks

2017/2/ACOM33 A **Benchmark Workshop for North Sea Stocks** (WKNSEA), chaired by External Chair Beatriz Roel, UK, and ICES Chair Jennifer Devine, Norway, and attended by two invited external experts Daniel Ricard, Canada and Cólín Minto, Ireland will be established and will meet at ICES HQ, Copenhagen, Denmark 6–10 November 2017 for a data evaluation meeting and at ICES HQ, Copenhagen, Denmark for a 5 day Benchmark meeting 5–9 February 2018 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. 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 5 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
Flounder (<i>Platichthys flesus</i>) in Subarea 4 and Division 3.a (North Sea, Skagerrak and Kattegat) (fle.27.3a4)	Holger Haslob
Lemon sole (<i>Microstomus kitt</i>) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel) (lem.27.3a47d)	Coby Needle
Whiting (<i>Merlangius merlangus</i>) in Subarea 4 and Division 7.d (North Sea and eastern English Channel) (whg.27.47d)	Tanja Miethe
Witch (<i>Glyptocephalus cynoglossus</i>) in Subarea 4 and divisions 3.a and 7.d (North Sea, Skagerrak and Kattegat, eastern English Channel) (wit.27.3a47d)	Rasmus Nielsen

WKREDFISH – Benchmark Workshop on Redfish in Northeast Arctic waters

2017/2/ACOM34 A **Benchmark of Redfish in NorthEast Arctic waters** (WKREDFISH), chaired by External Chair Paul Spencer, US, and ICES Chair Gudmundur Thordarson*, Iceland and attended by two invited external experts, Brian Linton, US and Michel Bertignac, France, will be established and meet for a three-day data evaluation meeting at ICES Headquarters, 21–23 November 2017 and at ICES Headquarters for a Benchmark meeting, 29 January – 2 February 2018 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. 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 appropriate necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);
- d) Develop recommendations for future work to improve the assessment and data collection and processing;
- e) As part of the evaluation:
 - v) Conduct a 3 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 compilation workshop consider the quality of data including discard and estimates of misreporting of landings;
 - vi) Following the DEWK, produce working documents to be reviewed during the Benchmark meeting at least 7 days prior to the meeting

Stocks	Stock leader
Beaked redfish (<i>Sebastes mentella</i>) in subareas 1 and 2 (Northeast Arctic)	Benjamin Planque
Golden redfish (<i>Sebastes norvegicus</i>) in subareas 1 and 2 (Northeast Arctic)	Daniel Howell

The Benchmark Workshop will report by 2 March 2018 for the attention of ACOM.

WKSPRAT - Benchmark Workshop on Sprat

2017/2/ACOM35 A **Benchmark of Sprat** (WKSPRAT), chaired by ICES Chair Piera Carpi, UK, and External Chair Zeynep Pekcan Hekim, SE, and attended by two invited external experts, Alexandra Silva, PT, and Leire Ibaibarriaga, ES, will be established and meet for a three-day data evaluation meeting at ICES Headquarters 19–21 June 2018 and at ICES Headquarters for a Benchmark meeting, 5–9 November 2018 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. 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 appropriate necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);
- d) Develop recommendations for future work to improve the assessment and data collection and processing;
- e) As part of the evaluation:
 - vii) Conduct a 3 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 compilation workshop consider the quality of data including discard and estimates of misreporting of landings;
 - viii) Following the DEWK, produce working documents to be reviewed during the Benchmark meeting at least 7 days prior to the meeting.

Stocks	Stock leader
Sprat (<i>Sprattus sprattus</i>) in Division 3.a (Skagerrak and Kattegat)	Anna Rindorf
Sprat (<i>Sprattus sprattus</i>) in Subarea 4 (North Sea)	Cecilie Kvamme
Sprat (<i>Sprattus sprattus</i>) in Subarea 4 (North Sea)	Piera Carpi

The Benchmark Workshop will report by 23 November 2018 for the attention of ACOM.

New Expert Groups and other 2018 meetings

WKIDEBCA – Workshop on Evaluation of Input data to Eastern Baltic Cod Assessment

2017/2/ACOM36 A **Workshop on Evaluation of Input data to Eastern Baltic Cod Assessment** (WKIDEBCA), chaired by Michele Casini* (Sweden) will be established and will meet in ICES HQ Copenhagen, Denmark 23–25 January 2018 to:

- a) Assemble and review updates and new quantitative information on current and past growth (length/weight at age) and natural mortality of Eastern Baltic cod, which was not considered at WKBEBCA workshop in 2017.
- b) Evaluate and conclude on the possible approaches/assumptions to inform growth in age/length based stock assessment models, based on the present scientific knowledge available. This includes proxies, e.g. based on changes in potential drivers for growth etc.
- c) Evaluate and conclude on the possible approaches/assumptions to inform natural mortality in age/length based stock assessment models, based on the present scientific knowledge available.
- d) Evaluate and conclude on the most appropriate method for calculating time series of survey indices for age/length based stock assessment purposes, with

specific focus on standardization across different gears, and considering the stock component in SD 24.

- e) Agree upon and document the most appropriate approaches to derive stock assessment input data concerning growth, natural mortality and survey indices, addressed in a-d), to be taken forward to future benchmark assessment on Eastern Baltic cod.
- f) Based on the conclusions from e), recommend the timing for future benchmark assessment on Eastern Baltic cod and develop corresponding workplan.

The Workshop will report by 10 February 2018 for the attention of ACOM.

WKSHARK4– Workshop on Length–Based Indicators and Reference Points for Elasmobranchs

2017/2/ACOM37 **A Workshop on Length-based Indicators and Reference Points for Elasmobranchs (WKSHARK4)**, chaired by Pascal Lorange* (France) and Jan Jaap Poos* (Netherlands) will be established and will meet at Ifremer, Nantes, France 6–9 February 2018 to:

- a) Address the concerns raised by WGEF regarding the use of these, or similar, Length Based Indicators to infer stock status and provide management advice for elasmobranchs, including:
 - The sensitivity of indicator values to life history parameters M/K , L_{inf} , and L_{mat}
 - The assumption of asymptotic fishing gear selection, which will not be appropriate for all elasmobranch stocks
 - The implicit assumption of homogeneous spatial distribution of the stock, i.e., that surveys consistently/adequately capture population size-distribution and important life history stages.
 - The assumption of constant recruitment, selection and fishing mortality; the violation of which could lead to a shift in population size distribution and affect indicator values and species status in relation to RP.
- b) Further develop the provisional protocol which was developed at WGEF 2017 for deriving appropriate Reference Points and expected indicator ratio values based on specific life history parameters for lesser-spotted dogfish *Scyliorhinus canicula*;
- c) Explore the use of the Leslie matrix approach as used at the WGEF 2017 meeting for identifying LBI 'expected values' based on the known life history characteristics of specific fish stocks;
- d) Develop MSY proxy reference points for the stocks in need of new advice in 2018: skates in the Celtic Seas and Bay of Biscay and Iberian Coast ecoregions and test these proxies using stocks for which quantitative assessment and actual MSY reference points are available, including spurdog in the NE Atlantic;

Any new data on life-history parameters for species/stocks assessed by WGEF should be made available before the meeting. Possible unpublished archive data should be considered.

WKSHARK4 will report by 23 February 2018 for the attention of ACOM.

Supporting Information

Scientific justification	WGEF considers that it is important to carefully evaluate the use of Length-Based Indicators (LBI) and Reference Points (RP) for elasmobranchs and recommends convening a dedicated workshop to explore the use of LBI and associated RP for elasmobranch assessments. This would build on the work carried out at the 2017 WGEF meeting and will progress the work on estimating MSY proxy reference points.
Resource requirements	Limited support will be required from the ICES Secretariat
Participants	
Secretariat facilities	
Financial	No financial implications.
Linkages to other committees or groups	This workshop is relevant to: WGEF, WKLIFE, WGBIOP.
Linkages to advisory committees	

WKNPout – Workshop for management strategy evaluation for Norway Pout

2018/2/ACOM38 **The Workshop for management strategy evaluation for Norway Pout** (WKNPout), chaired by Andrés Uriarte*, Spain, will meet at the ICES Headquarter 26–28 February 2018 to:

- a) Address the European Union and Norway joint request to ICES to advise on the management of Norway Pout in ICES Subarea 4 (North Sea) and ICES Division 3.a (Skagerrak-Kattegat). The proposed management strategy is based on the ICES escapement strategy for Norway pout with the aim of achieving a high probability of having the minimum SSB required to produce MSY (B_{lim}) surviving to the following year; ICES is requested to evaluate:
 - i) Whether a management strategy is precautionary if the TAC is constrained with a lower bound in the range of 20 000 tonnes to 40 000 tonnes and an upper bound in the range of 150 000 tonnes to 250 000 tonnes, or another range suggested by ICES.
 - ii) Whether such a strategy would be precautionary if the TAC constraints referred to in ToR a.1 are overridden by a constraint on the maximum value of fishing mortality (F_{cap}), and whether the application of the F_{cap} would allow a precautionary strategy with a higher minimum TAC than if the F_{cap} was not applied.
 - iii) Whether a provision to override the minimum value of the TAC when the stock is forecast to be below some threshold value would allow a precautionary strategy with a higher minimum TAC than if the escape-clause was not included, and whether such a provision would provide any additional benefit to the inclusion of an F_{cap} as referred to in paragraph 2.
- b) Update reference points for the stock in light of the MSE results:

WKNPout will report by 2 April 2018 for the attention of the WGNSSK meeting, 24 April – 3 May 2018, and to ACOM.

Supporting Information

Scientific justification	This workshop is to answer the request received the 5 May 2017 from the European Union and Norway (see TOR a).
Resource requirements	Limited support will be required from the ICES Secretariat
Participants	The Group is expected to be attended by some 5-10 members.
Secretariat facilities	None, apart from WebEx provision and SharePoint site
Financial	No financial implications.
Linkages to other committees or groups	WGNSSK, meeting 24 April – 3 May 2018, is expected to review the findings and report from MSENOP
Linkages to advisory committees	Advice Drafting Group and release of advice in May 2018

WKECOFRAME2 – Second workshop to scope the ICES framework for ecosystem advice

2017/2/ACOM39 The **Second workshop to scope the ICES framework for ecosystem advice** (WKECOFRAME2), chaired by Lisette Enserink (The Netherlands) and Carl O'Brien (UK) will meet in Copenhagen, Denmark, 22–24 May 2018 to:

- a) analyse ICES' role and position in ecosystem advice, based on e.g. the WKECOFRAME report, and including interaction with clients and current and potential scope of the advice.
- b) catalogue the drivers for experts to participate in ICES' ecosystem science and advisory processes; together with identifying a process for prioritising requests, workplans and the identification of resources.
- c) Based upon the outcomes of ToR a) and b), propose the scope in terms of participants, organisation, terms of reference and agenda of an ICES-led dialogue meeting (to be held in late 2018 or early 2019) to explore the needs and principles for ecosystem advice and ICES' role in providing such advice.
- d) prepare an example of a Framework that might be used for a specific item of advice.

WGECOFAME2 will report by 7 September 2018 for the attention of the Advisory Committee.

Supporting information

Priority	ACOM priority
Scientific justification	Term of Reference a) The delivery of ToR c) will necessitate an in-depth analysis of ICES' role and position in ecosystem advice and how this is regarded by ICES' clients. Elements are:

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- a. Who are the clients? Current clients are OSPAR, HELCOM, EC/DG Environment, NASCO, NEAFC and national governments. What are the roles of the Secretariats of client organisations? Member countries of ICES and 'client' member countries (OSPAR, HELCOM, EC, NASCO, NEAFC), may also be invited to increase the number of requests for ICES advice. Which countries have asked for ecosystem advice (current and past) and which national ministries and institutes were involved? Can any additional clients be foreseen?
 - b. Interaction with clients: current interaction, lessons learned from MIACO and MIRIA and how might clients best interact with ICES? Current practice will need to be documented and questioned in terms of its utility and future relevance to ICES' mission.
 - c. Scope of the advice: ad hoc and recurring requests for advice and technical services have been explored in the WKECOFRAME report, as well as main research needs in OSPAR, HELCOM and MSFD. From an ICES perspective we need to understand how potential demands for ecosystem advice will influence the focus of our science and how SCICOM can best facilitate uptake of this science into the advice process. Which areas of advice would match ICES' expertise and what are ICES' unique selling points? At the moment much of ICES' advice is reactionary and short-term in nature but should a medium- to long-term strategic perspective be considered? Increasingly, ecosystem science and evidence is being conducted within funded projects; e.g. Norwegian project MAREANO, outside of the auspices of ICES – is there a role for ICES in reviewing and synthesising such activities through the ACOM process if ecosystem advice is to be provided that is both pertinent and timely? Is ICES satisfying the needs of its end-users; and if not, are there novel ways of working within the ICES system?

Term of reference b)

From the perspective of the scientists: Why are fisheries scientists engaged in the fishery advisory process but "ecosystem" scientists less engaged in the ICES non-fishery advisory process? Why do individual scientists from national laboratories have a greater engagement with ICES' clients, when these same clients request advice from ICES? Is there a perceived difference to the advice provided?

From the perspective of the national ministries responsible for environmental policies: Member countries provide experts for both ICES groups and other international organisations (eg. OSPAR, HELCOM, EU MSFD) groups, so they need to make judgements on the most effective way to spend their capacity/money. How are these judgements being made and to what extent is participation in ICES groups seen as an effective way to make progress in the area of ecosystem policy?

Term of Reference c)

ACOM consultations concluded that there should be a dialogue meeting on the whole ecosystem advisory process with an operational outcome. WKECOFRAME2 should be the prime organisers of this meeting together with the ICES Secretariat and ACOM leadership, but noting that Resolutions on dialogue meetings are adopted by Bureau and Council, thus there is a need to get the support from these bodies.

Term of reference d)

At present the concept of advice frameworks may be difficult for clients and others to understand. A draft Framework might enable the concept to be

	better understood and enable clients to better help ICES to provide the most appropriate advice. [example areas might be for the HAZ advice delivered in 2017 or for any piece of advice related to MSFD]
Resource requirements	None
Participants	As with all workshops, this will be open to all.
Secretariat facilities	Secretariat support and meeting room
Financial	None
Linkages to advisory committees	Direct link to ACOM, and to relevant Steering Groups of SCICOM
Linkages to other committees or groups	Links to CSIMSFD-EA and SCICOM.
Linkages to other organizations	Links to RSCs and EC

WKTEEL – The Workshop on Tools for Eel

2017/2/ACOM40 The **Workshop on Tools for Eel** (WKTEEL), chaired by Laurent Beaulaton, France, will be established and will meet in Rennes, France, 2–6 July 2018 to:

- a) Further develop the WGEEL database structure to integrate the information from the 2018 Data call;
- b) Develop an efficient method to integrate the information from the 2018 Data call into the database to (i) check for duplicate entries and return files to the WGEEL to select the appropriate values, and (ii) adapt scripts to quality check the data before their insertion in the database;
- c) Design batches of tools, figures, maps and tables to (i) upload files to run the checks for database integration (a user friendly interface), (ii) show, analyse and extract information from the database to provide the results, tables and figures needed by the WGEEL, and (iii) verify that the information inserted into the database is in accordance with the Data call files from 2017 (and thereafter);
- d) Implement the above tools, figures and maps.

WKTEEL will report by 31st August for the attention of the Advisory Committee.

Supporting information

Priority	<ol style="list-style-type: none"> 1. The EU Regulation (EC 1100/2007) and associated Guidance 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 WGEEL continues to provide EIFAAC, ICES and the GFCM countries with scientific support in implementing and improving such actions. 2. The EU has requested annually recurring scientific advice on the European eel because the EU "has adopted or may adopt rules for the protection of anadromous and catadromous species (such as eels or salmon), including for the non-marine part of their life cycle", as described in the 2017 AA between the EU and ICES. Specifically for eel, the advice is sought in support of the Eel Regulation (EC 1100/2007). 3. WKEELDATA (2017) and WGEEL have implemented a Data call system for formalizing and standardizing the data provision to support WGEEL work. The workshop will now develop procedures to automate checking these submission for errors, and automate their analysis and reporting for the WGEEL core activity of reporting on the state of the stock and impacts. These procedures will make the WGEEL activities much more efficient and facilitate quality assurance. Consequently, these activities are considered to have a very high priority.
Scientific justification	<p>Term of Reference a)</p> <p>The WGEEL is developing a database to integrate data reported by EU and non-EU countries in support of WGEEL recurring duties to report updates on the state of the stock. At the same time, the WGEEL is implementing a Data call process to formalize and standardize reporting. The 2018 Data call was developed during the WGEEL 2017 meeting but the database needs to be further developed to be made ready for these new data. WGEEL acknowledges that eventually the aim is to integrate these data and quality control checks into the Regional DataBase and Estimation System (RDBES)', as and when this is possible.</p> <p>Term of Reference b)</p> <p>The WGEEL wishes to implement automatic checking procedures to ensure the correct data are uploaded and analysed. In particular, historic data sometimes gets revised because of new analyses and it is essential to actions these revisions in the database. The work will develop autmoated scripts for this.</p> <p>Term of Reference c)</p> <p>When complete, the eel database can be used to automate the generation of the annual update on the state of the eel stock, e.g. geenrating tables, figures and associated text for landings, recruitment biomass and mortality estimates. This workshop will develop the processes to achieve these.</p> <p>Term of Reference b)</p>

	The workshop will test all these developments so that they are finalise ahead of the WGEEL 2018 meeting.
Resource requirements	This work will require access to the ICES SharePoint.
Participants	The workshop will be open to members of the EIFAAC/ICES/GFCM WGEEL, national eel experts and data providers, and invited specialists. The workshop will liaise with the ICES Data Experts.
Secretariat facilities	Support to provide access to the SharePoint and formatting the report.
Financial	No financial implications as members will attend at their own expense
Linkages to advisory committees	This links to ACOM because the WGEEL description of the stock is a recurring ToR set by ACOM, and this workshop will make the process more efficient and better quality assured.
Linkages to other committees or groups	This work links closely to WGDIAD.
Linkages to other organizations	The work of this group is to support the ICES Scientific Advice which used by EU DG MARE and DG ENV, the CITES Secretariat, FAO EIFAAC, GFCM.

WKDCVMS- Workshop for VMS + Logbook Data compilation

2017/2/ACOM41 **The Workshop for VMS + Logbook Data compilation (WKDCVMS)**, chaired by and Colin Millar (Denmark) will meet 15-16 March 2018 in Copenhagen, Denmark to:

- a) Provide guidelines and template for VMS + logbook data submission.
- b) Guide users to extract VMS + logbook data in accordance with requirement of the ICES VMS + logbook data call. For example 1) guidelines for installing the software necessary for data manipulation and aggregation into the requested format. (Participants will be supported in running their data through the scripts developed with the ICES working group WGSFD and available online at https://github.com/ices-eg/wg_WGSFD/blob/master/VMS-datacall/VMSdatacall_2017_proposedWorkflow.r) and 2) guidelines for the work flow: convert data into the tables requested by the data call in annex 1 and 2.
- c) Provide quality control guidelines
Once the aggregated VMS files have been produced, the participants will be shown how to run a QC (quality control) report, developed with the WGSFD, on their country specific data. This QC report is what will be used by ICES to quality check the submission prior to accepting the data.

WKDCVMS will report by 13th April 2018 to the attention of WGSFD and ACOM.

Supporting Information

Priority	High, in response to a special request from a number of clients (NEAFC/EC).
Scientific justification	ICES advises on the environmental impacts of fishing and the use of space in the North East Atlantic and Baltic Sea. VMS from vessels, coupled with log book data, is currently the most practical and cost-effective way to describe the spatial dynamics of fishing activities. National data specialists are encouraged to consider attending ICES's

workshop on the data compilation for VMS data.

ICES will use submitted VMS/Log book data to address the development of ICES advice addressing EC, NEAFC requests to describe fisheries activities and to evaluate the spatial and temporal effects of fishing, for example to describe fisheries activities in and in the vicinity of sensitive habitats (i.e. Vulnerable Marine Ecosystems, VMEs) It will also be used to map the aggregated distribution of fishing by different gear types.

Specifically, ICES has a standing request from the European Commission to advise and inform on the impacts of fisheries on the marine environment. Currently it provides advice on the impact of fishing on birds and mammals. It is required to expand this advice to the impact on benthic habitats. The DCF makes it a requirement to report on spatial fishing activities in relation to habitat (indicators 5, 6 and 7 of Annex XIII to Commission Decision (2010/93/EU)) and ICES is requested by the Commission to provide these indicators. ICES is thus mandated to request VMS and logbook information to provide this advice. This mandate is supported by international agreements and the current EU data collection framework (DCF).

Data for VMS combined with log books should be submitted in the exchange format described in (ref). In addition, all vessel categories and fishing activity should be submitted.

The aim of the Workshop for VMS Data compilation (WKDCVMS) is to assist countries who experience substantial difficulties submitting VMS data or who have not submitted VMS data before.

Resource requirements	Some support will be required from the ICES Secretariat
Participants	Workshop with researchers and RSCs. Special priority will be given to representatives of countries that experience substantial difficulties submitting VMS data or submit VMS data for the first time. 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 WGDEC and WGSFD
Linkages to other organizations	Links to RSCs and EC.

WKDIVAGG – Workshop on MSFD biodiversity of species D1 aggregation

2017/2/ACOM42 The **Workshop on MSFD biodiversity of species D1 aggregation** (WKDIVAGG), chaired by Anna Rindorf, Denmark, will be established and meet in ICES HQ, Copenhagen, Denmark, on 1–4 May 2018 to:

- a) explore and provide guidance on a suitable method to integrate D1 criteria to derive the status for each species (for species other than those listed under the Habitats Directive, and those assessed under D3),

- b) explore and provide guidance on a suitable method to derive the overall status of each species group, based on integrating the status assessments of all the species assessed within the group.
- c) explore and provide guidance on the overall presentation of the extent to which GES has been achieved for higher groups (“ecosystem component”: birds, mammals, reptiles, fish and cephalopods).
- d) test the approaches/methods proposed by using the results of current Regional Sea Convention assessments (i.e. HOLAS II and OSPAR intermediate assessment).

Notes:

For ToR a) ICES was also requested to explore the method used for Habitats Directive or commercial species, so as to minimise the range of methods followed. ICES should also advise whether there is justification to adopt a different method for a specific region or subregion.

For ToR b) The number of methods recommended for use across the 16 species groups should be minimised, taking into account the likely number of species assessed per group and region or subregion.

For ToR c) bearing in mind the GES Decision requirement to conclude on overall status only at species group level, and the draft Article 8 guidance which shows a further level of aggregation from species group to the “ecosystem component” level of birds, mammals, reptiles, fish and cephalopods.

For ToR d) taking account that further indicators may be necessary.

WKDIVAGG will report by 25 May 2018 for the attention of ACOM.

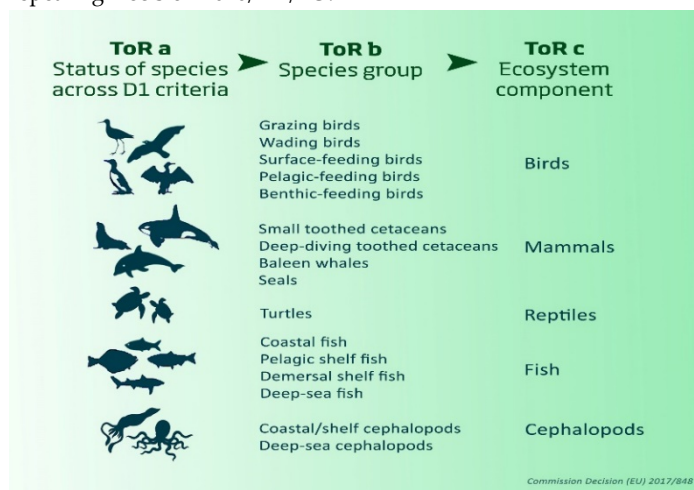
Supporting information

Priority	High. This workshop and its sister WKDIVEXTINCT are required to help address a request from the European Commission DGENV to provide guidance to the MSFD Common Implementation Strategy (CIS) being implemented by the EU’s Working Group on Good Environmental Status (WGGES).
Scientific justification	<p>DGENV made the following request to ICES:</p> <p>Guidance on an appropriate method(s):</p> <ul style="list-style-type: none"> a) to integrate across criteria for each species of bird, fish and cephalopod (excepting commercial species and species on Habitats Directive annexes). b) to aggregate species within species groups for an overall assessment of status per species group for MSFD Descriptor 1. c) to aggregate from species group to the level of birds, mammals, reptiles, fish and cephalopods for an overall presentation of the extent to which GES has been achieved for these higher groups. <p>The revised Commission Decision on criteria and methodological standards for Good Environmental Status ((EU) 2017/848) has clarified that the assessment process for birds, mammals, turtles, fish and cephalopods under biodiversity descriptor 1 of MSFD should be based on integration of the criteria used in order to derive a status assessment for each species, followed by an overall status assessment per species group. The status per species is to follow the Habitats Directive integration method (for Habitats Directive-listed species of mammal, turtle and fish) and the Descriptor 3 method for commercial fish and cephalopod species.</p>

For other species a suitable method is to be agreed at EU level, taking into account regional or subregional specificities. ICES is requested to re-evaluate the previous ICES guidance² in light of the requirements of the new Decision.

Reference: [Commission Decision \(EU\) 2017/848 of 17 May 2017](#)

laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU.



Resource requirements	Supported by a request from European Commission DG ENV. Support from EU MSFD CIS member countries and stakeholders and ICES member countries. Input also expected of staff from Regional Sea Conventions.
Participants	The participant researchers will come from both the ICES and the EU MSFD CIS networks.
Secretariat facilities	Requiring standard ICES secretariat and logistical support, including meeting room and IT.
Financial	No financial implications as supported by request from EU DG ENV. ICES work order 2002-37.
Linkages to advisory committees	This request was made directly to the advisory committee.
Linkages to other committees or groups	Links to WGECO and to WGBIODIV.
Linkages to other organizations	Links to all Regional Sea Conventions, EU DG ENV, and MSFD CIS countries and stakeholders.

WKDIVEXTINCT – Workshop on extinction risk of MSFD biodiversity approach

2017/2/ACOM43 The **Workshop on extinction risk of MSFD biodiversity approach** (WKDIVEXTINCT), chaired by Dave Reid, Ireland, will be established and will meet in ICES HQ, Copenhagen, Denmark, on 12–15 June 2018 to:

- consider if the methods recommended by WKDIVAGG on integration of the status of each species, followed by integration of species to provide status of

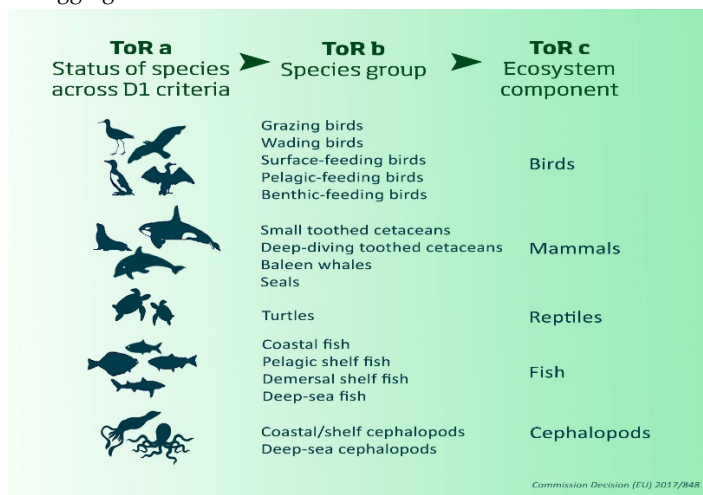
species group, could lead to the failure to alert of a potential extinction risk to a species.

- b) if required, suggest adaptations or additional rules to alert the risk of extinction of a species within a species group.

WKDIVEXTINCT will report by 20 June 2018 for the attention of ACOM.

Supporting information

Priority	High. This workshop and its sister WKDIVAGG are required to help address a request from the European Commission DGENV to provide guidance to the MSFD Central Implementation Strategy (CIS) in support of WGGES.
Scientific justification	<p>DGENV made the following request to ICES: Guidance on an appropriate method(s):</p> <ul style="list-style-type: none"> a) to integrate across criteria for each species of bird, fish and cephalopod (excepting commercial species and species on Habitats Directive annexes). b) to aggregate species within species groups for an overall assessment of status per species group for MSFD Descriptor 1. c) to aggregate from species group to the level of birds, mammals, reptiles, fish and cephalopods for an overall presentation of the extent to which GES has been achieved for these higher groups. <p>The risk of these suggested methods of failing to assess population trends of sensitive, threatened or vulnerable species needs to be evaluated. What is the possibility that overall MSFD D1 species assessments will fail to flag deleterious declines in species at risk? For example, if the threshold value for GES is set at 75% of species within the group, but there is significant risk of extinction of other species within the group, how should this affect the application of the aggregation rules?</p>



ICES is requested to re-evaluate the previous ICES guidance³ in light of the requirements of the new Decision.

	Reference: Commission Decision (EU) 2017/848 of 17 May 2017 laying down criteria and methodological standards on good environmental status of marine waters and specifications and standardised methods for monitoring and assessment, and repealing Decision 2010/477/EU.
Resource requirements	Supported by a request from European Commission DGENV. Support from EU MSFD CIS member countries and stakeholders and ICES member countries. Input also expected of staff from Regional Sea Conventions.
Participants	The participant researchers will come from both the ICES and the EU MSFD CIS networks.
Secretariat facilities	Requiring standard ICES secretariat and logistical support, including meeting room and IT.
Financial	No financial implications as supported by request from EU DGENV. ICES work order 2002-37.
Linkages to advisory committees	This request was made directly to the advisory committee.
Linkages to other committees or groups	Links to WGECO, WGBIODIV, WGMIXFISH.
Linkages to other organizations	Links to all Regional Sea Conventions, EU DGENV, and MSFD CIS countries and stakeholders.

WKRDB-MODEL – Workshop on new data model for the Regional Database

2017/2/ACOM44 The **Workshop on new data model for the Regional Database (WKRDB-MODEL)**, chaired by Henrik Kjems-Nielsen, Denmark, will be established and will meet in ICES HQ, Copenhagen, 15–18 January 2018 to:

- a) Make sample data examples and fill-in the data in the tables;
- b) Specify all known normal hierarchies (Check that most cases can fit in to the data model, a few case studies);
- c) Mark tables and fields used for the scenario/hierarchy/strata;
- d) Identify key fields and clean fields in multiple tables;
- e) Identify mandatory and optional field;
- f) Create code lists for new codes (Use existing where possible);
- g) Ask countries for feedback of the data model.

WKRDB-MODEL will report by 2nd February 2018 for the attention of the ACOM.

Supporting information

Priority	The activities of this group will promote the development of a Regional DataBase and Estimation System, RDBES. This workshop will specify the data model for the RDBES. The RDBES when it is implemented will work as database for the Regional Coordination Group, RCG; Baltic Sea, North Sea & Eastern Arctic and North Atlantic and potentially more RCGs. The RDBES will also work as database and estimation system for the countries and ICES for the 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.
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Scientific justification	The catch, effort and sample data collected for fisheries advice is used by the RCG to coordinate sampling. The same data need to be raised/estimated to be used for fisheries advice. These estimations are time consuming and with a risk of introducing error. WGCATCH, WKMERGE, WKPICS, SGPIDS, the fishPi project and WKRDB have been working towards using statistical sound estimation methods for raising/estimating data. It is important to develop a database and estimation system, which can estimate data using approved statistical sound methods in a transparent way. At the same time the data will be quality controlled, documented to a more detailed level than to day in InterCatch. The RDBES will when it is implemented replace the existing Regional DataBase, RDB, and InterCatch.
Resource requirements	All the 10 members of the RDBES Development Support Group would be requested to participate, but not all can participate. The work will be completed with the resources available.
Participants	The group is normally attended by some 6-8 members.
Secretariat facilities	Meeting room.
Financial	No financial implications.
Linkages to advisory committees	There are no direct linkages with the advisory committees, but there is a link to WGCATCH and PGDATA and most of the stock assessment Working 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 fishPi 2 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.

WKRDB-SPEC – Workshop on new specification for the Regional Database

2017/2/ACOM45 The Workshop on new specification for the Regional Database (WKRDB-SPEC), chaired by Henrik Kjems-Nielsen, Denmark, will be established and will meet in ICES HQ, Copenhagen, 3–6 April 2018 to:

- a) Go through the comments from countries regarding the data model.
- b) Finalise the data model (strata, key definitions and sampling design issues (clustering), mandatory fields, descriptions)
- c) Overwriting rules specific
- d) Specify data quality checks (including checks, which ensure the data needed for the estimation is present);
- e) Specify user roles;
- f) Test simple design based estimations on each hierarchy;
- g) Back conversion to the existing RDB format

WKRDB-SPEC will report by 20th April 2018 for the attention of the ACOM. This report will be used as specifications for the development of the RDBES.

Supporting information

Priority	The activities of this group will promote the development of a Regional DataBase and Estimation System, RDBES. This workshop will specify the specifications of the RDBES. The RDBES when it is implemented work as database for the Regional Coordination Group, RCG; Baltic Sea, North Sea & Eastern Arctic and North Atlantic and potentially more RCGs. The RDBES will also work as database and estimation system for the countries and ICES for the 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 catch, effort and sample data collected for fisheries advice is used by the RCG to coordinate sampling. The same data need to be raised/estimated to be used for fisheries advice. These estimations are time consuming and with a risk of introducing error. WGCATCH, WKMERGE, WKPICS, SGPIDS, the fishPi project and WKRDB have been working towards using statistical sound estimation methods for raising/estimating data. It is important to develop a database and estimation system, which can estimate data using approved statistical sound methods in a transparent way. At the same time the data will be quality controlled, documented to a more detailed level than to day in InterCatch. It is therefore important to have the specification of the RDBES written and finalised. The RDBES will when it is implemented replace the existing Regional DataBase, RDB, and InterCatch
Resource requirements	All the 10 members of the RDBES Development Support Group would be requested to participate, but not all can participate. The work will be completed with the resources available.
Participants	The group is normally attended by some 6-8 members.
Secretariat facilities	Meeting room.
Financial	No financial implications.
Linkages to advisory committees	There are no direct linkages with the advisory committees, but there is a link to WGCATCH and PGDATA and most of the stock assessment Working 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 fishPi 2 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.

WKSTOCKADE – Workshop on standardized data formats for input to assessment models

2017/2/ACOM46 The **Workshop on standardized data formats for input to assessment models** (WKSTOCKADE), chaired by James Thorson, USA, and Anders Nielsen, Denmark, will be established and will meet in ICES-HQ, late September 2018 (tbc) to:

- a) Establish a GitHub site for data standard specification, to organize the work and maintain a history of changes.
- b) Review data format requirements of commonly used assessment models and existing methods to distribute, reposit, and document aggregated data. For example, FLR, Lowestoft formats, NOAA Species Information System (SIS), and the RAM Legacy database structure.
- c) Classify the different data formats into groups, to identify which can be combined and which will not be included.

- d) Develop a standard data format for each category of data, consisting of a minimal and sufficient set of data objects. Each data format will be a defined data structure, along with documentation and meta-data, that can be used to reposit and distribute input data fitted by common assessment model types worldwide. The first version could be similar to some existing data standard, which can then be extended by adding new data objects, as needed to encompass a wide range of different assessment models.
- e) Use one or more case study to verify that this data format can be used to cross-test common assessment model types, e.g., SAM, XSAM, Stock Synthesis.

WKSTOCKADE will report by DATE for the attention of the ACOM.

Supporting information

Priority	The activities of this group will generate common formats for sharing data to be used in different stock assessment models. It will facilitate regular cross-testing of stock assessments throughout ICES. It therefore has high priority.
Scientific justification	<p>Term of Reference a)</p> <p>A central repository will make it clear for scientists where to find the most current data standard specification and documentation. The site can also link to existing and upcoming data conversion tools.</p> <p>Terms of Reference b–d)</p> <p>Stock assessment research has highlighted the need to characterize not just “parametric uncertainty” (i.e., uncertainty about parameters based on given data set) but also “structural uncertainty” (i.e., uncertainty about the choice of parametric models used to approximate population dynamics). This structural uncertainty is estimable by comparing output from multiple models with different structural assumptions, and is therefore easiest to estimate when fitting multiple stock assessment software packages. Developing common data formats is necessary for this task, and this would likely improve the scientific credibility of benchmark assessments.</p> <p>Term of Reference e)</p> <p>ICES has periodically conducted a cross-test of commonly used stock assessment models, including one using the simulated data generated by the US National Research Council (1996), and the recent ICES Strategic Initiative on Stock Assessment Methods (SISAM, https://academic.oup.com/icesjms/article/72/1/19/815567/Simulation-testing-the-robustness-of-stock). These efforts are hampered by difficulties of obtaining data with suitable format for inclusion in different model types. These efforts could potentially be automated and conducted routinely if suitably-formatted data were available as part of a public and fully-documented database.</p>
Resource requirements	The research programmes which provide the main input to this group are already underway, and resources are already committed. The additional resource required to undertake additional activities in the framework of this group is negligible.
Participants	The workshop is expected to be attended by 15–20 members and guests.
Secretariat facilities	None.
Financial	No financial implications.

Linkages to advisory committees	Linked to ACOM. Improvements on the stock assessment process. The WK will provide the stock assessment working groups with important products to do their work more efficiently, and improve robustness of results by allowing cross model comparisons and inclusion of structural uncertainty.
Linkages to other committees or groups	<p>WKSTOCKADE will have direct relevance to all EGs running stock assessment models (e.g. WGNSSK, AFWG, WGWIDE).</p> <p>This workshop will conform to the Dec 2016 ICES Data Policy, given that data objects defined here will be classified as “aggregated data” in that policy. This workshop will advance Goal #4 (“Promote the advancement of data and information services for science and advice needs”) in the ICES Strategic Plan. This workshop is closely aligned with the goals of the Data and Information Group (DIG) of the Scientific Committee (SCICOM). The project also will “promote the use of regional databases”, which is listed as a goal for the ICES Advisory Committee (ACOM) (see ICES 2014 strategic plan, pg. 32).</p> <p>This workshop will also relate to the existing ICES Transparent Assessment Framework (TAF, http://taf.ices.dk), specifically by providing a recommended structure for exporting data objects that can be used both (1) in model cross-tests of assessments in TAF and (2) to import data from other assessments into TAF.</p>
Linkages to other organizations	<p>The work of this group is similar to existing efforts by the RAM Legacy database. However, the RAM database has generally repositied outputs from stock assessment models, not the input data that would be formatted using guidelines developed by this group. We therefore see that this work group could provide guidance that could then be followed in the RAM database for regions not covered by ICES.</p> <p>This working group also relates to existing efforts to standardize stock assessment practices, e.g., the stock assessment archive maintained by Anders Nielsen (http://stockassessment.org) and the FLR Initiative (http://flr-project.org).</p>

WKNSSHREF – Workshop on the determination of reference points for Norwegian Spring Spawning Herring

2018/2/ACOM47 **The Workshop on the determination of reference points for Norwegian Spring Spawning Herring (WKNSSHREF)**, chaired by Katja Enberg*, Norway, and attended by two invited, external experts Massimiliano Cardinale, Sweden, and Jason Cope, US, will be established and will meet at ICES, Copenhagen 10–11 April 2018 to:

- c) Address the request from Iceland on behalf of the Coastal States for a re-evaluation of the reference points for the Norwegian Spring Spawning Herring (her.27.1-24a514a):
- iv) Apply ICES reference point guidelines to determine precautionary and MSY reference points for the stock

WKNSSH will report by 18 April 2018 for the attention of the ACOM.

Supporting Information

Scientific justification	This workshop is to answer the request received the 21 December 2017 from Iceland on behalf of the Coastal States (see ToR a).
Resource	

requirements	
Participants	Experts from WGWIDE and stock assessment experts will be required for the work.
Secretariat facilities	Meeting rooms and Webex hosting.
Financial	Requested budget outlined in the Special Request Form.
Linkages to other committees or groups	WGWIDE
Linkages to advisory committees	Advice Drafting Group (April 18, by Webex) and release of advice on 26 April 2018.

WKFORBIAS– Workshop on catch forecasts from biased assessments

2018/2/ACOM48 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 30 October – 1 November 2018 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 November 20, 2018 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	<p>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 framework. 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 some other approach should be followed.</p> <p>The workshop 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 literature, 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).</p>
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

WKEMP2018 – Workshop for the review of Eel Management Plan Progress Reports 2018

2018/2/ACOM49 The **Workshop for the Review of Eel Management Plan Progress Reports 2018** (WKEMP2018), chaired by Jean-Jacques Maguire, Canada, will be established and will meet in Copenhagen, Denmark, 17–19 July 2018, back to back with WGEEL in Gdansk 5–12 September 2018 and in October/November 2018 to:

- a) Collate the Eel Management Unit biomass and mortality rates from EU Member State (MS) Eel Management Plan (EMP) Progress Reports as submitted to the European Commission by 30th June 2018;
- b) Review EMP methods and results to confirm whether or not they appropriately reflect the (present and target) status of eel biomass and mortality rates across Europe;
- c) Where there are gaps in results, or estimates are identified as not being appropriate, derive alternative estimates based on a standardized view of eel biomass and mortality;
- d) Deliver an early draft advice and a report containing the full reviews of biomass and mortality rates from EMPs or replacements, and describe the methodology for standardizing the various results to determine overall estimates of biomass and mortality.

WKEMP2018 will report by 30th November 2018 for the attention of the Advisory Committee.

Supporting information

Priority	The EU Regulation (EC 1100/2007) and associated Guidance obliges EU Member States to report on the progress of their Eel Management Plans (EMPs) on a triannual basis. DGMARE has requested an independent external review of the 2018 progress reports.
Scientific justification	The task of providing solid estimates of stock parameters by Eel Management Units (EMUs) that are comparable among regions and can be summed in terms of biomass and mortality, is an important one to develop an overview of the eel stock and exploitation status in Europe. At present, it is believed that there could be considerable differences between national approaches and harmonising these approaches would allow for more effective management.
Resource requirements	This work will require access to the ICES SharePoint, and potential hosting of two meetings.
Participants	The initial workshop will be only a core group of three experts: an independent (non-EU) chair to oversee the whole process and assure objectivity and respect of the outcomes; the WGEEL chair to ensure good linkages to relevant national experts; and an external expert with experience stock assessment. These experts would review data and methods and make new calculations where needed. Progress will be discussed with data providers and stock assessors during WGEEL in Gdansk, Poland, 5–12 September. The final workshop of the core group of experts will complete the reporting.
Secretariat facilities	Support to provide access to the SharePoint and formatting the report.

Financial	A budget has been agreed with DGMARE, also covering the hiring and travel costs of the three core experts.
Linkages to advisory committees	This links to ACOM because the assessment of the eel stock by WGEEL is a recurring ToR set by ACOM, and this workshop will make the process more efficient and better quality assured.
Linkages to other committees or groups	This work links closely to WGEEL.
Linkages to other organizations	The work of this group is primarily to support EU DGMARE in their evaluation of their EMP progress reports. This work also has links to the ICES Scientific Advice which is used by not only EU DG MARE, but also DG ENV, the CITES Secretariat, FAO EIFAAC, GFCM.

WKREBMSE – Workshop on the evaluation of harvest control rules for *Sebastes mentella* in ICES areas 1 and 2

2018/2/ACOM50 **The Workshop on the evaluation of harvest control rules for *Sebastes mentella* in ICES areas 1 and 2 (WKREBMSE)**, chaired by Daniel Howell*, Norway, and attended by three invited external experts XXX YYY, CCC, and ZZZ AAA, CCC will be established and will meet by correspondence during June-August 2018 to:

- a) Evaluate, according to ICES guidelines, whether the assessment for this stock should be treated as a Category 1 or Category 2 (relative) assessment. Determine appropriate reference points for the stock depending on the category chosen.
- b) Address the request from Norway and Russia for an evaluation of a set of proposed harvest control rules for *Sebastes mentella* in ICES areas 1 and 2 (reb.27.1-2).
- c) Draft advice for the reb.27.1-2 stock (including catch scenarios for those HCR considered precautionary).

WKREBMSE will report by 24 August 2018 for the attention of the ACOM.

Supporting Information

Scientific justification	This workshop is to answer the request received in March 2018 from Norway and Russia.
Resource requirements	
Participants	Experts from AFWG and management strategy evaluation experts will be required for the work.
Secretariat facilities	Host Webex calls
Financial	Requested budget: 39881 DKK
Linkages to other committees or groups	AFWG, WKREDFISH 2018
Linkages to advisory committees	ADGWIDE (September 12-14) and release of advice on 28 September 2018

IBPTurbot – Inter-Benchmark Protocol for turbot in the North Sea 2018

2018/2/ACOM51 The **Inter-Benchmark Protocol for turbot in the North Sea 2018** that will serve as in Inter-Benchmark Protocol, co-chaired by Alexander Kempf*, Germany and José De Oliveira*, UK, and reviewed by correspondence by Owen Hamel, US, and **TBD**, will meet in Ijmuiden, Netherlands (30–31 July 2018) to:

1. Review the outcomes and decisions of IBP Turbot held in 2017 in light of a more appropriate treatment of the commercial LPUE time series in the assessment, and in particular to
 - a. Review whether the decisions, particularly with regard to the final model configuration, are still valid after further improvements
 - b. Review the decision about ICES stock category (currently Category 3)
2. If the stock is upgraded to a Category 1 assessment, define a full set of reference points for the stock following ICES guidelines. Otherwise, review the existing reference point proxies based on SPICT.

IBPTurbot will report by 7 August 2018 for the attention of ACOM.

Supporting information

Priority	The activities of this Group will improve North Sea turbot stock assessment.
Scientific justification	Following the IBP Turbot in 2017, it was discovered that the commercial LPUE index used in the assessment was classified as an SSB index, where it should have been treated as an exploitable biomass index. This led to a strong retrospective pattern in F, and the subsequent categorisation of the stock as Category 3. This inter-benchmark is needed to address the classification of the Commercial LPUE index and to check whether, having more appropriately classified the LPUE index as an exploitable biomass index in the assessment, the decisions made during the IBP, particularly with regard to the final model configuration, are still valid. Furthermore, this inter-benchmark needs to review the decision about the ICES stock categorisation in light of the new results.
Resource requirements	Two external reviewers and work from WG members.
Participants	The Group is expected to be attended by 8-12 members and guests.
Secretariat facilities	None.
Financial	No financial implications.
Linkages to advisory committees	ACOM.
Linkages to other committees or groups	WGNSSK
Linkages to other organizations	None.

WKMixHer – Workshop on mixing of western and Central Baltic herring stocks

2018/2/ACOM52 The Workshop on mixing of western and Central Baltic herring stocks (WKMixHer), co-chaired Valerio Bartolino, Sweden, and Jan Horbowy, Poland), will be established and will meet in Gdynia, Poland, 11-13 September 2018 to:

- a) Review and report on recent research on mixing of western Baltic spring spawning herring (WBSSH) and central Baltic herring (CBH) stocks and potential implications of such mixing for the assessment and management of both stocks
- b) Develop a coordinated plan for collection and analysis of relevant data to quantify mixing of both herring stocks in the western and central Baltic. Consider analysis of genetic data, growth rates, morphometrics and otolith shape analysis, infestation with parasites as natural tags, and other potential discriminants of herring populations.

WKMixHer will report by **15 November** for the attention of the ACOM Committee.

Supporting information

Priority

The findings of the WK will provide preliminary information on the intensity of mixing of herring stocks and whether intensity of mixing requires its consideration in stock assessment and management. If the mixing is substantial, the programme for collection of relevant data to quantify the mixing will be developed.

Scientific justification

Term of Reference a)

Several countries conducted or have recently completed significant studies in this area and the subject would benefit from a review of progress and an evaluation of the results obtained.

Term of Reference b)

Findings of ToR a) will form the basis for identifying data necessary for discrimination of WBSSH and CBH stocks in catches and survey in the Baltic. Collection of relevant data and separation of both stocks in present and historical mixed catches and survey are expected to contribute to the improvement of assessment and management of both herring stocks.

Resource requirements

A few research programmes that may provide some input to this WK have been already completed or are underway. The additional resources required to undertake additional activities in the framework of this WK could be probably financed within National Programmes for Data Collection co-financed by EU.

Participants

It is expected that the WK will be attended by some 10-15 participants.

Secretariat facilities

None.

Financial

No financial implications.

Linkages to advisory committees	Results of the WK may lead to change in methodology of assessments of both herring stocks and change in their management.
Linkages to other committees or groups	There is a very close working relationship with WGBFAS, HAWG and WGBIFS.
Linkages to other organizations	

WKG MSE 2 – Workshop on guidelines for management strategy evaluations

2018/2/ACOM53 **The second Workshop on guidelines for management strategy evaluations** [WKG MSE 2] 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 WKG MSE (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 WKG MSE (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 WKG MSE (2013).
- d) Consider how to best disseminate the guidelines to experts within the ICES community and the need for training courses.

WKG MSE2 will report to ACOM by March 4 2019.

Supporting Information

Priority	<p>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 WKG MSE workshop in January 2013 in which an up-to-date set of guidelines was prepared to serve as reference for MSE in ICES.</p> <p>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:</p> <p>“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.</p> <p>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.</p> <p>Similar initiatives on the science side with model developments, etc. would be considered 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.”</p> <p>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.</p>
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	

WKBALTCOD2 – Benchmark Workshop on Baltic Cod Stocks

2018/2/ACOM:54 A **Benchmark Workshop on Baltic Cod Stocks** (WKBALTCOD), attended by ... invited external expertswill be established and will meet in Copenhagen, Denmark, 15–19 October 2018 for a data evaluation meeting (chaired by ICES Chairs Johan Lövgren, and Joakim Hjelm, Sweden) and in **Copenhagen, Denmark** 4–8 February 2019 for a Benchmark meeting (chaired by External Chair, and ICES Chair Michele Casini, Sweden) to:

- g) 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
- h) 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;
- i) Re-examine and update (if necessary) MSY and PA reference points according to ICES guidelines (see Technical document on reference points);
- j) Prioritize recommendations for future improving of the assessment methodology and data collection;
- k) 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 (<i>Gadus morhua</i>) in subdivisions 22–24, western Baltic stock (western Baltic Sea)	Marie Storr-Paulsen
Cod (<i>Gadus morhua</i>) in subdivisions 24–32, eastern Baltic stock (eastern Baltic Sea)	Margit Eero

The Benchmark Workshop will report by2019 for the attention of ACOM.

WKCONGA- Workshop to evaluate the effect of CONservation measures on Easter Baltic cod

2018/2/ACOM55 The Workshop to evaluate the effect of CONservation measures on Easter Baltic cod (*GAdus morhua*) (WKCONGA), chaired by Margit Eero, Denmark, and Piotr Margonski, Poland will be established and will meet in Copenhagen, 14–15 August 2018 to:

- c) Review and summarize the existing spawning closures to protect cod in the Baltic as a management measure in general.
- d) Define, on the basis of knowledge and logic, the potential biological objectives for each current closure for the Eastern Baltic cod stocks. Evaluate the effectiveness of each closure against those objectives. Consider other potential management measures to reach the same objectives.
- e) Comment on the potential need to expand or modify the current geographical extent of the three designated area closures currently in force from May 1-Oct 31.
- f) Comment on the potential need to expand the closed period applied for 2018 from 1st July to 31st August in SDs 25-26 and to other parts of the EB cod stock distribution area (i.e. SDs 27-32 and SD 24). Investigate if a concentration of fishing effort has occurred on spawning areas and consider if this might have a negative impact on the spawning effectiveness of the Eastern Baltic cod.
- g) Identify future monitoring and research needs to improve the conservation of Eastern Baltic cod and evaluate relevant management measures.

WKCONGA will report by 29 August 2018 for the attention of the ACOM and SCICOM.

IBP- CluB (CLUpea harengus in gulf of Bothnia)

2018/2/ACOM56 **Inter-benchmark process (IBP)** on herring (*Clupea harengus*) in the Gulf of Bothnia (IBPCLUB), chaired by External Chair TBD and ICES Chair Noël Holmgren, Sweden, and attended by the invited external experts Anders Nielsen and Massimiliano Cardinale will be established and meet by correspondence on the 19–21 November 2018 to:

- f) Evaluate the present analytical assessment method of herring with emphasis on:
 - i. Estimate statistical conversion factors between day and night acoustic survey abundance indices
 - ii. Improve assessment model settings:
 - i. Investigate selection pattern assumptions and other configuration parameters;
- g) Update the stock annex as appropriate;
- h) Re-examine and update MSY and PA reference points according to ICES guidelines (see Technical document on reference points);

- i) Prioritize recommendations for future improving of the assessment methodology and data collection.

Stocks	Stock leader
Herring (<i>Clupea harengus</i>) in subdivisions 30 and 31 (Gulf of Bothnia)	Jukka Pönni

The Benchmark Workshop will report by 21 December 2018 for the attention of ACOM.

WKNSSHMSE – Workshop on the determination of reference points for Norwegian Spring Spawning Herring

2018/2/ACOM57 **The Workshop on the management strategy evaluation for Norwegian Spring Spawning Herring (WKNSSHMSE)**, chaired by Eydna ð Homrum, Faroe Islands, and Erling Kåre Stenevik, Norway, will meet on 26-27 August 2018 in Torshavn, Faroe Islands, to work on the response to a request from NEAFC. The work will be to:

- a) Evaluate the proposed harvest control rules (HCRs) for a long-term management strategy for Herring (*Clupea harengus*) in subareas 1, 2, 5 and divisions 4.a and 14.a, Norwegian spring-spawning herring (the Northeast Atlantic and Arctic Ocean), as specified in the request ([here](#)) and
- b) Prepare the first draft of the advice for the special request on NSSH in North East Atlantic.

WKNSSHMSE will report by 04 September 2018 for the attention of the ACOM.

Supporting Information

Scientific justification	This workshop is to answer the request received from NEAFC on behalf of the Coastal States.
Resource requirements	
Participants	Experts from WGWIDE and management strategy evaluation experts will be required for the work.
Secretariat facilities	SharePoint site
Financial	Requested budget: 68787 DKK
Linkages to other committees or groups	WGWIDE
Linkages to advisory committees	Advice Drafting Group for Widely Distributed stocks (ADGWIDE, 12-14 September 2018) and release of advice on 26 April 2018

IBPbass – Inter-Benchmark Protocol on Sea bass in 8.ab

2018/2/ACOM59 An **Inter-Benchmark of Sea Bass in Divisions 8 a and b** (IBPbass), chaired by tbc. and attended by one invited external expert, Niels Hintzen, will be established and work by correspondence to:

- a) 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
Seabass (<i>Dicentrarchus labrax</i>) in Divisions 8a,b (Bay of Biscay North and Central)	Mickael Drogou	Mathieu WOILLEZ

The Inter-Benchmark Workshop will report by 15 September 2018 for the attention of ACOM.

WKBEDPRES1 – Scoping of benthic pressure layers D6C2 – methods to operational data products

2018/2/ACOM59 The **Workshop on scoping for benthic pressure layers D6C2 - from methods to operational data product** (WKBEDPRES1), chaired by Phillip Boulcott, UK (Scotland) will meet in Copenhagen, Denmark, 24 October – 26 October 2018 to:

- a) Scope the main pressure(s) on benthic impact per EU ecoregion. The workshop will evaluate the relative significance of each pressure per ecoregion, the characteristics (e.g. frequency/extent) of these pressure(s), and what human activities the pressure is linked to.
- b) Establish criteria to guide the collecting of pressure data. The workshop will determine criteria to guide collation of pressure data, to ensure the practical use of the data in assessing benthic impact.
- c) Decide on practical steps to collate the required data, while applying data management best practices (pressure data will be sourced and data flows mapped). The practical steps include identifying what steps need to be taken and by whom to ensure identified data is collated by June 2019 (data calls, working groups, projects, organizations).
- d) Suggest appropriate assessment units by broad benthic habitat types to assess spatial extent and distribution of physical disturbance. With the support of Commission Decision 2017/848/EU Table 2 and EUNIS habitat classification the workshop will suggest how to aggregate from habitat to overall spatial extent and distribution of physical disturbance. Specific characteristics of all European ecoregions should be considered.

Prior to the workshop, the Chair, together with two ACOM approved invited attendees (tbc) will prepare material to address the TORs. This group will also ensure the completion of the workshop report.

WKBEDPRES1 will report to the attention of ACOM by 12 November 2018.

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.
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Scientific justification	<p>This workshop focuses on the requirement of D6C2 to assess the spatial extent and distribution of physical disturbance pressures on the seabed (including the intertidal area) for each MSFD broad habitat type within each ecoregion and subdivisions within. Physical disturbance by all relevant human activities should be considered (e.g. physical restructuring of the coast and seabed including dredging and depositing of materials, placement of infrastructure, extraction of minerals including gravel and sand, and use of bottom-contacting fishing gear). Central to this is to identify methods to express 1) the intensity of the pressure in a way appropriate to derive the cumulative of all disturbance pressures, and, to express 2) the intensity of the pressure in a way appropriate to assess adverse effects under D6C3 and D6C5, both for the single pressure and the cumulative of all pressures. In doing this, recovery time will also be considered.</p>
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The workshop will prepare a guidance document to illustrate for each pressure the data flow from "owner" to product. General guidelines will be required that define how 1) pressure data should be (re)processed and how 2) the pressure data should be interpolated and/or extrapolated when data is missing.

The following supporting material is provided to guide the interpretation of TORs a-d:

a) What are the main pressure(s) causing benthic impact per EU ecoregion? This TOR will ensure the scoping of pressures most relevant to impact the seabed. For each EU ecoregion the top pressures impacting the seabed should be identified, with relative significance weighted in percentage. In addition, for each pressure a description estimating the frequency of activity, area of the seabed affected along with other relevant parameters (e.g temporal frequency, intensity, acute, chronic, spatial extent, direct or indirect effect, homogenising effect or heterogenizing effect) should be provided. Combined, such an approach will allow a comparison of ecoregions. When evaluating pressures, consideration will also be given to which habitat-pressure impacts are most important (and how this should be accounted for when aggregating results). For each pressure a description of the link to the main drivers and/or sectors-activities will be included (i.e. manageable human activity).

b) What criteria should be applied when collecting these pressure data? The workshop should agree upon criteria for drafting a guidance document for the collection of pressure data (see TOR C). The criteria can include the following:

- Grain and resolution (c-square) of data.
 - Issues related to data security / data policy
 - Encompass the main activities contributing to disturbance pressures on the seabed (including dredging and depositing of
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- materials, extraction of minerals, and use of bottom-contacting fishing gear per metier);
 - Be applicable to all EU waters (noting subregional variations where necessary due, for example, to data availability);
 - Be suitable for assessment of the pressure over a 6-year MSFD reporting;
 - Express the intensity of the pressure in a way appropriate to derive the cumulative of all disturbance pressures on the seabed;
 - Express the intensity of the pressure in a way appropriate to assess adverse effects under D6C3 and D6C5, both for the single pressure and the cumulative of all pressures;
 - Be sufficiently operational that a demonstration product can be made in Workshop 2, 2019, with available data.

c) What practical steps are needed to collect data? Using agreed criteria (see TOR B), a draft guidance document for the collation of pressure data will be produced to ensure best practice and correct standardization when assessing spatial extent and distribution of pressure and habitat data. The document will take into account work done in Regional Sea Conventions (e.g. HELCOM's SPICE), RMFOs and available data (e.g. habitat data in EMODnet). The document, for each pressure and each ecoregion, will include:

- data sources, data flow and data management best practices
- definitions of how pressure data should be (re)processed, interpolated/extrapolated when data is missing
- practical steps/tasks to collect data by June 2019 (data calls, working groups, projects, organizations)

d) What are the relevant assessment units and broad benthic habitat types to be used? This TOR will determine what broad benthic habitat types should be used as assessment units for each ecoregion using the Commission Decision 2017/848/EU Table 2 and EUNIS habitat classification. The TOR should include suggestions as to how to aggregate up from individual habitats to the overall spatial extent and distribution of physical disturbance. Ecoregions specific characteristics should be considered.

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, WGMP CZM, WGMHM, WGECON, CSGMSFD and SCICOM.
Linkages to other organizations	Links to OSPAR, HELCOM, Barcelona Convention, Bucharest Convention
