

**MINUTES OF THE MEETING OF THE ICES
ADVISORY COMMITTEE (ACOM),
COPENHAGEN, DENMARK, 5-8 MARCH 2019**

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

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

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Welcome

The meeting was opened by the ACOM Chair Mark Dickey-Collas who gave a warm welcome to all participants (Annex 1). The meeting was attended by 19 member countries and Greenland, the ACOM Leadership, the SCICOM Chair, Chairs of the Ecosystem Observation Steering Group and the Fisheries Resources Steering Group and representatives from the ICES Secretariat.

A special welcome was given to Linas Lozys, Lithuanian ACOM member, Patrick Lynch, FRSG Chair, Ewen D. Bell, UK ACOM alternate, Alexander Kempf, German ACOM alternate and Bjarte Bogstad, Norwegian ACOM alternate, who all were attending their first ACOM meeting.

The Chair raised the ICES code of conduct with the members of ACOM. All members were asked if they would identify and disclose an actual, potential or perceived Conflict of Interest as described in the code of conduct. After reflection, none of the members identified a conflict of interest that challenged the scientific independence, integrity, and impartiality of ICES.

1 Adoption of agenda

The agenda (Annex 2) was circulated 10 days prior to the meeting. The opportunity was provided to comment on the ACOM forum, as no comments were posted it was assumed that ACOM had adopted the agenda.

2 Review of membership

ACOM was invited to review and update the ACOM membership list (Doc 02).

Changes should be reported to the Secretariat.

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| Action point |
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| 2.1 ACOM members: review membership list and report changes to secretariat |
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3 Minutes, Decisions and Action points from ACOM 2018

The minutes (Doc 03) had been approved via the ACOM Forum prior to the meeting. The Chair reported on decisions and incomplete actions points from 2018. Only few action points were remaining from the last meeting and these would be dealt with under the individual agenda items.

4 Reflections on advice activities and process

4.1 Chair's report to ACOM

ACOM chair provided ACOM with an overview of the advice activities since November 2018 (Doc 04a) reflecting the rather productive year of 2018, where several EO and FO were added to the advisory products from ICES, which was considered to be a good development that should be continued.

In terms of work-load for ACOM, the changes made to the allocation of members to ADGs, including those reserved for special requests, was anticipated to facilitate a more even distribution of workload and it was concluded that so far this system has worked well. It was confirmed that the decision by ACOM in November regarding the financial support for ADGs was accepted by Bureau providing that an evaluation of the system assigning ACOM participation to ADGs after two years. Thus, all ACOM members will receive travel and per-diem from ICES for any ADG they participate in.

MIRIA, MIACO and Bureau were reported to ACOM. All three meetings took place in a constructive atmosphere; the main subjects were quality and consistency, layers of advice, operational matters and looking into the future. MIRIA was broader in terms of subjects, MIACO was quite fisheries oriented. The consensus guidelines agreed and adopted by ACOM were well received.

Bureau supported the development of the Advice Plan and the scheduled time-plan for this. In terms of the suggested 2020 dialogue meeting on ecosystem advice framework, Bureau suggested to postpone the meeting to happen in 2021. ACOM decided to develop the ToRs and framework further during meeting.

ACOM received the briefing well and in particular that advice plans and new initiatives regarding workload had been confirmed by Bureau and MIRIA/MIACO. The only concern was that the suggestion to have two deadlines for the special requests during the year was not well received by MIRIA and the Secretariat is facing difficulties in finding a suitable model for such a structure. ACOM concluded that the system for acceptance/rejection of requests as well as longer response-times could potentially resolve the issues work load issues related to special requests.

4.2 Vice Chairs' reports to ACOM

The Vice Chairs reported on activities since November 2018 and ACOM was invited to comment (Doc 04b).

Henn Ojaveer presented on going work: follow-up of some relevant ideas from the recent WGCHAIRS meeting, planning for the dialogue meeting in 2020, start drafting technical guidelines for Fisheries Overviews, planning for the workshop for third generation of Ecosystem Overviews.

Eugene Nixon presented his ideas on areas to explore given the information and knowledge already available. These areas are: marine spatial planning and marine energy. He also emphasized the importance of the community of ICES.

Colm Lordan updated on the meetings since last ACOM meeting. It is key to move forward with quality assurance framework and we need the experts and member country buy-in to progress. Benchmark process needs reform and integrating MSEs to robustness test the assessment models

and management procedures could be envisaged for key stocks. Mixfish advice needs further developments- there is a lot of interest from stakeholders. Consider to simplify single stock advice and make mixfish the main advice, lots of opportunities by including interactions. Framework for advice and guidelines need to be simplified.

Ghislain Chouinard presented an overview of recent of advice since last meeting and reflections on current issues some raised during MIRIA, MIACO and WGCHAIRS. Work has been ongoing on a framework for prioritisation of benchmarks which is needed. Issues to concentrate on during the upcoming year include the advisory framework and guidelines, updating the general approach on MSEs following on the work of WKG MSE2, how to include ecosystem considerations in fisheries advice, an approach to consider regime shift and their impacts on reference points.

4.3 Head of Advisory Support report

The head of ICES Advisory Support presented a review (Doc 04c) of the advisory process over the last 4 months. ACOM was invited to comment.

Negotiating agreements with clients was progressing well. There are different types of agreements with clients: Letter of Agreement (LoAs) with no financial implications, Memorandum of Understanding (MoU) often with financial implications, Grant Agreement (GA). with a project structure and financial implications. The status is as follows being revised (NASCO, Iceland, NEAFC), status quo (OSPAR, Helcom), under construction (UK, Iceland, DGENV)

4.4 ACOM members review

ACOM members were individually invited to review and comment on the advisory activities and process and the performance of ACOM.

The predominant view of ACOM members was that things had been going well, and that the members were happy with the current system. New members commented that it was too early for comments but that they were happy to be in the group and looking forward to the week ahead. The strategic direction of ICES was discussed, and the need to check how much progress had been made since the last meeting.

The key areas of concern to ACOM were:

Mixed-fisheries and multi-species A number of ACOM members said that they were looking forward to see how the work on mixed fisheries was progressing and that this was an important direction for ICES. Those mixed-fisheries relevant to a particular country were discussed, and the idea of multi-species reference points.

Fisheries and Ecosystem Overviews Members were happy to see new published Fisheries and Ecosystem Overviews and highlighted how important these are to the stakeholders. It was thought that the overviews would look better with a front page with an introduction, contents and a paragraph on their strategic development. The ACOM chair agreed with this idea. Some members felt that a clearer direction for the Ecosystem Overviews was needed, whilst the Fisheries Overviews was more on track.

Benchmarks, ADGs and guidelines The importance of the benchmark system was highlighted as being fundamental to ACOM. There are still difficulties in explaining the big changes in advice after a benchmark and this needs to be properly addressed. The ACOM chair commented that Iceland already puts together MSEs and benchmarks and requested ACOM to start thinking about this.

Many of the ACOM members were impressed with how the ADG attendance had improved in 2018. Most participants felt that the new development of allocating nations to ADGs was a good one. Some members had been confused as to how the funding allocation at ADGs would work and if members could participate at the national expense. This was later resolved by the ACOM chair. Some countries were concerned they might not be able to make all the ADGs they had been allocated for due to restrictions with travel. Communication between the expert groups and ADGs was seen to be a perennial issue that could still be improved. The ACOM chair agreed with this, and highlighted the difficulties in communication within the ICES community in general.

Members felt that ICES needed to work further on the technical guidelines, particularly concerning what was a rule and what was a guideline. It was suggested that trialling these within expert groups before publication could be a good first step.

The ICES community The need to train new alternates was discussed, with some countries saying they had invested considerable time in this and now had a number of good alternates. Some were surprised by the workload required for an alternate, and believed it would take many years before an outsider who is not familiar with the ICES system can really contribute. Members talked more generally about how they were developing the ICES community at home by engaging in meetings with stakeholders and new scientists and how well this has been received.

4.5 ACOM and advisory programme formal collaborations with recipients and partners

Clarification and update on ICES formal meetings with recipients of advice and partners was requested by a member of ACOM for clarification. These were documented in Doc 4d.

The general principle of collaboration with recipients and partners was outlined by the ACOM Chair; while the ICES secretariat engages in meetings to aid the iterative development of requests, ACOM leadership, or an ACOM representative, engages to present and explain recently published advice. The secretariat and ACOM leadership act as ambassadors for ICES and report back to ICES on challenges to the partnerships, impressions of good will and responses to advice. The informal discussions during these meetings was stated as being as important a component of ICES engagement as the formal presentations of advice.

ACOM accepted the outlined approach and description of collaboration with partners and recipients of advice without any comments.

4 Decisions

4.4 Regarding participation in ADGs: countries can populate extra ADGs than the ones they were allocated to if they want, and still be covered with per diem from ICES, but they have to fulfil their quota of allocated ADGs as well.

4.5 ACOM reaffirmed the approach of working in collaboration with advice recipients, ie the secretariat addresses the development of advice requests and the ACOM leadership presents advice. Formal and informal consultations were considered appropriate by ACOM.

4 Action point

4.4 Develop the front page of the Fisheries and Ecosystem Overviews, Henn Ojaveer to lead.

5 Science and development

5.1 SCICOM

The SCICOM Chair provided a report of SCICOM activities of relevance to ACOM (Doc 05a). ACOM was invited to comment.

The SCICOM Chair presented the new ICES Science Plan to produce science that underpins the advice. The SCICOM chair also introduced the Guidelines for ICES groups and the new expert groups report series.

ACOM pointed out that when considering for new expertise (i.e. social), before creating new WK and WG, care should be taken to ensure alignment to avoid double work with other organizations as STECF. ICES expert group focus should be scientific (the building and synthesis of knowledge) and not only the compilation of information. It was noted that there is not national financial support for these new groups and people attending are new to the ICES community. In addition, duplication of roles is avoided by keeping ICES ToRs strategic whilst STECF focus more on the compilation of annual data.

5.2 Fisheries Resources Steering Group

The new Chair of the Fisheries Resources Steering Group was introduced and the changes in structure described. ACOM was invited to comment.

The ACOM Chair introduced the new Chair of the Fisheries Resources Steering Group (FRSG) and the allocation of expert groups now residing under this SG. FRSG will parent expert groups that cover stock assessments and forecasts, data limited methods, MSEs, EBFM and MSY concepts and their application in fisheries, the development of evidence and standards to advise on management objectives for commercial fisheries (e.g. EU MSFD D3, UN SG14), as well as recreational and coastal fisheries. The membership rules which applied to expert groups that reported to ACOM prior to 2019 will be the same for expert groups under FRSG going forward. The new Chair of FRSG (Patrick Lynch) introduced himself.

ACOM was invited to comment on the allocation of expert groups to the FRSG. ACOM questioned whether former science groups were considered in the reallocation? During the transition from having ACOM and SCICOM groups to having "ICES expert groups" and now one new steering group, it was simplest to start with the reallocation of ACOM groups only. In the future, this may of course change.

The ACOM chair informed ACOM that an email would be sent out to all chairs of groups now residing under FRSG introducing the steering group.

5.2 Action point

ACOM chair to send explanatory emails to chairs of former ACOM expert groups.

6 Technical guidelines

6.1 Review of status of Technical guidelines

ACOM, at their annual meeting in 2014, agreed to develop a compilation of Technical Guidelines related with the advisory products and identified the contents of the Technical Guidelines to be produced. Document 6 provided the status priority for production of these.

ACOM was invited to review progress and comment on next stages towards finalisation of the guidelines. ACOM was also invited to review the preliminary technical guidelines for the fisheries overviews and F_{MSY} ranges (Doc 06b and 06c).

ACOM reviewed the table of technical guidelines and proposed no major alterations.

ACOM discussed to what extent do we use the guidelines? It agreed that once technical guidelines are published, they should be followed to the extent possible. They have to be viewed as living documents, since situations occur on a regular basis where we have to deviate from guidelines for one reason or another. The dilemma is that we produce guidelines to give clarity of the advisory process, but often we end up blurring the picture and reducing clarity because of the complexity of some of these guidelines.

A page has been created on www.ices.dk that contains all published technical guidelines: [Guidelines and Policies](#)

6.2 Technical guidelines for Fisheries Overviews

A presentation on the current draft Fisheries Overviews Technical Guidelines was given (Doc 06b). The technical guidelines explain what the Fisheries Overviews contain, how they are produced, where the data comes from and the objective of the overviews. The technical guidelines will also include an elaboration on how areas and stocks are defined. The Fisheries Overviews are an integral part of ICES capability of providing Ecosystem Based Management advice. The generic theme of the guidelines is to be approved by ACOM. Any comments should be provided within the week of the ACOM meeting.

The draft technical guidelines include 3 annexes: the first will show examples of figures, their content and format, the second will give detailed guidance on how to produce plots, and the third will explain the format and content of the tables included in the Fisheries Overviews annexes. The aim is to have these guidelines finished by the end of 2019.

ACOM commented that it would be informative to have a map showing stock areas and TAC areas, but this type of map is too complicated to get correct. Unfortunately, there is no easy solution on how to show TAC management by stock in relation to area. It was concluded that a paragraph explaining the complexities could be useful.

6.3 Technical guidelines for F_{MSY} ranges

The need for Guidelines for setting F_{MSY} ranges was highlighted at the ACOM meeting in November 2018. A document was drafted and presented to ACOM for review (Doc 06c). Based on the feedback from the subgroup, doc 06c was modified and sent to Carmen Fernandez for additional review.

6. Decisions

6.1a. The prioritization of the list of guidelines to stay unchanged.

6.1b Published Technical Guidelines should be followed to the extent possible.

6.2 WRT Doc 6b: No comments were received to the fisheries overview technical guidelines. The Guidelines to be finalised by the end of 2019.

6.3 WRT Doc 06c to be modified after feedback from subgroup and preferably reviewed by Carmen Fernandez.

6 Action points

6.1 Programme of work to be maintained and delivery following the table.

6.2 Fisheries Overviews technical guidelines: Henn Ojaveer to lead the work together with Sarah Millar.

6.3a FMSY ranges: Colm Lordan and Ciaran Kelly to finalize document and send on to Carmen Fernandez. Once finalised, Secretariat to post on ACOM forum for approval.

6.3b Text to be inserted into the existing “12.4.3.1 Reference points for category 1 and 2 stocks” on Fmsy ranges.

7 Fisheries and ecosystem overviews and viewpoints

7.1 Fisheries overviews

ACOM leadership and secretariat reported on progress made on the Fisheries Overviews (Doc 07a) and confirm timelines for creation or update:

- Bay of Biscay and the Iberian Coast: Fatima de Borges, Francisco Velasco and Michel Bertignac
- Greater North Sea: Ewen Bell
- Baltic Sea: Didzis Ustups
- Celtic Seas: Colm Lordan
- Barents Sea: Harald Gjøsæter
- Norwegian Sea: Harald Gjøsæter and Yuri Efimov

ACOM vice-chair, Henn Ojaveer, presented work on the current contents of the Fisheries Overviews, plans for new areas to include in both the current and new overviews, a timeline of the release dates of new overviews, and a list of lead ACOM members for each overview.

It was noted that three of the overviews currently do not have ACOM lead. These are: Azores, Faroes and Atlantic Ecoregion. The ACOM lead for Greenland Sea had also left and needed a replacement. If no lead was found during the week a follow up would be needed to assign a member as soon as possible.

The ACOM Vice-Chair asked the group if there were particular considerations for improvements in the current structure of the overviews. Of concern to ACOM was the inclusion of bycatch in the overviews, and how the current information was limited and of a broad-scope rather than specific to each region. This is an issue that came up frequently in areas such as MSC certifications. The ACOM chair highlighted that there is currently a gap in the provision of evidence and data from the bycatch groups, and the experts were often uncertain about disseminating their

work. The EU has an action plan on seabird bycatch, but as yet no reports have been produced. Further, ICES has committed to producing work on bycatch but has so far been unable to deliver. The point was also raised that bycatch observer coverage is currently quite low, and that we could include information in the overviews concerning how much of a fishery is currently covered. An additional concern in the group was that a balance is needed in the overviews between desirable content and becoming too specific and detailed. This latter would result in an unwieldy document that is too large, both in terms of the time needed to put them together and also in terms of reading them.

7.2 Ecosystem Overviews

ACOM leadership and secretariat reported (Doc 07b) progress on the ecosystem overviews and confirm timelines and identify leads for missing overviews:

- Oceanic Northeast Atlantic: lead author Odd Aksel Bergstad
- Azores:
- Arctic Ocean: lead author Hein Rune Skjoldal
- Greenland Sea:
- Faroes:

ACOM was invited to comment and reaffirm plan for production.

ACOM Vice-Chair Henn Ojaveer presented work on the ICES Ecosystem Overviews (EOs). He gave an overview of the ICES scientists and Expert Groups involved in the process of the creation of the 7 existing EOs; an overall description of the contents and interactive diagram of the EOs, as well as the new addition of Climate Change (in 2018), outlined the planned EOs work for 2019: Oceanic Northeast Atlantic and Azorean Ecoregions, and for 2020: Arctic and Greenland Ecoregions. Henn highlighted the differences in the process leading to the creation of the EOs; some of the EOs are created by contributions from the relevant ICES Integrated Ecosystem Assessment (IEA) groups whereas in the ecoregions with no relevant IEA group the secretariat involves “champion” experts who carry on the work and in some cases hold a Workshop, e.g. Oceanic Northeast Atlantic EO in 2019. Henn discussed the issue of not having a specific process of updating the existing EOs, especially the ones that have not been done with the Involvement of an IEA group, and asked for ACOM representatives-volunteers to follow the EO process connected to their areas. There was discussion about the role of WGDEC and whether another working group was required for IEA consideration in the open Atlantic.

After a request for ACOM representation for each ecosystem overview (similar to the fisheries overviews), ACOM concluded that the ecosystem overviews were supported by the IEA expert groups so the situation was different.

7.3 Third generation ecosystem overviews

ACOM was invited to comment on plans for the workshop on third generation Ecosystem Overviews (Doc 07c).

ACOM vice-chair Henn Ojaveer discussed the future of ecosystem overviews and forthcoming Workshop on the design and scope of the 3rd generation of ICES Ecosystem Overviews (WKEO3) pointing out the layout and targets of the workshop. He added that the planning of WKEO3 is going well, and effort is put into securing stakeholders’ and clients’ participation; at the conclusion of WKEO3 the vision is to try to make results operational and communicate the suggestions/results to ACOM. There was a comment reinforcing the importance of taking into consideration the clients’ vision for the future of the EOs.

In general, in all items related to ecosystem issues, ACOM feel the need to define better what ICES wants to achieve with this advice/approaches and link them to the ICES strategic objectives. A subgroup was commissioned to draft introductory text for the Advisory Plan based on the general objectives stated on the ICES document on [EBM](#) showing also continuity with the ideas produced during the WKECOVER (2013) that provide a narrative linkage between the ecosystem and fisheries overviews and the six priority areas identified for the Advisory Plan (see Annex 3).

7.4 Viewpoints

An ACOM vice chair reported on the discussion at WGCHAIRS on the Viewpoints. ACOM was invited to comment (Doc 07d).

ACOM vice-chair Eugene Nixon presented the viewpoint concept, showed existing viewpoints, and outlined the publication process. He mentioned points from discussions in WGCHAIRS 2019 covering the challenges, i.e. how mature should the science be for the creation of a viewpoint. Viewpoints could be exploratory advice to managers, and a way for ICES to move into new areas. Proposals for viewpoints can be submitted to SCICOM & ACOM chairs and should include: a short summary, title, collaborators, and sources of information. ACOM chair Mark Dickey-Colas asked if ACOM is satisfied with the previous decision taken during the last ACOM meeting, i.e. that experts should come forward with viewpoint candidate topics, not ACOM/SCICOM. There was agreement from ACOM.

It was suggested that steering group chairs could propose viewpoint topics.

It was agreed that this is a good scientific process but it falls into the category of some of the ICES processes that are poorly understood from the outside, and ICES could communicate the publication of a viewpoint to a wider community; experts and interested public. SCICOM chair Simon Jennings commented that this is a good point and there might be a debate for where/how to communicate this.

SCICOM chair Simon Jennings said that this kind of publication could show the way forward for ACOM in the next 20 years, it could help ICES strategically by pointing out new science fields for advice and managers e.g. [the viewpoint of biofouling](#).

Overall participants agreed on this being an active process and a good way forward. ACOM chair Mark Dickey-Colas commented that this is a long process which requires a lot of work, and ACOM vice chair Henn Ojaveer added information from his experience on this and suggested we need to add more planning time when creating viewpoints.

7. Decisions

7.1 It was concluded that discernible progress on the contents of the overviews (particularly bycatch) needs to be made over the next year and this was given high importance in the meeting.

ACOM leads were agreed for the following overviews:

Greenland Sea: Jesper Boje

Faroese: Petur Steingrund

Azores: Mario Rui de Pinho

7.2 No ACOM lead needed for the Ecosystem overviews that have an IEA group in charge, but ACOM lead needed for EOs that are produced by expert champions.

7.4 Experts should submit proposals for viewpoint subjects through expert groups or WGChairs to be assessed by ACOM leadership.

7. Action points

7.1 An ACOM lead for the Atlantic Ecoregion fishery overview is still required. Henn Ojaveer to follow up. Identified shortly after the meeting: Francisco Velasco and Colm Lordan.

7.2 New text on ICES strategy to EBM to be included in the ICES advisory plan.

7.3 ACOM leadership to continue process to create ICES viewpoints, responsibility Henn Ojaveer.

8 Quality assurance in the advisory process

ACOM was updated on quality assurance issues (Doc 08) from the subgroup chaired by Colm Lordan. ACOM was invited to comment and agree on actions as appropriate.

ACOM vice chair Colm Lordan presented the quality management framework that includes planning, quality assurance, quality control, and quality improvement. He discussed the quality challenges ICES faces, ways of how to solve these and add improvements to the framework. Colm pointed out that ACOM should consider future needs, which are broader than the recurrent fisheries advice. Discussing issues of quality, Colm argued that these are broader than the errors of the actual advice, errors cover a broad spectrum of the process, including guidelines and benchmarks. Colm went on to present an overview of errors in the advice sheets, which shows that most are located at the Expert Group level; whereas ADG minutes reviews show additional errors in and ADG level. Discussing quality assurance connected to data, Colm presented work on the Best practices in data created by DIG, and outlined that PGDATA have been also trying to put together a quality assurance framework in data inspired by the European framework. He pointed out that RDBES (to be tested in 2020, 2021 for all stocks, and to run in 2022) will try to assess the quality of the data fed into TAF. Colm indicated that TAF will now be used by expert groups for their assessments and this will improve the quality assurance on that level. Closing Colm presented other quality initiatives from the RCGs, SmartDots, FishPi2, STREAM, EFARO,

Quality management framework accreditation was discussed and ACOM agreed that ICES should explore this issue further. ACOM was asked in subgroups to discuss how a quality assurance framework of the advice is implemented.

Conclusions from subgroups

Where does ICES's role in quality assurance start? ICES needs to know that quality is being evaluated and reported from the very start of data collection. ICES has a role in establishing standards and procedures at an international level. ICES should also ensure documentation showing what QA/QC procedures were done at the country level; information on sampling designs underpinning the data should also be known. It was agreed that ICES also has clear responsibility in terms of requesting clear quality standards for submitted data and quality assuring the data once it has been supplied.

It was agreed that quality considerations should be seen in relation to data (QC) and to processes (QA), including software, people and culture. Check points are needed at each stage of the data process so that errors can be detected and corrected at an early stage. There is a need to (continue to) keep track of where the sources of errors are and what has been done to correct the source/process (not only the data). The conclusions were that ICES must map the process flows for as many products of advice as possible.

Additionally, how do proposals for setting standards for evaluation of data quality (e.g. as provided by PGDATA) can be taken forward. Achieving international accreditation process (such as IODE) may be possible, but the associated workload and overheads should first be considered. Most of the current errors in the system are caused by resource challenges in terms of time availability and lack of expertise. Automation offers the opportunity for improvement such as TAF, RDBES, SID and SAG.

8. Decision

8.1 ACOM to continue to work with ICES data centre to improve quality control/assurance/framework as documented in the forthcoming ICES advisory plan (Annex 4).

9 Advisory plan– where do we want to be in ten years' time

ACOM was requested to reflect on Doc 09. Doc 09 is based on ACOM November 2019 considerations, discussions at WGCHAIRS and input from the ACOM leadership. ACOM worked through a set of subgroups and plenary discussions to further develop the new ICES advisory plan.

A brief overview presentation was given by the chair of ACOM on how an advisory plan matching the ICES Science plan was required to be developed by ACOM. An initial draft of such a plan had been prepared based on ACOM November 2019 considerations, discussions at WGCHAIRS and input from the ACOM leadership a document had been prepared.

In addition to providing context to the purpose of the advisory plan, it was noted by the ACOM chair that the purpose of developing such a plan was to ensure prioritization of development of the advice contribution towards the overall ICES strategic plan. The advisory plan should therefore be aimed at the underlying structures, processes and frameworks. It was also noted that such a plan should work in partnership with science plan that prioritises the discipline areas that need more investment.

The subgroups considered the priority areas for advice development and improvement and task associated with delivering those priority areas.

The results of the deliberations of ACOM are shown in Annex 4

The six priority areas for the proposed ICES Advisory plan are:

| | |
|---------------------------------|---|
| Assuring quality | Assure that quality in ICES encompasses the entire process from data collection to the publication of objective and independent advice. |
| Incorporating innovation | Incorporate new knowledge into the advisory process to contribute effectively to the creation of advice on meeting conservation, management and sustainability goals. |
| Profiling approach | Profile and communicate to existing and potential new users the relevance and benefits of the ICES approach to providing advice. |
| Sharing evidence | Share effectively the evidence and advice with recipients and society, and develop a responsive dialogue with partners to maintain relevance. |
| Evolving advice | Evolve the advice to remain relevant to policy developments and management challenges, while horizon scanning likely future evidence needs. |
| Identifying needs | Identify and communicate the expertise, monitoring, data and process needs to maintain and develop the provision of relevant advice. |



Proposed timeline for production of the ICES advisory plan.

| Target date | Action | By who |
|----------------|--|-----------------|
| Mar 2019 | Consider 6 priorities, strengths & develop actionable tasks | ACOM |
| Mar 2019 | Plan presented for consultation to SCICOM | ACOM leadership |
| Apr 2019 | Consultation period with SCICOM | ACOM leadership |
| Apr & May 2019 | Use meetings with recipients of advice used as opportunities to discuss the six priorities | ACOM leadership |
| Jun 2019 | The full text constructed. Bureau & ACOM asked for further comment | ACOM leadership |
| Jun 2019 | Draft for Bureau | Bureau |

| | | |
|----------------|--|-----------------------|
| Jun 2019 | Operational requirements to implement the plan discussed | ACOM leadership, Secr |
| Sep 2019 | Sign off of plan at ASC | ACOM |
| Oct 2019 | Council briefed on plan | Council, ACOM Chair |
| Oct & Nov 2019 | Development of visual presentation of the plan | Secr, ACOM |
| Dec 2019 | Plan launched | ACOM leadership, Secr |
| Jan 2020 | MIRIA and MIACO introduced to the plan. | ACOM leadership |

9. Decision

9.1 ACOM supports the further development leading to publication, following the agreed timeline, of the ICES advisory plan. (Annex 4).

9. Action point

9.1 Advisory plan to be developed and published following the agreed timeline; ACOM leadership and secretariat.

10 Dialogue meeting preparation (Doc 10)

The subgroup on the Dialogue Meeting on a framework for ecosystem advice reported and suggested a resolution (containing terms of reference) for the dialogue meeting.

However, Bureau has recommended a delay of the dialogue meeting until 2021 to enable further progress to be made on a framework for ecosystem advice. ACOM was invited to comment on developments.

Some ACOM member expressed disappointment at any potential delay in the dialogue meeting. ACOM overall more consideration is needed in relation to process and outcome. This was further discussed in subgroup (see item 13.4 in these minutes).

10. Decision

10.1 ACOM supports the proposal to delay the dialogue meeting for the framework for ecosystem advice until 2021, as proposed by Bureau.

11 Management Strategy Evaluation workshop

ACOM was informed (Doc 11) about the preliminary findings of the workshop on management strategy evaluation and the possible consequences for ICES advice processes.

ACOM was asked to consider the approach for a workshop on MSE for rebuilding plans and invited to comment.

ACOM vice-chair Colm Lordan presented work from the second workshop on guidelines for Management Strategy Evaluation. The meeting was well attended by experts.

The workshop highlighted that the concept of MSE was different in different parts of the world. Many participants did not recognise the ICES MSE as synonymous with their concept of an MSE. All agreed that MSE is an important tool to test management strategies across a range of uncertainties.

The workshop discussed the difference between short cut approach and the full feedback approach to MSE. Some MSEs use the short-cut approach but look at the uncertainties and implementation errors very well, whilst some just add white noise and are less good. The full feedback approach (assessment running in the MSE loop) has not been used greatly in ICES likely as a result of the time and resources required. The link between benchmarks and MSEs was discussed (using NE Atlantic mackerel as an example). This is a growing issue for ICES.

Preparation for the workshop had involved looking at the approximately 30 ICES MSEs conducted since 2013. There had been 19 different tools used to run the different MSEs, with a huge diversity of approach. This generated major challenges in terms of validating those tools, who can review them, and how ICES can quality assure this process. ACOM discussed the current computing power in the ICES community and the issue of it not being sufficient at present. MSE might become part of the benchmark process and there has already been informal requests for ICES to hold computing power to help with this.

There was discussion at the WKGMSE2 over the process flow. The WKGMSE decided that there should be a preliminary meeting to any MSE work where protocol was formalised for running the MSE, and this should include the reviewers. It was decided that the current technical guidelines for MSE used by ICES are generally adequate but could be some improvements. It was noted that many of the ICES MSEs conducted so far have not been following these guidelines as well as they should have, for instance, in many cases the reporting template was not completed.

11. Action point

11.1 Improve the ICES MSE guidance document, once the workshop report is published. Colm Lordan to lead.

12 Regional issues – Arctic and Areas Beyond National Jurisdiction

ACOM chair briefed ACOM about recent developments on Arctic and Areas Beyond National Jurisdiction (Doc 12). ACOM was invited to comment.

After a short discussion around the issues of the Arctic and ABNJ, ACOM made no decisions or highlighted action points.

13 Framework for advice and operational challenges

13.1 Scheme for prioritising stock assessment benchmarks

The ACOM leadership proposed benchmark prioritisation scheme (Doc 13a) was presented to ACOM and the consequences of its preliminary application to 2020 benchmarks was shown. A subgroup of ACOM considered the proposal and reviewed the prioritisation of 2020 benchmark requests.

ACOM was invited to approve the proposal of the subgroup including the list of benchmarks to be conducted in 2020.

ACOM Vice-Chair Ghislain Chouinard presented the prioritization framework proposal to the subgroup of ACOM members, and reported the resulting discussions back to ACOM at plenary.

Prioritization criteria The criteria and rankings were considered appropriate in general. Criterion 1 received the most criticism, and minor wording changes were proposed to criteria 2-4.

Criteria 1 – Quality of assessment to provide advice

Criteria 2 – Opportunity to improve the assessment

Criteria 3 – Management importance, attributes:

Advice on fishing opportunities is requested for the stock.

Stock is the object of an agreed management plan.

Stock is the object of a directed fishery.

Stock is included in a mixed fishery analysis, is a likely choke stock, or the object of a pelagic fishery (meets one of the 3)

Criteria 4 – Perceived stock status

Criteria 5 - Time since last benchmark

General prioritization framework There was consensus among ACOM members that the scorings should be done in the WGs. It was suggested that implementation should begin this year, with the Secretariat to support.

Overall benchmarking system The subgroup discussed improving the ICES benchmark process in general. Some specific suggestions included: grouping stocks into workshops by assessment method instead of ecoregion; creating a formal system for interbenchmarking; linking top-down and bottom-up requests for benchmark. This led to discussion at plenary regarding benchmark reform within ICES. One idea that was mentioned but not discussed further is to make benchmarking a two-step process where the first step incorporates a preliminary assessment of what can be achieved (i.e., a scoping stage). There was general agreement that the benchmark system would benefit from major change or reform; in the interim, ACOM agreed to implementing the prioritization framework.

Benchmarks in 2020 After discussion with the subgroup regarding specific stock scores, four benchmarks covering 22 stocks were proposed for 2020 based largely on outcomes from the prioritization framework. Four benchmark meetings were approved for 2020 including 1) the deep stocks (WKDEEP), 2) Celtic Seas (WK Celtic), 3) Various stocks (Barents, West Scotland, Skegerrak) and 4) Flatfish stocks from the North and Celtic Seas (WK FlatCNS) - (Last slide of Agenda_item_13_Benchmark prioritization). The final list of stocks to be included within these

benchmarks needed some refinement based on capacity and will be discussed by the respective expert groups.

13a. Decisions

13a1 ACOM agreed that the prioritization framework should be revised and implemented within WGs for the 2019 advice year.

13a2 ACOM agreed to the four proposed benchmarks for 2020, with the understanding that some (4-6) stocks on the list will be postponed to 2021 depending on capacity.

13a. Action Points

13a1 The prioritization framework will be revised based on comments from ACOM; Ghislain Chouinard and Secretariat will work on this.

13a2 The revised framework will be implemented for WGs to score their stocks during 2019 with support from ICES Secretariat.

13.2 Ecosystem approach and productivity changes

In November 2018, ACOM discussed whether and how ICES currently implement changes in productivity and density dependent effects in our short- and long-term advice and whether this is apparent from reports and advice sheets. As tasked, a proposal was developed by the ACOM leadership. A subgroup of ACOM considered the proposal and propose an approach for ACOM decision.

ACOM was invited to approve the proposal of the subgroup.

ACOM vice-chair, Henn Ojaveer, presented Doc 13b. The proposal from ACOM leadership is develop an approach from Marshal *et al.* (2019) (Inclusion of ecosystem information in US fish stock assessments suggests progress toward ecosystem-based fisheries management. ICES Journal of Marine Science, doi:10.1093/icesjms/fsy152). The ranking and categories were discussed and explored in terms of the ICES context. ACOM should focus categories that reflect what data we can collect and the information ACOM needs for the ecosystem approach.

A proposal was made by a subgroup and discussed by ACOM. It should audit the data used on

1. Stock assessment: weight-at-age, mat, sex
2. Forecast variability in recruitment, weight-at-age
3. Productivity: natural mortality as predator and prey
4. Distribution
5. Mixed fisheries
6. Consider Climate Change (CC)

ACOM agreed to the following approach. To test the proposed audit on a few expert groups in 2019. Then to formalize the audit and collect all information. Then to make the audit a standard part of the benchmark process. The stock assessment database should be adapted to take in this information.

13.2 Decision

To test the audit of ecosystem variability information with a number of expert groups in 2019

13.2 Action

To build a template to test the ideas of ACOM, for ACOM leadership, and to report back to next ACOM meeting

13.3 Advice for mixed fisheries

Following on from discussions in November 2018, a subgroup of ACOM considered a resolution (Doc 13c) for a scoping workshop on the future priorities for the generation of evidence for the management of mixed fisheries. This would be used in a consultation process with the community of researchers with interest in mixed fisheries.

ACOM was invited to approve the approach suggested.

ACOM vice-chair Colm Lordan, presented the proposed ToRs for a scoping workshop on mixed fisheries to be held later in 2019. Feedback from MIRIA was there was a desire for this workshop and the possibility of combining it with the MIRIA meeting in early 2020 was discussed.

A sub-group discussed the utility of the current advice. It was noted that it had been very useful in the technical service on zero TAC fisheries. The current technical aspects of running the mixed fisheries was discussed and the limitations. The current Fcube model is a short term view and there was agreement in the group that we need to start looking at it in the longer term. Improving the link between the fisheries overviews and the mixed fisheries was seen as very important.

There is a need for critical analysis of the current approach and the limitations in advance of the scoping meeting. The lack of resources also needs to be highlighted. ICES needs to start pointing out the conflicts between the single stock and mixed fisheries stock advice. Managers want to know about the fleet dynamics and the history of the fisheries, and ICES is currently not doing this that well. They want to know if the Landings Obligation is going to result in changes in selectivity in the short term etc. ACOM feels that the chair of the workshop needs to be someone who can translate complex ideas into simplified terms. It was suggested that a co-chair from industry would be appreciated.

The proposed resolution, ready for consultation with the network is shown in Annex 5

13.3 Decision

ACOM proposes some ToRs for workshop on mixed fisheries (see Annex 5)

13.3 Action

Network to be consulted on the proposed resolution, Colm Lordan to lead for ACOM leadership.

13.4 Dialogue meeting/ecosystem advice framework

Following on from discussions on agenda item 10 (Doc 10), a subgroup discussed the next steps to realise a framework for ecosystem advice. ACOM was invited to approve the approach suggested.

In a subgroup, ACOM vice-chair Eugene Nixon initiated a discussion. It was pointed out that the current discussion is different from past ones because the goal is the creation of a framework for ecosystem advice, not fisheries advice but advice that concerns the whole picture and has a fisheries part. Accessing the impact of the implementation of the advice becomes clearer when considering that this framework will be used to advise on management of human activities. Presenting ecosystem risks and trade-offs to management is different to including ecosystem parts into fisheries advice.

There was a discussion on the importance of the terminology used for in the ecosystem advice, i.e. right now too many different terms are used: ecosystem framework, ecosystem based advice, ecosystem integrated assessments etc. ICES needs to have consistency and use the appropriate

terminology that makes it easy to communicate the different levels, and which is clear within and outside the ICES network.

13.4 Decision

ACOM proposes that further development be carried out to build a framework.

13.4 Action

Further work be instigated to move beyond the development of WKECOFRAME1 and 2, Eugene Nixon to lead.

13.5 Reporting back from benchmarks (Doc 13e)

i) Baltic cod – impact of high M on ICES MSY approach

The benchmark for eastern Baltic cod found that there was no precautionary F_{MSY} for the stock. All candidate F_{MSY} values had >5% to the stock being below B_{lim} . The high M results in no fishing rate being precautionary. How should ICES describe MSY targets in this scenario.

ii) Advice rules for short lived species (highlighted by sprat)

iii) Biomass reference points herring

A subgroup of ACOM will consider the issues and if necessary propose approaches for ACOM decisions.

ACOM will be invited to comment and approve the proposal of the subgroup.

ACOM Vice-Chair Ghislain Chouinard presented issues relating to four stocks that were recently benchmarked. The issues were discussed in the subgroup, and approaches for moving forward were identified.

i) Baltic cod

At WKBALTCOD2, experts found that there has been a large increase in natural mortality for Eastern Baltic cod, and as a result the F_{msy} reference point was negative. An ACOM subgroup discussed how best to present this information in the advice sheet and met to determine the appropriate language, and their suggested text was revised and subsequently approved by ACOM.

ii) Short-lived sprat advice rules

At WKspratMSE (a workshop linked closely to the WKsprat benchmark), it was suggested that a fixed harvest rate was more precautionary than the recommended one-over-two rule for sprat 7de. The specific issues that short-lived data-limited stocks have will be addressed at WKDLSSLS in 2019. During the ACOM meeting, it came to light that the definition of B_{lim} was very high in the WKspratMSE report. This raised the question of whether the 1-over-2 rule would be precautionary if a more appropriate B_{lim} is defined. The subgroup asked for the experts to check the raw MSE output to test if the 1-over-2 rule is precautionary at a lower level of B_{lim} .

iii) Biomass reference points herring

At IBPher6a7bc, there was an issue with calculating herring reference points as a result of high retrospective bias in the assessment. The reference points were not

credible, and so the benchmark suggested taking a category 3 approach for proxy reference points instead. The subgroup discussed implications of stocks changing categories; in some situations using a category 3 approach can result in higher catch advice than in previous years.

At IBPCLuB, there was an issue with calculating reference points for Bothnia herring as a result of an unclear stock-recruit (SR) relationship. The subgroup discussed that the guidelines do not have clear recommendations for what to do when there is no clear break point.

13.5 Decisions

13.5a Baltic Cod- The suggested text for how to convey that there is no precautionary F was approved by ACOM,

13.5b Short lived sprat the 1-over-2 should be used if it is considered precautionary at a lower level of Blim, otherwise the fixed harvest rate should be used. This is a case-specific decision.

13.5c Biomass reference points herring the proxy reference points are the correct approach (west of Scotland herring) and that a full benchmark is needed before reconsidering category 1 reference points. In addition, ACOM recommends to the ADG that the advised catch should be set to 0 despite the change in category.

13.5 Actions

13.5a Baltic cod - the text should be communicated to the relevant ADG.

13.5b Short lived sprat - Secretariat to follow up with experts and ensure that the stock is assessed in line with the decision above .

13.5c Guidelines will be revised to add clarity and guidance for situations when SR relationship is unclear; ACOM Vice-Chair Colm Lordan will lead with Alexander Kempf to assist.

13.6 MSY & Precautionary frameworks

The layering of the MSY approach on top of the PA approach has led to a confusion around Fpa and Fp05. Should ICES simplify the approach by defining Blim according to the original PA framework and the implement the risk based approach through the MSY framework?

A subgroup of ACOM considered the issues and proposed approaches for ACOM decisions.

ACOM was invited to comment and approve the proposal of the subgroup.

The definitions and guidance for calculating Fpa and Fp05 need to be improved making sure that they are clearly stated with examples on how to calculate the reference points. Better code with good annotations is needed. The secretariat should look into this in conjunction. This would enable experts to follow these code examples step by step to ensure consistency of approaches across stocks. These code examples should cover a multitude of scenarios so experts can see how different cases were tackled and have less chance of getting stuck by unusual cases.

The interpretation of Fp05 and Fpa changed slightly over time from the initial text in 2002 in the Study Group on the further development of the precautionary approach to fishery management (SGPA) report. It was highlighted that working towards a similar approach when calculating

Fp05 and Fpa is paramount. However, this work needs a home to be further investigated, developed and tested. Despite the importance of this work especially to ensure that managers and stakeholders fully understand what these values mean the work needed may not justify running a dedicated WK on the theme. It was highlighted that Fp05 and Fpa might be embedded into the legislation and changing the technical basis may not be possible. This was confirmed during the meeting e.g. banking and borrowings is only permitted under EU legislation if stocks are within Precautionary Approach reference points. If these values and the technical basis are not embedded then it may be possible to work on these to make them consistent with each other.

13.6 Action points

13.6a develop code with annotations on the calculation of Fp05 and FPA , secretariat

13.6b Investigate the possibility to refine Fp05 as FPA and harmonise the PA and MSY frameworks- Ciaran Kelly to propose some text on the Forum for AC.

14 Data, monitoring and surveys: the future of the Ecosystem Observation Steering Group

ACOM was informed about the challenges faced by the surveys and monitoring expert groups in ICES (Doc 14). This was prior to deeper consideration at SCICOM. ACOM was invited to comment.

The rationale for the need to reform EOSG was argued by the chair of the steering group. A particular concern was the gap between the data providers and the data users. Currently he felt the ICES community treats data as a service and this doesn't help the inclusivity of the process. While ACOM is committing to the ecosystem process, the chair of EOSG feels that the structure of EOSG hinders the delivery. EOSG has its focus on consistency not change. However, the science plan is ambitious with changes and improvements, and it was suggested that ICES needs to support this with different data collecting. Innovation as much as consistency needs to be emphasised. Three options to reform were presented to ACOM. The Chair of EOSG said to ACOM that at this stage, he was not after a clear decision between the latter two options offered.

Option 1: change nothing. This gave a low risk to advice in the short term but does not resolve the underlying problems.

Option 2: Recognise that there are problems and split EOSG along natural fault lines (perhaps monitoring, technology, surveys). This offers a low risk to short term to advice but the Chair of EOSG argued that it did not address all of the challenges.

Option 3: Regionalise all approaches for data collection and surveying. The chair of EOSG argued that this will rejuvenate some of the working groups and deliver better into the evidence base for ecosystem approach to management.

ACOM welcomed the presentation and saw the need for change in the EOSG structure. ACOM supported the idea of reform of the system in order to address communication issues and to align data collection with the science and advice processes. ACOM did not give a preference between options 2 and 3, as broadly they saw the benefits of regional approaches, but also were also in search of pragmatic solutions that maintained community support. ACOM stressed that changes needed to be carried out in after wide spread consultation with the expert community and the existing EO expert groups. There was support amongst ACOM for regionalisation (for instance it has more natural links with the DCF in the EU) but there was also a feeling that it is not fit for

all expert groups, such as pelagic surveys. It was felt important that we should not lose the idea of working together on one methodology, and ensuring some standardization. ACOM supported the idea of workshops across the community of data collectors and data users to examine regionalisation but encouraged consideration of other options that will satisfy the 'desired change' criteria. ACOM was against a top-down imposed reform. It was felt option 3 and the regional approach might not be workable, even if it's the best solution.

14. Decision

ACOM is supportive of the need for change but the proposals require further consultation with the experts and working groups. ACOM did not give preference for option 2 or 3.

14 Action point

ACOM members are asked to begin discussions in their home locations to see if support exists for the proposed options for reform.

15 Advisory Work plan 2019

15.1 Requests for advice

Special request are an integrated part of the annual work plan and Clients and ICES Member Countries will continue to send such requests to ICES throughout the year. The 16 special requests that had been budgeted for so far in 2019 were presented (Doc 15a).

15.2 Stock assessors and coordinators

The list of current stocks assessors and coordinators was highlighted (Doc 15b) and it was mentioned that some stocks are missing coordinators.

15.3 Advice Drafting Groups

ACOM agreed in 2018, that the ACOM leadership would suggest a scheme and a plan to populate the ADGs for 2019 with at least 3 ACOM nominated members (by nominating countries). The schedule for 2019 was presented to ACOM in December and ACOM members had already provided nominations for most ADGs. ADGSARMP and ADGHarpSeal were mentioned as groups still lacking nominations.

15.4 Upcoming workshops of relevance to the advisory activities

ACOM was presented with an update on the workshops of relevance to the advisory work that are planned to be conducted over the coming year (Doc 15d). The workshops are:

- Workshop on a Research Roadmap for Mackerel (WKRRMAC) that will be held 7-9 May in Bremerhaven, Germany
- Workshop on the Ecosystem Based Management of the Baltic Sea (WKBALTIC) that will be held 20-23 May in Copenhagen, Denmark

- Workshop on catch forecasts from biased assessments (WKFORBIAS) that will meet 11-15 November in Woods Hole, USA

15.5 Scheduling ACOM meeting at ASC and annual meeting in 2020

ACOM was invited to discuss the setup of ACOM meetings (number of meetings, timing, and duration) and agree the work plan. ACOM agreed to the dates proposed for the ACOM consultations at the 2019 ASC and the 2020 ACOM meeting back to back with the SCICOM meeting.

15 Decisions

15.5 ACOM will meet for consultations on 8 September 2019 in Gothenburg Sweden and the 2020 ACOM meeting will be held 10-13 March in Copenhagen.

15 Actions

15.3a ACOM members to check the ADG allocation document for groups for which they should nominate.

15.3b. ACOM members to inform the experts nominated about the nomination, to make sure that they would be available for the meeting.

15.2 ACOM members to check the list of stocks and propose names for stocks missing assessors or coordinators.

16 Special request management

As requested by ACOM 2019, the secretariat developed a proposal for a strategy to improve the Special Request process (Doc 16). This strategy starts with more engagement from ACOM in the process and requires a prioritization of the Special Requests accepted by ICES.

ACOM was invited to comment and propose the next steps.

The head of advice support briefed ACOM on the proposal and discussions on previous initiatives. The possibility of establishing windows for submissions of special requests has been discussed with recipients of advice. The recipients were not in support of the proposal and it was difficult to make progress. Thus, the suggestion has been removed from the strategy. Instead better planning, with more interactions with the recipients will be carried out. Also, the time line for replies to initial enquiries about requests will be lengthened.

The proposed strategy involves an improved internal secretariat process as well as increased engagement from ACOM in that process, and requires a prioritization of the Special Requests accepted by ICES. ICES Secretariat have reacted by implementing a new framework that facilitates the workflow and sharing of communication among ICES secretariat, experts and more importantly ACOM. The new process is tailored towards facilitating the easy sharing of information, allocation of the most up-to-date versions of work ongoing in the Special Request, as well as giving a clear outline of expected tasks and timeline.

For the ACOM-related part of the improved Special Request process, a two-step process was suggested:

1. Ambassadorship by ACOM of special requests. As in the past ACOM involvement in some special request has been sparse it was proposed that ACOM Leadership nominate one ACOM member to actively lead the ACOM part of each request process in collaboration with the ICES Professional Officer (PO) managing the request.

2. Prioritization of special requests. ACOM involvement in the prioritization phase of special request previously had been rare the set-up process. ACOM member/alternate 'relevant' for the request to be appointed by ACOM LS to act like a 'counsel' of the process.

ACOM, in discussing the proposal, raised concern about the ability to prioritize and to judge whether a request should take high priority or not. It was felt that the member assigned should be familiar with the topic or the ecoregion to which the request was connected. ACOM also suggested that instead of a single ACOM member being responsible it should rather be a panel.

After further deliberation ACOM agreed to both suggestions.

16. Actions

16a The Secretariat will inform clients that the timeline for handling requests will be longer.

16b 2 ACOM members at a time will for a period receive information from the Secretariat to prioritize requests. The procedure will be evaluated next year.

16c An ambassador of ACOM will shadow each special request, nominated by ACOM leadership.

17 Roundtable summary

Each ACOM member was invited to reflect on the meeting.

In general, everyone thought it had been a good meeting – intensive but productive with a lot of concrete output. The shift from having been a meeting very focused on the fishy issues in the past, to a much broader and balanced meeting was noticed and appreciated. The balance between strategic planning and focused discussion was highlighted by many as very positive. It was highlighted that ICES (contrary to some other institutions) does seem to have a way of making strategic plans and visions useful. A wish was voiced, though, for more concrete timelines associated with the discussions and visions for the future; a need for a sort of roadmap as well as a general look at the underlying structure. The balance between subgroup work and plenary discussions was good and the subgroups had been engaging. The presentation of action points from last ACOM meeting and the progress on each of these was appreciated. It was felt that ACOM had made good progress on many issues and especially it is good that there is a way forward for how to deal with the flow of special requests. Good progress was also made in terms of framework and advice, and the ecosystem framework is progressing, building on the extensive work already done in ICES in the past years. There was appreciation of how there now is a science plan and an advice plan and good to see a connection between the two. Work is still needed in some areas– for instance the benchmarks. It was good, though, that issues arising in benchmarks was highlighted and discussed. It is a great help for the work of the ADGs if these issues have already been seen and discussed by ACOM.

18 Closing

In closing the meeting, the Chair thanked all participants for the good discussions and engagement. A special thank you was directed to Harald Gjørseter who would step down as Norwegian ACOM member on 1st May.

A final wish from the Chair was that ACOM members would talk to national experts about discussions and decisions that had been made in the meeting.

19 List of action points

- 2.1 ACOM members: review membership list and report changes to secretariat
- 4.4 Develop the front page of the Fisheries and Ecosystem Overviews, Henn Ojaveer to lead.
- 5.2 ACOM chair to send explanatory emails to chairs of former ACOM expert groups.
- 6.1 Programme of work to be maintained and delivery following the table.
- 6.2 Fisheries Overviews technical guidelines: Henn Ojaveer to lead the work together with Sarah Millar.
- 6.3a FMSY ranges: Colm Lordan and Ciaran Kelly to finalize document and send on to Carmen Fernandez. Once finalised, Secretariat to post on ACOM forum for approval.
- 6.3b Text to be inserted into the existing "12.4.3.1 Reference points for category 1 and 2 stocks" on Fmsy ranges.
- 7.1 An ACOM lead for the Atlantic Ecoregion fishery overview is still required. Henn Ojaveer to follow up. Identified shortly after the meeting: Francisco Velasco and Colm Lordan.
- 7.2 New text on ICES strategy to EBM to be included in the ICES advisory plan.
- 7.3 ACOM leadership to continue process to create ICES viewpoints, responsibility Henn Ojaveer.
- 9.1 Advisory plan to be developed and published following the agreed timeline; ACOM leadership and secretariat.
- 11.1 Improve the ICES MSE guidance document, once the workshop report is published. Colm Lordan to lead.
- 13a1 The prioritization framework will be revised based on comments from ACOM; Ghislain Chouinard and Secretariat will work on this.
- 13a2 The revised framework will be implemented for WGs to score their stocks during 2019 with support from ICES Secretariat.
- 13.2 To build a template to test the ideas of ACOM, for ACOM leadership, and to report back to next ACOM meeting
- 13.3 Network to be consulted on the proposed resolution, Colm Lordan to lead for ACOM leadership.
- 13.4 Further work be instigated to move beyond the development of WKECOFRAME1 and 2, Eugene Nixon to lead.
- 13.5a Baltic cod - the text should be communicated to the relevant ADG.
- 13.5b Short lived sprat - Secretariat to follow up with experts and ensure that the stock is assessed in line with the decision above .
- 13.5c Guidelines will be revised to add clarity and guidance for situations when SR relationship is unclear; ACOM Vice-Chair Colm Lordan will lead with Alexander Kempf to assist.

- 13.6a develop code with annotations on the calculation of Fp05 and FPA , secretariat
- 13.6b Investigate the possibility to refine Fp05 as FPA and harmonise the PA and MSY frame-works- Ciaran Kelly to propose some text on the Forum for ACOM consideration.
- 14.1 ACOM members are asked to begin discussions in their home locations to see if support exists for the proposed options for reform.
- 15.3a ACOM members to check the ADG allocation document for groups for which they should nominate.
- 15.3b. ACOM members to inform the experts nominated about the nomination, to make sure that they would be available for the meeting.
- 15.2 ACOM members to check the list of stocks and propose names for stocks missing assessors or coordinators.
- 16a The Secretariat will inform clients that the timeline for handling requests will be longer.
- 16b 2 ACOM members at a time will for a period receive information from the Secretariat to prioritize requests. The procedure will be evaluated next year.
- 16c An ambassador of ACOM will shadow each special request, nominated by ACOM leadership.

20 List of decisions

- 4.4 Regarding participation in ADGs: countries can populate extra ADGs than the ones they were allocated to if they want, and still be covered with per diem from ICES, but they have to fulfil their quota of allocated ADGs as well.
- 4.5 ACOM reaffirmed the approach of working in collaboration with advice recipients, ie the secretariat addresses the development of advice requests and the ACOM leadership presents advice. Formal and informal consultations were considered appropriate by ACOM.
- 6.1a. The prioritization of the list of guidelines to stay unchanged.
- 6.1b Published Technical Guidelines should be followed to the extent possible.
- 6.2 WRT Doc 6b: No comments were received to the fisheries overview technical guidelines. The Guidelines to be finalised by the end of 2019.
- 6.3 WRT Doc 06c to be modified after feedback from subgroup and preferably reviewed by Carmen Fernandez.
- 7.1 It was concluded that discernible progress on the contents of the overviews (particularly bycatch) needs to be made over the next year and this was given high importance in the meeting. ACOM leads were agreed for the following overviews:
 - Greenland Sea: Jesper Boje
 - Faroese: Petur Steingrund
 - Azores: Mario Rui de Pinho
- 7.2 No ACOM lead needed for the Ecosystem overviews that have an IEA group in charge, but ACOM lead needed for EOs that are produced by expert champions.

- 7.4 Experts should submit proposals for viewpoint subjects through expert groups or WGChairs to be assessed by ACOM leadership.
- 8.1 ACOM to continue to work with ICES data centre to improve quality control/assurance/framework as documented in the forthcoming ICES advisory plan (Annex 4).
- 9.1 ACOM supports the further development leading to publication, following the agreed timeline, of the ICES advisory plan. (Annex 4).
- 10.1 ACOM supports the proposal to delay the dialogue meeting for the framework for ecosystem advice until 2021, as proposed by Bureau.
- 13a1 ACOM agreed that the prioritization framework should be revised and implemented within WGs for the 2019 advice year.
- 13a2 ACOM agreed to the four proposed benchmarks for 2020, with the understanding that some (4-6) stocks on the list will be postponed to 2021 depending on capacity.
- 13.2 To test the audit of ecosystem variability information with a number of expert groups in 2019
- 13.3 ACOM proposes some ToRs for workshop on mixed fisheries (see Annex 5)
- 13.4 ACOM proposes that further development be carried out to build a framework.
- 13.5a Baltic Cod- The suggested text for how to convey that there is no precautionary F was approved by ACOM,
- 13.5b Short lived sprat the 1-over-2 should be used if it is considered precautionary at a lower level of Blim, otherwise the fixed harvest rate should be used. This is a case-specific decision.
- 13.5c Biomass reference points herring the proxy reference points are the correct approach (west of Scotland herring) and that a full benchmark is needed before reconsidering category 1 reference points. In addition, ACOM recommends to the ADG that the advised catch should be set to 0 despite the change in category.
- 14.1 ACOM is supportive of the need for change but the proposals require further consultation with the experts and working groups. ACOM did not give preference for option 2 or 3.
- 15.5 ACOM will meet for consultations on 8 September 2019 in Gothenburg Sweden and the 2020 ACOM meeting will be held 10-13 March in Copenhagen.

Annex 1: List of participants

| | | | | |
|--------------------|------------|--|---|-----------------------------|
| Mark Dickey-Collas | Chair | International Council for the Exploration of the Sea H. C. Andersens Boulevard 44-46 1553 Copenhagen V Denmark | +45 33386759 | Mark.dickey-collas@ices.dk |
| Colm Lordan | Vice-Chair | International Council for the Exploration of the Sea H. C. Andersens Boulevard 44-46 1553 Copenhagen V Denmark | +353 876 995 708 | Colm.lordan@ices.dk |
| Eugene Nixon | Vice-Chair | International Council for the Exploration of the Sea H. C. Andersens Boulevard 44-46 1553 Copenhagen V Denmark | | eugene.nixon@ices.dk |
| Ghislain Chouinard | Vice-Chair | International Council for the Exploration of the Sea H. C. Andersens Boulevard 44-46 1553 Copenhagen V Denmark | +1-506-384-2115 | ghislain@ices.dk |
| Henn Ojaveer | Vice-Chair | International Council for the Exploration of the Sea H. C. Andersens Boulevard 44-46 1553 Copenhagen V Denmark | | henn.ojaveer@ices.dk |
| | | | | |
| Alain Biseau | Member | IFREMER Lorient Station 8 rue François Toullec 56100 Lorient France | +33 297 87 38 20 / +33 6 77 02 722 7 | abiseau@ifremer.fr |
| Alexander Kempf | alternate | Thunen Institute Institute of Sea Fisheries Palmaille 9 | +49 40 38905 194 | alexander.kempf@thuene.n.de |

| | | | | |
|-------------------|------------|--|------------------|---------------------------------|
| | | 22767 Hamburg Germany | | |
| Bjarte Bogstad | Alter-nate | Institute of Marine Research Nordnes P.O. Box 1870 5817 Bergen Norway | +47 92422352 | bjarte.bogstad@hi.no |
| Ciaran Kelly | Member | Marine Institute Rinville Oranmore Co. Galway Ireland | +353 91 387 397 | ciaran.kelly@marine.ie |
| Didzis Ustups | Member | Institute of Food Safety Animal Health and Environment (BIOR) Fish Resources Research Department 8 Daugavgrivas Str. 1048 Riga Latvia | +371 67610766 | Didzis.Ustups@bior.gov.lv |
| Edwin van Helmond | Alter-nate | Wageningen University and Research PO Box 68 1870 AB IJmuiden The Netherlands | +31 317487171 | edwin.vanhelmond@wur.nl |
| Els Torreele | Member | Institute for Agricultural and Fisheries Research (ILVO) Ankerstraat 1 8400 Oostende Belgium | +32 59569833 | els.torreele@ilvo.vlaanderen.be |
| Ewen D. Bell | Alter-nate | Centre for Environment, Fisheries and Aquaculture Science Lowestoft Laboratory Pakefield Road Lowestoft NR33 0HT Suffolk United Kingdom | +44 1502 524 238 | ewen.bell@cefas.co.uk |

| | | | | |
|----------------------|--------------------|--|-----------------------|-----------------------------------|
| Fátima Borges | Member | Portuguese Institute for the Sea and the Atmosphere (IPMA) Avenida de Brasília 1449-006 Lisbon Portugal | +351 21 302 7098 | mfborges@ipma.pt |
| Francisco Velasco | Member | Instituto Español de Oceanografía Centro Oceanográfico de Santander Promontorio San Martín s/n P.O. Box 240 39004 Santander Cantabria Spain | +34 942 291060 | francisco.velasco@ieo.es |
| Gudmundur Thordarson | Member | Marine and Freshwater Research Institute Skúlagata 4 PO Box 1390 121 Reykjavík Iceland | +354 5752000 | gudmundur.thordarson@hafogvatn.is |
| Harald Gjøsæter | Member | Institute of Marine Research Nordnes P.O. Box 1870 5817 Bergen Norway | Mobile +47 414 79 177 | Harald.Gjoesaeter@imr.no |
| Jari Raitaniemi | Member | Natural Resources Institute Finland – Turku Itäinen Pitkätatu 3 20520 Turku Finland | +358 205 7511 | jari.raitaniemi@luke.fi |
| Jesper Boje | Greenland Observer | DTU Aqua -National Institute of Aquatic Resources Kemitorvet Bygning 202 2800 Kgs. Lyngby Denmark | +45 35 88 34 64 | jbo@aqua.dtu.dk |

| | | | | |
|------------------|------------|---|-------------------|--------------------------------|
| Joanne Morgan | Member | Fisheries and Oceans Canada DFO Science Branch PO Box 566 A1C 5X1 St John's NL Canada | +1 (709) 772-2261 | Joanne.Morgan@dfo-mpo.gc.ca |
| Kiersten Curti | Member | NOAA Fisheries Northeast Fisheries Science Center 166 Water Street MA 02543 Woods Hole USA | +1 508-495-2082 | kiersten.curti@noaa.gov |
| Linas Lozys | Member | Nature Research Centre Akademijos str. 2 Laboratory of Marine Ecology Vilnius-12 08412 Lithuania | +370 52729284 | linas.lozys@gamtc.lt |
| Morten Vinther | Member | DTU Aqua -National Institute of Aquatic Resources Kemitorvet Bygning 202 2800 Kgs. Lyngby Denmark | +45 3588 33 50 | mv@aqua.dtu.dk |
| Noel Holmgren | Alternate | Swedish University of Agricultural Sciences Department of Aquatic Resources-SLU Aqua Stångholmsvägen 2 178 Drottningholm Sweden | +46 500 448607 | noel.holmgren@slu.se |
| Patrick Lynch | FRSG Chair | National Oceanic and Atmospheric Administration NOAA Fisheries 1315 East West Highway MD, 20910-6233 Silver Spring USA | +1 301 427 8151 | patrick.lynch@noaa.gov |
| Pieter-Jan Schön | Member | Agri-food and Biosciences Institute (AFBI) AFBI Headquarters 18a Newforge Lane | +44 28 90255015 | pieter-jan.schon@afbini.gov.uk |

| | | | | |
|----------------|--------------|--|-----------------|---------------------------|
| | | Belfast BT9 5PX United Kingdom | | |
| Robert Aps | Member | Estonian Marine Institute University of Tartu 14 Mäealuse Street Tallinn 12618 Estonia | | robert.aps@ut.ee |
| Simon Jennings | SCICOM Chair | International Council for the Exploration of the Sea H. C. Andersens Boulevard 44-46 1553 Copenhagen V Denmark | | simon.jennings@ices.dk |
| Sven Kupschus | EOSG Chair | Centre for Environment, Fisheries and Aquaculture Science Lowestoft Laboratory Pakefield Road Lowestoft NR33 0HT Suffolk United Kingdom | +44 1502 562244 | Sven.Kupschus@cefas.co.uk |
| Yury Efimov | Member | Russian Federal Research Institute of Fisheries and Oceanography 17 V, Krasnoselskaya 107140 Moscow Russian Federation | +7 499 264 9129 | efimov@vniro.ru |

ICES Secretariat

| | | | |
|-------------------------|------------------|--------------|-------------------------|
| Eirini Glyki | ICES Secretariat | +45 33386726 | eirini.glyki@ices.dk |
| Helle Gjeding Jørgensen | ICES Secretariat | +45 33386753 | hgj@ices.dk |
| Inigo Martinez | ICES Secretariat | +45 33386752 | inigo@ices.dk |
| Jette Fredslund | ICES Secretariat | +45 33386743 | Jette.fredslund@ices.dk |
| Lara Salvany | ICES Secretariat | +45 33386728 | lara.salvany@ices.dk |
| Liese Carleton | ICES Secretariat | +45 33386767 | liese.carleton@ices.dk |

| | | | |
|----------------------|------------------|--------------|-------------------------------------|
| Lotte Worsøe Clausen | ICES Secretariat | +45 33386721 | lotte.worsoe.clause n@ices.dk |
| Michala Ovens | ICES Secretariat | +45 33386738 | michala@ices.dk |
| Rui Cata- rino | ICES Secretariat | +45 33386707 | rui.cata- rino@ices.dk |
| Sarah Mil- lar | ICES Secretariat | +45 33386786 | sarah- louise.millar@ices.d k |
| Sebastian Valanko | ICES Secretariat | +45 33386784 | sebastian.val- anko@ices.dk |

Annex 2: Draft annotated agenda

Welcome

1) Adoption of agenda (Doc 01)

The agenda has been circulated 10 days prior to the meeting. The opportunity was provided to comment on the ACOM forum, so it is assumed that ACOM has adopted the agenda.

2) Review of membership (Doc 02)

ACOM is invited to review and update the ACOM membership list. Changes should be reported to the Secretariat.

3) Minutes, Decisions and Action points from ACOM 2018 (Doc 03)

ACOM will review the decisions and report on incomplete actions points from 2018.

The minutes were approved via the ACOM forum prior to this meeting.

4) Reflections on advice activities and process

a) Chair's report to ACOM (Doc 04a)

The Chair's report contains an overview of the advice activities since November 2018 including reporting on MIRIA, MIACO and WGCHAIRS.

ACOM will be invited to comment.

b) Vice Chairs' reports to ACOM (Doc 04b)

The Vice Chairs will be invited to report on activities since November 2018.

ACOM will be invited to comment.

c) Head of Advisory Support report (Doc 04c)

The head of ICES Advisory Support will present a review of the advisory process over the last 4 months.

ACOM will be invited to comment.

d) ACOM members review

ACOM members are individually invited to review and comment on the advisory activities and process and the performance of ACOM.

e) ACOM and advisory programme formal collaborations with recipients and partners (Doc 04d)

Clarification and update on ICES formal meetings with recipients of advice and partners was requested by a member of ACOM for clarification. These are described in document 4d.

ACOM will be invited to comment and request clarification.

5) Science and development

a) SCICOM (Doc 05a)

The SCICOM Chair will provide a report of SCICOM activities of relevance to ACOM.

ACOM will be invited to comment.

b) Fisheries Resources Steering Group (Doc 04a)

The new Chair of the Fisheries Resources Steering Group will be introduced and the changes in structure described.

ACOM will be invited to comment.

6) Technical guidelines

a) Review of status of Technical guidelines (Doc 06a, 06b and 06c)

ACOM, at their annual meeting in 2014, agreed to develop a compilation of Technical Guidelines related with the advisory products and identified the contents of the Technical Guidelines to be produced. Document 6 provides the status priority for production of these.

ACOM is invited to review progress and comment on next stages towards finalisation of the guidelines.

ACOM is also invited to review the preliminary technical guidelines for the fisheries overviews and FMSY ranges (Doc 06b and 06c).

7) Fisheries and ecosystem overviews and viewpoints

a) Fisheries overviews (Doc 07a)

ACOM and secretariat to report progress on the fisheries overviews and confirm timelines for creation or update:

- *Bay of Biscay and the Iberian Coast: Fatima de Borges, Francisco Velasco and Michel Bertignac*
- *Greater North Sea: Ewen Bell*
- *Baltic Sea: Didzis Ustups*
- *Celtic Seas: Colm Lordan*
- *Barents Sea: Harald Gjøsæter*
- *Norwegian Sea: Harald and Yuri*

ACOM will be invited to comment and reaffirm plan for production.

b) Ecosystem Overviews (Doc 07b)

ACOM and secretariat to report progress on the ecosystem overviews and confirm timelines and nominate leads for missing overviews:

- *Oceanic Northeast Atlantic: ACOM link (Harald Gjøsæter) and main contributors (Odd Aksel Bergstad and Francis Neat)*
- *Azores: ACOM link (Fátima Borges) and main contributors (Mario Pinho and Telmo Morato)*
- *Arctic Ocean: ACOM link (tbd) and main contributors (Hein Rune Skjoldal)*
- *Greenland Sea: ACOM link (Jesper Boje) and main contributors (Jesper Boje and tbd)*

ACOM will be invited to comment and reaffirm plan for production.

c) Third generation ecosystem overviews (Doc 07c)

ACOM is invited to comment on plans for the workshop on third generation ecosystem overviews.

d) Viewpoints (Doc 07d)

An ACOM vice chair will report on the discussion at WGCHAIRS on the Viewpoints.

ACOM will be invited to comment.

8) Quality assurance in the advisory process (Doc 08) – in subgroups

ACOM is updated on quality assurance issues from the subgroup chaired by Colm Lordan.

Quality assurance will be discussed further during item 9 – the advice plan.

ACOM will also be asked in subgroups to discuss how we implement a quality assurance framework of the advice .

ACOM is invited to comment and agree on actions as appropriate.

9) Advisory plan– where do we want to be in ten years' time (Doc 9) – in subgroups (supplementary doc 09.1)

ACOM will be requested to reflect on document 9. Document 9 is based on ACOM November 2019 considerations, discussions at WGCHAIRS and input from the ACOM leadership.

A, introductory presentation of the context and purpose of the plan will be given.

Note to ACOM: “advisory plan” is the working title for the document. The purpose of the plan is to prioritise the development of the advice contribution to ICES strategic plan. The plan is aimed at our structures, processes and frameworks. The plan works in partnership with science plan that prioritises the discipline areas that need more investment

In sub groups, facilitated by ACOM and SCICOM leadership, ACOM will consider the explanatory text for six priority areas, and examples of existing best practice in ICES:

1. *Assuring quality*
2. *Incorporating innovation*
3. *Profiling benefits*
4. *Sharing advice*
5. *Evolving advice*
6. *Revealing needs*

Two subgroup sessions will be held for each priority area (see supplementary doc 09.1). Each member of ACOM will have the opportunity to contribute to two of priority areas. Subgroups will report back to plenary.

In the afternoon, a further round of subgroups will take place to consider the tasks and deliverables for each priority area. ACOM members will be asked to choose one subgroup based on their interest and expertise. The tasks and deliverables should be achievable and pragmatic and for ACOM, expert groups and secretariat action. Subgroups will report back to plenary.

ACOM will be asked to approve the time line for the delivery of the ICES advisory plan (doc 09).

10) Dialogue meeting preparation (Doc 10)

The subgroup on the Dialogue Meeting on a framework for ecosystem advice will report and suggest a resolution (containing terms of reference) for the dialogue meeting.

Bureau has recommended a delay of the dialogue meeting until 2021 to enable further progress to be made on a framework for ecosystem advice.

ACOM is invited to comment on developments.

11) Management Strategy Evaluation workshop (Doc 11)

ACOM will be informed about the preliminary findings of the workshop on management strategy evaluation and the possible consequences for ICES advice processes.

ACOM will be asked to consider the approach for a workshop on MSE for rebuilding plans.

ACOM will be invited to comment.

12) Regional issues – Arctic and Areas Beyond National Jurisdiction (Doc 12)

ACOM chair will brief ACOM about recent developments on Arctic and Areas Beyond National Jurisdiction.

ACOM will be invited to comment.

13) Framework for advice and operational challenges – in subgroups

b) Scheme for prioritising stock assessment benchmarks (Doc 13a)

The ACOM leadership proposed benchmark prioritisation scheme will be presented to ACOM and the consequences of its preliminary application to 2020 benchmarks will be shown. A subgroup of ACOM will consider the proposal and review the prioritisation of 2020 benchmark requests.

ACOM will be invited to approve the proposal of the subgroup including the list of benchmarks to be conducted in 2020.

c) Ecosystem approach and productivity changes (Dcs 13b)

In November 2018, ACOM discussed whether and how ICES currently implement changes in productivity and density dependent effects in our short- and long-term advice and whether this is apparent from reports and advice sheets. As tasked, a proposal has been developed by the ACOM leadership. A subgroup of ACOM will consider the proposal and propose an approach for ACOM decision.

ACOM will be invited to approve the proposal of the subgroup.

d) Advice for mixed fisheries (Doc 13c)

Following on from discussions in November 2018, a subgroup of ACOM will consider a resolution for a scoping workshop on the future priorities for the generation of evidence for the management of

mixed fisheries. A subgroup of ACOM will consider the resolution ready for a consultation process with the community of researchers with interest in mixed fisheries.

ACOM will be invited to approve the approach suggested.

e) Dialogue meeting/ecosystem advice framework (Doc 10)

Following on from discussions on agenda item 10, a subgroup will discuss the next steps to realise a framework for ecosystem advice.

ACOM will be invited to approve the approach suggested.

f) Reporting back from benchmarks (Doc 13e)

i) Baltic cod – impact of high M on ICES MSY approach

The benchmark for eastern Baltic cod found that there was no precautionary F_{MSY} for the stock. All candidate F_{MSY} values had >5% to the stock being below B_{lim} . The high M results in no fishing rate being precautionary. How should ICES describe MSY targets in this scenario.

ii) Advice rules for short lived species (highlighted by sprat)

iii) Biomass reference points herring

A subgroup of ACOM will consider the issues and if necessary propose approaches for ACOM decisions.

ACOM will be invited to comment and approve the proposal of the subgroup.

g) MSY & Precautionary frameworks

The layering of the MSY approach on top of the PA approach has led to a confusion around F_{pa} and F_{p05} . Should ICES simplify the approach by defining B_{lim} according to the original PA framework and the implement the risk based approach through the MSY framework?

A subgroup of ACOM will consider the issues and if necessary propose approaches for ACOM decisions.

ACOM will be invited to comment and approve the proposal of the subgroup.

14) Data, monitoring and surveys: the future of the Ecosystem Observation Steering Group (Doc 14)

ACOM will be informed about the challenges faced by the surveys and monitoring expert groups in ICES. This will be prior to deeper consideration at SCICOM.

ACOM will be invited to comment.

15) Advisory Work plan 2019

a) Requests for advice (Doc 15a);

b) Stock assessors and coordinators (Doc 15b);

c) ADGs (Doc 15c);

d) Upcoming workshops of relevance to the advisory activities (Doc 15d)

ACOM will be presented with an update on the workshops of relevance to the advisory work that are planned to be conducted over the coming year.

ACOM will be invited to provide comments progress and preparations for these workshops.

e) Scheduling ACOM meeting at ASC and annual meeting in 2020

ACOM is invited to discuss the setup of ACOM meetings (number of meetings, timing, and duration) and agree the work plan.

ACOM consultations at the ASC proposed for 8 September 2019 in Gothenburg.

ACOM 2020 proposed to be held 10-13 March 2020 in Copenhagen. It is proposed that SCICOM will meet the following week.

16) Special request management (Document 16)

As requested by ACOM 2019, the secretariat has developed a proposal for a strategy to improve the Special Request process. This strategy starts with more engagement from ACOM in the process and requires a prioritization of the Special Requests accepted by ICES.

ACOM will be invited to comment and propose the next steps.

17) Road table reflections on ACOM 2019

Each member of ACOM will be asked for their personal reflection on ACOM 2019.

18) Closing

Annex 3: Text from subgroup on the strategy behind the ecosystem and fisheries overviews, to be incorporated into the ICES advisory plan

Text from subgroup on the strategy behind the ecosystem and fisheries overviews, to be incorporated into the ICES advisory plan

Ecosystem approach: ecosystem and fisheries overviews for the Advisory plan: Advice to deliver an ecosystem approach?

ICES mission is to advance and share scientific understanding of marine ecosystems and the services they provide and to use this knowledge to generate state-of-the-art advice for meeting conservation, management, and sustainability goals. This advice supports ecosystem-based decision making for the management of human activities in the ICES area, and contributes to the effective application of an ecosystem approach. This approach seeks to maintain the health of marine ecosystems, alongside appropriate human use, for the benefit of current and future generations.

To support application of the ecosystem approach, ICES is committed to facilitating the incorporation of a wider range of scientific knowledge into advice to inform decision-makers and society about the state of our seas and oceans, the consequences of human use, and options for conservation and management. We will develop regularly publish, update, and disseminate overviews on the state of ecosystems, fisheries and aquaculture in the ICES region, drawing as appropriate on analyses of human activities, pressures, and impacts. In the longer term, these overviews will incorporate social, cultural, and economic information.

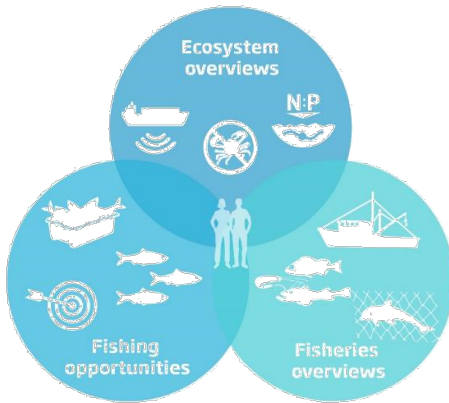
Ongoing development of advice, tools and assessments to support the ecosystem approach will build on our longstanding experience as impartial advisers on the status and use of marine ecosystems. Development of these products will be informed by ICES ecosystem science, observation and exploration, and assessments of human activities that affect and are affected by marine ecosystems

The overviews provide a concise and informative introduction to ecoregions and human activities considered in other ICES advice. Ecosystem overviews identify the main human pressures and environmental characteristics and provide a description of the state of the ecoregions.

Fisheries overviews summarize fishing activities in the ecoregions, describing the countries and fleets, the distribution and intensity of fishing activities, catches and bycatches. They also cover management of the fisheries, the status of fished stocks, wider fisheries impacts and advice on the trade-offs linked to mix-fisheries scenarios

[Aquaculture overviews]

The overviews complement other types of advice, providing supporting context and allowing users to understand the implications of sectoral decisions in an ecosystem context.



Annex 4: Draft of ICES advisory plan

ICES Advisory Plan: delivering evidence-based advice to meet conservation, management, and sustainability goals.

Advice to support the ecosystem-based decision making for our seas and oceans

ICES mission is to advance and share scientific understanding of marine ecosystems and the services they provide and to use this knowledge to generate state-of-the-art advice for meeting conservation, management, and sustainability goals. This advice supports ecosystem-based decision making for the management of human activities in our seas and oceans, and contributes towards the effective application of an ecosystem approach. The approach seeks to maintain the health of marine ecosystems, alongside appropriate human use, for the benefit of current and future generations.

To support application of the ecosystem approach, ICES is committed to facilitating the incorporation of a wider range of scientific knowledge into the evidence base that informs decision-makers and society about the state and trends of our seas and oceans, the consequences of human use, and options for conservation and management. We will answer requests on specific challenges encountered by policy developers and managers. We will also develop and regularly publish, update, and disseminate overviews on the state of ecosystems, fisheries and aquaculture in the ICES region, drawing as appropriate on analyses of human activities, pressures, and impacts. In the longer term, these overviews will incorporate social, cultural, and economic information.

Ongoing development of advice, tools and assessments to support the ecosystem approach will build on our longstanding experience as impartial advisers on the status and use of marine ecosystems. Development of these products will be informed by ICES ecosystem science, data provision, observation and exploration, and assessments of human activities that affect and are affected by marine ecosystems.

Requests for advice will be answered following the ICES framework and guidelines for providing fisheries advice and the developing ICES framework for ecosystem advice. We consider that certain key phrases illustrate the central tenet of the ecosystem approach:

- management of human activities
- consideration of collective pressures
- achievement of good environmental status
- sustainable use
- optimization of benefits among diverse societal goals
- regionalization
- trade-offs
- stewardship for future generations

Evidence is required to explore the consequences of likely trade-offs between and within sectors as well as between sectors and conservation and protection obligations. This is to support sustainable development aimed at both human and ecosystem well-being and stewardship of marine ecosystems.

The overviews complement other types of advice, providing supporting context and allowing users to understand the implications of sectoral decisions in an ecosystem context. They provide

a concise and informative introduction to ecoregions and human activities considered in other ICES advice. Ecosystem overviews identify the main human pressures and environmental characteristics and provide a description of the state of the ecoregions. Fisheries overviews summarize fishing activities in the ecoregions, describing the countries and fleets, the distribution and intensity of fishing activities, catches and bycatches. They also cover management of the fisheries, the status of fished stocks, wider fisheries impacts and advice on the trade-offs linked to mix-fisheries scenarios. Aquaculture overviews will describe the distribution, ecosystem interactions, benefits, impacts and potential of aquaculture production at a regional scale. The overviews also afford an opportunity to present information on “potential” and identify options for development where the ratio of benefits to impacts is projected to be high.

What we will do and how we work

To be relevant and credible, ICES advice should be developed and shared in a legitimate and transparent manner. It is independent and based on best available knowledge. ICES will continue to provide the evidence base for policy developers and managers of marine activities in response to their needs for recurrent advice and special one-off requests. To imbed the provision of evidence in the context of ecosystem-based management, the advice will be framed within fisheries, aquaculture and ecosystem overviews. ICES viewpoints will also provide valuable contributions to global discourse around the state of the marine ecosystem, the management of human impacts and the provision of goods and services.

Credibility

By ensuring robust debate and critical evaluation of data, methods and knowledge sources, ICES will continue to provide credible best available science for decision making for society. ICES sees the dual tools of consensual deliberation of science and independent peer review of those deliberations, as the key mechanisms to deliver our vision. The breadth of knowledge across over 150 expert groups, and the dynamism of our experts, is the foundation of ICES advice. Our experience as a trusted knowledge provider and facilitator of evidence for policy builds on this foundation.

Relevancy

ICES will continue its dialogue with recipients of advice and wider society to maintain the relevancy of our advice. The management objectives determined by society are already incorporated into the fisheries advice framework. ICES will work with partners to create a similar ecosystem advice framework which reflects international objectives, such as those of the Convention of Biological Diversity (CBD) and regional objectives such as the Baltic Sea Action Plan, North-East Atlantic Environment Strategy and the Marine Strategy Framework Directive. ICES will also use FAO guidance on the ecosystem-based fisheries management to link and where possible reconcile resource management and biodiversity conservation objectives.

Legitimacy

Continuing adaption and improvement of our processes to reflect the expectations of the recipients of advice will maintain our legitimacy. Clear decision making and appropriate quality assurance of the advisory processes will underpin our role as an independent and legitimate evidence provider. The potential for tensions may arise, as the transparency and the interaction with stakeholders increase, in particular regarding the independence of the advice given. ICES will work with stakeholders, and social scientists, to ensure a wider range of relevant scientific knowledge is incorporated into our advice consistent with the ecosystem approach. ICES advice will be shared and communicated in an audience relevant manner.

Priority areas of advice plan

Assuring quality

Assure that quality in ICES encompasses the entire process from data collection to the publication of objective and independent advice.

ICES will continue to build upon the proven track record of providing credible evidence-based advice through assuring quality, reproducibility and transparency. The existing quality control and assurance processes are enhanced to form an end-to-end quality assurance framework that will encompass best practice in data management, data integration and translation into advice. Quality assurance within ICES should meet international standards, adhere to the FAIR principles and include independent peer review for existing and new areas of advice. To assure high quality advice, ICES will continue to maintain and expand the expertise needed to address evolving advisory needs.

Tasks:

- As part of the quality assurance framework (QAF), map out process flows and critical control points and feedback loops in the advisory system and begin to address identified critical control points.
- Seek international quality accreditation for the ICES advisory system.
- Develop a comprehensive ICES quality management system for advice including implementing RDBES, TAF, etc.
- Where possible ensure that all advice products are based on data that adhere to the FAIR principals.
- Application and ongoing development of the ICES benchmark system, to ensure the advice is fit for the evolving advisory demands.

Incorporating innovation

Incorporate new knowledge into the advisory process to contribute effectively to the creation of advice on meeting conservation, management and sustainability goals.

ICES advice is based on the best available knowledge, while also meeting our stringent requirements for transparency, traceability, documentation, peer-review, robustness and being relevant to the needs of recipients and stakeholders. Knowledge assimilated by ICES spans outputs delivered through the ICES science plans, marine science internationally, data, tools and technologies for monitoring and assessment, as well as relevant social, cultural, economic and stakeholder information. ICES will work with scientists, advisors, recipients of advice and stakeholders and be guided by their feedback as it assimilates new and a wider range of relevant scientific knowledge. The principal use of assimilated knowledge will be to advance ICES capacity to provide ecosystem-based advice.

Tasks

- Scan and evaluate new knowledge, from inside and outside the ICES community, to assess if it can support state of the art advice on meeting conservation, management and sustainability goals (ACOM, EG, benchmarks)
- Review and report on best practices in other agencies and management systems to inform future development of advice (Benchmarks, workshops, dialogue meetings)
- Support translation of mature science into viewpoints or ecosystem overviews (if ICES priority but no recipient request) and into requested advice (if recipient request) (EG, ACOM)
- Engage stakeholders and advice recipients to develop current and future advice products (MIRIA, MIACO, ACOM)

- Engage funding agencies to develop/ recommend approaches to project calls and design that increase uptake of science into advice (Council)

Profiling approach

Profile and communicate to existing and potential new users the relevance and benefits of the ICES approach to providing advice.

ICES is a leading, trusted adviser on the impacts of human activities on marine ecosystems; advising on more than 90% of fisheries catches and the impacts of these associated fisheries on the marine ecosystem of the North East Atlantic. The advice draws on the expertise and experience of approximately 1,500 active researchers across a multitude of disciplines in many regions. Throughout its long history as an adviser, ICES has recognised the need to have credible, timely and relevant advice. The advice is based on the best available science and is characterized by quality assurance, developed in a transparent process, unbiased, independent manner. ICES will continue to develop advice products informed by its extensive network and underpinned by its experience as a trusted operator at the science for policy interface. It will profile its strengths in incorporating state-of-the art scientific knowledge and adapting globally agreed standards to regional management challenges.

Tasks

- Prepare a communication strategy with SCICOM and the secretariat outlining the strengths and future direction of the ICES advisory system clarifying the message that ICES is an organisation that operates as a science network with functional, knowledge brokering and boundary organisation activities.
- Highlight the ecosystem approach in existing ICES advisory products and communicate this to new audiences and publicise future developments of the integration of ecosystem approach in ICES advisory products
- Communicate the synergy between ICES Data, Science and Advice by revising ICES website in terms of target audience, levels of detail and clarity. Link this to the visualisation of advice on the website.
- Raise the profile of ICES with marine sectors (commercial, managers and policy makers) not currently engaged with ICES such as energy and shipping.
- Broaden the participation in the ICES Science community by promoting participation from academia in the Advisory process – the ASC is an important event in this respect
- Identify and target specific audiences of advice when concerns are expressed about ICES advice process and begin dialogue to resolve such issues
- Expand the terms of references for MIRIA and MIACO to use these meetings as part of the communication strategy

Sharing evidence

Share effectively the evidence and advice with recipients and society, and develop a responsive dialogue with partners to maintain relevance.

ICES acknowledges that the audience for its advisory products goes beyond the clients and immediate stakeholders to a much broader society. ICES already embraces a range of mechanisms for communicating and will continue to use new evolving methods to communicate our advice. ICES will maintain a dialogue with key users to ensure that it remains responsive to their needs. The methods used to create the advice must be transparent and explained with the advice. The complexity of the language used will be appropriate to the target audience. The flow from the underlying science research to the published advice will be explicitly described, together with the principles by which ICES delivers the advice and evidence.

Tasks:

- Improve and ensure branding of all ICES advice products
- In dialogue with clients to design and develop a user friendly and dynamic web platform for ICES advice (either through the ICES website, or in parallel)
- Develop web-based advice that includes several levels/layers (incl. popular advice, forecast options, full advice) and also enables presentation of advice in an effective and consistent format
- Work with the fishing industry to develop a mechanism to bring commercially derived sample data into the RDBES
- Improve the mechanism for sharing alternative perceptions of the state of stocks and fisheries.
- Simplify the headline advice, but connect to the underlying basis and data in an interactive way
- Ensure that ICES advisory highlights are made available to society in a user-friendly way
- Ensure corrections in advice and updates in the advisory products will be transparent and easily tracked by the clients.
- Improve the advice profile in the ICES document archive, encourage the creation of an ICES online library for all documents

Evolving advice

Evolve the advice to remain relevant to policy developments and management challenges, while horizon scanning likely future evidence needs.

The policy arena is continuously changing and ICES advice needs to evolve to stay fit for purpose and pre-empt future requirements for impartial evidence. ICES needs to be resilient to these future policy and technology developments and ensure that the knowledge base is robust. ICES will actively engage with recipients to understand and meet their oncoming needs. The ICES advisory system will adapt to incorporate further consideration of issues such as cross sectoral challenges, ecosystem thresholds, acceptable risk and competition for space. Efforts with requesters will intensify to identify and clarify management objectives, future scenarios and potential trade-offs. Mechanisms will be developed to alert managers and stakeholders to changes in the marine ecosystem and human activities. ICES will strive to maintain clear narratives when answering complex requests.

Tasks:

- Map with recipients their current and potential future policy initiatives and management objectives and document their potential impact on the provision of advice from ICES
- Develop an ecosystem advice framework
- Identify and develop new clients for ICES advice e.g. marine energy and spatial planning.
- Develop a stronger base in scoping and stakeholder engagement
- Investigate mechanisms and examples of assuring independence of advice in systems with increasing stakeholder participation, more consultation and iterations with client.
- Identify associated data and information needs related to policy developments, the concept of risk and thresholds for ecosystem health

Identifying needs

Identify and communicate the expertise, monitoring, data and process needs to maintain and develop the provision of relevant advice.

ICES receives data from providers, undertakes analysis, and provides evidence-based advice and services. To enhance the provision of advice, ICES needs to ensure that the scientific community and advice recipients are aware of potential improvements, gaps, and emerging issues that should be addressed. Successful building of capacity requires an informed development approach. ICES will evaluate skills and expertise shortages, and the provision and use of data and knowledge. This evaluation will assist the data collectors (e.g. RCGs), experts, funding agencies and advice recipients in their provision of resources for the production of advice.

Tasks

- Conduct an objective stock assessment prioritization and data-gap analysis
- Collate a list of future research and data requirements from benchmarks, overviews and expert group reports in an existing database on an annual basis, across expert groups, steering groups and SCICOM
- Continuously review training courses run by ICES with the potential to increase the programme for key areas.
- Identify key under-populated areas of expertise and clearly communicate the current needs in expert groups to institutes and conduct an independent review of the gaps in expertise related to the anticipated advisory needs.
- Identify potential programme of funding and training in disciplines that are relevant to the institutes and engage funding agencies and recipients of advice to highlight research to meet future advice needs
- Once the database on surveys, RDBES and the inclusion in stock assessments is concluded, communicate with the institutes and regional data groups about gaps and modifications that will augment the surveys and monitoring utility.
- Identify disciplines and institutions that could collaborate with ICES with the view to improving and adding context to ICES advice e.g. socio-economics and marine planning

Annex 5: Proposed ToRs for WKMIXFISH-Scope – Scoping workshop on the future of mixed fisheries advice

2018/2/ACOM26 The scoping workshop on next generation of mixed fisheries advice, chaired by XXXX XXX, will meet XX–XX 2020 in XXX, to:

- a) Review recent scientific developments on mixed fisheries analysis, modelling and visualization to create awareness of what is currently achievable and identify potential approaches for the future.
- b) With advice recipients and stakeholders, identify a range of questions on mixed fisheries in the context of policy objectives such as achieving MSY, spatial management, discard reduction (landings obligation), improving selection and ecosystem approach;
- c) Prioritize recommendations for research to lead to future improvements of the mixed fisheries advice;
- d) Consider potential process and timetables by which new data and methods can be incorporated into the advice system
- e) Consider methods to improve communication of mixed fisheries information and advice.

WKMIXFISH-Scope will report by XXXX to the attention of the ACOM Committee.

Supporting Information

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|--------------------------|---|
| Priority | The current activities of this Group will enable ICES to respond to advice requests from a number of clients. Consequently, these activities are considered to have a high priority. |
| Scientific justification | <p>ToR [a] The ICES mixed fisheries advice using Fcube is focused on the short term consequences of different advice scenarios. While this approach is useful to look at short term trade-offs and conflicts with the single stock advice both understanding and utilisation of this advice has been low. There have been a number of research projects looking for new ways to analyse, visualise and model mixed fisheries data. It would be very useful to demonstrate these to advice recipients and clients.</p> <p>ToR [b] There is a need for a wide dialogue among the scientific community, advice recipients and stakeholders on the scope of current and future advice requirements linked to current and emerging policy needs.</p> <p>ToR [c] Based on the types of questions identified in b) prioritise the research needed.</p> <p>ToR [d] Consider how new mixed fisheries advice can be developed in practice e.g. will this be possible with existing EG or are new groups needed? Timing and frequency of the advice etc.,.</p> <p>ToR [d] The current mixed fisheries advice is complex and the communication of future mixed fisheries information and advice needs to be simple.</p> |

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| 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 and SharePoint site provision. |
| Financial | No financial implications. |
| Linkages to advisory committees | ACOM is the parent committee |
| Linkages to other committees or groups | WKMIXFISH-Scope will be linked with WGMIXFISH-Methods and WGMIXFISH-advice |
| Linkages to other organizations | STECF – Fisheries Dependent Information expert group. |