

THE ANNUAL MEETING BETWEEN ICES, ADVISORY COUNCILS AND OTHER OBSERVERS (MIACO 2020)

16–17 January 2020
ICES Headquarters, Copenhagen, Denmark



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1 Welcome and opening of the meeting

ICES welcomed the MIACO participants and a Tour-de-Table was initiated. Representatives from BSAC, PelAC, NWWAC, SWWAC, Market AC, NSAC, LDAC, ANOPCERCO, Marine Ingredients Denmark, Pelagic Freezer-Trawler Association, Marine Conservation and Cooperation Association, Norwegian Fishermen's Association, OPEGUI, Dutch Elasmobranch Association, Killybegs Fishermen's Association, Scottish White Fish Producers Association Ltd., DGMare, Innovative Fisheries Management, National Federation of Fishermen's Organisation, Pew Charitable Trusts participated in the meeting. Three observers also attended; from the Marine Stewardship Council, the Department of Planning, Aalborg University and the School of Global Studies, University of Göteborg.

The participants list is found in Annex 1.

2 Adoption of agenda

The number and character of Any other Business (AoB) for MIACO was assumed to cover the major issues, as well as take up more time than usually. ICES would present responses to the AoB and thereafter take questions. The agenda was adopted with thanks.

Suggested dates for MIACO 2021: 14–15 January 2021.

3 Review

3.1 Review of ICES Advisory Services in 2019

An overview of the ICES Advisory services in 2019 was given (Document 03a). MIACO was invited to comment on the process and discuss any issues that happened in 2019.

ICES presented a review of the advice given in 2019, including a presentation of the Special Requests process. Advice updates happen when the perception of stock changes or when errors are spotted. Only the updates where the advice catch has changed are communicated to the recipient(s). Data transmission failures have decreased due to better communication between ICES and data users and data providers. However, issues are still present with VMS and mixed fisheries data. Most Expert Groups have addressed the Terms of Reference relevant to the 2019 advisory process. The lack of expertise in mixed fisheries and MSEs was emphasized, as it makes the entire process vulnerable. Quality Assurance and Quality processes are in focus for 2020.

There were no questions or comment.

3.2 Advisory plan

The [ICES advisory plan](#) was presented and MIACO was invited to comment on the Plan and asked which they perceive as the top priority area for development.

ICES ADVISORY PLAN

Priority areas

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

Sharing evidence
Effectively share evidence and advice with requesters and society, and develop a responsive dialogue with partners to maintain relevance.

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

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

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

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



MIACO response

MIACO stated which areas they saw as the most important (see table below). A very clear prioritizing of the quality assurance was evident around the room, however also evolving advice, incorporating innovation and sharing evidence were considered to be the highest priority of the advisory plan. The key for MIACO was the ability for ICES to provide a quality assured advice that is adaptable to the changing conditions in the ecosystem and the ability to have as many relevant managers to take the advice up as possible. Advice has developed from being about reducing F, restricting the impact of fishing. Now CFP and MSFD and other policies is asking ICES to advice for managing to targets.

Priority area	'Votes'
Assuring quality	14
Evolving advice	9
Incorporating innovation	8
Sharing evidence	7
Highlighting benefits	1
Identifying needs	1

4 Advisory plan priority area 1. Assuring Quality

4.1 Quality control of data

The plans for quality control of ICES housed data was explained to MIACO. This included progress towards accreditation, TAF, RDBES, quality control of aging and biological sampling, improvement to survey databases. MIACO was invited to comment.

ICES presented the plans for quality control of data throughout the advice process that centres on the Quality Assurance Framework, and a network of ICES groups and initiatives. Fair principles were explained: open and findable data, and current systems of Quality Assurance that are being developed, focusing on SmartDots, the Regional DataBase Estimation System (RDBES) and Transparent Assessment Framework (TAF). The longer-term planning of Quality Control and Quality Assurance were also discussed.

It was explained how the Quality Assurance Framework (QAF) began with a subgroup comprising PGDATA and survey data experts among others. QAF tries to document all the quality assurance processes within the ICES Secretariat, ICES groups and the Member Countries. It was explained that current quality assurance works through a number of processes such as: auditing of stock assessments, independent reviewers, ACOM guidelines and data checking within expert groups.

The key factors identified going forward were developing a culture and desire within the ICES science community of accountability, responsibility, transparency and reproducibility. The importance of communication was stressed, particularly regarding the weak points in the system. Examples of these quality control points were data validation at point of entry to an ICES database, and national quality control prior to data submission.

Quality statistics, quality reports and monitoring of targets such as Mohn's Rho were also discussed.

PGDATA are currently mapping out a full quality assurance framework. The group has reviewed quality assurance in other domains and identified areas of relevance to ICES.

In terms of data governance, the importance of maintaining an oversight in the governance of databases and systems across ICES, was stressed. There are currently a number of data governance groups within ICES, taking care of the VMS, DATRAS, acoustic, TAF and SmartDots. The importance of maintain consistency across the organisation was emphasised.

It was announced that the ICES Data Centre was looking for accreditation. The DIG had recommended the core trust seal. The aim is to apply for this at some point in 2020.

The DQA repository was then discussed. This was developed a number of years ago, and now maintained by PDATA. It holds a number of workshop reports related to age data, maturity data, and calibration methods, as well as protocol documents for surveys and tools for aging such as SmartDots; a tool to compare age reading across institutes, which also allows the production of statistics on bias and precision of aging data.

An image of the process flow and quality control points was presented as a pipeline diagram. It was explained that for each individual stock, the quality control points could be mapped out. This will start to happen over the next two years.

ICES presented an update on the Regional DataBase (RDB) and the RDBES. The future plan for these would require a major effort by the ICES community to make them operational. The RDBES

will be tested on seven stocks in 2020, and then all stocks in 2021. It was stressed that this will be a big learning curve for the ICES community.

One of the most important parts will be in the unification and streamlining of data calls, so that potentially there will only be one data call. Finally, the resources within the ICES Data Centre for the quality assurance work were discussed. It was confirmed that these were in place for TAF, RDBES, DATRAS, the acoustic database and new ways to disseminate advice in the future. These would include further development of the VISA tool, and moving towards interactive publications of the advice, in addition to the current PDF.

MIACO response

It was asked what accountability meant in the QA context. ICES is not managing the experts that create the advice, so there was a need to encourage the experts to take ownership of the quality of the work being provided. Due to demands on the time of experts and the lack of investment in our expert-network, quality can drop. This needs to be improved. There was agreement that ultimately ICES is based on trust from the community.

Many were impressed with the presented work, and felt that ICES had come a long way since the issue was first discussed some years ago. There was some concern expressed over how different institutes would deal with accreditation. The point was reinforced that ICES would lead in the accreditation front and help member countries, which were at differing stages of accreditation themselves, with the process in due time.

Some thought that the critical issue for ICES was to be able to identify and test all the quality control points in the system, and then monitoring these. ICES replied that the best forum for this would be at the benchmarks, and as such they had not been mapped out for all stocks yet.

There were additional questions on how the entire system would be tested, and if it would be robust enough to pick up erroneous data. ICES replied that this was not an engineering process, but rather a fluid system where different parts of the system would need to be considered in different ways. It was stressed that it was important to be realistic about the task at hand, which would be difficult.

MIACO commented that one of the key elements is the measurement of catches and discards, and questioned how ICES will accredit this. As an external source of data, ICES replied that it would be very difficult.

It was also asked if looking back in time, we could have caught some of the errors using this new QAF. It was stated that fixing wrong measurements was not the focus, but rather focus was on fixing unstable assessments and advice. ICES confirmed that all data were checked and filtered before going into ICES databases, so there was already some protection there.

There was a question regarding the RDBES and whether only DCF data would be used. ICES replied that it would contain data from outside the current DCF, funded at a national level. It was also stressed that stakeholder information could also fit into the RDBES, for example in the form of sampling that is taking place in factories and cameras at sea.

4.2 Quality assurance of Advice

The plans for quality assurance of the advice process and the associated challenges were explained to MIACO. MIACO was invited to comment.

It was acknowledged that the proposal was in parts aspirational, but some areas were already being well covered by the advice process.

Five key tasks were presented, representing challenges for the advice process. ICES is innovating and at the forefront of quality assurance across the global RFMOs and RFBs in its use of TAF (Transparent Assessment Framework) and the RDBES (Regional Database Estimation System), but that there were still challenges, for instance issues surrounding retrospective bias and the provision of mackerel advice.

It was highlighted that ICES is the advisory body with a Stock Assessment Graphs database (SAG) and a Stock Identification Database (SID). ICES stressed the need to use the “best available science” - a globally agreed point. The phrase could be found in the UN fish stocks agreement, the MSFD and CFP, the NEAFC convention, and alluded to in different terminology in the Norway Marine Resources Act.

The ICES network outside of PGDATA does not fully understand what quality assurance involves. There is therefore a need to set up a partnership between managers and stakeholders. ICES proposed a partnership between ICES, management and stakeholders to further the issue. A one-off workshop was proposed to begin the process (as MIRIA wished for), that may be followed up by a Working Group, with Terms of Reference drawn up between MIRIA and MIACO that would meet in 2021. The timing would be considered but would not take place between MIRIA and MIACO due to fatigue of participants.

The ICES then presented the performance of ICES advice over the last year.

- There has been a stable number of special requests over the last three years. ICES currently gives MSY or MP advice on 93% of category 1 and 2 stocks.
- Methods have been developed over the last few years for giving MSY advice on the data-limited stocks in category 3–6 stocks.
- In 2019, ICES had to change the headline advice in 2% of stocks (two issues in 2018 and two issues in 2019).
- 28% of category 1 stocks have large retrospective inconsistency.
- 50 stocks are now fully integrated into TAF and 41 partially integrated.

ICES presented an explanation of the current ICES benchmark process, and provided a status update of the ongoing work to reform ICES benchmarks. It was explained that benchmarks are part of the ICES quality assurance work and are workshops, as such they are open to stakeholders and others who would like to participate. Scheduling of benchmarks is a decision that is the sole work of ICES and it is based on scientific need and readiness. In 2019, ICES began using a prioritization scheme as a tool to assist in scheduling benchmarks; it is not deterministic, but is a key source of information. ACOM is currently reviewing the ICES benchmark process. This work should be concluded in March 2020.

MIACO response

There were questions around the quality assurance of benchmarks and whether the process would be included in the QAF. The ACOM chair assured that it would have to be but highlighted the trade-offs when, for instance, introducing a new survey, between getting a new piece of data into the process as quickly as possible and ensuring its reliability.

The point was made that it is not just quality that is required and the need to be “not-wrong,” but also the need to be useful.

It was agreed that category 5 and 6 stocks were problematic in the way the ICES advice system currently deals with them, and that it was not just the responsibility of ICES to address that, but also for policy and data to be active in this area.

Action point: ICES to consider the proposed Workshop in light of feedback.

5 Evolving Advice. Advisory plan priority area 5

5.1 Ensuring that Advice remains consistent across management objectives

As fisheries and conservation objectives begin to converge, MIACO was asked to comment on the growing interaction between management objectives for exploitation of natural resources and biodiversity conservation (species and habitats). MIACO was asked how ICES could maintain robust and credible advice that is consistent across different management objectives?

Using examples from a recent FAO symposium, ICES highlighted that there is a recent trend for the convergence between management objectives related to the exploitation of natural resources (food) and biodiversity conservation (species and habitats). It has also been shown that evidence-based fisheries management is having a positive effect on fish stocks. Managing the variability (not stability) has been key to adapting to, for example, climate change induced changes in productivity and/or range shifts of fish stocks. An increase in our understanding of the ecosystem has also allowed us to be aware of the option to keep exploitation at a level that would ensure the functioning of the ecosystem.

Given the suite of global initiatives that will impact fisheries from a global (e.g. CBD biodiversity targets, UN BBNJ, climate change and ocean acidification, etc.), as well as from a regional perspective (e.g. NEAFC/OSPAR collective arrangement, EU-green deal, EU-CFP MSFD), it is recognized that there may be multiple management objectives and solutions. How to prioritize and choose between management fisheries management options, that have knock-on consequences on other societal objectives, is the job of managers. ICES as a scientific organization can provide as advice the evidence base and/or the likely consequences of the management options. This is increasingly being requested from ICES (e.g. Eastern Baltic cod, and or reviewing multispectral human activities across the EU causing physical disturbance to the seafloor and loss of habitats).

MIACO was requested to consider the following issues:

1. How do we ensure that advice remains consistent across management objectives?
2. How do we embed science on fisheries conservation in the broader biodiversity needs/agendas?
3. How do we ensure cooperation with a broader set of players with less sectoral independence/self-determination?

MIACO response

How do we ensure that advice remains consistent across management objectives?

Requesters will have different objectives. In the EU context, DG ENV and DG MARE are two different parts of the same organization. It is at times challenging to align their objectives. This makes it very hard for ICES to be consistent. It was pointed out that RSCs (HELCOM and OSPAR) are also regional organization that will have a further set of objectives that would require aligning.

It was noted that the advice requesters are key to ensuring that ICES remains consistent across management objectives. A suggestion was made to open up the ICES advice process at critical stages for policy/management input.

In the EU context, ICES is requested to provide advice, on single stocks, on early warning signals of threat to the ecosystem and specific environmental issues (special requests) which may or may not be consistent. In addition, the Habitats and Birds Directive work provides objectives with regard to the natural range of species and habitats, which serve to underpin the ecosystem. This complementarity in the EU context makes sense and is not that complicated.

ICES produces advice across its themes of single-stock advice, fisheries and ecosystem overviews and environmental advice. These products should be produced in parallel. It would be beneficial to produce a qualitative analysis of the consistencies and/or inconsistencies of these within ecoregions.

To some degree the likes of the CFP and the MSFD have the same policy objective of “*good environmental status (GES)*”. As such these two policies should assist each other. One idea when providing advice on, for example, a fish stock is to also provide options on how to fish (line, bottom trawl, etc.) and likely consequences of the activities with regard to achieving other policy objectives.

2. How do we embed science on fisheries conservation in the broader biodiversity needs/agendas?

It was recognized that while MIACO participants may want to further embed fisheries into broader biodiversity needs/agendas, it was the managers who are able to do this. It could be beneficial to compile a list of species and to provide early warning signals once numbers decline to a critical level.

It is mainly up to the requester to seek advice that embeds broader biodiversity needs into fisheries advice. ICES could however hire a communications expert to actively “sell” or make aware ICES products with non-traditional actors.

ICES is viewed to having a role in high seas issues in the BBNJ process. When 10% MPA targets increase, ICES would have a role to advice on the benefits to broader biodiversity as well as to fisheries. Fisheries and environment are very much in silos, under different ministries. ICES should up its game with regard to the ecosystem overviews and make them more useful from a management perspective.

3. How do we ensure cooperation with a broader set of players with less sectoral independence/self-determination?

ICES was encouraged to engage with a wider suite of organization, and all the way to the top levels. ICES mentioned that advice would be presented to IMO in the coming month, but was a proactive initiative by ICES ([Biofouling on vessels – what is the risk, and what might be done about it?](#))

It was questioned whether ICES has the mandate to challenge the policy objectives of organizations, if it was solely a scientific organization.

5.2 Engaging with managers and stakeholders through special workshops

ICES is increasingly using stakeholder workshops to explore knowledge gaps and appropriateness of methods for management, examples include WKIRISH (Workshop on an Ecosystem-based Approach to Fishery Management for the Irish Sea), WKBALT (Benchmark Work-shop on Baltic Cod), WKRRMAC (Workshop on a Research Roadmap for Mackerel), deep sea access regulation, WKBALTIC (Workshop on the Ecosystem Based Management of the Baltic Sea) Baltic salmon management plan. MIACO was asked to

comment on the strengths and weaknesses of the approach taken to engaging with managers and stakeholders through these workshops.

At the end of a short presentation, MIACO to discuss the two questions:

1. How best to balance manager and stakeholder involvement with the potential loss of independence and credibility, real or perceived, in the advisory product?
2. How to ensure active and equitable participation / representation from all parties given their different access to resources and expertise–power imbalances?

MIACO response

The following points were raised:

- There is a lack of capacity (expertise and/or funding) from parts of the industry to provide evidence to support their causes. Information tends to be presented in an anecdotal manner rather than in a scientifically or even in a usable manner. It was recognised that some sectors of industry are reluctant to collaborate with science even facilitating data collection. However, a close collaboration between scientists and fishermen is key to both sides, and that collaboration would improve data interpretation from the science side and reciprocally, the fishers would benefit from a better understanding of what is the aim of the scientists.
- All expert groups should be open to participation of the outside world making the entire process fully transparent. Code of conduct should be public, and all participants in meetings should also be public.
- Overuse of technical language makes some stakeholders uncomfortable. Some stakeholders have difficulties understanding it, and tend not to participate as much as they could as they feel excluded from the discussions.
- With regards to conflict of interest: the guidelines associated with the code of conduct was thought to be working quite well. When it comes to benchmarks, stakeholders have contributed significantly to past benchmarks.
- ICES should invite experts in a way that ensures a spread of knowledge from all different views. Experts should be paid for their participation, and get their name in the report to ensure responsibility and accountability. ICES should look at other models, stakeholders in US and Canada are completely removed from the advice.
- The existing rules and procedures for attendees to ICES meetings, should be enforced and more training should be given to expert group chairs.
- It is thought that science is not compromised but reinforced for having industry and science working together. Fears of individual bias and potential individual influence were dismissed. Moreover, scientist bias is rarely mentioned or seen as a problem. Scientists can also have their own interests at heart.
- ICES should make it clear to different types of stakeholder participants what is expected of them.

Action point: ICES to address the challenges on stakeholder engagement further and to investigate further training of expert group chairs.

6 Changes to Advice framework in 2020

6.1 Bycatch roadmap

Requesters of advice are expecting greater progress from ICES on the reporting and advising of by-catch in fisheries. ICES is developing a bycatch roadmap to make tangible progress. The draft roadmap, not yet commented/agreed on by ACOM, was presented.

It was noted that the version of the roadmap is version 2 (i.e. there have been two rounds of consultations with the ICES WGs involved). The draft is currently EU-orientated, and it is acknowledged that its scope should be broadened to involve other parties. Background on relevant USA and Canadian legislation is being gathered. The main ICES WGs involved, main medium and long-term goals and data sources/needs were presented.

MIACO response

The EU Technical Measures Regulation (EU 2019/1241) includes the requirement to collect data on bycatch of protected species. This Regulation is outside DCF, and it is unclear still whether Member states would use their DCF schemes to fulfil the obligations under the Technical Measures Regulation.

Quantitative input from ICES regarding conservation status of species under the Habitats Directive may be required in the future. ICES clarified that a grant agreement with DG Environment is under development, and it may include work related to the Habitats Directive.

It was noted that the document does not provide a definition of bycatch. ICES agreed that this will be defined in the document. The EU Technical Measures Regulation includes a definition of protected species. ICES has an additional initiative to this roadmap which consist in developing a list of sensitive species independently of list included within legislation.

It was also noted that timelines are lacking for the strategic development (i.e. item #5) in the draft roadmap. ICES explained that the roadmap is still in a draft format, and a timeline has not been discussed yet. Tasks included in the roadmap would need to be linked to action points and timelines.

It was mentioned that small-scale fisheries would be able to provide raw data on bycatch, while the responsibility to process those data lies with member states. Also noted that recreational fisheries were not mentioned in the roadmap. ICES agreed that recreational fisheries should be mentioned in the document.

Some ACs are including bycatch of sensitive species (i.e. seabirds) as a part of the general work plans (e.g. LDAC). Many of the ACs work with several NGOs, mainly Birdlife international and implementing technical measures by developing new gears. Maps are being developed that identify areas where species (i.e. seabirds) distribution and fishing effort coincide, sensitivity maps, habitat distribution maps, and risk maps.

6.2 Ecosystem Advice framework

The credibility of ICES advice on fisheries is helped by the use of a framework for that advice. This framework also aids transparency of decision making. For a number of years, ICES has been developing a framework for ecosystem advice. Progress on developing this ecosystem advice framework was be presented to MIACO.

MIACO response

- The work done was welcomed as it moved and linked the policy, management and specialized science to operational products through the ecosystem advice. The need for dialogue with managers and stakeholders involvement was highlighted. Next steps in the community should encourage discussion on how to define management objectives and how to operationalize the advice on a multi-stakeholder and multidisciplinary environment.
- There is a policy drive for advice for ecosystem based management. There is a mandate to the community to produce this advice. The role of ICES as facilitator of the dialogue between the policy makers and stakeholders was highlighted.
- There is some frustration among managers (and scientist) formulating requests to ICES in a useful manner; especially on how to define what questions to ask, and what is the correct data. Improving the request template to get a better questions sent to ICES is quite important; however, it is not only the template since it is an iterative process facilitated by ICES.
- MIACO discussed the role of science to develop policy objectives. There are different roles that science can take.

There are different expectations of the role of science in developing and /or informing policy, and how the ICES Strategic Plan states the objective of helping policy developments by providing impartial evidence. The ecosystem overviews and fisheries overviews are seen as tools to use to fulfil this objective.

6.3 Ecosystem Overviews

The current coverage and the future direction for ecosystem overviews was presented to MIACO and MIACO was invited to comment.

ICES presented the current status, strategic work, and future aims of the ICES Ecosystem, Fisheries and Aquaculture Overviews and the creation of the pipeline process for adding new products to the Ecosystem overviews. The future strategic work for the Ecosystem Overviews will take place during WKTRASPARENT (Workshop on methods and guidelines to link human activities, pressures and state of the ecosystem in Ecosystem Overviews) in April 2020.

ICES presented the operational status of the Fisheries Overviews. The plan for Aquaculture Overviews was introduced. Aquaculture Overviews will describe the distribution, ecosystem interactions, benefits, and impacts of potential production at the regional scale. In early 2020, ICES plans to solicit feedback from stakeholders, agree on content and scope of the overviews, and to begin identifying the first candidate ecoregion for an Aquaculture Overview.

MIACO response

There was a question regarding the Aquaculture Overviews and whether these will include linkages and impacts with Baltic fisheries. ICES replied that this will come after the final scoping of scientists, stakeholders and requesters and consulting the experts, so it is too early to have an answer.

There was a question regarding highly migratory stocks. ICES explained their inclusion is under discussion, there are diverse fisheries and deep-water fisheries as well as tuna fisheries in the area.

There were overall positive comments for the overviews. ACOM is aware of the criticism regarding the qualitative nature of the Ecosystem Overviews and will continue to lead the work for improvement, aiming at making the Ecosystem Overviews more operational and quantitative.

6.4 MSY Advice

The basis of advice for non-target stocks in the EU MAPs will change in 2020, moving from precautionary considerations to MSY targets. This item was for information.

It had been agreed with the EU to provide Precautionary Advice for a few category 1 stocks that were non-target stocks in the EU MAP. It has been agreed with the EU that ICES will provide MSY for such stocks in 2020. For stocks in category 3, ICES is continuing to develop an MSY framework. This is under active consideration by ACOM for how to develop this framework going forward.

6.5 Working with commercially collected data and stakeholder information

ICES has begun developing methods with industry to ensure the quality and consistency of commercially derived data. This links the outputs of WKRRMAC and WKSCINDI (Workshop on Science with Industry Initiatives). It also has clarified how in the short term information from the industry can be brought into assessments and forecasts. MIACO was invited to comment.

ICES is committed to improving consistency, range of sources, and quality of data and information used in the fishing opportunities advice. WKSCINDI developed a framework to improve the flow from industry collection of data to quality assured data provided for use in ICES analyses for advice. WKRRMAC developed plans for improving the quality and relevance of the advice for mackerel, focussing on improving the advice basis in collaboration with stakeholders.

In addition, changes to the way ICES will handle the 'Stakeholder Information' section of the advice sheets were presented. ICES will request that earlier input is provided to the expert group chairs, so that the information can be properly utilised by the expert groups (e.g. in assumptions for forecasts, identify issues/contradictions with the assessment, etc.). Statements of position or preference will not be included in advice sheets.

MIACO response

There were no response from MIACO regarding the two workshop outcomes.

Regarding the stakeholder information text, it was noted that text has been provided for many years on observations from fisheries of widely distributed pelagic stocks. This text occasionally concerned issues not covered in the advice sheet (e.g. stock ID genetic work being undertaken), but are concerned that this may no longer be included without direct relevance relevant to the current advice. There has been disquiet when ACOM has changed the ADG proposed text beyond editorial changes (e.g. Celtic Sea herring; a sentence about the MP being supported by PelAC was removed for being 'political' rather than 'scientific'). Some felt that while they agree it is ICES advice, they feel the authors of the text should be informed if fundamental changes are made, in which case they may withdraw it. It was pointed out by ICES that the text is the consensus text of the ADG.

It was also mentioned that there was a need to separate stakeholder information into quantitative and non-quantitative forms. Previously non-quantifiable information from the fishing industry about fishery developments has been provided, and are unsure how such information will be

used by the expert groups (which may simply be ignored). ICES said that information about the fishery (when, where, etc.) would be useful to WGs, to support assumptions, identify issues to explore further etc. ICES noted that WKRRMAC raised the issue of 'sense checking', and different perceptions amongst scientists and stakeholders. Sense checking should occur at WG and benchmarks, before the ADG.

Action points:

ACs and other stakeholders to send information to Expert groups prior to their meeting.
Add sense-checking to the ACOM meeting agenda.

6.6 Mixed fisheries

A number of issues relating to mixed fisheries advice arose in 2019. These were presented and MIACO was invited to comment.

ICES presented an update on the ICES mixed-fisheries advice. It was explained that it had been problematic integrating mixed-fisheries advice and single-stock advice in previous years, and so in 2019 mixed-fisheries advice was integrated into the Fisheries Overviews.

As the majority of figures in the Fisheries Overviews are produced using the most recent published advice, the overviews cannot be published before the end of November. This enables the incorporation of the Celtic Seas *Nephrops* advice and the North Sea reopened stocks. This is too late for fisheries management negotiations.

Progress has been made streamlining processes and using the TAF at the mixed-fisheries Working Group. The advice production for the North Sea was very smooth and efficient as a result. However, there were data issues for the Celtic Seas, particularly concerning the format of submitted data from some Member States. These quality control problems meant that one of the Technical Services based on the Celtic Seas mixed-fisheries data had to be re-released multiple times. In the longer term, it is hoped that many of these issues will be solved using data from the RDBES.

A scoping workshop will be held at the beginning of March that will include stakeholders, managers and experts, and will both present the work that is currently being undertaken by the mixed-fisheries community. The timing of current advice will be considered and the ways in which we can provide mixed-fisheries advice outside of the current F_{cube} analysis, such as spatial management, improving selectivity, addressing the ecosystem approach and discard bans.

7 Any other business, raised before the meeting

A range of AOB issues were submitted to ICES before the meeting. These were addressed.

7.1 Quality assurance of the Advice

The importance of quality assurance was again emphasised. This was covered in agenda item 4. No further comments were raised.

7.2 Transparency in the advice generation process: how does the Commission formulate requests to ICES?

ICES comment: the requester drafts the request through a process that is facilitated by the ICES secretariat. The request is then evaluated by ACOM following set criteria. ICES considers stakeholder engagement in this process as the responsibility of the requester. An example of engagement with stakeholders is the formulation of requests by EU DG ENV through WGGES.

MIACO acknowledged that this should be a discussion between requesters and stakeholders.

7.3 Database that summarizes all the stock advice

The database "advice view" is in the process of being populated with past advice (most recent advice for each stock). From 2020 onwards, each advice on fishing opportunities will be uploaded to a database. While the 'advice view' will present key advice information, context is often important, so a link to the full advice sheet is included. No TACs will be stored, since these are not in the remit of ICES.

The 'advice view' is searchable by date, advice requester and ecoregion, and users can search for individual stocks or download a group of advices. Web services will be developed to allow automated scripts.

MIACO participants were invited to explore the 'advice view' and to provide any comments or feedback when using it. The initiative was well received.

7.4 Update on any changes to "ICES introduction to the Advice" document, including any developments related to the ICES MSY framework and its precautionary elements (e.g. F_{p05})

ICES explained that it was exploring mechanisms to make the determination of F_{pa} more robust and consistent within the developing framework. There is an ACOM subgroup working on $F_{p0.5}$ and F_{pa} , they may consider if these reference points should be harmonized and if ICES needs a more consistent approach to F_{pa} .

7.5 The ICES Advice framework in light of the UN fish stock agreement (1995) and the ICES interpretation of the precautionary approach in the context of MSY

ICES is committed to provide fishing opportunities advice that is compatible with International conventions: the CFP from 2014, the NEAFC Convention Article 4 (2006 amendment), and the UN Fish stocks agreement Articles 6. All of these underline the need for application of the precautionary approach for advice on marine resource management. In addition to this, ICES advice operates under the UN fish stocks agreement Annex II, which stipulates that the fishing mortality rate which generates maximum sustainable yield, should be regarded as a minimum standard for limit reference points. For stocks which are not overfished, fishery management strategies shall ensure that fishing mortality does not exceed that which corresponds to maximum sustainable yield, and that the biomass does not fall below a predefined threshold.

In order to align these policies, the ICES MSY approach include precautionarity and advice requesters are content with the ICES MSY approach. Clarity as to how MSY is calculated was asked for, guidelines exist for this, and these will be revised to improve the clarity (worked examples, more information).

The density-dependent explorations in the MSY project are considered useful and should be further explored. An ICES workshop on fisheries management reference points in a changing environment (climate, density, productivity shifts) is being planned for end of 2020, and the MSY project is being invited to assist drafting the Terms of Reference.

7.6 MSY project

Members of MIACO stated that ICES uses F_{MSY} values that are underestimates; ICES MSEs are biased; and that precautionary considerations should not be mixed with MSY.

Innovation and discussion are highly sought after and valued by ICES. ICES responded:

- There appears to be a misunderstanding about $F_{p0.5}$; it is not widely used in the ICES advice (less than 6% of advice in 2019), and $F_{p0.5}$ is not bias, it is a tool to protect biomass when necessary.
- Several international agreements support the ICES approach and the requesters accept the ICES approach.
- ICES proposes to collaborate on a workshop for reference points in a changing environment. ICES is working to schedule this workshop for the end of 2020.

MIACO commented that it would be helpful if ICES focused our energies on advancing our science and advice for multispecies rather than changing the basis of MSY. Perhaps the ICES approach to reference points could be better understood or resolved with some further discussions and through improvements to the clarity of the document, *ICES Guidelines of Reference points*.

7.7 Update on identification and strategic assessment of data limitations to help improve the delivery of the CFP objectives, notably B_{MSY} and progress in recovering biomass above these levels

ICES explained the concept of F_{MSY} and $MSY B_{trigger}$ currently used by ICES. It also highlighted that using a deterministic estimate of F_{MSY} would result in well managed fisheries being above the target 50% of the time, because the world is more stochastic. In other words there are distributions around datapoints.

Some in MIACO felt that B_{MSY} could be calculated quite easily, in the same way as F_{MSY} is currently being calculated in the F_{MSY} project, using a surplus production model. ICES commented that we actually do already calculate B_{MSY} as part of the reference point calculations, but it takes a stock to have been fished at or around F_{MSY} for some time before it becomes a meaningful reference point, for instance in the case of North Sea plaice.

7.8 Recreational data

There was concern about how recreational catch data were being used in advice, since there is a lack of data from small scale fisheries that may not have the obligation to (electronically) provide data. DCMAP allows for monitoring of recreational fisheries through studies. ICES noted that recreational data were included in some data calls (e.g. sea bass, western Baltic cod, pollack), but it varies by region and stock. ICES also has a recreational fisheries WG, which has written recommendations to four assessment WGs for stocks that should include recreational catch information. ICES is getting more information now (generally phone surveys and counts of fishers). But the coverage is not as good as for commercial catches, so it is challenging to use this information in stock assessments.

It was raised that bycatch in recreational fisheries should also be considered in some cases e.g. some recreational fisheries in the Baltic use commercial style gears, which would likely have bycatch issues too.

8 Closure of the meeting

The meeting closed with a general round of thanks.

9 Action points

- 4.2 ICES to consider the proposed Workshop in light of feedback.
- 5.2 ICES to address the challenges on stakeholder engagement further and to investigate further training of expert group chairs.
- 6.5 ACs and other stakeholders to send information to expert groups prior to their meeting.
- 6.5 Add sense-checking to the ACOM meeting agenda.

Annex 1: List of participants

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