

REPORT OF THE SCIENCE COMMITTEE (SCICOM)

9 and 11 September 2020
via WebEx



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1 Opening

The SCICOM Chair welcomed participants to the virtual SCICOM September meeting. The meeting included two WebEx sessions held on:

- Wednesday, 9 September: 15.00 to 19.30 CET
- Friday, 11 September: 15.00 to 19.35 CET

A warm welcome was extended to the new participants (Jos Schilder, the Netherlands; Lena Bergström, Sweden; Andreas Kannen, Germany, alternate; Debbi Pedreschi, incoming IEASG Chair, and Bill Karp, ICES First Vice President) and PICES representatives (Sonia Batten, Executive Secretary; Hal Batchelder, Deputy Executive Secretary; and Vera Trainer, PICES Science Board Chair). A tour de table was conducted.

SCICOM Chair drew the attention of participants to ICES Code of Conduct and asked that if anyone was unable to abide by the code, they should make this clear to the meeting. No person suggested they could not follow the code.

2 Introduction of agenda and timetable

SCICOM Chair with reference to Document 2-1, introduced the SCICOM Agenda for both meeting days. The agenda was approved.

Prior to the meeting the SCICOM Chair had made available a summary document on the key points and actions expected from the SCICOM meeting, including suggestions for sub-groups, where SCICOM discussion and preparation would be necessary. SCICOM Chair also suggested to schedule an extracurricular meeting in end-October or early November with a time slot dedicated for discussion.

3 Follow-up on actions and decisions taken at the SCICOM March 2020 meeting and on SCICOM Forum

SCICOM Chair drew attention to Document 3.1, Minutes of March 2020 SCICOM meeting, 3.2, Actions completed from September 2019, and 3.3, Summary of decisions made via SCICOM Forum and ICES Resolutions Forum. All actions had been completed prior to the meeting, and the SCICOM Chair thanked all contributors.

4 Reports and highlights from Steering Groups

Debbi Pedreschi (IEASG) and Jens Rasmussen (DSTSG) were introduced as new steering group chairs starting their terms on 1 January 2021.

4.1 Recruitment of chairs for Ecosystem Observation, Ecosystem Processes and Dynamics, Integrated Ecosystem Assessment and Data Science and Technology Steering Groups

SCICOM was informed that new steering group chairs are still needed for EOSG and EPDSG, and that nominations would be accepted until 15 September 2020. After the SCICOM September meeting Joël Vigneau was elected as Chair of the Ecosystem Observation Steering Group and Steven Degraer was elected as Chair of the Ecosystem Processes and Dynamics Steering Group.

4.2 Data Science and Technology Steering Group

SCICOM Chair with reference to Document 4.2-1, introduced the new DSTSG Chair and provided a list of the groups that will move to DSTSG, which officially starts on 1 January 2021.

Jens Rasmussen noted that there is broad scope of the expert groups moving to that steering group and it will be essential to work with the other steering groups to maintain good crosscutting work.

4.3 Aquaculture Steering Group

Mike Rust (Chair of ASG) with reference to Document 4.3-1, gave an update from the Aquaculture Steering Group.

Mike Rust provided an overview of his 7 expert groups in ASG: 3 are renewing their ToRs, 3 are in the middle of their ToRs, and 1 (WGEIA) will be morphing into another group and changing their focus. He then listed 5 potential topic areas for new ASG working groups and welcomed SCICOM to provide comments and suggestions for chairs:

- Vulnerabilities and resilience of aquaculture to climate change
- Aquaculture Oceanography and Modelling
- Operationalizing Economic and Social Trade-off Analysis
- Aquaculture Marine Spatial Analysis
- Engineering and Technical Risk in Aquaculture

Attendance in the aquaculture groups has been growing since 2015; approximately 190 participants have attended the working group meetings, with one more group to meet later this year. Most groups had higher attendance in their virtual meetings in 2020 compared to their in person meetings, except for WGAGFA.

Science to Advice for aquaculture has been a priority this year, and the ASG Chair along with members of the Secretariat (Anne Cooper and Malene Eilersen) and ACOM (Henn Ojaveer and Mark Dickey-Collas) have been making progress on the planning of aquaculture overviews and viewpoints, as well as preparing to receive requested advice. Recipients who need aquaculture advice have been identified as national governments, EU, DGMARE, plus other DGs, FAO, OIE and other international organizations.

Science to advice in ASG also included the following:

- The first aquaculture overview will be produced for the Norwegian Sea; the ASG Chair asked for SCICOM's input on which ecoregion's aquaculture overview should be produced next and potential people that could spearhead the coordination.
- Two aquaculture-related viewpoints were mentioned: (1) emerging pathogens (actively being developed by the Chairs of WKEMOP) and (2) genetic tools to determine composition of mixed fishery landings (in the planning stages).
- Setting a foundation for requested advice, the SG thinks they will likely be asked for a risk assessment, and WGREIA will be looking into best practices for ICES and will put together a TIMES guidance article. A future ICES training course on risk assessment methods would be valuable to consider.
- ASG is working to build scientific capacity to support all forms of advice. Expertise in the following areas exists in current ASG expert groups: Genetic Risk of Escapes, Disease transfer/epidemiology, Habitat/Carrying Capacity, Economics, and Social Sciences
- As mentioned above, there are still a number of gaps in areas where new expert groups should be established for more comprehensive coverage of aquaculture science and advice.

Since April 2020, ASG has been coordinating a webinar series. Four talks have already occurred, and the remaining three are planned for later this year, with the first resuming on 14 October 2020.

Communication of ICES/PICES collaboration with Vera Trainer of PICES will be valuable. PICES has two aquaculture groups, both of which have some overlap with ICES groups: marine diseases (US/Canada/Korea) and ecosystem impacts of aquaculture (China/US).

Comments were supportive of the ASG Chair's effort to cross advice and science, noted the good activity of the ASG expert group chairs, and relayed that the past ASG webinars are taped and available.

4.4 Integrated Ecosystem Assessments Steering Group

Mette Skern-Mauritzen (current Chair of IEASG) with reference to Document 4.4-1, gave an update from Integrated Ecosystem Assessments Steering Group.

Mette Skern-Mauritzen noted that this would be her last SCICOM meeting. She had started to work on the transition to the new Chair, Debbi Pedreschi, who was attending this SCICOM meeting as well.

An overview of IEASG progress was provided:

- Addition of a new regional expert, WGIEANBS-CS.
- Progress on the ecosystem overviews: (1) planning for the Dec workshop WKTRANSPARENT chaired by Henn Ojaveer and Mette Skern-Mauritzen, (2) building on WGEAWESS ODEMM approach, (3) Arctic Ocean Ecosystem Overview under development for 2021 with the new chairs for WGICA (4) regular updates planned on a three-year cycle for the EOs.
- Further development of IEA products were mentioned focused on targeting stock assessments and informing EBM.
- Science highlights had been outlined in the IEASG report to SCICOM. IEASG Chair mentioned two notable highlights: (1) Beukhof *et al.* 2019 in Nature Scientific Reports produced by WGCAMEDA, "Marine fish traits follow fast-slow continuum across oceans," <https://doi.org/10.1038/s41598-019-53998-2> and (2) Arneberg and Solvang of WGINOR had submitted a paper on "A method for warning signal identification in integrated ecosystems assessment by statistical time series modelling."
- Proposals and projects included three recent activities: Pedreschi *et al.* had led conceptual mapping methods with EuroMarine, Thebaud *et al.* had led an EU proposal called SEASIDE on socio-ecosystem modelling for EBFM, and a kick-off meeting for Mission Atlantic will occur in October.
- A Steering Group meeting had been held at WGCHAIRS earlier this year, with an additional meeting to be held on 13–14 October that will include discussions of the ecosystem overviews, summarize IEA progress and priorities, and presentations from WGSHP, WGCEAM, WGOWDF.

Overall, the IEASG Chair indicated that there was good development of the steering group, with a good focus on stakeholder interactions, social science and economics, and a balance between basic science and assessment. Overall, she felt that we are on the right track for quality and scope, with room for improvement bridging stock assessments and ecosystem based management. For example, there is still needed development on EBM strategy and roadmap, better coordination between expert groups especially also across ACOM and SCICOM, strategic decisions on science and advice gaps, and communication with clients and stakeholders on what ICES can provide now or in the near/longer term.

SCICOM members asked how coordination could be improved, with the IEASG Chair replying that we should see what would arise from a recent ACOM breakout group discussion that has suggested that we may need a roadmap or governing body. Overall, she noted that there have been discussions about clients' needs and how we can meet those, but we need to be clearer on what ICES can and wants to do and how we can achieve it, including a better overview of our own prioritizations for better coordination between our expert groups.

ACOM and SCICOM Chair and other members thanked the outgoing IEASG Chair for her dedication to ICES and the steering group.

4.5 Fisheries Resources Steering Group

Patrick Lynch (Chair of FRSG), with reference to Document 4.5-1, gave an update from Fisheries Resources Steering Group.

Patrick Lynch opened his presentation by stating that his large steering group is more operationally focused than some of the others, and includes many of the stock assessment and advice-producing groups. An overview of the 2020 Advice season was provided next. While adjustments had been made to shift to remote meetings due to COVID-19, most advice was successfully managed with some revised ToRs, abbreviated advice sheets, and a delay in acceptance of a special request. Of particular interest for SCICOM is a survey on productivity changes that the EGs completed earlier this year.

However, despite most meetings having been held remotely, there are some realities that were identified by expert groups: more preparation was required, it was difficult to facilitate discussions, discussions tended to be limited with less input from fewer people, meetings focused on preparing the advice without opportunity for strategic and scientific development, and lastly collaboration and network building was compromised. It is therefore important to find the right balance going forward regarding in person and online meetings.

Overall communication with the steering group has consisted of a few check-in emails per year, and a meeting at WGCHAIRS. Without ASC occurring in 2020, there wasn't an opportunity for a second in-person meeting in 2020. There are currently plans for another in-person meeting once travel bans are lifted, ideally this will occur in 2021 if possible. The steering group Chair acknowledged that communication within the SG could be improved.

Looking forward, there are plans for an FRSG-related session on structural uncertainty at ASC 2021. Future topics to discuss with the steering group at their next in person meeting include strategic discussions for future of stock assessments, changing systems, multispecies effects, ensemble modelling, forecasting with EBFM thinking, software engineering for assessment models, spatial dynamics, Management Strategy Evaluation and plans for methods workshops. Although workshops are continuously developed, more thinking about gaps is needed to be more strategic.

ACOM Chair thanked the FRSG Chair, with appreciation for the updates on adjustments made due to COVID-19. He mentioned that groups do see addressing ecosystem change and issues of assuming stability in the ecosystem for the fish stock groups as a priority, and that ACOM has launched an audit for further analysis of where this is being brought into stock assessments.

In reply to the incoming Chair of DSTSG asking about how TAF is going, the FRSG Chair replied that it continues to mature and connect with more elements, being more and more embedded. Overall, he felt that it was good to have this level of transparency of the analyses.

Another SCICOM member did not know precisely how many groups are using TAF, but noted that most fisheries assessments are part of TAF now. ACOM Chair relayed that WGTAF is taking in more information, 2–3 major stocks per group, VMS, and some of the fisheries and ecosystem overviews data. EOSG Chair commented that TAF is conceptually good and useful for identifying parallels, but needs some more work.

Lastly, the discussion ended with SCICOM members discussing the role of ecosystems and expanding assessments to include EBFM goals. While this is a major challenge, ICES needs to identify a way forward. SCICOM Chair agreed that this topic needed follow up, and has requested on the forum that SCICOM members identify their interest in participating in a sub-group to discuss this topic.

Action: A subgroup was established to further discuss the way forward to improve orientation, communication and coordination of EBM work within ICES and report back to the March SCICOM meeting. The following subgroup members volunteered via the WebEx Chat and SCICOM Forum post: Mette Skern-Mauritzen, Rafael González-Quirós; Debbi Pedreschi, Pierre Petitgas, Alan Haynie, Patrick Lynch, Brian R. MacKenzie, Lena Bergström, Henrik Nygård, Michael Rust.

4.6 Ecosystem Observation Steering Group

Sven Kupschus (Chair of EOSG) with reference to Document 4.6-1, gave an update from the Ecosystem Observation Steering Group. This will be the current EOSG Chair's last report to SCICOM, with his term ending at the end of 2020.

The EOSG Chair opened his presentation with a number of the steering group's science highlights: WKIDCLUP2 technical achievement working on sharing and analysing high resolution images together, WGELECTRA evidence base for advice, WGFASST looking at acoustic data open format and accessibility, WKUSER focused on decision making to provide practical advice where there are challenges to data surveys, IBTSWG developing a new gear with sea trials and cooperating across institutes to test out new nets and how to get them into operation without destroying the long time series in the North Sea, WGBEAM early to adapt to working through COVID-19 condition with Chair Ingeborg de Boois organizing this adjustment in 7 days.

Moving forward, EOSG will be able to have a more unified focus now with the establishment of DSTSG. This will improve the ability to have more regional focus aligned with some other ICES working groups. WKREO had outlined some strategies that were helpful for creating the new ToRs for the next EOSG term, but some more work can be addressed regarding data needs. The EOSG Chair welcomes greater SCICOM input as the implementation of the EOSG strategy develops. Another positive action for this past year is that the SISPs have become part of the TIMES series; this will provide more support for the groups from the Secretariat publications group.

A number of activities and actions are needed including: (1) identification of objectives and specific deliverables for EOSG working groups, potentially through a workshop, (2) development of tools to qualitatively evaluate data collections, (3) more active input from IEASG and FRSG, and (3) defining procedures with RCGs on requesting information on data collections (there has been some progress on this). The EOSG Chair asked SCICOM members to encourage participation of relevant experts in their countries.

A number of upcoming workshops for EOSG have been approved by SCICOM: RDBS workshop, WKING environmental assessment of gears, WKABM acoustic data backscatter models best practices. Additional work by EOSG expert groups include: WGAcoustic Governance will have a new ICES database, WGSSSE is developing methods to estimate fleet selectivity experimentally, and WKPILOT is defining activities of regional monitoring groups in a North Sea case study.

The EOSG Chair concluded with a thank you and brief overview of some lessons learned during his steering group tenure, noting that he will continue to be involved in ICES as an expert group chair and in data collection. ACOM Chair thanked the EOSG Chair, especially for his coordination with ACOM.

4.7 Human Activities, Pressures and Impacts Steering Group

Sarah Bailey (Chair of HAPISG) with reference to Document 4.7-1, opened her presentation with an overview of the steering group. In 2020, there were a total of 27 working groups and 2 workshops working on a diversity of pressures affecting marine ecosystems and the impacts that follow. All HAPISG expert groups were on track with their ToRs, and many have been contributing to science highlights and viewpoints. A few groups have been delayed with their submissions of evaluations and final reports.

Two new workshops are being proposed, including WKTBIMP, a workshop on transboundary issues marine spatial planning. WGMEDS is closing at the end of 2020.

Working Group on Marine Sediments (WGMS) and Marine Chemistry Working Group (MCWG) are planning to merge in a combined group in 2022. This will allow to strengthen cooperation and solve low attendance issues. In order to facilitate the merger process, WGMS has requested an extension to achieve alignment of terms.

Many groups have produced science highlights. WGBOSV, WGMS, WGBEC, WGML, WGITMO, WGHAB have had ICES news stories that are well disseminated, including some highlights of peer-reviewed publications. Publications in development include a CRR by WGEXT and a TIMES from MCWG.

Looking ahead, the HAPISG identified some upcoming activities: WGSFDGOV is moving to DSTSG in 2021, a viewpoint has been drafted by WGSHP on the impact from exhaust gas cleaning systems (scrubbers), WGBOSV/WGSHP will hold a joint theme session at ASC 2021, and WGBOSV/WGITMO will have a theme session at the IUCN World Congress 2021.

The steering group's priorities for 2020 include:

- Strengthening communication – the group will hold its first online meeting on October 19, 2020, if it goes well there are plans to hold a steering group meeting once or twice a year
- Building on information sharing and feedback – circulating more information so the groups can follow other expert group activities and feel like part of a steering group, the HAPISG for example circulated her report to SCICOM to all expert group chairs.
- Continued support of news and advice – the steering group chair is actively involved in supporting viewpoints and science highlights, including contributions to the new “In Other Words” series.
- Working with ACOM and SCICOM Chairs to formalize participation of expert groups at the International Maritime Organization (WGSHP, WGBOSV).
- Improved connections and collaborations – for example, WGSHP is participating in PAME's (Arctic Council) shipping group and the HAPI expert group chairs will share their work at the upcoming IEASG meeting.

During the following discussion, ACOM Chair noted that ICES has been working with IMO for a long time and HAPISG has been essential at keeping these good connections.

4.8 Ecosystem Processes and Dynamics SG

Silvana Birchenough (Chair of EPDSG) with reference to Document 4.8-1, gave an update on the current progress of EPD expert groups. The majority are on track with progress on their ToRs and have been able to adjust to COVID-19 conditions remotely and find new ways to collaborate. ICES press releases have been made for a number of papers produced; the steering group Chair highlighted some recent work and outputs by WGHABS (best practices guidelines and global status report), WGSCALLOPS (data call and plans for a North East Irish Sea stock assessment) and BEWG (papers by Birchenough and Degraer 2020 in *IJMS* and Greathead *et al.* 2020 in *Aquatic Conservation*).

Additional updates on a few expert groups were provided:

- WGGAFY has added a PICES chair and has good global participation including Asia, EU, and North America.
- WGZE has contributed to a number of ecosystem overviews, the zooplankton status report, and is planning an *IJMS* themed series on marine zooplankton time series with a deadline for contributions is March 2021.
- WGOOFE will be restarted with new chairs and SCICOM was requested to suggest new members.
- WGONCE ToRs are being drafted with PICES collaboration; this group is focused on ocean negative carbon emissions.
- BEWG has two new chairs.

EPDSG Chair drew the attention of the meeting to several articles recently published under EPDSG:

- [To remove or not remove](#)
- [Decommissioned offshore man-made installations are the focus of the latest themed set of papers in ICES Journal of Marine Science](#)
- [Bioturbation paper](#)
- [Bioturbation article ICES Annual Report](#)
- [MPAs paper](#)

Looking forward, the steering group has a number of planned activities and products: (1) the steering group chair will be participating in the UN DOS Arctic workshop and will co-chair the ecosystem session at the Decadal Variability symposium, (2) the steering group will contribute articles to the new biodiversity highlights series, (3) a *TIMES* publication on eDNA methods is in the planning stages, (4) an ICES news story will highlight the steering group's collaboration during COVID-19, and (5) a steering group meeting will be held on October 6. Lastly, a new EPDSG chair will be appointed as the current steering group chair will be ending her term in 2020.

Of note also is the memorial for Clare Greathead, a long-term member of BEWG (https://www.ices.dk/news-and-events/news-archive/news/Pages/Clare_Greathead.aspx). One SCICOM member was especially grateful for ICES recognition and relayed that Clare and her family greatly appreciated the letter sent by Simon Jennings, the past SCICOM Chair, during her late stages of illness. One of Clare's final contributions was the BEWG collaborative paper in *Aquatic Conservation* mentioned above that illustrated the importance of benthic marine ecosystems to conservation.

The ACOM and SCICOM Chair thanked the outgoing EPDSG Chair for her dedicated and engaged work in leading the SG.

5 Reports from the Strategic Initiatives

5.1 ICES/PICES Strategic Initiative on Climate Change Impacts on Marine Ecosystems

Mark Payne (SICCME Chair) with reference to Document 5.1-1 gave an update from SICCME. The SICCME leadership had seen some changes over the last year with both ICES Chairs (Myron Peck, Germany and John Pinnegar, UK) and one of the PICES Chairs (Shin-ichi Ito, Japan) having ended their terms end of 2019. Incoming Chair on the PICES side is Xiujuan Shan, China. Jackie King would be stopping as SICCME Chair (PICES) in October 2020, and most likely be replaced by Kirsten Holsman, USA. The change in leadership in combination with the global COVID-19 pandemic has led to a break in the continuity of the initiative.

In October this year ICES SICCME is planning to participate remotely in PICES SICCME annual meeting, and this together with the establishment of an online forum is hoped to bring the two communities of researchers (and chairs) closer together.

ICES and PICES are well represented in the IPCC WGII process with lead authors John Pinnegar, Kirstin Holsman, Shin-ichi Ito and Mette Skern-Mauritzen and Christian Möllmann. The process has been substantially delayed and the final report is now expected towards the end of 2021 or beginning of 2022.

SCICOM was informed about the new four-year EU H2020 Project FutureMARES coordinated by Myron Peck, scheduled to have its kick-off meeting in September 2020. FutureMARES has three over-arching case studies: Habitat Restoration (e.g. seagrasses, shellfish), Habitat Conservation (e.g. MPAs, charismatic megafauna), and Sustainable Harvesting (e.g. ecosystem-based fisheries, IMTA).

Working group activities include:

- ICES/PICES Working Group on Impacts of Warming on Growth Rates and Fisheries Yields (WGGRAFY), which has adapted successfully to the new online reality.
- Working Group on Integrative, Physical-biological and Ecosystem Modelling (WGIPEM) was postponed from March 2020 to March 2021.
- Working Group on Seasonal-to-Decadal Prediction of Marine Ecosystems (WGS2D). Next meeting in spring 2021 and there will be a workshop event at ICES ASC 2021.
- Joint ICES/PICES Working Group on Small Pelagic Fish (WGSPF) is planning a symposium to be held in Lisbon; Portugal in late February 2022. Preparations are ongoing.

SIHD Chair suggested for SICCME to consider a dual membership system, with a group of core members and a less formal membership type subscribing to the SICCME Forum. This could help improve and define the SICCME community.

5.2 Strategic Initiative on the Human Dimension

Alan Haynie (SIHD Chair), with reference to Document 5.2-1, reported from SIHD. SCICOM was informed that Johanna Ferretti (who had contributed very productively during her short term) had recently taken a new job that did not allow her to continue as SIHD Chair; this meant that Alan Haynie was currently the sole SIHD Chair looking for new chairs.

Some highlights from working groups related to SIHD activities were presented, including the meetings of Working Group on Balancing Economic, Social, and Ecological Objectives in Integrated Assessments (WGBESEO), which had met online in April and June and is planning to meet again in November this year. WGECON and WGSOCIAL met jointly but also had separate sessions.

Upcoming SIHD activities include:

- ICES Webinar on “ICES reflections: Understanding the impacts of the COVID-19 pandemic on fisheries, markets, communities, and management” featuring SIHD members’ work and research on COVID-19. Talks will be given by Alan Haynie (USA), Doug Lipton (USA), Cristina Pita (Portugal), and Marloes Kraan (The Netherlands).
- An update of the SIHD Roadmap 2020 shaping a vision forward, building on the 2018 Roadmap.
- Planning the ICES/PICES MSEAS Symposium which was scheduled to be held this spring in Yokohama, Japan and has been rescheduled for May 2021
- Building on WKCONSERVE and continue to better integrate human dimensions research into ICES.

SIHD would like to become more involved in the stakeholder interaction process and there is an ongoing discussion with ACOM on how to participate.

ASG Chair suggested developing a management tool where you could throw in a management question (either on aquaculture or anything else) and get back a matrix or an index on money, jobs, ecosystem trade-offs, social issues, human health. Would like to explore this jointly with SIHD Chair. Also, ASG Chair mentioned that ASG had established a stakeholder group that helped shape the aquaculture overviews, and this group still exists and could be tapped as a sounding board for aquaculture stakeholders. The SIHD Chair responded that one can provide the data and general analysis available to feed into tools, but experience is that not everything can be done in one tool- the data can be set up, but the analysis needs to be more customised.

6 SCICOM Operational Groups and interactions between Operational Groups and ICES Secretariat

6.1 Training Group

Jan Jaap Poos (Chair of Training Group) gave an update from Training Group with reference to Document 6.1-1, 6.1-2, and 6.1-3.

Several courses that were planned for this year had been cancelled or postponed to next year due to the COVID-19 pandemic. Two courses were moved online for 2020. An overview of courses for 2019–2020 was presented. The first online ICES training course will take place in October (Fish stock assessment), while another will take place in December (Bayesian network). Not many participants signed up for the courses yet; hence, sharing the course in ICES network and beyond would be much appreciated. Another online course planned for 2021 is “Opening the Box” that will focus on the work of ICES. The impact of courses in the past five years will be evaluated to decide about future course planning (both content and form). Courses should run in a budget neutral manner, which was well achieved. In 2019 there was even a surplus of money coming in from courses.

Within the ICES Joint work Plan 2019–2024 the Training Group is tasked to evaluate, develop, and implement a strategy for the ICES Training Programme. As a first step, the plan is to evaluate the impact of the courses that were held over the last 5 years, and solicit views on the future direction of the training courses (form of the courses, (offline or online courses), and the results can be used to develop and implement a strategy in 2021.

Some SCICOM members expressed their positive feeling about the online model, as it can reach a wider audience. However, online teaching is very work-intensive and generally not appreciated as much as physical teaching based on the presenter’s own experience, despite a larger audience. Issues regarding online teaching/courses need to be further discussed in the near future.

SIHD Chair expressed the need for testing going to an online model as more and more demand for that is developing. TG chair agreed, although it needs a lot of work, the benefit is a wider reach and potentially more participants.

6.2 Science Impact and Publication Group

Nils Olav Handegard (Chair of SIPG) and Ruth Anderson (ICES Editor) presented agenda item 6.2 about the library project and updates regarding ICES publications, with reference to Document 06.2-1. The main purpose of the library project is to create a modern, up-to-date ICES library, to improve the visibility and impact of ICES publications. After a thorough assessment carried out by SIPG, in consultation with librarian and database managers from a number of member country institutions (e.g. NOAA, IFREMER, IPMA, IMR), it was decided that the best option for ICES is to outsource the library to a commercially hosted platform. The number of platforms to choose from has been narrowed down to three commercially hosted repositories. A detailed analysis is now being conducted by SIPG to decide which of the three is best suited to ICES needs.

ICES currently has not adopted a standard copyright licencing scheme for its publications, rather relying on an own text. SIPG recommends to adopt a Creative Commons Licence, specifically CC BY 4.0. This entails a switch to allowing commercial use of ICES publications, and maintains the requirement that ICES be cited when ICES publications are used.

ICES has two disclaimer texts at the moment – text 1 states that the contents of the publication in question do not reflect the views of the council, while text 2 states the opposite (mainly used in advice). SIPG recommends the continued use of text 2, and requested SCICOM to evaluate an amended version of text 1.

SIPG recommended that the new ICES Business Reports series should receive a DOI and ISSN, and should have a set of inner covers to reflect differences in the authorship and disclaimer texts of the different types of reports it contains.

The project to expand the scope and the number of publications in TIMES, approved during the mid-term SCICOM meeting, has been highly successful. The target is 3–5 issues per year. Since many groups expressed their interest, this target is likely to be reached already in 2020. The incorporation of the Series of ICES Survey Protocols (SISPs) to the TIMES has been smooth, and the first survey in times will be published at the end of 2020.

The re-launch of the ID Leaflets for Plankton has been highly successful, with 5 issues published since 2019, a large number in the production process, and very high readership compared to earlier leaflets (400–700 views per leaflet since its relaunch in 2019 vs. 100 views per leaflet for its older publications). CRRs and ID Leaflets for Diseases and Parasites in Fish and Shellfish did not publish any new issues thus far in 2020, but this is circumstantial and not a reason for concern. Many reports are in the publication process for both series.

There's has been overall a very strong increase in readership. For example, the average views of CRRs published in 2019 have increased substantially to 1700 views per report vs. around 200 - 400 previously. The reviewer acceptance rate is high for our in-house publications, at around 80%, indicating that these publications are considered important and relevant both within and without the ICES community.

A new version of Author Guidelines is now available. A new section lays emphasis on when to submit a resolution, as part of our strategy to reduce the number of draft publications that exceed their time-limit for submission.

The website concerning publications is undergoing a restructuring. The contents and the design are updated in order to attract more visitors and to make it more user-friendly for interested individuals from within and outside ICES community.

Amendment documents were discussed regarding publications and whether or not both of the disclaimer texts should be used.

<p>Action: SCICOM members were requested to provide comments on the use of disclaimer 1 on the SCICOM Forum.</p>

6.3 Data and Information Group

Jens Rasmussen (DIG Chair) and Neil Holdsworth (Head of Data and Information), with reference to Document 6.3-1, presented an update for DIG key activities with emphasis on the meeting in May 2020, which was very productive. The Data Centre submitted the final accreditation application in July 2020 and expects feedback from The Core Trust Seal (CTS) by late September 2020. The application responds to the 16 requirements of CTS accreditation certification, of which ICES has self-assessed as follows:

- 13 requirements are fully implemented in the (ICES) repository
- 3 requirements are in the implementation phase

The three requirements on the implementation phase address changes to the data policy, data licensing and data flow through schematics. This data flow is very important, however the process has been quite challenging. The strategy aims to address quality control of data and quality assurance for advice because there is a need to understand where control checks are needed and will have the greatest impact.

One of the main aspects to consider in the development process is data policy and the need to disclaim the way ICES uses data. DIG is working toward a single data policy proposal that will address all aspects of how data is received, maintained and safeguarded by ICES. DIG is also developing variation on licenses for different types of data; this work in progress has drafts targeted for completion in January 2021 and aims to present a full update to SCICOM in March 2021. Additionally, the best practice principle guidance is under revision to address issues regarding data requests; a decision template is being developed in conjunction with improved guidance.

DIG had a very useful dialogue with governance groups. The groups, including the newly established groups in 2020 are working well on prioritizing issues and decisions. However, due to the format and meeting schedule, the scientific report is a poor fit for the groups to report back, and it is hoped that SCICOM will recognize that perhaps the business report format can be a better fit for governance groups.

A new chair was unanimously agreed by DIG at the May 2020 meeting, Sjur Ringheim Lid from Norway will take over from Jens Rasmussen from 1 January 2021.

As a reflection on his tenure Jens Rasmussen highlighted that DIG has a very engaging relationship with ICES Data Centre and brings a lot to the table, especially providing feedback to the Data Centre projects. There should also be recognition that now with the new steering group DSTSG, there is a lot of room for collaboration.

SCICOM Chair thanked the outgoing DIG Chair for his dedicated work and welcomed the incoming chair.

7 Effects of COVID-19 pandemic

7.1 Effects of remote working, feedback from survey

SCICOM Chair emphasised that we have already heard a lot about the impacts of the COVID pandemic on work throughout the meeting and asked SCICOM to read the responses from the survey on remote meetings.

In general, the experts and EG chairs responded positively, however the remote format of meetings also poses some challenges. The main challenges are the ability for longer discussions and missing social interactions between meetings.

7.2 National perspectives on remote working (national representatives)

With all ICES physical meetings on hold until 31 January 2021, and high probability of continuing to have remote meetings, there is a need to consider the advantages and disadvantages.

Action: SCICOM national members to provide written national perspectives on remote working before 15 November.

7.3 SCICOM input to ICES CO₂ footprint initiative

Bill Karp (First Vice President) explained that the carbon footprint initiative intersects with the pandemic experience and the impact this has on work in the short and long term. The initiative embodies a commitment to achieve net zero emission status for activities supported through the ICES Secretariat and those related to the expert groups. Although the ICES carbon footprint is relatively small, there is an opportunity for ICES to recognize the need to respond to the climate change and show leadership to the broader community. The initiative also recognizes the scientific challenges associated with reducing the carbon footprint of broader activities, such as research surveys, fishing and aquaculture operations, etc., and encourages (through explicit TORs) SCICOM to work in these areas. Since travel is a major consideration in reducing emissions, lessons learned during the pandemic regarding remote meetings will be very valuable.

Bill Karp presented Annex 1 in Document 7.3 on ICES policy/position for Council and asked for participation in the Bureau Working Group on Terms of Reference (ToRs) 5–7.

Process

Upon approval by Council at the 2020 meeting, this strategy will be developed through a Bureau Working Group. This will likely include individuals from Bureau, Secretariat, SCICOM, ACOM, and ICES Data Centre and will include staff support from the Secretariat. The process will be designed to encourage and endorse bottom-up participation.

Comments

Brian MacKenzie (national member, Denmark) asked whether the initiative will look into activities beyond ICES meetings and at the ICES headquarters. Bill Karp emphasised that the initiative takes a broad approach, but prioritizes the need to address activities funded by ICES, expert groups and the Annual Science Conference (ASC).

Antonina Santos (national member, Portugal) requested that more time should be allocated to seriously consider the initiative and goal of net zero emissions. Bill Karp responded that the idea is to initiate some action and to get Council to agree on a strategy.

Jens Rasmussen (DIG Chair) asked that we consider that hybrid meetings do not work. If we go forward with this initiative then we should consider a certain proportion of meetings are remote and others are entirely face-to-face. Bill Karp responded that this is indeed under consideration and will vary from country to country. We can expect that US and Canadian delegates will not be able to join physical meetings with other countries for some time. It is also important to consider the impact of remote and hybrid meetings for an organisation – hybrid meetings will require the organisation to do everything needed for a remote meeting and physical meeting.

Ellen Kenchington (national member, Canada) requested that we also ask how likely ICES experts will be to participate in remote meetings to avoid any potential negative consequences of going online.

Mike Rust (ASG Chair) raised the concern that the focus of the initiative on moving to more remote participation loses site of the larger context. If ICES does not conduct productive remote expert group meetings that produce the science to influence the larger carbon users in the marine sector, then we will have less ripple effects on the larger CO₂ producers. Bill hopes that the initiative will stimulate this kind of discussion and that SCICOM address these broader questions from a scientific point of view.

Mark Dickey-Collas (ACOM Chair) reminded SCICOM that ICES has remained operational in terms of advice, but has failed to make innovations and strategize under the current set up. When we talk about reducing CO₂, we should take this seriously and be wary of not losing site of the impact of ICES science on the sustainable management of ecosystems. He emphasised the importance of SCICOM members to discuss this with the national delegates before the Council meeting. Bill Karp agreed that it is indeed a challenge and opportunity and is hopeful that the Council will have a full discussion on this topic.

SCICOM Chair asked SCICOM members to volunteer to the sub-group on the SCICOM Forum and that the sub-group will organise themselves with the tight deadline in mind.

Mike Rust reminded the sub-group to look at the virtual meetings document as a starting point.

Action: SCICOM members were encouraged to join the SCICOM Subgroup on carbon footprint initiative. The Subgroup would be announced on the SCICOM Forum and tasked to provide input on the initiative and the wording of the proposed ToRs 5–7 prior to the Council meeting, 21–22 October. There will be room to adjust Terms of Reference before Council and even after.

7.4 Hybrid-meetings

SCICOM Chair gave a short introduction to the challenges of hybrid meetings. When we are thinking of going beyond only remote meetings, we will have the challenge of how to plan meetings with people who are willing to travel and others who will participate remotely

Action: SCICOM members were invited to join the SCICOM Subgroup on Remote and Hybrid Meetings tasked to prepare a document to support Coordination Group, as well as providing written feedback. The Subgroup would be announced on the SCICOM Forum

8 Science and Advice

8.1 Ecosystem, Fisheries and Aquaculture Overviews

Henn Ojaveer (ACOM Vice-Chair) presented an update on the Ecosystem, Fisheries, and Aquaculture Overviews with reference to Document 8.1-1. A new Ecosystem Overview is being developed in 2020, the Greenland Sea (WGIEAGS) ecoregion. Another Ecosystem Overview is being updated this year, the Norwegian Sea (WGINOR) ecoregion. In March 2020, it was agreed that WKTRANSPARENT should be postponed due to the COVID-19 pandemic; however, it was decided subsequently that it would be held online as a remote meeting 7–9 December 2020. Plans for 2021 include one new Ecosystem Overview, the Central Arctic Ocean (WGICA) ecoregion, the update of the Celtic Sea (WGEAWESS) ecoregion, and the aim is to start implementing recommendations proposed by WKTRANSPARENT.

Regarding Fisheries Overviews, three new will be published in 2020: Greenland Sea, Azores, and the Oceanic Northeast Atlantic ecoregions. It was proposed to arrange a workshop in early 2021 to discuss the long-term strategy and content of Fisheries Overviews, and to identify new products to be incorporated in the publication.

The Aquaculture Overviews core group proposes ten topics that should be covered in the overviews with reference to Document 8.1-1. The final topics will be decided by the end of September 2020. It is proposed to publish the first overview, the Norwegian Sea Aquaculture Overview in 2021.

The rationale of ICES Viewpoints was explained; these are meant to indicate to stakeholders and potential clients the expertise within ICES and the kind of advice products ICES can provide. One Viewpoint was cancelled this year (Future fish production in the Arctic) due to lack of author responsiveness. If another author can be found for the same topic from WGICA, the viewpoint can still be published with a later deadline. There are currently six viewpoints to be published in 2020 and 2021 besides the one that was dropped due to issues with author responsiveness.

8.2 ICES approach to stakeholder engagement

Mark Dickey-Collas (ACOM Chair) gave a presentation about ICES stakeholder engagement with reference to Document 8.2-1. Currently, stakeholder engagement is carried out in an unstructured manner, no objectives are defined for engagement, and a lack of overarching strategy pertains. Yet the aim of ICES is a commitment to deeper and wider engagement, and there is a need for greater stakeholder accountability and responsibility. Document 8.2 serves as a resource to stimulate discussion about the topic. Seven potential principles for engagement and current stakeholder roles in ICES were discussed with reference to Document 8.2-1. A strategy is needed to address (among other things) that ICES does not compromise its perceived scientific integrity, being the main issue for Council. On the other hand, a strategy is needed to clearly set what the responsibilities of stakeholders are – this concerns mostly ACOM Leadership.

A potential next step is a proposed workshop on stakeholder engagement strategy (WKSHOES). It is crucial to understand the needs of policymakers. An ongoing communication system is required with stakeholders and scientists for policymakers to make informed decisions. The form of the workshop (online or physical) was also discussed; however, if the matter is treated with the desired urgency, the workshop will likely be held online. ACOM expressed its concern whether stakeholders would be represented at the workshop.

8.3 Outcomes and actions from ACOM meeting

Mark Dickey-Collas (ACOM Chair) presented the outcomes and actions from ACOM meeting, including the guide of the advice framework and the newly set principles for advice production. There are four stages of advice production: 1) Request formulation; 2) Knowledge synthesis; 3) Peer-review; and 4) Advice production. ACOM wants to develop a resilient system for advice production with regards to future challenges; hence, ten principles were laid out that should serve as a cornerstone for all ICES advice products. It is important to address how to deal with conflicting policy goals and topics in advice products. A workshop for advice is proposed that would look at how to incorporate climate and projections into advice frameworks.

Three main operational challenges in productivity within fisheries advice were also discussed during ACOM meeting. A subgroup was set up to consider the outcomes of WKIRISH and will look at the implications for ICES advice. Additionally, it will review various approaches how to estimate changes in fish productivity (including anadromous species). The group will also comment on the overall approach to incorporate multispecies model derived estimates of M.

Regarding EBM in ICES, the EBM statement is still appropriate according to ACOM; however, its adaptability is not set as a priority at the moment. A proposal by ACOM for an EBM Oversight Group was discussed that establishes and monitors development, implementation, and integration targets, but it was not formally agreed as yet by ACOM. ICES can highlight and communicate its activities and products by specifying EBM objectives in an explicit manner, and by developing risk-based framework and cumulative effects assessment. Whether EBM will include both fisheries and aquaculture as well is a matter of priorities and planning.

8.4 Benchmark Oversight Group

Brian MacKenzie (national member, Denmark) presented the Benchmark Oversight Group (BOG) with reference to Document 8.4-1. The main task of BOG is to explore and propose solutions related to generic issues with benchmarks. ACOM was invited to comment on the list of generic issues and set priorities. Reviewing completed benchmarks and recommend remedial action is also one of the objectives of BOG. Most of the benchmarks are related to standard fisheries advice. All the other types of benchmarks (e.g. ecosystem related) need to be carefully developed and considered in future benchmarks. Members of BOG were presented and they will have 3–4 remote meetings per year. To address non-fishery benchmarks is a priority, and SCICOM could contribute to this process with its scientific expertise and knowledge. The process and methodology of updated benchmarks are the main priorities that need to be developed. Another issue that was brought up is the short time-frame to produce good benchmark products. Lack of time should be considered in future benchmark planning.

9 Science Cooperation

9.1 PICES cooperation (Anne Christine Brusendorff, General Secretary) – including UN Ocean Decade joint planning

9.2 Arctic research (Anne Christine Brusendorff, General Secretary)

Anne Christine Brusendorff (General Secretary), with reference to Document 9.1-1, presented agenda points 9.1. and 9.2 together and provided an update on the cooperation with ICES-PICES, particularly in relation to the UN Decade of Ocean Science. Since the formalisation of the cooperation in 1998, the cooperation has been positively developing. A few upcoming activities between ICES-PICES presented were:

- The 4th ICES/PICES Early career scientists conference, hosted by Canada as part of the UN Decade of Ocean Science activities
- Looking into the possibility of a joint ICES-PICES annual meeting/annual science conference in 2023 to look into the cooperation between the two organisations and how we can use the established organisational structures to contribute to the UN Ocean Decade

ICES vision and objective, with PICES, is to get a full coverage of the sub-arctic waters with Ecosystem Overviews (EO). A new joint working group for the Pacific Arctic joint ICES/PICES/PAME IEA group Northern Bering Sea – Chukchi Sea LME has been established. The Central Arctic Ocean EO will be published in 2021. ICES-PICES are starting to cover both the Central Arctic Ocean, but also the waters adjoining the central arctic. Since the very beginning of the ICES-PICES cooperation, have the organisations looked into the Central Arctic Ocean as part of the Agreement to Prevent Unregulated High Seas Fisheries in the Central Arctic Ocean.

ICES-PICES have contributed with information on the IEA process, areas beyond national jurisdiction and biodiversity beyond national jurisdiction, to the 3rd Arctic Science Ministerial meeting. The meeting has been postponed until 8-9 May 2021 in Tokyo, Japan.

UN Decade of Ocean Science (UNDOS)

A number of regional workshops have been arranged to look into regions, cooperation with partners, as well as gaps and further needs in ocean science. The ICES General Secretary attended a North Atlantic workshop in Canada and one day initial workshop on the Arctic arranged by Norwegian colleagues. A comprehensive regional workshop for the arctic will be arranged by the Danish Centre of Marine Science. ICES has been asked to co-chair the working group during this regional workshop on the arctic looking into productive oceans.

Based on the work of the ad hoc ICES-PICES working group on further cooperation in relation to the UN Decade, a proposal for a Joint ICES-PICES Study Group/Council Strategic Initiative (ICES-PICES Ocean Decade) to plan participation in the UN Decade of Ocean Science has been put forward. The initiative looks at five priorities as described in the resolution. Anne Christine Brusendorff emphasised that this initiative can also include cooperation on aquaculture and data issues under UNDOS. The process of UNDOS was presented and ICES received good feedback for participating in the kick-off meeting in Germany June 2021.

Action: SCICOM members were encouraged to join the Council Strategic Initiative on the ICES-PICES Ocean Decade. SCICOM Chair asked for SCICOM members to come forward, who can both strengthen the scientific and more strategic representation of the group.

Comments

Mette Skern-Mauritzen (IEASG Chair) asked whether the joint ICES-PICES conference in 2023 and the Next Effects on Climate Change on the World Oceans (ECCWO5) would be held in the same year. Anne Christine Brusendorff responded that these two activities are planned for the same year and that there could be nice synergies between the two. ECCWO5 will be held in Europe and the ICES-PICES conference in North America.

ACOM Chair raised the concern of gender representation between ICES-PICES and that need for gender balance to be a high priority. Anne Christine Brusendorff referred to ToR3 of the initiative and that gender balance has been selected as a priority. Vera Trainer (PICES Science Board Chair), stated that PICES is taking gender roles seriously and interested in having early career ocean science professionals participate in PICES study and working groups.

9.3 Status on external projects

Wojciech Wawrzynski, Head of Science Support, with reference to Document 9.3-1, provided an update of the external projects that ICES participates in. Currently ICES is involved in 9 ongoing projects and 6 subcontracts, which are mostly run by the ICES Data Centre.

There are four competing proposals for the H2020 BG-10-2020 proposals being put forward by the Advisory Department. BG-08-2018-2019 All Atlantic Ocean Research Alliance Flagship Project 'Mission Atlantic' will be kicked off in October and ICES' primary role is to build human capacity. Department for Environment Food and Rural Affairs in the UK are developing

a Joint Cetacean Database Programme with the ICES Data Centre on behalf of the UK to ensure the data base has long-term functionality. This project is closely aligned with the ICES Working Group on Marine Mammal Ecology and supports the expert groups work.

Wojciech explained that there is continued discussion on project participation at the ICES Delegates level. Last year, the Council voted on pro-active engagement with strategic and science cooperation projects.

Actions: SCICOM to provide feedback on the following questions:

- Can we better link project work with ICES expert groups?
- Feedback on the importance of supporting national projects – how can these support the work of ICES expert groups?

Comments

SCICOM Chair emphasised the importance of national and international projects to support experts for their work in expert groups. SCICOM Chair will include this on the forum.

Johannes Karstensen, Alternate member, Germany, explained that there are many linkages between ongoing projects and ICES experts so it would be worthwhile to look into how this can be leveraged better.

9.4 ICES co-sponsored symposia 2020-2021

Malene Eilersen (Science Programme Supporting Officer), with reference to Document 9.4-1 “Revolving List”, presented the ICES co-sponsored science symposia and COVID-19 status for symposia planned for 2021 and 2022. Four symposia have been postponed from 2020 to 2021 and several symposium conveners are exploring potential formats: online, hybrid or physical symposia.

Malene presented the schedule for the upcoming resolution submission for 2022 symposia. In December 2020 ICES will make a broad announcement of co-sponsorship opportunities on ICES social media and ICES forums, as well as contacting conveners who have expressed prior interest directly. The deadline for submissions will be the 1st of February to give time for the ICES Secretariat to conduct an internal review and smooth out any issues with submitters before submitting all the resolutions to SCICOM in March for scientific review.

SCICOM was informed that ICES is anticipating three resolutions for 2022:

- 4th ICES-PICES Early Career Scientist Conference in 2022
- 7th Zooplankton Symposium
- FAO-sponsored FAO-ICES mini-symposium 2022

Actions:

Wojciech Wawrzynski provided an update on the planning of the ICES-PICES Early Career Scientist Conference and asked SCICOM members to nominate Early Career Scientists to join the Scientific Steering Committee, which currently only has one of three ICES representatives. This is a high commitment conference and ICES therefore asks that the person nominated have an agreement with their institution to participate in the planning of this. The Scientific Steering Committee will be leading the scientific programme, abstract selection and organising of the conference.

SCICOM members are invited to share the 2022 symposium resolution submission schedule with their colleagues.

DSTSG Chair to look for opportunities for a Symposium supporting the advancement of the “Emerging techniques and technologies” science priority.

Comments

Hal Batchelder (Deputy Executive Secretary, PICES) confirmed that the Zooplankton Symposium conveners have expressed grave concern with the travel to Hobart in Australia by 2022. The conveners have agreed to push the symposium to 2024.

Silvana Birchenough (EPDSG Chair) asked that SCICOM consider the early career scientists who are not able to present when symposia are postponed or cancelled. We should consider having shorter online events where scientists are able to present and to keep momentum of work going.

10 Science highlights and science promotion

10.1 Communications efforts to increase the profile of ICES science

Celine Byrne (ICES Communications Officer) presented the work of Communications and recent updates regarding efforts with other departments to increase the profile of ICES science. The website has been restructured and updated since the last SCICOM meeting in March. The main menu points are now “Science”, “Advice”, and “Data”. The news page is being promoted on social media and the website. The “Highlights” initiative is successful, there is a consistent stream of submissions from different expert groups. Series which are used to promote the work of ICES scientists and expert groups are “ICES Science Highlights”, “IJMS Editor’s Choice articles”; “Biodiversity”, and; “In other words”. Social media (Facebook, Twitter, and LinkedIn) serves as the main platform to reach out to the wider ICES community and to keep them up-to-date regarding news within the community. The followership of social media platforms is steadily growing. Some examples of outreach material by Communications is the “Annual Report” and “Factsheets”. This year the first ICES webinar is organized. Recently, a new initiative together with Publications to produce small videos, serves as a new avenue to promote the work of ICES and the work of its community. The first short video was produced for World Ocean Day. As ASC 2020 is postponed to 2021, two short video interviews were produced to announce the winners of ICES Prix d’Excellence 2020 and ICES Outstanding Achievement Award 2020.

The short video productions were received positively by several SCICOM members, highlighting that short videos can increase the reach of an organization and make its communications reach much wider audiences.

10.2 Science highlights

Julie Kellner (Science Professional Officer) presented Science Highlights with reference to Document 11.2-1 and 11.2-2. ICES Science Highlights is a short focused series, publishing 2–3 times per year. Generally, five or more expert groups are involved in the series. There are two upcoming series, with “Technology and data science” to be launched in early 2021, while “Future of aquaculture” is postponed to 2021. Suggestions for other Science Highlight topics from SCICOM are welcomed. Additionally, publication of the series “Biodiversity” and “In other words” will be starting in 2021. A proposed ongoing series in collaboration with SCICOM is “National perspectives on international cooperation with ICES”. Volunteering for the series will be much appreciated.

10.3 ICES Webinar

Katla Björnsdóttir (ICES Conference and Training Coordinator) presented the structure and content of the first ICES Webinar. It will consist of four pre-recorded talks about the socio-economic impacts of the COVID-19 pandemic on fisheries and communities. Live Q&A sessions will follow each presentation. The platform hosting the webinar is GoToWebinar and a professional moderator will make sure the quality of the webinar remains high.

At the time of SCICOM, 620+ individuals registered for the webinar. The webinar is recorded and published on ICES Youtube channel. New ideas are welcome from SCICOM for future webinars, as webinars are excellent platforms for knowledge exchange, even if they cannot replace physical meetings and conferences. During the discussion, it was brought up whether such initiatives should remain cost-neutral or should have a participation fee in the future.

11 Strengthening the ICES Community

11.1 Engaging oceanographers in ICES

Johannes Karstensen (Subgroup Chair and alternate member, Germany), with reference to Document 10.1-1 “Report from SCICOM Subgroup on Oceanography in ICES”, presented on the groups’ initiative to engage oceanographers. The general objectives of the subgroup include to:

- Develop a position paper to **assess potential target areas** considering the ICES mission and ICES science plan;
- Seek to **engage the oceanographic community** in targeted areas;
- Assess the (many) internal and external ICES efforts that already link with the Oceanographic community.

The group has made limited progress due to the COVID-19 pandemic. Part of the subgroup had an online meeting to assess opportunities for the science and advisory processes, emphasis on use of “oceanographers” data/products (e.g. EMODnet, CMEMS).

It needs to be considered how to link the oceanographic products better and how to test a product related to an area. A proposal was made for pilot application in a confined area (e.g. North Sea). Furthermore, it was noted that the connection to Working Group on Oceanic Hydrography (WGOH) as well as the Working Group on Operational oceanographic products for fisheries and environment (WGOOFE) is essential. A suggestion was to link aquaculture with oceanography as the ocean conditions and forecasts are as essential for aquaculture as weather and weather forecast for agriculture.

11.2 WGCHAIRS 2021

The SCICOM Chair with reference to the “Report from the Annual Meeting of Expert Group Chairs (WGCHAIRS), reported that the meeting in January 2020 was again well-attended with participation of 55 EG chairs.

Some of the key action items from the meeting include:

- Mentoring and Guidance for Chairs - currently looking into the opportunity to make a training course for new Chairs.
- Recognition of Chairs - Career advancement and recognition should be optimized to ensure the Chairs roles remain attractive and to generate further interest. It essential that they feel like the Chair role feeds into their career development.

The ACOM Chair reported back on the meeting and stated that the interaction with chairs was energizing and again emphasized the discussion points on training, mentoring and recognition as being central and important.

Next WGCHAIRS meeting

SCICOM was informed that the next physical meeting will be postponed until it is possible to arrange a physical meeting. There will be a shorter virtual meeting to keep up momentum and address some key points mentioned above. SCICOM and ACOM chair will work on the format and agenda.

12 Implementation of ICES Science Plan

SCICOM Chair provided a brief update on the Implementation of the ICES Science Plan and noted that almost all items are on track! The following items are in development:

- Mapping of ToRs (ongoing, but will be easier with new resolution forms!)
- EG reports (still experiencing delayed reports, affecting consistency)
- Identify and promote science priorities, nationally and internationally
 - Narratives defining influence of ICES science on international science agenda (including work on Science Highlights)
- Annual analyses of ICES science impact for reporting to SCICOM ASC meeting and Council October meeting (SIPG working on it)

13 Draft resolutions

13.1 Resolutions database development

Julie Kellner (Science Professional Officer) gave a presentation on the resolutions database. The Secretariat is working towards a searchable interface for expert groups, and to achieve this, has been working on cleaning up the data we have, which will enable user to search on details at SG, Country, Institute level. Groups will be searchable on name, acronym and the full descriptions. It will also be possible to extract information on Expert Group meeting attendance by country and EG Chair representation.

The resolutions will be searchable on the following parameters: Title, description, meeting dates; Chairs; Science and Advice Plan Priorities; Geographic focus (check list); Expertise needed; ToRs; Deliverables; and relationships to steering groups, other expert groups, strategic initiatives, and other organizations

Action: SCICOM members were reminded to complete corrections for their country institute lists, and to let us know if they would like to review additional countries.

DIG Chair asked if there is a plan to link to the EG reports? In response there is scope to and potential to join the databases in PowerBI.

13.2 Draft resolutions for expert groups

The Secretariat with reference to Document 13.3-1, informed SCICOM members of the process and deadlines for finalization of the draft resolutions.

14 SCICOM members' open forum and reflections on important topics

Postponed to either the extra meeting in November or the SCICOM March meeting.

15 ASC 2021

15.1 Update from Conference Coordinator

Katla Hrund Björnsdóttir (Conference and Training Coordinator), with reference to Document 14.1-1, gave a brief presentation of the postponement of the 2020 ASC and current plans for the ICES ASC 2021 taking place at Øksnehallen in Copenhagen Denmark, 6–9 September 2021.

Submissions have been processed by theme session conveners and authors notified of their abstract acceptance or rejection. There will be another call for abstracts opened in January 2021, as well as an option to update already accepted abstracts with new research results.

Opening and keynote speakers. Carlos M Duarte and Martin Smith had both confirmed their participation for the 2021 ASC. Unfortunately, Esther Horvath was unavailable for the 2021 dates. Finding her replacement would be discussed further during agenda point 15.2.

Action: SCICOM members were invited to volunteer for the mentoring of early career scientists. Any members who would like to volunteer or had previously agreed to any of the above, were requested to re-confirm by sending an email to katla.bjoernsdottir@ices.dk.

It was clarified that due to the split of the poster session into two sessions, no conference dinner will be organized for the ASC 2021.

SCICOM was informed that the ASC 2022 will be taking place in Dublin, Ireland, from 12–15 September 2022. Dublin Castle Conference Centre has been confirmed as the conference venue and has been booked from Sunday, 11 to Saturday 17 September 2022.

15.2 Missing keynote speaker

Decision: SCICOM selected Yunne-Jai Shin, France, as the third keynote speaker for the ASC 2021.

16 SCICOM Annual Report to Council

The SCICOM Chair, with reference to Document 16.1, outlined the structure of the annual progress report to Council and reminded the contributors of the 25 September 2020 deadline.

17 Dates of next meetings

Intersessional meeting in November 2020

SCICOM Chair will propose dates for an intersessional SCICOM meeting with more time for discussion and social interaction.

SCICOM March meeting 2021

Tuesday, 16 March (13:00 to 18:00)

Wednesday, 17 March (09:00 to 18:00)

Thursday, 18 March (09:00 to 13:00)

SCICOM September meeting 2021

Sunday, 5 September (09:00 to 18:00)

Friday, 10 September (09:00 to 18:00)

18 Closing remarks

SCICOM Chair had very much appreciated the meeting, although it had not been possible to meet in person. Thanks were extended to all members of SCICOM for their participation, interactions and comments, and special thanks to the Chairs of the Strategic Initiatives, Steering Groups and Operational Groups. Thanks were also extended to the Secretariat for excellent meeting support.

SCICOM Chair was looking forward to seeing active participation by SCICOM members in response to the posts requesting members for subgroups and comments in response to the various questions.

Annex 1: List of participants

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Annex 2: List of SCICOM actions and decisions

Action/Decision	Section	Deadline	Responsible
Action: A subgroup was established to further discuss the way forward to improve orientation, communication and coordination of EBM work within ICES and report back to the March SCICOM meeting. The following subgroup members volunteered via the WebEx Chat and SCICOM Forum post: Mette Skern-Mauritzen, Rafael González-Quirós; Debbi Pedreschi, Pierre Petitgas, Alan Haynie, Patrick Lynch, Brian R. MacKenzie, Lena Bergström, Henrik Nygård, Michael Rust.	4.5 Fisheries Resources Steering Group	March SCICOM	SCICOM Chair
Action: SCICOM members were requested to provide comments on the use of disclaimer 1 on the SCICOM Forum.	6.2 Science Impact and Publication Group	15.09.2020 (Completed)	SCICOM members
Action: SCICOM national members to provide written national perspectives on remote working.	7.2 National perspectives on remote working (national representatives)	15 November 2020	SCICOM national members
Action: SCICOM members were encouraged to join the SCICOM Subgroup on carbon footprint initiative. The Subgroup would be announced on the SCICOM Forum and would be tasked to provide input on the initiative and the wording of the proposed ToRs 5–7 prior to the Council meeting, 21–22 October. There will be room to adjust Terms of Reference before Council and even after.	7.3 Carbon footprint initiative	15 October (delayed – pending progress)	SCICOM members
Action: SCICOM members were invited to join the SCICOM Subgroup on Remote and Hybrid Meetings tasked to prepare a document to support Coordination Group, as well as providing written feedback. The Subgroup would be announced on the SCICOM Forum	7.4 Hybrid meetings	1 December	SCICOM Chair
Action: SCICOM members were encouraged to join the Council Strategic Initiative on the ICES-PICES Ocean Decade. SCICOM Chair asked for SCICOM members to come forward, who can both strengthen the scientific and more strategic representation of the group.	9.1/9.2 UN Decade of Ocean Science (UN-DOS)	November 2020	SCICOM members
Actions: SCICOM to provide feedback on the following questions: - Can we better link project work with ICES expert groups? - Feedback on the importance of supporting national projects – how can these support the work of ICES expert groups?	9.3 Status on external projects	March SCICOM	SCICOM Chair/HoSS

Action/Decision	Section	Deadline	Responsible
Action: Wojciech Wawrzynski provided an update on the planning of the ICES-PICES Early Career Scientist Conference and asked SCICOM members to nominate Early Career Scientists to join the Scientific Steering Committee, which currently only has one of three ICES representatives. This is a high commitment conference and ICES therefore asks that the person nominated have an agreement with their institution to participate in the planning of this. The Scientific Steering Committee will be leading the scientific programme, abstract selection and organising of the conference.	9.4 ICES co-sponsored symposia 2020–2021	November 2020	SCICOM Chair / HoSS
Action: SCICOM members are invited to share the 2022 symposium resolution submission schedule with their colleagues.	9.4 ICES co-sponsored symposia 2020–2021	January 2021	SCICOM members
Action: DSTSG Chair to look for opportunities for a Symposium supporting the advancement of the “Emerging techniques and technologies” science priority.	9.4 ICES co-sponsored symposia 2020–2021	SCICOM March 2021	DSTSG Chair
Action: SCICOM members were reminded to complete corrections for their country institute lists, and to let us know if they would like to review additional countries.	13.1 Resolutions database development	November 2020	SCICOM members
Action: SCICOM members were invited to volunteer for the mentoring of early career scientists. Any members who would like to volunteer or had previously agreed to any of the above, were requested to re-confirm by sending an email to katla.bjoernsdottir@ices.dk.	15.1 ASC Update from Conference Co-ordinator	March SCICOM	SCICOM members
Decision: SCICOM selected Yunne-Jai Shin, France, as the third keynote speaker for the ASC 2021.	15.2 Missing keynote speaker	–	–