

SCICOM MARCH 2019

ICES SCIENCE COMMITTEE

ICES CM 2019/SCICOM:01

REF. COUNCIL

Minutes from the meeting of the ICES Science Committee (SCICOM)

26–28 March 2019



ICES

CIEM

International Council for
the Exploration of the Sea

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

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

Recommended format for purposes of citation:

ICES. 2019. Minutes from the meeting of the ICES Science Committee (SCICOM), 26–28 March 2019. ICES CM 2019/SCICOM:01. 29 pp.

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1 Opening and welcome

The SCICOM Chair welcomed the participants and thanked the Secretariat and all contributors of meeting documents.

A special welcome was extended to new members Jonne Kotta (Estonia) and Artūras Razinkovas-Baziukas (Lithuania), Thomas Klein (Sweden) who would join us on Thursday, and Anna Jöborn, Swedish alternate member. Eva-Lotta Sundblad and Alan Haynie, co-Chairs of the Strategic Initiative on the Human Dimension (SIHD), were joining the meeting as observers.

Apologies had been received from Dariusz Fey (Poland) and Patrick Lynch (Fisheries Resources Steering Group, USA), and Strategic Initiative on Climate Change Impacts on Marine Ecosystems (SICCME) Co-Chairs, John Pinnegar and Myron Peck. Patrick Lynch gave a short self-introduction under item 9.1 by WebEx, and John Pinnegar gave the SICCME report by WebEx. Two new staff members, Julie Kellner, Science Professional Officer, and Ruth Andersen, Editor, were welcomed.

SCICOM Chair asked for a tour de table to introduce attendees (see Annex 1).

2 Agenda and timetable

SCICOM Chair noted that the main focus of the Wednesday agenda would be on the implementation of the Science Plan, drawing on the plans provided by the national SCICOM members, giving an insight to how ICES member countries are planning to contribute to the implementation of the plan.

SCICOM was informed of the new ICES code of conduct as added in Section 4 of [Guidelines for ICES Groups](#), and which applies to aspects of the work carried out in SCICOM. SCICOM members and participants were asked to declare any conflict of interest in advance of any agenda item where there was a possibility of perceived or actual conflict of interest.

The agenda was approved and no new items were brought up for inclusion.

3 Follow-up on decisions taken at the meetings of SCICOM (September 2018) and SCICOM Forum and ICES Resolutions Forum

SCICOM Chair, with reference to the minutes from September 2018 and Doc 4, 5 and 6, gave a summary of the decisions taken on the SCICOM Forum and the ICES Resolutions Forum, and summarised actions completed.

SCICOM was informed that efforts have been made to create a new joint ICES/PICES small pelagics working group, but a chair has not yet been identified. ICES has now passed a request for a Chair to PICES.

SCICOM Chair raised his concern that material handled on the resolutions forum tends to generate very little feedback. The material going on the forum is generally in good condition, so perhaps this is the reason for few comments, but he hoped that all resolutions are getting the attention needed.

4 Information on Council actions and recommendations for SCICOM

Ellen Johannesen on behalf of ICES General Secretary presented the outcomes from Council and Bureau of relevance for SCICOM (Doc 7):

Annual Science Conference (ASC). SCICOM was informed that the Secretariat will arrange the ASC in 2020 in Copenhagen and the requested cost can be financed from equity.

Council Strategic Initiative on Resources. Given the dependence on experts to carry out ICES work, one of the major limiting factors for participation is financing. The 2018 Council meeting established a Council Strategic Initiative that was tasked to map how experts are financed to participate in ICES activities and to consider if there are other options or benefits to be realised by information exchange among ICES member countries.

Potential for IJMS to become open-access. Inspired by a move towards an open access publication policy for the next EU research programme (Horizon 2020 Europe), the Secretariat is working with the Editor in Chief of IJMS and Oxford University Press to prepare for the future by making all IJMS submissions open access.

Projects. When discussing projects under Agenda Item 17.4 SCICOM was requested to discuss how a proactive role in projects could help the transfer of ICES science to advice.

Renewal of SCICOM Chair contract. SCICOM was informed that a panel will meet by correspondence and report to Bureau in June. SCICOM is represented by Ellen Kenchington (Canada) and Jörn Schmidt (Germany).

5 Reporting back from WGCHAIRS

ACOM Chair with reference to the WGCHAIRS report (Doc 8) reported from the meeting held from 21–25 January 2019. The meeting was well attended with ca. 60 Expert Group chairs across science and advice. Topics addressed included quality assurance and developing the Advice Plan. A joint science day focused on the guidelines for ICES Groups, and looked at how expert groups relate to the Science Plan and Strategic Plan. Breakout groups were asked to look into the implementation of the Science Plan, authorship of expert group reports, and how to communicate highlights from expert groups. One breakout session gave the steering groups an opportunity to set up individual meetings, which was regarded as very useful.

SCICOM Chair thanked the Steering Group Chairs and ACOM Chair for their active participation in this meeting.

6 ICES Strategic Plan

SCICOM Chair gave a presentation of the Strategic Plan (Doc 9), released on 15 January. With the new Strategic Plan ICES is renewing its commitment to understanding marine ecosystems and securing the benefits that people derive from them. The plan defines our direction and priorities relating to science data and advice and it describes how we will work collaboratively, to generate and share the data, knowledge, and advice needed to meet conservation, management, and sustainability goals.

7 ICES Science and Advice Plans, Science Implementation Plan and status of resolutions database

SCICOM Chair introduced the Science Plan (Doc 10a), and emphasised that the next steps for SCICOM will involve implementation of all the agreed objectives. By following the Implementation Plan, we should meet the objectives of the Science Plan! Table

1 in the implementation plan outlines specific responsibilities and actions to meet the broad objectives.

ACOM Chair gave a presentation of the Advice Plan (Doc 10b), including the priorities and purpose of the plan. The timelines for implementation were presented, with an intended launch in December 2019. Comments on the Advice Plan from SCICOM members will be requested in April/May to assure SCICOM ownership of the plan.

Resolutions database

Science Programme Professional Officer, Julie Kellner, introduced SCICOM to the ongoing work on developing a new resolutions database. The resolutions submission template will be changed to pdf forms to ensure that the drafters of resolutions can still effectively collaborate during the submission process and maintain the ability to receive feedback and comments from the steering group chairs and Secretariat staff. Moving to a pdf form will ensure that the resolutions are formulated as structured data that can be added to the centralized resolutions database.

There was discussion with SCICOM members about how the resolutions database would be structured in order to provide effective searching and reporting capabilities. SCICOM members were particularly interested in understanding where their countries were sufficiently addressing each of the science plan priorities and the ability to identify gaps in coverage of the priorities so that they could help to improve coverage. SCICOM Chair thanked the Secretariat for the work done so far, and for the positive feedback from SCICOM confirming that there is a national demand for the resolutions database.

8 ICES Annual Science Conference

Anna Davies, Conference Coordinator, gave an update on the preparations for ASC in Gothenburg, Sweden (Doc 12).

The 2019 ASC will be held in Gothenburg, Sweden, from Monday 9 – Thursday 12 September at the [Swedish Exhibition & Congress Centre and Gothia Towers](#), with additional meetings taking place on Sunday 8 and Friday 13 September.

In place of an opening single keynote speaker, there will be an opening panel debate entitled ‘Science is key for a sustainable management of the sea’. There will be an introduction by Cleopatra Doumbia-Henry, World Maritime University, Sweden, speaking about science policy needs and challenges for achieving SDG14. The panel will consist of Katherine Richardson, Sustainability Science Centre, University of Copenhagen, Denmark; Elisa Morgera, University of Strathclyde, Glasgow, UK; Manuel Barange, Food and Agriculture Organization of the United Nations (FAO); and Vladimir Ryabinin, The Intergovernmental Oceanographic Commission of UNESCO. The panel moderator will be Jakob Granit, Swedish Agency for Marine and Water Management.

The following conference events were highlighted:

Networking meeting for communications professionals SCICOM members were encouraged to contact ICES communications (terhi.minkkinen@ices.dk), if they had any suggestions for persons from their institutes who should be invited to the meeting.

Side events including COMPASS communications presentation and workshop, BONUS stakeholder workshop, visit to SVEA research vessel, seminar on transdisciplinary approaches to biodiversity, marine ecosystem and sustainability science.

Early career scientist's events include a mentor programme, welcome breakfast and COMPASS science communications workshop, and an Early Career Scientist meetup zone.

Conference registration fees will include lunch for all participants and will be served as a vegetarian deli platter, from various stations throughout the conference venue.

9 Steering Groups

9.1 Steering groups: recent updates to steering group structure and introduction to FRSG

Patrick Lynch (Chair of FRSG) on WebEx introduced himself to SCICOM.

Mark Dickey-Collas, ACOM Chair, described the challenges of this new steering group; it is large and often there needs to be a quick turnaround of ToR by the expert groups. He is working with the new chair, Patrick, to identify a workflow that will work best as this new steering group develops.

Questions and comments: (1) a SCICOM member wanted to know when the groups were going to be moved to this new steering group (ACOM Chair explained that this has already happened and the expert group chairs have been notified), (2) a SCICOM member wanted to know why the stock identification groups were not moved to FRSG (ACOM and SCICOM Chairs explained that they didn't want to make too many changes in the first year of the group, but further changes including this change may be considered in the future).

9.2 Integrated Ecosystem Assessments Steering Group

Mette Skern-Mauritzen (Chair of IEASG) reported from Integrated Ecosystem Assessments Steering Group (Doc 14). She noted that there has been more cross expert group communication in the past year using WebEx conferences. Mette asked SCICOM to encourage more participation from other expert group chairs in two upcoming workshops from WKINTRA. Additionally, Mette noted that the IEA groups are struggling with interacting with stakeholders and that some are experiencing "stakeholder fatigue". She suggested that this might be a suitable topic to address at the next WGCHAIRS meeting.

Action: WGCHAIRS topic on stakeholder engagement with Ecosystem Overviews to be included in WGCHAIRS 2020.

Questions and comments: (1) SCICOM Chair was glad that there is substantial interest in the upcoming WKECO3 workshop. (2) ACOM Chair agreed that there is some stakeholder fatigue, but there are also great opportunities. For example, during his representation of ACOM at other meetings, he has discovered that the Fisheries Overviews are being used by the European Commissions in unexpected ways to guide decision-making. (3) A SCICOM member stated that it is important to know which types of stakeholder the groups are engaged with, and that feedback to those in the field is important. (4) The EOSG chair noted the links between the IEASG and EOSG, and that the collaborative approach could be more community-based if there were improved back and forth communication. Mette agreed. (4) A SCICOM member followed up on the stakeholder comments, and said that there is renewed interest in engagement through the marine spatial planning process that involves a variety of different sectors. (5) Another SCICOM member said that stakeholder engagement at the higher level is occurring, but a communication strategy on this topic for ICES would be worth dis-

cussing. Others agreed that processes for stakeholder engagement needed further consideration. The action to begin the discussion of stakeholder engagement at WGCHAIRS can be considered a starting point.

9.3 Aquaculture Steering Group

Mike Rust, Chair of ASG, gave an update from Aquaculture SG (Doc 15). Over the next year, the steering group is considering putting together a paper on the ecosystem approach to aquaculture, and will be establishing a monthly webinar series for the expert groups to increase cross-group communication. There has also been discussion of coordinating working group meetings to facilitate overlap. Additionally, discussions on the development of aquaculture overviews are occurring.

Questions and comments: (1) SCICOM Chair has been impressed with the growth of the ASG and appreciates that the group has done some long-term planning of theme sessions for the ASC. (2) A SCICOM member contemplated whether aquaculture overviews could be part of the ecosystem overviews. (3) Another SCICOM member suggested that the production of factsheets on aquaculture developments such as shrimp farming could be informative. Mike Rust said that there are already some outreach products available in the aquaculture community that they could build upon. (4) A SCICOM member mentioned that the aquaculture database could be expanded to include other species. (5) Henn Ojaveer asked about the progress of developing viewpoints, but Mike Rust stated that there has been some pushback from the expert group chairs given the intensive requirements to produce them. He contemplated that the ASG needs to figure out whether to move forward with these viewpoints given the need to also develop the Aquaculture Overviews. (6) A SCICOM member contemplated what the Aquaculture Overviews would include, as there are many important issues for mariculture, such as genetics, diseases and climate change. Another member noted that SIHD and SICCME workshops have been looking at climate and socio-economic scenarios that would likely be relevant to aquaculture, but finding common ground can be challenging when different regions have different goals. They additionally stated that scenario testing is very challenging; one approach is to rely on IPCC for some generalizations that can then be scaled down regionally. (7) Mike indicated that there has been reasonable focus on climate and aquaculture resilience, but less on vulnerability. This may be an opportunity to develop another expert group if a chair could be identified. SCICOM Chair indicated that much of this climate change work has been under the umbrella of the strategic initiatives, but Mike now has some expert groups addressing these issues.

Action: SICCME, SIHD and ASG Chairs and representative from fisheries side to discuss horizon scanning scenarios (7.6 in Science Plan).

9.4 Ecosystem Processes and Dynamics Steering Group

Silvana Birchenough, Chair of EPDSG, gave an update from the Ecosystem Processes and Dynamics Steering Group (Doc 16). She indicated that over the past year there has been a substantial collaboration and interaction across the expert groups in EPDSG and HAPISG.

Questions and comments: (1) SCICOM Chair appreciated that the Ecosystem Processes and Dynamics expert groups had been effectively mapping their activities to the science plan and that the co-ordination and collaboration between EPDSG and HAPISG adds significant value to the group.

Action: ACOM Chair and Silvana to discuss sensitivities of WGBIRD offline.

9.5 Ecosystem Observation Steering Group

Sven Kupschus, Chair of EOSG, reported from Ecosystem Observation Steering Group. (Doc 17). He noted that there were some differences between this steering group and some others as EOSG sits between science and advice. In particular, his groups have very structured roles in comparison with many expert groups in other steering groups. Additionally, many of the EOSG expert groups map to only one element in the science plan (5.1) which risks that they are underrepresented. He stated that there will be some upcoming workshops on the use of data; the ToRs are currently being developed. He suggested that the workshops could be beneficial for the IEA groups and that data collectors and data users should be attending workshops together more regularly. Sven Kupschus also commented that EOSG has around 60 expert groups, and he has found that using the forum is an effective way to communicate. EOSG has spent considerable time on QAQC in the past year, but could improve documentation of when errors happen.

Questions and comments: (1) SCICOM Chair appreciated that the EOSG chair has spent considerable time working with the expert groups on their resolutions that then go through the forum approval cleanly. (2) A SCICOM member asked whether the EOSG expert groups were addressing and incorporating new technology; Sven said that these groups often are governed by the input of the data sets and are focused on data quality, collection, and monitoring and that there is not much time during the expert groups to do much more. He also noted that the expert groups are looking at ways to make more efficient use of data. Other SCICOM members noted that many of these surveys are longstanding, and while there is room for improvement, the long-term funding mechanisms in place can be restrictive. SCICOM Chair acknowledged that the speed of scientific innovation is often faster than changes in funding support, and that a lag from innovation to adoption and application should be expected. Sven thought there was room for ICES to be more directive on these issues. (3) There was some discussion about the future vision of EOSG, and Sven is hopeful that some upcoming workshops on this topic will help address some of the challenges and ways to move forward.

9.6 Human Activities, Pressures and Impacts Steering Group

Sarah Bailey, Chair of HAPISG, gave an update from Human Activities, Pressures and Impacts Steering Group (Doc 18). She noted that her steering group has been thinking about how to work best with the former ACOM groups that have been moved into HAPISG. She also noted that the Marine Chemistry Working Group (MCWG) was at risk due to low active member participation and encouraged SCICOM members to suggest more people for the group. Sarah stated that the authors in HAPISG involved with the first ICES viewpoint were content with the process and are considering another viewpoint.

Questions and comments: (1) There was much discussion on ways to help the MCWG. This turned into a broader discussion about ways to improve the advertising of groups that were looking for new members and better ways to know which groups were having upcoming meetings. ACOM and SCICOM Chairs reported that the Secretariat is working with a consultant to improve the ICES website, and the suggestion of having a higher profile for the working groups was being considered. SCICOM proposed a subgroup to provide guidance on publicising expert groups. (2) It was noted that there are many (50+) MCWG members listed on the WG site on the web and that issue is one of needing to tidy up the membership list, removing retired members and replacing non-active ones with active ones if possible. Other WGs have had to do this with the

help of ICES support staff and national delegates. The process starts with a mailout to all members and cc to national delegates to confirm membership.

Actions:

Stronger communications requested around e-evaluation process.

Members to seek MCWG contributors nationally.

Subgroup to look at web projection of expert groups to people with no special knowledge of ICES system, to include links from 'Get Involved' pages and provide recommendations for how we can better publicize new/existing groups in ICES community and to a wider set of institutes. Sarah Bailey to chair with Pierre, Brian, Laura, Mike, Ellen and secretariat reps. Reporting back to SCICOM at ASC 2019.

10 Opening Day II

11 SCICOM Operational Groups

11.1 ICES Training Group (ITG)

Jan Jaap Poos, Chair of Training Group, gave an update from the ICES Training Group (Doc 19). The training courses held during the last six months were presented and SCICOM members were reminded that course reports are publically available on the ICES website. Training courses planned for 2019-20 and training courses under development were presented, and SCICOM members were encouraged to bring forward suggestions for new courses. Training courses are promoted via e-mail to specific working groups and via the ICES newsletter. SCICOM members are also encouraged to disseminate information about ICES training courses in their own organisations.

There is a funding opportunity for a training course on aquaculture, but input from Aquaculture Steering group is required. ASG Chair noted that possible topics identified would be on methods and risk assessment around aquaculture and on management tools for aquaculture, but both proposals are at an early planning stage and require more work.

Action: Mike Rust and Jan Jaap will meet to discuss design of aquaculture course.

Last year, Training Group through a collaboration with the Danish Technical University (DTU) and with funding from the BlueBRIDGE project, developed an [online training course on oceanography](#) for bachelor university level. However, this online course hardly had any visitors. Designing these courses cannot be taken on by ICES, but it would be great if instructors came forward to make this happen on a voluntary basis.

Another option is to offer online attendance for real time/physical courses and several SCICOM members noted that this has worked fairly well in the past. Yet another option is to join forces with universities. It was noted that the community building aspect of training courses is high when people are in-house and a lot of the people stay tied into ICES work. There was overall agreement that the balance of emphasis should be given to real-time online courses.

A suggestion was put forward (given there is a demand) to develop a course on code handling and documentation.

Action: SCICOM to feed suggestions for training courses to Jan Jaap.

11.2 Science Impact and Publication Group (SIPG)

Ruth Andersen, ICES Editor, gave an update on SIPG and progress on the SIPG Terms of Reference (Doc 20).

SCICOM was introduced to the other new members of the editorial team: our new Editorial Assistant, Ffion Bell, and a new intern, Vera Kristbjargardóttir.

SCICOM was informed that new [Guidelines for CRR/TIMES authors](#) have been written, summarizing relevant existing guidelines and providing advice on preparing a CRR/TIMES draft with the ICES template. Through these guidelines, the two-year deadline for CRR/TIMES authors has been tightened again to avoid long delays. The template for CRR and TIMES reports is being updated and is expected to be ready for use by authors from March/April 2019.

SCICOM was informed of the ICES library optimization project 2019 aiming to improve the search function until the whole ICES library can be optimized, and the ICES Citation project with the end goal of creating a good database, aiming to obtain a good overview of publications that have used ICES data or been facilitated by ICES expert groups via ICES acknowledgement.

ICES Editor gave an overview of all ICES publications and the low submission rate for TIMES publications was brought to SCICOM attention.

SCICOM Chair thanked Ruth for very rapid progress since joining ICES.

Questions and comments: 1) Two-year deadline for submission of reports. ACOM Chair reminded SCICOM that it has been the policy to ask for publications to be resubmitted after a two-year deadline. ICES Editor had a preference to deal with this on a case by case basis. 2) It was suggested and agreed to assess if the ICES Cooperative Research Series can be included in a big peer-reviewed database, such as Scopus. 3) A SCICOM member noted that the website for the ICES peer-reviewed database does not include instructions on how to submit the information to be included to the database and it was suggested to make the process more explicit on the website.

Actions:

SCICOM to solicit ideas for TIMES nationally and convey to Ruth (responsibility of national members and SG chairs).

National members to encourage submission of peer reviewed papers that include ICES acknowledgements and copies to Ruth. (responsibility of national members).

Assess if CRR can be listed in Scopus (ICES Editor).

Include instructions on the ICES peer-reviewed papers site to state how information on new publications should be submitted to ICES.

11.3 Data and Information Group (DIG)

Jens Rasmussen, DIG Chair, presented an update on Data and Information Group (Doc 21).

SCICOM was informed that ICES Data Centre presented a paper to Bureau in February 2019 on data governance. The presentation included a matrix highlighting different data products and which elements of governance and quality control were well identified, and where there is need for improvement. ICES Data Centre and DIG at their May meeting will look into accreditation of the Data Centre for the processes that it follows.

DIG Chair gave a presentation on Data Quality & Best Practise at WGCHAIRS in January 2019.

Data guidance. SCICOM was informed that progress has been made on Data Guide formats and DIG will seek to establish a workflow for data guides subject to SCICOM adoption of the proposed structure and process.

Decision/Action: Data Guides. SCICOM endorses the concept and welcomes these being posted on SCICOM forum for feedback on detail.

SCICOM noted that Jens Rasmussen is now at his third year as DIG Chair and that DIG will make a recommendation to SCICOM on a future chair. SCICOM Chair thanked the DIG Chair for his good work in this role.

DIG and ICES Data Centre have established a matrix of future opportunities and challenges relating to data, technology, open data and coding, and transparency of processes. The initial matrix has been completed, and will be discussed at the upcoming DIG meeting with a view to a summary being presented at the September SCICOM meeting.

Comments/questions: 1) A question was asked if the ICES network can be used to disseminate and share knowledge on new technology? DIG Chair responded that the matrix of future challenges and opportunities will hugely benefit from input from other groups, and DIG will seek advice from relevant groups. For example, the working group on machine learning in marine science (WGMLEARN) will be held in May 2019 and one of the ToR will be to 'Communicate with DIG and the ICES Data Centre on data organization and requirements related to machine learning analysis.' 2) Concern was raised on the issue of data falling through gaps, assembled by groups but not correctly registered in the system and how to ensure that people have the proper mandate to bring the data into ICES? DIG Chair noted that ensuring adequate documentation for data that is published on the individual working group level would be a very resource-intensive task. ACOM Chair emphasised the need on the advisory side to tighten up on data flows, ownership and how the data conforms to data policy. There are certain data quality requirements and the community needs to recognise these, especially when the data is used for advice. 3) Accreditation. Head of ICES Data Centre, in response to question from a SCICOM member, explained that accreditation is based on the ISO accreditation system. It is about documenting all the data processes and mapping out all the data flows and data access. The advantage of doing this is that we will find out where the gaps in processes and documentation are.

SCICOM Chair thanked DIG and Data Centre for giving high priority to tidying up the data management and work processes.

Action: DIG to provide regular review/ update of WGMLEARN outputs. Responsibility of DIG.

12 Strategic Initiatives: Review of activities and plans

12.1 SCICOM Strategic Initiative on Climate Change (SICCME)

John Pinnegar, SICCME Co-Chair, gave an update on SICCME via WebEx (Doc 22). He reported on activities since the September 2018 SCICOM meeting (2018-19) and planned activities looking forward. He also mentioned that a new working group on Climate Impacts on Life Histories and Population Dynamics is under review.

SCICOM was informed that both ICES SICCME co-chairs will step down by the end of the year and new chairs need to be found.

Questions and comments: (1) ACOM Chair contemplated whether ICES needed to do more in the area of ecosystem-based management and climate change. (2) The SICCME co-chair thinks that ICES will be asked to provide expertise on forecasting (such as work related to Mark Payne's expert group) and changes in fish stock distributions in relation to management boundaries. He also mentioned that further advice on fish distribution shifts may be required. (3) Mike Rust said that ICES should think more about resiliency to climate change; SCICOM Chair encouraged that the two (Rust and Pinnegar) should explore this avenue.

Action: Mike Rust and John Pinnegar to speak offline about SICCME projections work and extent to which aquaculture projections could be included.

12.2 Strategic Initiative on Human Dimension

Jörn Schmidt, co-chair of SIHD, gave an update on SIHD (Doc 23).

Questions and comments: (1) SCICOM Chair was pleased to see the growing level of international engagement by this initiative. Alan Haynie, another SIHD co-chair, also noted the recent good progress of the initiative. (2) A SCICOM member mentioned that there were cross linkages with the SIHD and work done by the Atlantic Ocean Research Alliance (AORA) Working Group.

13 Science Plan Implementation: national actions

13.1 From ICES Strategic Plan to implementation of the Science Plan

Fritz Köster, ICES President, gave a presentation on the strategic plan and science plan. These set the frame for ICES to adopt an increasingly global mandate in future, whereas ICES focus in the past was more regional. He reminded SCICOM that achieving the Science Plan was their responsibility. The next steps for SCICOM are described in the implementation plan. A prerequisite to accelerate the uptake of science into advice, will be increased collaboration between SCICOM and ACOM. Going through the national actions to extract the commonalities, as planned in the next session, is an important step towards effective implementation of the science plan. SCICOM Chair thanked the President for his presentation.

Comments and questions:

1) **Lobbying position in programming.** Artūras Razinkovas-Baziukas, Lithuanian SCICOM member, asked if there have there been any attempts of joint lobbying by ICES in relation to funding calls? ICES President explained that ICES as a science-based organisation has been reluctant to go into real lobbying. The diversity of organisations dealing with programming has increased and the landscape is becoming more complex, so this would be the entrance for ICES to get into more programming, at least at the EU level.

Action: Consider ICES role in lobbying and programming as an item for a future SCICOM meeting. SCICOM chair action.

2) ACOM Chair noted that our links with the European Commission DGs are getting stronger, but ICES President explained the low impact of the DGs into the current framework programme.

14 Summary review of national actions and introduction to breakout groups

SCICOM Chair invited national members to present their national actions (Doc 24.1 to 24.20).

Actions:

Share Belgian “ICES event” report via SCICOM forum. Belgian SCICOM member action.

Consider possibility of offering workshop for early career scientists at ASC 2019 “How to make short movies with your smartphone?”

SCICOM Chair thanked members for the national presentations, highlighted their value as reference documents and as background to the upcoming breakout sessions, and presented a summary of some of the commonalities he had drawn from the presentations:

- Communication, coordination and dissemination of ICES activity nationally and to a lesser extent internationally is important and it has been great to share experiences on what is working / not working.
- As ICES moves into new areas of science, and not only those linked to the institutes that have provided good support for ICES, we rely more on bottom-up engagement, and it is clear more visibility of ICES will be needed to promote this.
- There can be a large proportion of the national institutes sending just one or two representatives per expert group (Germany and Spain provided examples). Going forward we should think about how to more fully engage these institutes and how we encourage input from new institutes in countries where that’s feasible?
- Engagement with Research Councils and equivalents is an area where we can be more effective, by explaining what ICES is adding. More and more research is tied to societal impact and this is where ICES has a strong track record through linking science to advice.
- It was excellent to hear from four countries about specific ICES events completed or in planning and the breakout groups provide a good opportunity to share information on how to set up further events.

15 Priorities for implementation of science plan

SCICOM Chair gave a short introduction to the breakout groups. Each of the four groups were asked to reflect on reported national actions to engage scientists in the work described in the Science Plan, to consider priorities for 2019-20 and to identify specific actions for SCICOM or Secretariat. The groups were asked to appoint a rapporteur and bring back to plenary the key actions on a single PowerPoint slide.

16 Reporting back from breakout groups

A summary of the feedback received from the breakout groups is provided in Annex 2. SCICOM discussed the feedback and actions that should result.

Action: Use breakout group reports to develop draft document to define specific actions to be carried forward to support implementation plan to include promotion of expert groups (and take input from item 9.6), engagement of PhD students and ECS and actions to develop with WGCHAIRS. SCICOM chair to draft document for review on SCICOM forum.

Group 1 (Biscay) – rapporteur Silvana Birchenough

Group 2 (North Sea) – rapporteur Peter Wright

Group 3 (Kattegat) – rapporteur Jörn Schmidt

Group 4 (Atlantic) – rapporteur Mike Rust

17 Science Cooperation

17.1 ICES contributions to Decade of Ocean Science (Anna Jöborn, Sweden)

Anna Jöborn, Swedish SCICOM Alternate, gave a presentation on the [UN Decade of Ocean Science for Sustainable Development \(2021-2030\)](#) in her capacity as member of the executive planning group. She expressed hope that ICES would get engaged in this initiative and the regional workshops planned. The aim is to establish a cooperating framework, sharing information and data between the different organisations. ICES is an important organisation in this context and ICES engagement will be essential to make this a success.

SCICOM members were invited to take part in the [1st Global Planning Meeting](#) to be held in Copenhagen from 13-15 May 2019, and to help spread the information that it is taking place.

The aim is to launch a Science Implementation Plan for the UN Decade of Ocean Science in Berlin in 2021.

Comments/questions: 1) A question was asked on how ICES can become engaged and what would the mechanism of engagement? Anna Jöborn explained that at this stage it is not a question of involving individual scientists; it is more about finding the added value of collaboration. The global planning meeting will be a brainstorming event. 2) Another question was asked on the added value for the ICES community if ICES decides to take part? Perhaps one important added value would be to share a platform and goals with other organisations, thus opening doors for more experts from other communities to join the ICES network. It was also mentioned that this process is heavily driven by physical oceanographers and this is also an opportunity to engage with them. It was noted that it is desirable to have concrete links between ICES and the IOC Decade if this is to go forward (as opposed to having involvement by ICES scientists in dual roles).

SCICOM Chair thanked Anna Jöborn for the presentation and for raising awareness.

Action: SCICOM members are invited to IOC Decade of Ocean Science planning meeting in Copenhagen 13–15 May 2019. Please contact Anna Jöborn (anna.joborn@havochvatten.se) to register.

17.2 ICES co-sponsored symposia

Julie Kellner, Science Professional Officer, with reference to the Revolving list of ICES co-sponsored symposia (Doc 26a, 26b and 26c) gave a progress update on ICES co-sponsored symposia. SCICOM was informed that the [Guidelines for Symposium Conveners](#) have been updated and the [symposium website](#) is up to date.

Two resolutions were approved recently via the Resolutions Forum:

- Symposium on “Fisheries Sustainability: Strengthening the Science-Policy Nexus (19–21 November 2019, Rome, Italy)
- Symposium on the “Implementation of the Ecosystem Approach to Management in the Arctic” (25–27 June 2019, Bergen; Norway)

Two new requests for ICES co-sponsorship had been received requesting SCICOM Approval:

Decision: Symposium on “OCEANS PAST VIII” to be held in Bruges, Belgium, in May 2020. SCICOM approved co-sponsorship including 9,000 EUR for Early Career Scientists. Final decision on funding to be made by the General Secretary / Finance Department.

Decision: The World Fisheries Congress 2020 (WFC2020) to be held in Adelaide, Australia, from 11-15 October 2020. SCICOM approved co-sponsorship including 10,000 EUR for Early Career Scientists. Final decision on funding to be made by the General Secretary / Finance Department.

17.3 PICES Cooperation

Wojciech Wawrzynski, Head of Science Support, gave an update on PICES cooperation (Doc 27).

ICES co-sponsorship of PICES topic sessions

Action: Secretariat will write to names proposed on the SCICOM Forum to assess ability to take co-convenor role and forward list of those accepting to PICES for consideration. (Wojciech Wawrzynski, Head of Science Support).

It was noted that Alan Haynie can act as an ICES co-convenor on Session 58 (in which he is already involved). Sarah Bailey is a co-convenor of a workshop and shipping session and can do these also as an ICES co-convenor.

17.4 ICES engagement in external projects and their benefits for member countries (Lise Cronne, Science Programme Project Officer) (17:20)

Wojciech Wawrzynski, Head of Science Support, gave a presentation on external projects (Doc 28).

SCICOM is asked to discuss a more proactive role of ICES in projects, how ICES can impact national priorities and how much lobbying ICES should do?

A SWOT analysis in relation to external projects as well as a table overview of current projects and sub-contracts was presented.

SCICOM Chair thanked the Head of Science Support for this well thought out document and invited comments from SCICOM members.

Comments/questions: 1) DIG Chair noted that there is a huge involvement of the ICES Data Centre in projects, and asked what is the proportion of Data Centre resources that

can be allocated into projects? Could you end up in a situation where we are caught up in projects, not leaving enough resources for other activities. It was clarified that ICES involvement is always reviewed by ICES coordination group and nothing is imposed. 2) When the decision of ICES involvement is made, is it possible to add participation of different countries in the projects to ensure a good balance? Having ICES in a consortium could be an added value for the project. According to the ICES project policy, it is the role of the ICES Bureau to look at this balance.

Action: Consider ICES role in lobbying and programming- as an item for a future SCICOM meeting- ASC 2019 was suggested. SCICOM chair action. (Note this was an almost identical action to the action taken from item 13.1 and will be handled under 13.1)

17.5 Scientific advice on Areas Beyond National Jurisdiction

ACOM Chair gave a presentation (Doc 29a and 29b) detailing ICES advice outputs over the last 20 years for Areas Beyond National Jurisdiction (ABNJ).

Partnership with Convention on Biological Diversity (CBD)

A workshop on EBSA for North Atlantic will be held in September 2019 on data and guidance. IEASG Chair asked if someone involved in the Ecosystem Overviews work would attend this workshop. ACOM Chair explained that there is an issue whether ICES can engage in the workshop. ICES needs to ask NEAFC if they want us to review workshop outputs afterwards. In this case we can't engage in the workshop as this ensures the legitimacy of ICES role in this process.

18 ASC Gothenburg 2019 – Conference programme

18.1 Conference Introduction/Programme

Thomas Klein, incoming Swedish SCICOM member, introduced himself and gave a presentation on the planning of the Annual Science Conference 2019. Sweden has cooperated closely with the ICES Secretariat on the planning of the ASC. ICES has done an amazing job and in Sweden there is an active team supporting the conference, consisting of Anna Jöborn, Thomas Klein, Maria Zetterqvist, Floor ten Hoopen, Emma Sernland, Pernilla Johansson (SWAM) and many more colleagues from several Swedish organisations.

Thomas Klein explained that the idea behind the opening session is to emphasise the role of science in sustainable management of the sea. **Science is key for a sustainable management of the sea.** He also presented the ASC social events and a number of exiting side-events. A dialogue session on the [Coordination and Support action BANOS CSA](#) was scheduled for Wednesday, 11 September, 16:30 to 18:00. The object is to prepare for a joint Baltic and North Sea research and innovation programme. It is EU funded and runs from November 2018 till early 2021.

Five exhibitors' slots have been reserved for Swedish exhibitors and are intended to show examples of Swedish research and projects relevant to the work of ICES and contribute to a successful ASC2019.

SCICOM Chair thanked Thomas and his group for good planning and their innovative approach to the opening of the ASC.

18.2 Operation of Award Selection Group

Rafael González-Quirós, SCICOM member, Spain, presented a revised guideline for the Awards Selection Group on how to judge merit awards at the ICES Annual Science Conference. The revision was based on the lessons learned from ASC 2018 (Doc 31). The following recommendations were made:

- 1) The Poster Session, if possible, should be held on the second day of the ASC, so the ASG members dedicate that evening to evaluate the posters exclusively. Hence, they may hold a meeting during the evening of the 3rd day of the ASC to decide on the Best Poster Awards and to take a preliminary decision on the Best Oral Presentation Awards. These and other aspects will be more precisely explained in the section "Selection process during the ASC".
- 2) The keynote lecture on the closing day should be scheduled before the closing ceremony, so there is more time available for the decisions and the necessary arrangements for the Awards announcement.
- 3) Theme session conveners will not be asked to score the presentations, but they should be prepared to respond to questions from the members of the award selection group.

SCICOM Chair thanked Rafael González-Quirós and Myron Peck, in his absence, for their work on this document. This year the last keynote talk was scheduled before the Closing, which should make the process easier.

Decision: Document on award selection process approved as basis for judging at ASC 2019.

18.3 Appointment of Gothenburg ASC 2019 Award Selection Group

Decision: Nils Olav Handegard (Chair), Mette Skern-Mauritzen, Laura Uusitalo, Jörn Schmidt, Hedinn Valdimarsson, Francis O'Beirn, Maris Plikss, Mike Rust, Steven Degraer, Silvana Birchenough, Svetlana Kasatkina, Ellen Kenchington and an ACOM member (TBA- ask ACOM Chair) were appointed for the 2019 ASC Award Selection Group.

18.4 Chaperoning keynote speakers Gothenburg ASC 2019

Mette Skern-Mauritzen was appointed as host for Manuel Barange, FAO.

Myron Peck was appointed as host for Gretta Pecl, Centre for Marine Socioecology, Australia.

Silvana Birchenough was appointed as host for Cisco Werner, NOAA; USA.

18.5 Appointment of ASC 2020 Theme and Network Session Group

Decision: Brian MacKenzie (Denmark, Chair), Peter Wright, Kevin Friedland, Ellen Kenchington, Steven Degraer, Wojciech Wawrzynski, Sarah Bailey, Silvana Birchenough, Jörn Schmidt, and a representative from ACOM (TBA) volunteered to be members of the 2020 ASC Group doing the pre-selection of 2020 theme session proposals for final decision of SCICOM.

18.6 ASC 2020 Theme and Network Session call: proposals for achieving diversity of science topics and increasing opportunities to contribute

Based on the challenges of providing sessions for the whole ICES community at the ASC (a consequence of an entirely bottom-up process leading to core ICES activities not being covered by sessions at the ASC, and high number of theme session mergers which delayed the release of the abstract call and additional workload for conveners and secretariat), a proposed revision of the approach to selecting ASC theme session proposals was presented (Doc 13):

- Call released as usual, proposers link proposal to science plan priorities and identify strongest link
- Submissions monitored. If any science priority not represented SCICOM members encouraged to directly solicit submissions related to this priority
- Group choosing theme sessions at the ASC will rank sessions within science priorities and overall. First eight session selections are made to span all science priorities.
- Recommendations to merge are discouraged, except in exceptional circumstances (high overlap and almost identical scores).

The selection process for network sessions should be more flexible than for theme sessions. This will allow scope for innovation in areas that are not covered in detail by the science plan. It was proposed to select the best three network session proposals broadly linked to any three different science priority areas and to take one open selection based solely on innovation and excellence and relevance to the ICES vision and mission.

The rejection rate for papers at the 2019 ASC was reported as 50% by Anna Davies, and three SCICOM members commented that this rate was likely to be too high. Following discussion on various scenarios, there was overall agreement to follow the selection process proposed in the document, but to increase the number of parallel sessions to five in 2020. There was a proposal to set a target rejection rate to guide the choice of the number of parallel sessions, but no specific target was suggested (although it would be assumed to be less than 50% based on discussions)

The following actions and decisions were summarised by the SCICOM Chair:

Actions and decisions:

Action: Antonina, Sven and Sarah offered to convene the contributed papers session at ASC 2020. (Note this will now have to be added to the regular list of requests for volunteers, diversity of scientific expertise will be important for fair selection).

Decision: The number of parallel theme sessions should be increased to 5 from ASC 2020, and guidance edited to indicate this preference.

Action: Edit guidance for ASC to provide a view on what a good theme session would be. SCICOM chair to work with Silvana Birchenough's contribution to WGCHAIRS 2019 (on this topic) to provide such guidance.

Decision: Rejection of posters should be minimised at the ASC. SCICOM Chair to add guidance that preference is to accept maximum proportion of submitted posters.

Action: SCICOM chair to discuss with secretariat the practical feasibility of asking conveners to link their proposal to a percentage relevance to each science priority area, and then work with resulting data to support selection of sessions by priority area.

Action: Revisions to process for selecting theme and network sessions requested by SCICOM will be made to guidance document by SCICOM chair and posted on forum for full SCICOM review before adoption.

19 Guidelines for ICES groups: update review

SCICOM Chair presented the [Guidelines for ICES Groups](#), which are now being updated two times per year based on input from community. SCICOM was informed that the main addition is the new ICES Code of Conduct signed off by Council in October 2018.

Decision: SCICOM agreed to add new role of SCICOM members on identifying science in support of advice to “Guidelines for ICES groups”.

Action: Secretariat and SCICOM Chair will investigate capacity to, and pros and cons of, transferring guidelines to the website as part of the website review.

20 Science Highlights and Science Promotion in 2019-2020

20.1 Review of science communications plan and opportunities for SCICOM contributions

Celine Byrne, Communications, gave a presentation on the ICES Communications Plan (Doc 35).

Thomas Klein, Swedish SCICOM member, asked how the Communications Plan connects to ocean literacy. Ocean literacy and scientific communication is at the heart of the international marine science agenda, helping people to learn more about the ocean, educating children and decision makers.

A suggestion was made for ICES to liaise with the Marine Educator Association.

Action: National SCICOM members to contact Celine Byrne if they wish to act as mentors to ASC ECS.

20.2 Science highlights

Julie Kellner, Science Professional Officer, gave a presentation on Science Highlights (Doc 36). SCICOM members are encouraged to help the Communications team to identify science highlights. SCICOM was informed of the new SharePoint site for submitting Science Highlights ideas and the updated guidance, including a list of suggested topics and examples, available on the same page: <https://community.ices.dk/External-Sites/highlights/>. This new SharePoint site is linked on the right sidebar on all expert group SharePoint pages.

In addition to producing science highlights about individual expert groups, a new initiative ‘Science Highlights Themed Series’ will be developed. Each themed series will be aligned with the ICES Science Priorities and will feature research from 4–5 expert groups that will provide one paragraph of text and one visual (data figure or picture). The following themed series were proposed:

Series Working Title	Alignment with ICES Science Priorities
Changing Arctic	Ecosystem science Impacts of human activities

Series Working Title	Alignment with ICES Science Priorities
Long-term data sets: challenges to maintaining consistency	Observation and exploration
Road trip series: highlighting new technology in the field	Emerging techniques and technologies
The future of aquaculture	Seafood production
A place to live: highlighting ICES work in different marine ecosystems (with emphasis on benthic ecosystems)	Ecosystem science Impacts of human activities Conservation and management science

SCICOM Chair and members thanked Julie and Communications for improving and streamlining the highlights process.

Action: SCICOM members to identify science highlights nationally and bring to Julie Kellner's attention following process described and approved in documents.

21 Accelerating uptake of science for applications

21.1 Developing links between science and advice

Henn Ojaveer gave a presentation on developing links between science and advice, noting that this is a continuous process with several key aspects/components which need permanent attention. Some of these key components are: i) management of contacts and maintaining trust with the existing recipients and actively seeking new ones; ii) keeping an eye on the radar of new subject areas for advice, iii) acknowledging the need to meet certain requirements of the advisory system (incl. quality assurance / quality control from data to advice release), iv) engagement of the ACOM leadership in discussions to assess the relevance of science to advisory needs and develop actions to facilitate uptake, and iv) actively utilizing several already existing communication fora (including science and advice coordination meetings and the WGCHAIRS meetings).

Mette Skern-Mauritzen, IEASG Chair, asked if it would be possible to follow the special advice requests. One option would be to give a presentation to SCICOM on an annual basis?

Action: Regular paper/ item on special advice requests being addressed by ICES to be included at SCICOM meetings. To be actioned by ACOM chair.

ACOM Chair, later presented an overview the special requests for advice to this SCICOM meeting. Last year there were 38 special requests and 9 technical services.

21.2 ICES viewpoints

SCICOM Chair gave an update on ICES viewpoints. Out of the three topics selected, the viewpoint on 'Management of biofouling as an invasion vector' was published and SCICOM Chair thanked Henn Ojaveer and Sarah Bailey for steering and contributing to this viewpoint, which has helped to draw ICES into a new community. The two other viewpoints ('Future fish production in Arctic waters' and 'Consequences of large

fish stocks') are under development, and during WGCHAIRS five new candidate topics were proposed.

Feedback on viewpoints received from the ACOM 2019 meeting included:

- The approach and process is a good way forward, as could help ICES strategically point out new science fields for future advice
- Experts and also steering group chairs should propose candidate topics

SCICOM was reminded that proposals for future topics should include short title for the topic, a few sentences describing the content of the viewpoint (to include the question to be addressed), and a final section giving details of any contacts to engage with and pointing to sources of information. Proposals should be sent to the ACOM and SCICOM Chairs.

21.3 Fisheries and ecosystem overviews, planning for 2019-2021 and interactions with steering and expert groups

Inigo Martinez, Advisory and Science Programme Professional Officer, presented the fisheries overview and the ecosystem overviews (Doc 37, 38 and 39).

Fisheries overviews

SCICOM was informed that four new fisheries overviews will be prepared in 2019: Icelandic Waters, Bay of Biscay and Iberian Coast, Norwegian Sea and Barents Sea. ACOM members have been allocated as ambassadors for fisheries overviews- to act as the main link to the experts and to ensure the relevant work was undertaken

Ecosystem overviews

The objectives for 2019 are to develop ecosystem overviews for two new areas (the Oceanic Northeast Atlantic and the Azores in 2019), initialize the scoping for two new ecosystem overviews (the Arctic Ocean and Greenland Sea) and to run the Workshop on the design and scope of the 3rd generation of ICES Ecosystem Overviews (WKEO3, to be held in Copenhagen from 2-4 April). The workshop will update the technical guidelines and propose a roadmap to develop ecosystem overviews in the next few years. SCICOM members were encouraged to help promote the following workshops:

- Workshop for the production of the Azorean Ecoregion Ecosystem Overview (WKAZOREco 2019) to be held in Horta-Faial, Portugal, from 28–31 May.
- Workshop for the production of the Oceanic North East Atlantic Ecoregion Ecosystem Overview (WKABNJ) to be held in Copenhagen, Denmark from 2–4 September 2019.

In 2019 there will also be updates to the existing overview on Norwegian Sea, and the process to update the Bay of Biscay and Iberian waters will begin.

SCICOM Chair thanked for the presentation and noted that this really shows an impressive broadening of coverage and ambition for the overviews.

22 Dates for next meetings

SCICOM meeting alongside ASC 2019, Gothenburg, Sweden

Sunday, 8 September (09:00–18:00)

Friday, 13 September (09:00–18:00)

SCICOM spring meeting 2020, Copenhagen, Denmark

Tuesday, 17 March (13:00 to 18:00)

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

Thursday, 19 March (09:00 to 13:00)

Joint ACOM/SCICOM coordination meeting

Monday, 16 March (for all Steering Group chairs to mark in their calendars)

SCICOM was informed that next year ACOM will meet in the week preceding SCICOM, which will allow better interaction between the two committees.

23 Closure

SCICOM Chair thanked SCICOM for good engagement and for producing papers in preparation of the meeting. A big thank you was extended to national members for their efforts with the national reports and to Steering Group chairs, for their significant work throughout the year. He also thanked the ICES Secretariat and Supporting Officers for providing great support to SCICOM and the expert groups. SCICOM Chair recognised the great support from the ACOM chair and the Advisory Committee and thanked them for their engagement with SCICOM.

Annex 1: SCICOM list of participants, 26 to 28 March 2019

(blue = confirmed participants; orange= apologies received)

NAME	ADDRESS	PHONE/FAX/EMAIL
Chair:		
Simon Jennings Chair, Science Committee	International Council for the Exploration of the Sea (ICES) H. C. Andersens Boulevard 44-46 1553 Copenhagen V, Denmark	Phone +45 3338 6725 Mobile +45 3121 5484 Email simon.jennings@ices.dk Skype jennings.science
Steering Group Chairs :		
Sarah Bailey, HAPISG Chair	Great Lakes Laboratory for Fisheries and Aquatic Sciences Fisheries and Oceans Canada 867 Lakeshore Road Burlington, ON, Canada, L7S 1A1	Ph: (905) 336-6425 Fax: (905) 336-6437 email: sarah.bailey@dfo-mpo.gc.ca
Silvana Birchenough, EPDSG Chair	Marine Climate Change Centre (MC3), Cefas Lowestoft Laboratory, Pakefield Road, Lowestoft, Suffolk, NR33 0HT, UK	Phone +44(0) 1502 527786 Mobile +44(0) 07827661379 Email: silvana.birchenough@cefas.co.uk
Sven Kupschus, EOSG Chair	Fisheries Division, Cefas Lowestoft Laboratory, Pakefield Road, Lowestoft, Suffolk, NR33 0HT, UK	Phone +44 1502 562244 Email sven.kupschus@cefas.co.uk
Mette Skern-Mauritzen, IEASG Chair	Institute of Marine Research (IMR) Nordnes 5817 Bergen Norway	Phone +47 924 62 615 Email mette.mauritzen@imr.no
Mike Rust, ASG Chair	NOAA Fisheries Office of Aquaculture 1315 East-West Highway Silver Spring, MD 20910 United States	Phone +301.427.8335 Email mike.rust@noaa.gov
Patrick Lynch, FRSG Chair (via WebEx)	NOAA Fisheries 1315 East West Highway Silver Spring MD 20910-6233 United States	Email patrick.lynch@noaa.gov
Operational Group and Strategic Initiative Chairs		
Jens Rasmussen, DIG Chair	Marine Laboratory 375 Victoria Road Aberdeen AB11 9DB United Kingdom	Email J.Rasmussen@marlab.ac.uk
Myron Peck, SICCME Co-Chair John Pinnegar, SICCME Co-Chair (via WebEx)	University of Hamburg Cefas	myron.peck@uni-hamburg.de john.pinnegar@cefas.co.uk
Alan Haynie, SIHD Co-Chair	Alaska Fisheries Science Center Seattle USA	Email: alan.haynie@noaa.gov
Eva-Lotta Sundblad, SIHD co-Chair	Swedish Institute for the Marine Environment	Email eva-lotta.sundblad@havsmiljoinstitutet.se

NAME	ADDRESS	PHONE/FAX/EMAIL
Ex officio and guests:		
Anne Christine Brusendorff, General Secretary (Thursday, 28 March)	International Council for the Exploration of the Sea H. C. Andersens Boulevard 44-46 1553 Copenhagen V Denmark	Email anne.christine@ices.dk
Mark Dickey-Collas, ACOM Chair	International Council for the Exploration of the Sea (ICES) H. C. Andersens Boulevard 44-46 1553 Copenhagen V, Denmark	Email Mark.dickey- collas@ices.dk
Fritz Köster, ICES President (Wednesday, 27 March)	DTU Aqua -National Institute of Aquatic Resources Kemitorvet Bygning 202 2800 Lyngby Denmark	Email fwk@aqua.dtu.dk
Henn Ojaveer (ACOM Vice Chair)	Estonian Marine Institute University of Tartu 2a Lootsi EE-80012 Parnu Estonia	Phone +372 443 4456 mobile: +372 5158328 Fax +372 6718 900 Email henn.ojaveer@ices.dk
National members and alternates:		
Steven Degraer (Belgium)	Royal Belgian Institute of Natural Sciences (MUMM) Gulledelle 100 B-1200 Brussels Belgium	Phone +32 27732103 Email steven.degraer@naturalsciences. be
Ellen Kenchington (Canada)	Fisheries and Oceans, Canada 1 Challenger Drive Dartmouth NS B2Y 4A2 Canada	Phone + 1-902-426-2030 Email Ellen.Kenchington@dfo- mpo.gc.ca
Brian MacKenzie (Denmark)	DTU Aqua -National Institute of Aquatic Resources Kemitorvet Bygning 202 2800 Kgs. Lyngby Denmark	Email brm@aqua.dtu.dk
Jonne Kotta (Estonia)	Estonian Marine Institute University of Tartu 14 Mäealuse Street Tallinn 12618 Estonia	Email jonne.kotta@ut.ee
Laura Uusitalo (Finland)	Finnish Environment Institute (SYKE) Mechelininkatu 34a 00251 Helsinki Finland	Email: laura.uusitalo@ymparisto.fi
Pierre Petitgas (France)	IFREMER Nantes Centre P.O. Box 21105 44311 Nantes Cédex 03	Phone +33 240 37 40 00 Fax +33 240 37 40 75 Email pierre.petitgas@ifremer.fr

NAME	ADDRESS	PHONE/FAX/EMAIL
	France	
Jörn Schmidt (Germany) SIHD Co-Chair	Christian-Albrechts-University of Kiel Department of Economics Wilhelm-Seelig-Platz 1 24118 Kiel Germany	Email jschmidt@economics.uni-kiel.de
Hedinn Valdimarsson (Iceland)	Marine and Freshwater Research Institute Skúlagata 4 IS-121 Reykjavík Iceland	Email hedinn.valdimarsson@hafogvatn.is
Francis O'Beirn (Ireland)	Marine Institute Rinville, Oranmore Galway, Ireland	Phone +353 (0)91 387250 Mobile: +353 (0)87 9683094 Email Francis.XOBeirn@Marine.ie
Maris Plikss (Latvia)	Institute of Food Safety Animal Health and Environment (BIOR) 8 Daugavgrivas Str. Fish Resources Research Department Riga 1048 Latvia	Email Maris.Plikss@bior.gov.lv
Artūras Razinkovas-Baziukas (Lithuania)	Klaipeda University Open Access Centre for Marine Research Herkaus Manto str. 84 92294 Klaipeda Lithuania	Email Arturas.Razinkovas-Baziukas@ku.lt
Jan Jaap Poos (the Netherlands) Chair of Training Group	Wageningen IMARES P.O. Box 68 1970 AB IJmuiden Netherlands	Phone +31 317 487 189 Fax +31 317 480 900 Email Janjaap.Poos@wur.nl
Nils Olav Handegard (Norway)	Institute of Marine Research P.O. Box 1870 Nordnes 5817 Bergen Norway	Phone +47 55238500 Email nils.olav.handegard@imr.no
Dariusz Fey (Poland)	National Marine Fisheries Research Institute ul. Kollataja 1 81-332 Gdynia Poland	Phone +48 58 735 61 30 Email dfey@mir.gdynia.pl
Antonina Santos (Portugal)	Portuguese Institute for the Sea and the Atmosphere (IPMA) Avenida de Brasilia 1449-006 Lisbon , Portugal	Phone +351 21302 7000 Email antonina@ipma.pt
Svetlana Kasatkina (Russian Federation)	AtlantNIRO 5 Dmitry Donskogo Street RU-236000 Kaliningrad Russian Federation	Phone +7 0112 225 769 Fax +7 0112 219 997 Email kasatkina.svetlana@gmail.com

NAME	ADDRESS	PHONE/FAX/EMAIL
Rafael González-Quirós (Spain)	Instituto Español de Oceanografía Centro Oceanográfico de Gijón Gijón, Spain	Email rafael.gonzalez-quirós@ieo.es
Anna Jöborn: (Sweden, Alternate)	Swedish Agency for Marine and Water Management Gullbergs Strandgata 15, Box 11 930, 404 39 Göteborg	Email anna.joborn@havochvatten.se
Thomas Klein (Sweden, will attend 28 March)	Swedish Agency for Marine and Water Management Gullbergs strandgata 15 41104 Göteborg Sweden	Email thomas.klein@havochvatten.se
Peter Wright (UK)	Marine Laboratory 375 Victoria Road Aberdeen AB11 9DB United Kingdom	Email P.Wright@marlab.ac.uk Phone +44 1224 295436
Kevin Friedland (USA)	National Marine Fisheries Service 28 Tarzwell Dr. Narragansett, RI 02882	Phone (401) 782-3236 E-mail: kevin.friedland@noaa.gov

ICES Staff:

Ruth Anderson, ICES Editor	ruth.anderson@ices.dk
Celine Byrne, Communications Officer	celine.byrne@ices.dk
Lise Cronne, Science Programme Supporting Officer	lise.cronne@ices.dk
Anna Davies, Conference and Training Coordinator	anna.davies@ices.dk
Neil Holdsworth, Head of Data and Information	neil.holdsworth@ices.dk
Ellen Johannesen, Coordinating Secretary	ellen.johannesen@ices.dk
Inigo Martinez, Advisory and Science Programme Professional Officer	inigo@ices.dk
Julie Kellner, Science Programme Professional Officer	julie.kellner@ices.dk
Julie Krogh Hallin, Science Programme Supporting Officer	Julie.Krogh.Hallin@ices.dk
Maria Lifentseva, Science Programme Supporting Officer	Maria.lifentseva@ices.dk
Vivian Piil, Departmental Secretary, Science Department	vivian.piil@ices.dk
Wojciech Wawrzynski, Head of Science Support	wojciech.wawrzynski@ices.dk

Annex 2: Priorities for implementation of Science Plan: summary of suggestions presented by breakout groups and proposed SCICOM responses

SCICOM members developed and shared ideas on engaging scientists in ICES science, with the intention of identifying national actions to engage scientists in the work described in the science plan and any support that SCICOM and ICES could provide for member countries.

These inputs were based on three sections of the implementation plan where SCICOM has responsibility.

A: To catalyse, shape, facilitate and promote marine science which has a high and beneficial impact on society and addresses all priorities identified in the science plan/ Strengthen our expert groups, creating stronger and more dynamic links between science and advice, attracting and engaging a wider range of scientists from the natural and social sciences and supporting and capturing innovation. A11. Identify and promote science priorities, nationally and internationally (includes presentations and discussions nationally)

Most discussions focused on promoting ICES science and actions to engage more scientists and institutions in ICES work. There was also a significant emphasis on methods to communicate the benefits of engaging with ICES.

Promotion/ communication

ICES science days (Group 4)

Use existing communication channels but note range of different audiences (Group 4)

Searchable database of ICES activity (Group 4)

Scientific dating services to link interests of scientists to expert groups (Group 4)

Present strengths/ benefits of ICES affiliation (Group 4)

ICES could be more pro-active/clear in advertising and selling the work (Group 2)

EGs advertising their work at ASC (Group 2)

Related comments on promoting benefits/ role of ICES

People are busy - EG's need to provide and articulate value to scientists and employers (Group 4)

Types of people - National reps, Chair Invited have different approaches to WG's (Group 4)

Why someone would join/continue.... (Group 4)

Interactions within groups provide benefits (Group 4)

Joint publications (Group 4)

Support for results getting at home (Group 4)

Advice is an impact hard to get elsewhere - makes research meaningful (Group 4)

Provides a professional home once reach critical mass - marine social science (Group 4)

Exposure/access to new technologies/approaches not easy to do/expensive in home country (Group 4)

ICES EGs- become your collaborators, they give you the opportunity to network, develop ideas and research proposals (Group 2)

National delegates- EGs provide the technical expertise and confidence to support and participate on science developments (Group 2)

Summary way forward: Groups requested that information on how to engage with ICES should be more readily accessible and more interpretable. These echo requests previously brought forward by WGCHAIRS and SCICOM. Aspects of these requests are already being addressed through planned work on the resolutions database and website, but the groups strongly emphasised topic related searches providing a window to expert groups and a searchable database of ICES activity (proposals for free text and keyword search of all expert group summary texts and terms of reference should meet this need). Further science days were proposed and SCICOM should offer support nationally as required.

The remaining outputs from the groups largely focused on better promoting the benefits of engaging with ICES. There are few documents known to us that elaborate these benefits and none do so in a systematic way.

SCICOM will take an action to draft a “benefits of engaging with ICES document”, to provide the basis of future web texts and active communications- recognising this is more focused on promoting ICES and ICES science in general as opposed to just the science priorities. Topics to include based on group outputs would be: value of expert groups in developing science and scientists, opportunities for joint publications and funding, building a network, adding value to national work and expertise, opportunities to contribute to science with societal impact.

F. To exchange knowledge and expertise with regional and global partners through collaborative projects, networks and training: to shape and advance marine science and advice and meet joint scientific goals/ Developing new partnerships to increase reach and impact of science and support capacity building. F2. Contact in cooperation with ICES Member Countries relevant public and non-profit institutes, academia currently not actively involved in ICES with the aim of including them in ICES community. Plan to be presented to Council based on suggestion from SCICOM and the Secretariat. Identify funding schemes in Member Countries to highlight different models of participation (especially for academia)

This implementation plan action was interpreted widely by the groups and focused as much on individual scientists as on their institutes. There were suggestions for fostering engagement of individuals, often focused on communication and promotion issues closely related to those in the previous action.

Promotion/ communication

Develop one pager describing Steering Groups and science priorities to support Delegates in targeting institutes (Group 4) (response: need to establish what existing web texts and science plan texts on these issues are lacking- or is this simply a proposal for alternate formatting)

Create a ‘get engaged’ area on the webpage (Group 3) (response: note “get involved” already exists but not used in this way)

Resource for Expert Group chairs to find experts (Group 3)

More logical and relatable acronyms (Group 3)

Mindmap/network analysis of the expert groups (categorized e.g. along the science priorities) interactive! (Group 3)

Facilitate collaboration among projects e.g. the way SICCOME is facilitating current H2020 climate projects joint meetings (Group 1)

Encourage new scientists by highlighting good examples of links between projects and WGs e.g. BONUS and integrated ecosystem assessments or FP6 FINE and WGFIE (Group 1)

ICES project funds – helped engagement (50keuros). Need to identify good news stories (Group 1)

Providing examples of ICES career paths for early career scientists (Group 1)

Bottom up focus of engaging new scientists by asking ICES participants to use their peer networks e.g. Strategic initiative bringing in social scientists (Group 1)

ICES should harvest information from those registering for ASC from abstract to identify possible working group (secret ICES dating service) (Group 1)

First we need to distinguish between those [scientists] that have to be involved (eg assessment, DCR surveys etc.) from the do not have to's (Group 1)

Mentorship scheme- could align with ICES Wks work (Group 2)

Chairs to help here to identify these details and support students (Group 2)

ICES junior fellows- countries could nominate people and they will fund their assistance (Group 2)

National countries could support ICES with a pot to facilitate their travel (researchers and students) (Group 2)

Develop information short videos (Group 3)

Formalise the role of ambassadors for ICES (SCICOM and ACOM members, Council delegates, chairs) (Group 3)

Identify additional links to other organisations and societies (top-down, because resource dependent) (Group 3)

Activities (senior/junior discussions pub crawl), speed dating conversations (Group 2)

Reach out to engage scientists from non-ICES countries as well (Group 3)

Increase familiarity [with ICES] among the decision makers in the ministries and the institutes (Group 3)

Communicate the relevance and the advantage of ICES to the institutes (Group 3)

Engaging more broadly with policy makers and stakeholders outside fisheries (maybe conference specifically to engage) (Group 3)

Need to get idea out that ICES is more than Fisheries (Group 4)

Need more young people (Need Early PhD level) (Group 4)

Go to funding for scientists to attend [ICES expert groups]- short term grant funding vs long term needs not a good fit - Are there alternative sources for "glue money". EU? Foundations? Universities? (Group 4)

National countries could support ICES with a pot to facilitate their travel (researchers and students) (Group 2)

Summary way forward: This implementation plan action was interpreted widely by the groups and focused as much on contacting and engaging individual scientists as on their institutes. For this reason, there are many overlaps with A11. At the institutional level, there were suggestions to communicate advantages of engaging with ICES and increase familiarity with ICES, and SCICOM can take an action along with Council to develop documents to support this where there are specific needs (actions under A11 support this need to some extent), but more important is identifying individuals to undertake these roles and the specific institutes they will target. A review of documents should also consider what is already available as several documents on specific roles and capabilities of ICES have already been developed. A practical action would, in the first instance, be to identify institutes to be approached by country and who will approach them. This process would complement a bottom up process of encouraging scientists from the institutes to engage as individuals.

At the generic level aim to link “get involved” on website to a tangible route into expert groups and ICES events, such as by searching for expert groups aligned with the user’s scientific interests. Much of the focus needs to be on scientists who are not currently sent to ICES to support, primarily, assessment groups, but on the environment for other scientists whose main rationale for attendance is personal motivation. Tasks identified under A11 will support: through planned work on the resolutions database and development of a searchable database of ICES activity- which could also be accessed through “get involved”. The proposal for videos would be part of this if commitment and resource were forthcoming. The value of projecting ICES as a broad marine science organisation and actively engaging early career scientists was raised. SCICOM will take an action to develop a specific document on how to engage early career scientists in ICES, and the benefits for the scientists that result, but with a stronger focus on recurrent engagement in expert groups. SCICOM will take an action to discuss capacity to develop “career paths” documents with ICES communications- to supplement the “benefits of engagement” document defined under A11.

G. To monitor and report on progress towards meeting the goals of the science plan/ Monitor implementation of the science plan and report on progress, innovation and science highlights through reports to Council, web communications and publications. G1. Regularly and actively solicit inputs from member country institutions, partners, clients and stakeholders on the development of our science (to lead to an annual review of science priorities by SCICOM)

There were few explicit suggestions how to address G1.

Collaborative work environment (like google docs) was proposed (Group 3)

Mega-report inputs - example degree of inputs/alignment to SDGs-Countries report, maybe too general, maybe useful? Other big reports? IPCC? - measure of ICES impacts? (Group 4)

Number of actions, presentations, papers (Group 4) [response: these are metrics in other parts of the implementation plan]

Summary way forward: Suggestions relating to G1 did not really define a process for soliciting inputs from member country institutions, partners, clients and stakeholders on the development of our science. This will need to be revisited by SCICOM and our committee will need to assess what SCICOM will do in addition to the core ICES activities such as MIRIA, MIACO and WGCHAIRS. A minimum may be an annual horizon scan of emerging science issues within the domain of ICES science and strategic plans and an assessment of the extent to which there is capacity to address in our network.

Other suggestions/ comments not clearly linked to the tasks in the existing implementation plan, but retained for completeness

Difficulty of recruitment of scientists for fisheries science (Group 4) [response: Council are already seeking to address this issue]

Specific actions before September 2019 meeting

1. SCICOM to draft a “benefits of engaging with ICES document”, to provide the basis of future web texts and active communications- recognising this is more focused on promoting ICES and ICES science in general as opposed to just the science priorities. Topics to include based on group outputs would be: value of expert groups in developing science and scientists, opportunities for joint publications and funding, building a network, adding value to national work and expertise, opportunities to contribute to science with societal impact (responsible: Chair to develop initial draft and share with SCICOM members for input before submitting to secretariat and Bureau for consideration)
2. SCICOM to support ongoing developments of resolutions and website to ensure information on how to engage with ICES is readily accessible and more interpretable. Priorities include topic related searches providing a window to expert groups and a searchable database of ICES activity (proposals for free text and keyword search of all expert group summary texts and terms of reference should meet this need). (responsible: all SCICOM members to review and contribute to materials at review points in the development process)
3. SCICOM to support national ICES science days as requested by ICES member countries. (responsible: SCICOM members)
4. SCICOM members to identify institutes to be approached by country, define who will approach them and any supporting materials needed (responsible: SCICOM members)
5. SCICOM to develop a specific document on how to engage early career scientists in ICES, and the benefits for the scientists that result, but with a focus on recurrent engagement in expert groups (responsible: Chair to develop initial draft and share with SCICOM members for input before submitting to expert group chairs, secretariat and Bureau for consideration)
6. SCICOM will take an action to discuss capacity to develop “career paths” documents with ICES communications- to supplement the “benefits of engagement” document (responsible: SCICOM chair and members to detail structure and pass to communications/ secretariat to consider implementation)