

GUIDELINES FOR ICES GROUPS

Version 2021-1



Science for sustainable seas
www.ices.dk

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1 Foreword

These guidelines were developed for anyone involved in ICES work, with a focus on the members and chairs of expert groups, operational groups, strategic initiatives, advice drafting groups, the Advisory Committee and the Science Committee. The guidelines describe how to establish, run and report on the work of an expert group, the roles of members and chairs of all ICES groups and the code of conduct for scientists contributing to ICES.

ICES endeavours to update these guidelines biannually to accommodate the most recent decisions by governance bodies, ICES system updates, and feedback from the network on material to include. If you identify material that would improve these guidelines, or find any errors, please contact ICES Secretariat (science@ices.dk).

Note on version 2021-1

Please note that version 2021-1 of the guidelines is being published while ICES is still transitioning to an improved system for processing resolutions. The generalities of resolution processing are described in this version of the guidelines. Information on the adoption of the new resolution process will also be shared widely via ICES forums and through direct correspondence with expert group chairs. Contact persons to provide support will be identified at this time.

Summary Table of Changes

The guidelines for ICES groups are normally updated twice a year. Please note that no change record exists prior to 2019.

DATE	EDITION	SUMMARY OF CHANGES
2021-01-08	2021-1	<p>Major updates:</p> <p>Removed the word clients throughout.</p> <p>NEW Section 3.1.1 on timing of resolutions for Expert Groups.</p> <p>Section 3.1.3 - guidance added for requests to expert groups to respond to public consultations.</p> <p>DELETED Section 3.5.3 on online meetings; content added to new section 3.6.4.</p> <p>NEW Section 3.6.4 on online meetings added.</p> <p>Section 3.6.4 renumbered to 3.6.5 and content modified to reflect the new meaning of "by correspondence".</p> <p>Section 3.7. –description added on what type of report or evaluation needs to be submitted over the course of an expert group term.</p> <p>Section 3.8 - additional guidance added on recommendations, including recommendations from ADGs, word limit, the cycle of review and how to submit ASC proposals and workshop resolutions.</p> <p>NEW Annex 11: Recommendations for online meetings</p> <p>Minor updates:</p> <p>Section 3.1.1. renumbered to 3.1.2</p> <p>Section 3.1.2 renumbered to 3.1.3</p> <p>Section 3.1.3 renumbered to 3.1.4</p> <p>Section 3.5.4 renumbered to 3.5.3</p> <p>Section 3.5.5 renumbered to 3.5.4</p> <p>Section 3.6.5 renumbered to 3.6.6; subsections renumbered accordingly</p>
	2020-2	Change log in Annex 12
	2020-1	Change log in Annex 12
	2019-2	Change log in Annex 12
	2019-1	Guidelines for ICES Groups established in their new format.

2 Introduction

2.1 The International Council for the Exploration of the Sea

The International Council for the Exploration of the Sea (ICES) is an intergovernmental science organization that coordinates and promotes marine research in the North Atlantic and its adjacent seas. ICES unites a community of more than 6000 marine scientists from over 300 institutes in 20 member countries and beyond.

ICES vision is “to be a world-leading marine science organization, meeting societal needs for impartial evidence on the state and sustainable use of our seas and oceans” and its mission is “to advance and share scientific understanding of marine ecosystems and the services they provide and to use this knowledge to generate state-of-the-art advice for meeting conservation, management, and sustainability goals.” ICES activities that support this vision and mission are described in ICES [Strategic Plan](#), [Science Plan](#) and [Advisory Plan](#). The majority of ICES scientific work is conducted in more than 150 expert groups (EG). Scientists, working in these expert groups, develop, gather and analyse information relating to marine ecosystems, identify new avenues of research, fill gaps in existing knowledge and develop analyses that underpin advice on the state and sustainable use of the oceans. Their work is facilitated and informed by outputs from ICES co-sponsored science symposia and an Annual Science Conference (ASC). Over 2500 different scientists participate in ICES expert groups every year, many attending two or more groups.

The work of expert groups is supported and supplemented by other ICES groups and committees, and ICES Secretariat (Box 1). These guidelines address all these groups, with the exception of the working practices of our governing body, ICES Council.

2.2 Types of ICES groups and their working relationships

Expert groups are groups of scientists who collaborate during scheduled meetings, and often intersessionally, to develop science and the basis for ICES advice. Expert groups are at the heart of ICES and play a critical role generating the science and analyses that further understanding of marine ecosystems and support advice on the state and sustainable use of our seas and oceans. Expert groups welcome members from all ICES Member Countries, with scientists from other countries welcomed by invitation. ICES Secretariat provides each expert group with logistical and technical support to facilitate effective meeting planning, reporting, and external communication.

Expert groups address a series of pre-agreed tasks known as Terms of Reference (ToR) that are listed in a so-called resolution (Section 3.1). Expert group chairs have an important role to guide and encourage members of the expert group in their scientific work to make sure members are aware of their role and responsibilities and to lead the development and submission of reports following expert group meetings.

The work of many expert groups provides the basis of ICES advice. The development of advice is managed by ICES Advisory Services. Professional officers from the Advisory Support department in the Secretariat will liaise with expert groups to support their work. ICES advice helps decision-makers to make informed choices on the sustainable use of our seas and oceans, with a focus on the management of the North Atlantic Ocean and adjacent seas. Advice is provided in response to requests from ICES Member Countries, the European Commission, regional fisheries management organizations, and the Regional Sea Conventions; making ICES the primary provider of advice on marine ecosystems and fishing opportunities to the governments and international regulatory bodies that manage the North Atlantic

Ocean and adjacent seas. ICES always seeks to use the best available science when developing its advice.

All ICES expert groups are established, dissolved, and guided by the Science Committee (SCICOM) and the Advisory Committee (ACOM). SCICOM oversees all aspects of ICES scientific work while ACOM is responsible for advice and relationships with the recipients of advice. Each committee is made up of nominees from each of the ICES Member Countries. In addition, Greenland and The Faroe Islands have observers in ACOM. Interactions between these committees and expert groups are supported by seven steering groups. Each steering group addresses a broad and enduring area of science and advice and “parents” a number of expert groups. Steering groups are responsible for guiding and supporting expert groups, helping to ensure their work is effectively coordinated, conducted, and reported. The steering groups are:

[Ecosystem Processes and Dynamics Steering Group](#)

[Human Activities, Pressures and Impacts Steering Group](#)

[Ecosystem Observation Steering Group](#)

[Aquaculture Steering Group](#)

[Fisheries Resources Steering Group](#)

[Integrated Ecosystem Assessments Steering Group](#)

[Data Science and Technology Steering Group \(from 1 January 2021\)](#)

Each steering group is led by a chair. Each chair is jointly elected and appointed by SCICOM and ACOM and becomes a member of SCICOM (if not already a member of SCICOM in a national capacity). The chair of the Fisheries Resources Steering Group also becomes a non-voting member of ACOM (if not already a member of ACOM in a national capacity). Chairs of all expert groups parented by a given steering group are members of that steering group.

The steering group chair works with expert group chairs to ensure that expert group work supports and meets ICES science objectives and advisory needs. The steering group chair will also help expert groups to formulate and prepare their ToR for the resolution (Section 3.1), coordinate work between expert groups, and report on outputs and highlights of the expert group to SCICOM, ACOM, and more widely across ICES network and international scientific community.

All interactions between expert groups, steering groups, SCICOM, and ACOM are facilitated by ICES Secretariat, with staff assigned to support these interactions. The Secretariat also supports the development and approval of resolutions and ensures these resolutions and subsequent expert group reports are correctly formatted and accessible to ICES network. Every expert group has an assigned professional officer and supporting officer who is responsible for day-to-day communication with the expert group. Depending on the tasks of the expert group, ICES professional officers provide technical support.

The term expert group is a generic term for working groups and workshops. Science-focused working groups usually plan meetings over a three-year cycle, always publishing an ICES Scientific Report in their final year. Some of these groups may also publish ICES Scientific Reports in their interim years, if a sufficient body of original scientific work is completed in interim years and/ or if their ToR address advisory requests. At the end of the three-year cycle, the working group may establish another three-year plan or dissolve. Advice-focused working groups run for many years. They

have annual ToR reflecting annual advisory requests and publish an ICES Scientific Report every year. Workshops are usually single events, to tackle a particular science or advisory issue. The work of a workshop is finalized by issuing an ICES Scientific Report. In some instances, workshops will seek support to continue related work over the long term by proposing the formation of a working group. A very small number of expert groups do not conduct scientific work and these groups may publish ICES Business Reports rather than ICES Scientific Reports. For example, these are groups that are solely responsible for co-ordinating activities.

As well as keeping oversight of the expert groups, the Science Committee and the Advisory Committee guide the work of other types of groups that may interact with expert groups.

The Science Committee oversees three operational groups: the Data and Information Group (DIG), which supports coordination and interaction between ICES Data Centre and expert groups, the Science Impact and Publication Group (SIPG), which assesses and reports on the impact of ICES science and reviews and approves material for publication, and the Training Group (TG), which organizes ICES Training Programme. The Science Committee also establishes temporary groups to plan the Annual Science Conference (ASC) and to identify candidates for awards at the ASC. Further, to develop some high priority, dynamic, and topical science areas, often those involving collaboration outside ICES Member Countries, SCICOM may establish Strategic Initiatives. There are currently two Strategic Initiatives: one focuses on [climate change impacts on marine ecosystems](#) and the other, links between [society and the sea](#). SCICOM and ACOM provide regular reports to the Council on progress with the science and advisory-related tasks delegated to them.

The Advisory Committee oversees around 35 advice drafting groups (ADG) which use the outputs from expert groups (working groups or workshops) to prepare draft advice for final approval by the Committee. Advice drafting groups are effectively subgroups of ACOM, with an annual work plan defined by ACOM and a chair appointed by ACOM. The advice drafting groups are managed on an annual cycle by ACOM, and membership may change from year to year. Expert group chairs are invited to attend relevant advice drafting groups. The advice generated by the advice drafting group is finalized and approved by ACOM.

ICES also works closely with Regional Coordination Groups (RCG) and the chairs of these groups will often interact with the chairs of ICES expert groups. The RCG are groups set up and managed by the European Commission to support the Data Collection Framework. These guidelines for ICES groups do not apply to the work of RCG.

All SCICOM and ACOM work is overseen by the principal decision and policy-making body of ICES: the Council. ICES Council consists of the President and two Delegates from each of ICES Member Countries. Delegates elect the President, First Vice-President, and five additional vice-presidents to form the Bureau, which is the Council's executive committee. The Bureau is responsible for carrying out the Council's decisions, preparing and convening Council meetings, formulating ICES budgets, appointing committee chairs and key Secretariat staff, and performing other tasks as assigned by the Council. The Bureau also acts as the operational link between Council and ICES committees.

A finance committee consisting of five Delegates from Council provides oversight on the Council's fiscal matters. Delegates also appoint a General Secretary, who serves as the Council's Chief Executive Officer and is charged with managing ICES Secretariat

facilities and staff, finances, meetings, reports, publications, and communications. Council and Bureau may establish working groups directly to support their work.

Box 1. Summary of the names and functions of ICES groups

Expert groups

Expert groups (EG) are groups of scientists who collaborate during scheduled meetings, and often intersessionally, to advance understanding of marine systems by tackling fundamental and applied scientific questions and developing analyses that underpin state-of-the-art advice on meeting conservation, management, and sustainability goals. The questions they address are defined by terms of reference that are reviewed and signed off by the Science Committee and/ or Advisory Committee. Expert groups publish their work in the series "ICES Scientific Reports".

Steering groups

Steering groups (SG) address broad and enduring areas of science and advice and "parent" a number of expert groups. They are responsible for guiding and supporting expert groups and helping to ensure their work is effectively coordinated, conducted and reported.

Operational groups

These groups develop ICES capability in areas beyond the remit of expert groups. Currently ICES has three operational groups: Data and Information Group (DIG), Science Impact and Publication Group (SIPG) and Training Group (TG).

Data and Information Group

The Data and Information Group (DIG) is an operational group reporting to the Science Committee that advises on all aspects of data management, including data policy, data strategy, data quality, technical issues, and user-oriented guidance. Their work is closely coordinated with the ICES Data Centre and helps to ensure that expert groups have access to data and the support for data handling that is essential to their work.

Science Impact and Publication Group

The Science Impact and Publication Group (SIPG) is an operational group reporting to the Science Committee that coordinates and supports the publication and dissemination of research conducted under the auspices of ICES. The group is responsible for guiding, monitoring, and sharing ICES publication output and increasing the reach and impact of ICES publications.

Training Group

The Training Group (TG) is an operational group reporting to the Science Committee that develops the structure and content of ICES training programme and then guides and supports the provision of training.

Box 1. Summary of the names and functions of ICES groups (continued)**Strategic Initiatives**

Strategic initiatives (SI) report to the Science Committee and develop and coordinate cross-cutting science that impacts and interacts with the science of many expert groups. They also focus on building science collaborations outside ICES member countries.

Science Committee

The Science Committee (SCICOM) is the main scientific body in ICES and is ultimately responsible for implementing and monitoring the progress of ICES [Science Plan](#) with the support of ICES network. Through effective planning of the work of ICES groups the Science Committee strives to ensure there are effective working relationships between all parties contributing to implementation of the Science Plan. The Science Committee reports to ICES governing body, the Council. All ICES member countries are represented on the Science Committee.

Advisory Committee

The Advisory Committee (ACOM) is responsible for providing scientific advice to competent authorities in support of the sustainable management of marine resources and ecosystems throughout the North Atlantic Ocean and for guiding the development of science in support of advice. The Advisory Committee must access and evaluate the best available science to meet requesters' needs for impartial evidence on the state and sustainable use of our seas and oceans. Its priorities are defined in ICES [Advisory Plan](#). The Advisory Committee reports to ICES governing body, the Council. All ICES member countries are represented on the Advisory Committee.

ICES Secretariat

ICES Secretariat provides secretarial, administrative, logistical, scientific, and data handling support to the preceding groups and ICES community in general. This facilitates effective planning of meetings, reporting and external communication.

3 Guidelines for expert groups

ICES coordinates an annual cycle of planning, establishing, and running expert group work, including meetings and related activities. This section provides information on the establishment, work planning, and management of expert groups.

ICES maintains an introductory presentation for new expert group chairs, available [here](#). This provides a general introduction to ICES and highlights the most important points in these guidelines. The presentation can also be used by expert group chairs to introduce their new members to ICES.

All references to expert groups in these guidelines apply to both working groups and workshops, unless stated otherwise. There are differences in the membership requirements for working groups and workshops, as detailed in Section 3.5.

3.1 Establishing expert groups and planning their work (resolutions)

Resolutions allow ICES to maintain oversight and coordination of science and advisory work. Resolutions are developed by the expert group chairs working with the steering group chair and ICES Secretariat. A resolution, is required to establish an expert group and plan expert group activity. This is because completion of the activity will rely on the support and funding of ICES Member Countries. The resolution describes the proposed work of the expert group as a series of terms of reference (ToR). Resolutions are also used for purposes other than founding or dissolving expert groups, including the authorisation of support for ICES publications and symposia (Section 3.3).

Expert group resolutions are reviewed and adopted (approved) by the Science Committee, Advisory Committee, or both committees, on a resolutions review and approval forum hosted by ICES. The committee or committees responsible for reviewing and adopting a given resolution will depend on whether the resolution includes terms of reference that relate to science, the underpinnings of requested advice, or both. If all terms of reference in a given resolution will underpin 'ICES advice' then sign-off is completed by the Advisory Committee. If all terms of reference in a resolution are 'science' related then sign-off is completed by the Science Committee. If the terms of reference in a resolution are allocated to both 'science' and 'advice' then sign-off is completed by both the Advisory Committee and Science Committee. Once a resolution is approved it is agreed that the proposed work is supported by ICES and that resources can be committed, and thus the activities of the expert group can begin.

As well as describing the terms of reference (ToR) for the expert group, expert group resolutions define dates and venues of expert group meetings and the chairs of the expert group (see Section 3.3.3. and Annex 3). The resolution thus provides the information needed by Delegates to nominate suitable members for the expert group and for scientists more widely to assess whether they would seek to join the group. For joint activities with other organizations, that take the form of joint working groups or workshops, details of a relevant contact person in the other organization are added to the resolution.

Resolutions can be developed and adopted throughout the year to address emerging needs, but most resolutions are reviewed and approved shortly after the ICES Annual Science Conference. Review and adoption of resolutions takes place on the (SharePoint-based) ICES Resolutions Forum. Draft resolutions are made available via SharePoint (see Section 3.6.5) in a timely manner to facilitate review, discussion and ultimately approval.

All draft resolutions are put forward by at least one steering group. The majority of resolutions originate from suggestions and draft resolutions formulated by expert groups and from the requirements of the Science Plan, Advisory Plan and advisory work plan. The development of the latter is overseen by the Advisory Committee and the terms of reference that go into the draft resolutions for expert groups originate from advice requests, including the [Administrative Agreements or Memorandum of Understanding](#) between advice requesters and ICES, from the Advisory Committee, or from suggestions by expert groups.

The establishment of a new expert group is usually catalysed by discussions in SCICOM and/or ACOM as members seek to implement the [Science Plan](#) and [Advisory Plan](#) and/ or become aware of emerging science or advisory needs relevant to ICES member countries that are not covered by existing expert groups. The establishment of groups may also be proposed from anywhere in the ICES community, to respond to emerging issues and scientific developments. To establish a new expert group, the relevant steering group chair will work with the SCICOM and ACOM chairs and a candidate chair or chairs for the new expert group to define the initial set of ToR and to prepare an Expert Group Resolution. If the resolution is approved the expert group can begin its work.

Well-considered and accurate completion of resolutions is very important, as resolutions provide the main source of information for oversight and tracking of the full swathe of ICES work and its links to ICES Strategic Plan, Science Plan and Advisory plan as well as the work of Advisory Services, Steering Groups, Operational Groups and Strategic Initiatives. In addition, accurate completion of the resolutions leads to more efficient and faster processing. If you are in doubt about how to complete resolutions when you have read these guidelines and the guidance associated with the forms, then please work with ICES secretariat and your steering group chair (in the case of expert group resolutions) to receive further support.

3.1.1 Timing of draft resolutions for Expert Groups

In general, it is recommended that new and existing Expert Groups have their resolutions drafted and approved at least 6 months before the meetings to allow adequate notification and planning can be done by the Secretariat and the EG Chair(s). An exception to this recommendation is when new expert groups are required to address advice requests, where the time lines are often much shorter. When new EGs are established, the group will be highlighted in the monthly calls for nominations send to ICES national delegates, encouraging them to nominate experts. For existing EGs, the chairs will be notified before the last meeting of their current term that a new resolution is required so that it can be discussed at the EG meeting.

3.1.2 Developing web material for Expert Groups

All chairs of expert groups will be asked by the ICES secretariat to provide a draft text describing their expert group and its work. This is developed as part of the resolution. The text will be reviewed and edited, and is then presented on the relevant expert group page on ICES website.

Expert group texts should be less than 200 words in length and should clearly and simply describe the purpose of the group, the approaches taken by the group, the expected outcomes of their work and its implications.

Expert group texts should be accessible to ICES website users and scientists in general, and readers should not have to rely on specialist knowledge of the work conducted by the expert group to interpret the texts. Thus the texts should not include technical jargon or acronyms without explanation.

Texts should not require frequent updating (e.g. please do not include dates or meeting information, as these are already made available in other sections of an Expert Group Resolution). Texts should not state or imply that an expert group gives advice or an opinion on behalf of ICES.

To ensure that the texts for expert groups on the website are relatively consistent in style, all texts should include the following components:

1. Purpose: Beginning 'The [full name expert group] [acronym] conducts/ assesses (one sentence, maximum 40 words)
2. Approaches/ methods/ activities: Describing what the expert group does (one or two sentences, maximum 80 words combined)
3. Context/ implications: Placing the purpose of the expert group and the outputs generated in context (two sentences, maximum 80 words combined)

On the webpage, the component texts will be merged to provide one continuous paragraph, preceded by the statement of purpose.

Example 1

1. The Working Group on Integrated Morphological and Molecular Taxonomy (WGIMT) develop and promotes new tools for species-level taxonomic analysis of the pelagic ecosystem.
2. They develop methods for species recognition and discrimination, focusing on identification of marine metazoan zooplankton, including cryptic species, and the determination of phylogenetic relationships between them. Further, the group seeks to assess and predict how these characteristics affect food webs, trophic relationships and the transfers and cycles of nutrients, chemical elements, energy, and biological production.
3. Their work supports the analysis, recognition and understanding of patterns and changes in community structure, species diversity, species phenology and productivity.

Example 2

1. The Working Group on Ecosystem Effects of Fishing Activities (WGECO) assess the effects of fishing on ecosystem components and attributes and the consequences for fisheries and the environment.
2. They develop models and indicators to understand and report on fishing effects and the state of the environment and to assess the ecosystem consequences of alternate management actions.
3. Their work improves our understanding of fisheries interactions with the environment and underpins advice on the effects of fishing on the marine environment and the implementation of the ecosystem approach.

3.1.3 Role of expert groups in the provision of ICES advice

Many expert groups conduct studies and analyses that provide the scientific basis for ICES advice. To create formal ICES advice, the ICES advisory process uses advice

drafting groups (ADG) that are charged with preparing draft advice based on the studies and analyses of the expert group/s. This draft advice is finalized and adopted by ACOM. Once adopted, the draft advice can be referred to as ICES advice (Box 2).

Given the existence of a formal process for generating ICES advice, expert groups cannot give ICES advice directly and do not have any mandate to do so. To emphasize the role of expert groups in relation to the production of ICES advice, every ICES Scientific Report includes a statement to indicate that the expert group report “does not necessarily represent the views of the Council”. Thus, none of the content in an ICES Scientific Report is, or should be referred to, as ICES advice.

To avoid any misunderstandings about the relationship between the outputs of expert groups and ICES advice, either on the part of expert group members, or on the part of those reading ICES Scientific Reports, the terms of reference for an expert group should not be phrased in a way that states or implies that the expert group is giving advice or is responsible for giving advice. In the case of joint expert groups with other organizations the same considerations apply, and it is a requirement of ICES engagement in a joint expert group that any joint report from a group with a stated ICES affiliation should also include the statement, “The document is a report of an expert group under the auspices of the International Council for the Exploration of the Sea and does not necessarily represent the views of the Council.” This requirement applies when the report is published by ICES, jointly with a partner organization, or solely by the partner organization.

Technical submissions to IMO by ICES expert groups are viewed as expert opinion and all submissions are logged with ACOM, and do not represent formal ICES advice.

ICES seeks to facilitate the uptake and translation of science into the advisory process. This is because a key criterion for ICES advice is that it should be based on the best available science. For expert group chairs and members who would like to see the science they are developing used in ICES advisory system, or consider that the science they have developed is already sufficiently mature to be used to support advice, Annex 9 provides guidance on how to proceed. The guidance is primarily for those expert groups that rarely receive advice-related terms of reference.

3.1.4 Presentation and discussion of ICES advice

The use of the term ‘advice’ in an ICES context refers specifically to advice that has been formulated through ICES advisory processes (Box 2). Participants in expert groups should never state or imply that they are providing, or able to provide, advice on behalf of ICES. Further, no persons in ICES community (including expert groups, advice drafting groups, peer-reviewers, ACOM and SCICOM) should share, or imply they are sharing, what is, or what is assumed to be, ICES advice before it is published. In practice, this means that outputs of expert groups that underpin the development of ICES advice should only be described as expert group results or scientific findings.

Box 2. What is ICES advice?

Advice can be broadly defined as “guidance, options, recommendations or assessments developed following a scientific method to address a specified question” but within ICES, the term “advice” is only applied when the advice has been formulated through ICES advisory processes (expert groups, advice drafting group, peer-review, and approval by the ACOM). ICES aims to produce advice based on the best available science that is characterized by quality assurance developed in a transparent process, unbiased, independent, and is recognized by all relevant parties as applicable to management. ICES provides advice on request to governmental and intergovernmental organisations from, or with links to, ICES Member Countries and not to non-governmental organizations or private companies, for example. Ten principles provide the framework for the advice.

ICES also generates viewpoints. These are not developed in response to requests for advice but are used to develop and illustrate ICES capacity to provide scientific advice on new or emerging topics with relevance to the vision and mission of ICES. Topics to be addressed as viewpoints are defined by ACOM and SCICOM based on their own deliberations, proposals from the community, and availability of resources. Viewpoints are developed by an advice drafting group, based on background documents prepared by expert groups and peer reviewed. Viewpoints are finally signed off by ACOM if they meet the standards expected of ICES advice.

Scientists and group chairs in ICES will sometimes be approached by, or interact with, people working for organisations that request advice from ICES. In the case of engagement with these people on topics related to the provision of ICES advice or data services the scientist or group chair should inform the ACOM leadership (chair, vice-chair or head of ICES Advisory Services). A group chair or scientist cannot make any direct commitment to advise or provide advice on behalf of ICES. Expert groups are occasionally asked to respond to public consultations, in this case experts can respond as individual experts “brought together by” the relevant ICES expert group, not as the ICES expert group.

3.2 Management of expert groups

3.2.1 Working groups and workshops

Working groups focusing on science topics are usually established for a three-year term, but groups focusing on advisory-related topics and the provision of data and other analyses to support the development of advice may meet for many years, reflecting the enduring needs for the advisory work they support.

In the case of the fixed-term working groups, terms of reference are set for the duration of their work (usually 3 years). During their tenure, working groups deliver specific activities and products as specified in their terms of reference (e.g. peer-reviewed publications, technical reports, coordinated datasets, model inputs, or advisory products). E-evaluations of progress are provided annually to update steering group chairs, SCICOM and ACOM on progress. At the end of the three-year term an ICES Scientific Report is always required. Some groups may also publish ICES Scientific Reports in their interim years, if a sufficient body of work is completed at that time and/ or if their ToR address advisory requests. At their last meeting, all fixed-term working groups are expected to review their work and submit a short self-evaluation within 10 days of the end of the meeting. At this point, these working groups are invited to request a new term, propose a new expert group (either a working group or perhaps a workshop), or propose that their working group is dissolved. The steering group chairs help to guide working groups with this process, and table requests to SCICOM and ACOM on behalf of working groups.

For working groups focusing primarily on advisory-related topics, and that continue to meet over many years, the terms of reference are reviewed and updated every year. After the annual resolution is approved, the working groups deliver specific activities and products specified in their terms of reference, as well as an ICES Scientific Report.

Workshops are established for a one-year period and the terms of reference apply to a single year. At the end of the workshop, ICES Scientific Report is due. Workshops may be arranged as a series of workshops developing a single topic, but each workshop requires a separate Expert Group Resolution and will publish a separate ICES Scientific Report after each meeting.

A very small number of expert groups do not conduct scientific work and/ or develop the basis of ICES advice. These groups may publish ICES Business Reports rather than ICES Scientific Reports. Examples of such groups would be those that are solely responsible for co-ordinating activities. ICES secretariat will advise on the rare occasions when publication of a Business Report is appropriate.

Details of expert group reporting are provided in Section 3.7.

3.2.2 Preparing Terms of Reference (ToR)

It is important for scientific progress, and to increase the accessibility and impact of ICES work in the ICES network, and beyond, that the purpose and nature of work being progressed by the expert groups is visible and clear. It is also important for our network, and for the countries and projects resourcing ICES, that an effective coordinated work programme is developed with no gaps and inefficiencies. This is easiest to achieve when everyone in the network clearly understands the scope, scale, and impact of the work being done.

The Terms of Reference (ToR) of expert groups (as well as steering groups and strategic initiatives) provide an essential year-on-year description of ICES work programme. As a “shop window” display of ICES work, they are widely shared when we advertise or report on work in our network.

For these reasons, ToR should have stand-alone meaning, with the scientific or advisory topic or subject clearly stated and action and outcome expressed with a verb.

It is recommended that all ToR:

- Can be understood when read in isolation;

- Are focused on a stated topic or subject;
- Include an action expressed with a verb;
- Indicate the purpose and expected outcome of the action.

The following provide some examples of recommended phrasings for ToR, but these are not exhaustive given the range of topics that expert groups address:

- A ToR leading to a review paper or review section in the report would read “Review and report on xxxx”;
- A ToR requesting the development of new methods and leading to a paper or a section in the report would read “Develop and report on methods to xxxx”;
- A ToR requiring an analysis to develop a new indicator and to make available code to generate this indicator would read “Develop an indicator to xxxx, report on the theoretical and empirical justification for this indicator and lodge commented code to generate the indicator on GitHub”.

Typically, each ToR should be 100–200 characters including spaces, with ToR exceeding 300 characters to be avoided. Loosely describing relationships between one ToR and another should be avoided (e.g. avoid wordings like ‘Following on from this, we will xxxx’ or ‘Continue to develop this to xxxx’) and either the topic should be repeated or any cross-reference should be specific (e.g. Use the methods for xxxx generated in ToR ‘c’ to xxxx’)

Good examples of handling interrelated ToR would be:

- “Further develop, update and publish the guidelines on [repeat subject of previous ToR]”
- “Evaluate and report on the effects of environmental variation on the robustness of methods developed to [repeat subject of previous ToR]”

For tasks involving data collation, preparation, or preparation of guidelines, ICES encourages the subsequent recipient or holder of these data to be identified in the ToR.

For example:

- “Collate data to allow the analysis of xxxx, and make this available to xxxx via xxxx”

ToR must not state or imply that an expert group is providing ICES advice (Section 3.1). This is to avoid any confusion between ICES advice requests (processed through an advice drafting group with ACOM sign-off) and any material appearing in an expert group report.

Expert groups are also asked to provide supporting information for their ToR within an Expert Group Resolution. The supporting information is an important element of the resolution as it provides the information needed to help ACOM members, SCICOM members, and/or Delegates to reach an informed decision on the merits of an Expert Group Resolution.

The “Supporting information” should be written as a stand-alone text, to the extent possible, and should emphasize, as a minimum, the driver and rationale for the ToR, the purpose of the ToR, and the expected benefits and recipient once the science described in the ToR is complete. As a guide, the “Supporting information” for each ToR would be 50–100 words.

The number of ToR listed in an Expert Group Resolution should be realistic and practical given the number of meetings, capacity for intersessional work and the impacts of any other planned activities of the expert group. Typically, the work of an expert group should be described with four to six ToR. Larger numbers of ToR require very strong justification. The production of regular products (e.g. by assessment or survey groups) is a case where more ToR would be justified. If any sub-ToR are required (though these should be avoided whenever possible) they must be accommodated within character limits for the main ToR description and supporting information. Expert Group resolutions only allows for one sub-level for sub-ToR, and sub-ToR should only be included when essential. Providing clear and well-justified ToR is essential if ICES science and advice are to be developed, conducted, and reported in a coordinated way. For this reason, expert group chairs are encouraged to discuss the development of ToR with their steering group chair, SCICOM chair, ACOM chair or vice-chair, as well as other experienced expert group chairs and members of their expert groups.

To maintain oversight of the relationship between expert groups' work and ICES Science Plan, the Secretariat will request that ToR are linked to coded sections of the science plan using [numeric codes](#) that the Secretariat provide.

3.2.3 Prioritizing Terms of Reference

The number and complexity of ToR addressed in expert groups will need to be balanced with the human and time resources available. Achieving an appropriate balance will help to generate higher quality science and advice and avoid groups struggling to complete their work. Expert groups should be ambitious but realistic as they develop their resolutions.

For expert groups supporting requests for advice from ICES requesters of advice, the ToR to support these requests should always receive the highest priority. The chair should prioritize the ToR linked to advisory requests in consultation with the Fisheries Resources Steering Group chair, other members of the ACOM leadership and the Secretariat. For expert groups not routinely receiving advisory requests, the relevant steering group chair, ACOM leadership or the Secretariat should give as much prior warning of the request as possible and discuss expectations with the expert group chair who, in turn, should discuss these expectations with expert group members. For all expert groups handling advice, consultation with the ACOM leadership and the Secretariat is essential to ensure the request for advice is fully understood before the resolution is approved and the expert group starts work.

For expert groups addressing ToR that lead to science outputs but do not support responses to advisory requests, prioritization of ToR should be based on the need to address the science priorities identified in ICES [Strategic Plan](#), [Science Plan](#) and [Advisory Plan](#). When prioritizing ToR, the expert group chair should interact closely with the steering group chair to ensure that the activities of different expert groups are complementary and not replicative.

As they develop ToR, expert group chairs should work with steering group chairs to identify any additional expertise they need to meet their ToR, and invite the relevant scientists to participate in the expert group, subject to the protocols outlined in Section 3.5.

To manage ICES work efficiently, expert groups should not pass proposals for ToR to other expert groups directly but highlight them to steering group chairs or propose them through the recommendations process (Section 3.8).

3.3 Types of Resolution

Resolutions are required for any ICES activity that directly or indirectly uses the resources of member countries. Resolutions are also essential for the Science Committee, Advisory Committee and the ICES Secretariat to guide and track the work of the ICES community and provide additional information on the geographic focus of ICES work and the extent of collaborations with partners. Resolutions are required for the following activities or groups of activities and, in each case, a dedicated resolution form is provided by ICES Secretariat.

- **ICES Publication:** to request publication of a Co-operative Research Report (CRR) or a Techniques in Marine Environmental Sciences (TIMES)
- **Symposium:** to request ICES co-sponsorship for a conference or symposium, or for organisation of a conference or symposium under the auspices of ICES
- **Expert Group:** to request the formation of, and define the work plan of, a Working Group or Workshop
- **Council:** to request the formation of, and define the work plan for, a Council Strategic Initiative, Council Working Groups, or other Council activities
- **Steering Group, Operational Group, Committee, Strategic Initiative, or Science Cooperation:** to request the formation and/or define the work plan of a Steering Group, Operational Group, Committee or Strategic Initiative, and to request support for science cooperation with other organisations

All resolution forms are provided with guidance notes on how to complete the forms. Resolution forms also ask for information on links between the proposed work and the ICES Strategic Plan, Advisory Plan and Science Plan, the geographic focus of the work (if appropriate) and the engagement of other organisations in the work. This information is essential for managing, tracking and reporting on the relationships between ICES activities and relationships with other organisations and initiatives.

3.3.1 Resolution for ICES Publication

Authors who are seeking ICES support for publication of volumes in the ICES Cooperative Research Reports (CRR) or ICES Techniques in Marine Environmental Sciences (TIMES) series' must submit a resolution. The resolution must include the names of editors and other details that may have resource implications, for example number of pages, and provision of accompanying files or data. The resolution will be reviewed by the Science Impact and Publication Group who submit a recommendation to approve or reject to SCICOM. SCICOM give final approval of resolutions for ICES publications. The full process for handling resolutions for publications is described in the author guidelines for CRR and TIMES ([available here](#)).

An approved resolution for an ICES publication is always required before ICES will publish a CRR or TIMES. Expressing a wish to write or publish a CRR or TIMES within an expert group resolution does not ensure that ICES will publish the CRR or TIMES. An example of a draft resolution for a publication in ICES *Cooperative Research Report* series is provided in Annex 1.

3.3.2 Symposium resolution

Requests for ICES symposium sponsorship should be presented in a symposium resolution and may originate from any part of ICES network or may be proposals from

other organizations (e.g. PICES, IOC, FAO, EC, EEA, HELCOM, NASCO, NEAFC, or OSPAR). Requests from research institutes that are not in an ICES Member Country may also be considered. Resolutions should be submitted in response to an annual ICES call for symposium co-sponsorship. SCICOM reviews symposium resolutions on an annual basis at the March SCICOM meeting. Resolutions must be prepared sufficiently far in advance that at least one year elapses between any SCICOM decision and the opening of the symposium; this is emphasised in the call for co-sponsorship that is published on ICES website.

Symposium sponsorship by ICES implies:

- endorsement by ICES of the objectives and scientific excellence of the planned symposium;

and may imply, if stated, the following:

- financial assistance;
- an opportunity to use *ICES Journal of Marine Science* as an outlet for the publication of the proceedings.

The following criteria/guidelines apply:

- The topic should match ICES science or advisory priorities;
- High quality scientific outcomes are expected;
- The scientific credibility of the conveners is well established;
- There is sufficient time and space before the event to accommodate ICES, especially to include ICES scientists in the scientific steering committee;
- A sound financial basis is expected;
- ICES sponsorship is of mutual importance for ICES and for the requesting partner.

An example of a draft resolution for a symposium is provided in Annex 2. Resolutions for symposia should include a draft budget.

3.3.3 Expert Group Resolution

An Expert Group Resolution is required to establish a working group or workshop and/or to plan the activities of a working group or workshop. Expert group resolutions are developed by the expert group chairs working with the relevant steering group chair and ICES Secretariat. The resolution describes the proposed work of the expert group as a series of terms of reference.

Expert group resolutions are reviewed and adopted (approved) by the Science Committee, Advisory Committee, or both committees, on a resolution forum hosted by ICES. The committee or committees responsible for reviewing and adopting a given resolution will depend on whether the resolution includes terms of reference that relate to science, the underpinnings of requested advice or both. If all terms of reference in a given resolution are 'advice' then sign-off is completed by the Advisory Committee. If all terms of reference in a resolution are 'science' then sign-off is completed by the Science Committee. If the terms of reference in a resolution are allocated to both 'science' and 'advice' then sign-off is completed by both the Advisory Committee and Science Committee. Once a resolution is approved, the activities of the expert group can begin. Resolutions can be developed and adopted at any time in the year to address emerging needs, but most resolutions are reviewed and approved shortly after the ICES Annual Science Conference, which is usually held in September.

As well as describing the terms of reference (ToR) for the expert group, expert group resolutions define dates and venues of expert group meetings and the chairs of the expert group (Annex 3). For joint activities with other organizations, that take the form of joint working groups or workshops, details of a relevant contact person in the other organization are added to the resolution. Resolutions are also required when existing expert groups make substantial changes to terms of reference or change chair(s) and meeting date(s) and location(s). Supporting officers and steering group chairs can advise chairs on what constitutes a ‘substantial’ change.

Science-focused working groups usually plan meetings over a three-year cycle, and always publish an ICES Scientific Report in their final year. The groups also have the option to publish ICES Scientific Report reports in interim years, if they produce substantial science output in those years. These are referred to as fixed-term working groups.

Advice-focused working groups run for many years. They have annual ToR based on advisory requests received from ICES requesters and publish an ICES Scientific Report every year. These are referred to as open-term working groups.

Workshops are usually single events, to tackle a particular science or advisory issue. The work of a workshop is finalized by issuing a full ICES Scientific Report. When completing the resolution form the chair(s) is/are asked to indicate if the resolution applies to a fixed-term working group, open-term working group or workshop.

The web text that describes an expert group is also developed and approved as part of the resolution form. This should be developed by the chair(s) following the guidance in Section 3.1.1.

Each expert group resolution also lists the terms of reference (ToR) for the group. Typically, the work of an expert group should be described with four to six ToR. Larger numbers of ToR require very strong justification. Approaches for writing and justifying ToR are described in Section 3.2.2. Some of the open-term working groups that develop the basis of ICES advice for ACOM will work on generic ToR relating to the fish stock assessment process, because the same approaches are applied to different stocks.

An example of a completed expert group resolution is provided in Annex 3.

3.3.3.1 Revision and resubmission of expert group resolutions

The process of approving expert group resolutions allows ICES to maintain oversight and coordination of science and advisory work, and highlights expectations for support and funding from member countries. For these reasons, any expert group seeking to revise a resolution in ways that will have implications for their work plan or resourcing need to resubmit the revision for approval. Examples of revisions that would lead to a request for resubmission are:

- Addition or removal of chair(s)
- Change to a meeting date or venue
- Addition or removal of a Term of Reference
- Changes to existing Terms of Reference that change contents of the expert group report, deliverable type or time-scale of delivery
- Changes to web texts that alter the stated focus or remit of the group

In case of doubt about the need for resubmission of a resolution, the expert group should discuss the proposed changes with their steering group chair in the first instance.

3.3.4 Council resolution

A Council resolution is required to request the formation of, and define the work plan for, a Council Strategic Initiative, Council Working Group, or other Council activity. The resolution asks for a description of the group and the resource requirements and the resolution is developed and approved by ICES Council. ToR and supporting information for each ToR should also be completed for these groups.

An example of a completed Council resolution is provided in Annex 4.

3.3.5 Resolution for Steering Group, Operational Group, Committee, Strategic Initiative, or Science Cooperation

This type of resolution is used to request the formation of, and/or define the work plan of, a Steering Group, Operational Group, Committee or Strategic Initiative, or to request support for science cooperation with other organisations. Resolutions should also be completed when existing groups of any of these types make substantial changes to terms of reference or change chair(s). The chairs of the Science and Advisory Committees can advise on what constitutes a 'substantial' change.

Typically, the resolutions for Steering Groups, Operational Groups, Committees or Strategic Initiatives are developed by the chairs of those groups in conjunction with the chairs of the Science Committee, the Advisory Committees and the Secretariat. Steering Groups work on generic ToR that are defined by the Science Committee and Advisory Committee, as well as group-specific ToR.

An example of a resolution for a Steering Group is provided in Annex 5 and for a Strategic Initiative in Annex 6.

3.4 Role of expert group chairs

Expert group chairs play a central role in generating ICES science and the basis for advice, engaging the scientists in ICES work, and ensuring outputs from expert groups are timely and clearly presented. Expert group chairs should be appointed based on merit, leadership ability, and excellence in the management and conduct of scientific work.

Expert group chairs also play an essential role in highlighting new areas of science, new techniques, and ensuring ICES science and advice is responsive to the needs of requesters and the marine science community. Delegates from ICES member and affiliate countries are responsible for ensuring that individuals accepting the roles of expert group chairs will be able to meet the time and financial commitments required to carry out the responsibilities of the role.

ICES expert groups ideally have one or two chairs. The number of chairs should never exceed three. The only exception is in the case of expert groups run jointly with other organisations (e.g. PICES), when up to four chairs can be appointed if essential for the effective functioning of the group.

All the following references to the roles of chairs will still apply if two or more chairs take responsibility for guiding the expert group. If an expert group has more than one chair, then the chairs should clearly establish the sharing of responsibilities to ensure that all the tasks required for the efficient operation of the expert group are completed.

The main roles of expert group chairs are to:

- Engage with the steering group chair, SCICOM chair and/ or ACOM leadership and ICES Secretariat to formulate, prioritize and prepare ToR

and resolutions and to ensure that expert group ToR, and intended expert group outputs, support and meet the science objectives (as articulated in the Science Plan) and advisory needs (as articulated in the Advisory Plan) of ICES.

- Plan and manage the work of the expert group in accordance with the agreed ToR. This involves planning, announcing and chairing of expert group meeting(s) and the preparation of an agenda and work schedule in consultation with members.
- Ensure that ICES Code of Conduct (Section 4) and the requirements for membership of expert groups (Section 3.5) are understood and followed by the chair and expert group members. This includes highlighting and implementing the Code of Conduct at meetings (Section 4) (Slides and links to ICES Code of Conduct are lodged on the SharePoint site for every expert group to support this process).
- Identify shortfalls in skills and knowledge needed to meet the ToR of the expert group and to work with the network including Delegates to rectify these shortfalls.
- Encourage working practices in the expert group which ensure science and analyses generated by the expert group are receiving adequate quality control consistent with scientific norms.
- Identify gaps and overlaps in the work of expert group, and work with members to propose consolidation or rationalization and increase efficiency of working.
- Oversee and contribute to the preparation of the expert group report and ensure that it is submitted to the secretariat on time and according to the schedule outlined in the resolution.
- Define the lists of editors and authors to be included on the report (Section 3.7.2.)
- Work with the Secretariat to finalize formatting of expert group reports and respond promptly to secretariat requests for input.
- For fixed-term working groups to provide interim and final evaluations of the expert group to the relevant steering group chair and secretariat within 10 days of meetings
- Report details of peer-review publications produced by the expert group to the ICES Editor and report science highlights to the Communications Officer and relevant steering group chair (Guidance: see Annex 7).
- Ensure peer reviewed and other publications facilitated by the expert group include an acknowledgement of ICES role (Guidance: see Annex 8)
- Review deliverables from the expert group and provide feedback to members on ways to develop and improve their work.
- Provide feedback to steering group chairs and/or ACOM and/or SCICOM leadership on emerging research priorities and implementation of ICES strategy.
- Represent the expert group at meetings of the relevant steering group and at other meetings for expert group chairs (e.g. WGCHAIRS).
- Identify and provide any important [recommendations](#) that influence work in other parts of the network (Section 3.8).

- Promptly share any concerns about the work or functioning of the expert group with the relevant steering group chair and ACOM and/or SCICOM leadership to facilitate quick resolution.

Chairs of expert groups that provide input to advice should also be available to attend relevant advice drafting groups.

3.5 Expert group membership and participation

Expert groups are at the heart of ICES and play a critical role generating the science and analyses that further understanding of marine ecosystems and support advice on the state and sustainable use of our seas and oceans. ICES aspires to be an inclusive organisation and expert groups welcome members and participants based on the procedures described in Sections 3.5.1 and 3.5.2. Scientists are welcomed in expert groups when they conduct themselves in a manner consistent with scientific independence, integrity, and impartiality and actively support ICES vision and mission (Section 4). Expert groups are encouraged to think about succession planning and career development for marine scientists, and thus to welcome members and participants at early career stages. The Secretariat maintains records of expert group membership and provides lists of members to each expert group chair. The Secretariat will keep the chair updated on any change in membership notified by Delegates. This membership list is normally issued in December/January, shortly after membership listings have been received from Delegates.

3.5.1 Workshops

A workshop is effectively a public meeting. Participants must be identified with the Secretariat prior to the workshop. Workshop participation is at national expense with the exception of workshops supporting requests for advice and for which the requester of the advice has agreed to cover the costs of the workshop.

Since workshops are effectively public meetings, there are very rare occasions when they will be oversubscribed in relation to the physical size of the room allocated for the workshop. If a workshop is oversubscribed, the ACOM or SCICOM leadership and Secretariat, with the workshop chairs, reserve the right to select the experts who will attend the workshop in-person. To allow experts to know that they will be attending an in-person workshop before making travel arrangements, the names of selected participants at the in-person workshop should be announced three weeks before the workshop at the very latest. If the workshop is oversubscribed or expected to be oversubscribed, the Secretariat will inform participants as soon as they are aware, but it is always advised that travel is not booked before in-person attendance is confirmed. The selection of experts to attend the in-person workshop should be based on the relevance of their expertise in relation to the stated workshop objectives and should seek to achieve national and regional balance among member countries. Persons who have registered to attend the workshop, but are not selected to attend, should inform ICES Secretariat if they wish to observe the workshop remotely (e.g. via WebEx). Workshop chairs will endeavour to allow remote attendees to input to the workshop, to the extent that software, facilities and the workshop schedule allow.

3.5.2 Working Groups (members and observers)

Working group participation is more formalized than workshop participation and is at national expense. Membership of working groups is decided in the following ways:

- Each Member Country may appoint “experts and advisers” as it may determine to assist in the work of the Council (Convention Article 6) ICES CM 2011 Del-06.5). These persons appointed by national Delegates are referred to as members. Persons should be nominated or invited only if the nominating Delegate or inviting chair are confident that they have provided adequate evidence that they can, and will, abide by ICES Code of Conduct (Section 4).
- Chairs of those working groups that are classified as predominantly contributing to the provision of advice (these are expert groups that were directly managed by ACOM prior to 1 January 2019, see Annex 10) can appoint experts in consultation with the national Delegates of the expert’s country. In so agreeing, Council recognizes that (a) no obligation would be placed on ICES or on national Delegates to fund such participation, and (b) if a chair wishes to appoint an expert from a non-member country, a Delegate of an ICES member country could sponsor that expert. Nominations of experts from outside ICES Member Countries or from international organizations should be agreed with the Secretariat. Persons appointed by the chair in consultation with national Delegates are referred to as chair-invited members. These chair-invited members will serve for one meeting (and be associated with the working group for the calendar year that includes the meeting). Full names and contact details of chair-invited members must be sent, by expert group chairs, to ICES Secretariat at least five full working days before the first day any meeting they will join.
- Chairs of those working groups that are not classified as predominantly contributing to the provision of advice (all ICES working groups that were not directly managed by ACOM prior to 1 January 2019, see Annex 10) may appoint experts who can contribute to the work of the group. Persons appointed by the chair are referred to as chair-invited members. Full names and contact details of chair-invited members must be sent, by expert group chairs, to ICES Secretariat at least five full working days before the first day any meeting they will join.
- Reports providing the latest information on chair-invited members can be accessed by ICES Delegates [here](#) and via the Delegates Dashboard.
- Chair-invited members must maintain the same levels of scientific independence, integrity, and impartiality expected of all participants in working group activities. Their behaviours and actions should minimize any risk of actual, potential or perceived Conflicts of Interest. Since ICES has the ambition to be an inclusive organization, the decision to appoint a chair-invited member should be based on the person’s scientific expertise, behaviour, and potential contribution to the work of the group, and not on their affiliation. All contributors to ICES work should present and review data, scientific evidence, theory, or interpretation honestly and accurately and no contributor to ICES work should knowingly mislead, or allow others to be misled, about scientific matters (Section 4).
- For fixed-term working groups, national nominations and chair-invited membership will continue for the duration of the current term as defined in the resolution (usually 3 years, unless ICES Secretariat is notified otherwise by the member, expert group chair or a Delegate).

- Employees of ICES Member Countries' government agencies that apply ICES advice may attend ICES working groups as observers. Employees of a requester of advice may attend, as an observer, ICES working groups addressing issues of relevance to the ICES response to the specific requests. In special cases, observers carrying out research into fisheries management and ICES processes (usually academics) may apply to the ACOM chair to observe individual working groups that were directly managed by ACOM prior to 1 January 2019 (Annex 10). The decision of the ACOM chair must then be relayed to ACOM and Council. Any objection raised by ACOM or Council will immediately invalidate the observer status. No other observers are allowed in working groups that are classified as predominantly contributing to the provision of advice (working groups in Annex 10) ([ICES CM 2013 Del-11.3](#)).
- Guidelines for participation and conduct of observers of the advisory process are outlined on [ICES website](#).
- Chairs of those working groups that are not classified as predominantly contributing to the provision of advice (any groups not listed in Annex 10) are generally open to observers. The decision to accept an observer is made by the chair(s) of the expert group and the chair of SCICOM in consultation with the secretariat as outlined on [ICES website](#). Any request for a person to observe a working group meeting must be received at least five full working days before the first day of any meeting the observer will join.

3.5.3 Appointment of chair

Chairs of expert groups are identified in the resolution for the expert group and are therefore appointed by the Science Committee and/or Advisory Committee as part of the approval of the resolution for the expert group.

An expert group can propose its own chair by including this recommendation in the draft resolution. SCICOM and/or ACOM will usually respect expert group recommendations.

The tenure of expert group chairs should be reviewed by the expert group every three years. In no circumstances may the tenure of a chair exceed six years. The chair must be a member of the expert group. If a chair-invited member is recommended as chair of an expert group, that person must be advised to seek formal nomination to the group by the relevant national Delegate. Expert group chairs should be appointed based on merit, leadership ability, and scientific excellence. The turnover of chairs should be planned and managed to ensure smooth transitions and continuity of work. For expert groups with more than one chair it is helpful to stagger the terms of the chairs if possible.

Agreement by individuals to accept the role of expert group chair implies an investment of time on the part of the individual to carry out the duties of the chair, and that the individual can access funds to cover travel and subsistence to attend expert group meeting. Chairs should also aim to participate in the annual meeting of chairs (WGCHAIRS: an annual meeting where chairs of the expert groups meet to discuss and resolve issues of common interest and to plan and coordinate their work). Delegates from ICES member and affiliate countries are responsible for ensuring that individuals accepting the role of expert group chair can meet time and financial commitments required to carry out the responsibilities of the position.

If a chair is to be appointed from a non-member country, the chair must demonstrate that he/she can secure the funding and time to fulfil this commitment. The appointment of a chair from a non-member country should be accompanied by the appointment of a chair from a member country. Delegates from ICES member and affiliate countries are responsible for ensuring that people accepting the role of chair have the necessary funding and time to fulfil this role.

3.5.4 Unresponsive chairs

Very occasionally, an appointed expert group chair may stop responding to expert group related correspondence from ICES Secretariat, steering group chairs, ACOM or SCICOM leadership, or expert group members.

If a chair becomes unresponsive, this must be addressed promptly to ensure continued functioning of the expert group.

If the unresponsive chair is identified by a person not already working in ICES Secretariat (e.g. by a steering group chair, expert group member) then ICES Secretariat should be informed immediately and they will work with the steering group chair and all other relevant parties to take actions to resolve the situation.

3.6 Expert group meetings

The main work by an expert group is usually conducted at the meetings planned and approved in the resolution. Effective planning of each meeting helps to ensure the work described in the ToR is completed and increases the engagement of expert group members. Some expert groups will also conduct significant work outside the meeting cycle, especially preparation of data and writing of papers, and expert group chairs are also encouraged to plan this well in advance to ensure that members are available and can commit the necessary time to address the ToR.

3.6.1 Before the meeting

ICES Secretariat will provide a copy of the resolution covering the meeting, as well as other information to help the chair to plan and run the meeting. This information will identify a Secretariat contact that will support the meeting (a “supporting officer”). If any changes to a resolution are required (such as changes in dates and venue for the meeting) a request to make the change must be addressed to the supporting officer and must be accompanied by a clear explanation of the rationale for the change. The request should be made well in advance of any planned meeting, recognizing that expert group members may book travel and accommodation for an in-person meeting several weeks or months in advance. An ICES calendar listing the dates for all expert group meetings is available on [ICES website](#).

The chair should send an email to all members of the expert group well in advance of the meeting, and copied to the supporting officer, to inform members about:

- the meeting date(s) and venue/ online arrangements
- Terms of Reference
- agenda including start and end time
- work schedule and assignments/meeting timetable
- instructions/requests for information and data
- preliminary analyses to be assembled and brought to the meeting
- the expectation that members can follow [ICES Code of Conduct](#) (Section 4)

- any other relevant information, including [ICES Privacy Statement](#)

The email should be sent as soon as possible after the chair has received a copy of the adopted resolution. This email may be accompanied by any special guidance or instructions on the work of the expert group from the chair of the parent steering group and/ or ACOM leadership.

Stock assessment expert groups should prepare, process, and summarize as many data as possible before the expert group meeting to allow meeting time to be focused on analyses, discussion, and report preparation. Draft assessments and possible catch forecasts for the stock concerned should be ready before the meeting begins to allow a proper discussion and audit of the work. To facilitate this, a stock coordinator and a stock assessor are appointed for each stock and should ensure that the preparatory work is done before the expert group meeting. The stock coordinator oversees the collation of all available data and facilitates a quality assured availability of data to the stock assessor. The stock assessor is the main person responsible for running the stock assessment, production of the diagnostics and outputs for the expert group to evaluate. During the expert group meeting, the stock coordinator leads the coordination of the process from assessment to advice drafting for the particular stock, in collaboration with the expert group chair. If suitable facilities are available at an in-person meeting venue then remote participation of members by web-conferencing is encouraged. The chair of the expert group should inform the supporting officer if remote attendance is planned.

Formal contacts with other international and intergovernmental organizations with regard to the activities of an expert group contributing to the development of ICES advice must first be sanctioned by ICES General Secretary. Applications for funding based on work conducted by ICES, or co-operative ICES activities, should not be directed to funding agencies before seeking the advice of the General Secretary.

When scientists register for an expert group, ICES will collect personal data from these people, and also from nominating delegates in the case of appointed members. These data generally include the participant's name, contact information and employer. Personal information collected is used for administrative purposes and retrospective analyses of group attendance by ICES.

Handling of these personal data is covered by ICES [Privacy Statement](#), which states that by participating in an ICES meeting a scientist agrees that ICES may use the provided personal information to:

- contact you – either in response to a query or with correspondences, questionnaires, confirmations, and alerts pertaining to your participation;
- coordinate your meeting participation;
- undertake statistical analysis, which includes sharing your participation history with ICES member countries;
- create a meeting participants list (including your name, email, institution, and country) which will be shared with meeting participants and may be published publicly online in the meeting report.

3.6.2 During the meeting

Chairs should ensure that the workload during a meeting is appropriately and equitably distributed among the meeting participants, and that sufficient time is allocated for planning, overseeing and reviewing the work of members, organizing plenary discussions, summarizing and drawing conclusions.

At the beginning of each meeting, the chairs should draw attention to ICES Code of Conduct (Section 4) and ask members to state immediately if they have any Conflicts of Interest that prevent them from acting with scientific independence, integrity, and impartiality, and second, if there is any other reason they cannot abide by the Code of Conduct. Chairs should also note that the Code of Conduct covers their own role at the meeting. Practical guidance on highlighting the main requirements of the Code of Conduct is also available in Section 4, and summary slides describing the Code of Conduct are available to all chairs via expert group SharePoint sites. Chairs should also agree with meeting participants their expectations about what may or may not be shared externally during the meeting (e.g. via email and/or social media). Any communication with the press should always be coordinated through ICES Communications Team (communications@ices.dk). ICES encourages openness and transparency in the scientific process. However, in some cases, confidentiality must be respected and results will be embargoed until formally reviewed and published on ICES website.

For meetings at ICES Headquarters, an instruction leaflet on how to use the computer system, details on how to connect your laptop to the secretariat's computer network, and general facilities information will be provided on arrival. Information about the Secretariat staff responsible for your meeting will also be provided at this time. Some or all of these staff may be present at your opening session to introduce themselves and to explain procedures. The expert group chair should inform all expert group members that personal folders on the SharePoint site, as well as the version history of all documents, may be deleted when the report of the meeting has been finalized and that personal folders on the SharePoint site should not be regarded as a permanent repository for working documents. Chairs of new expert groups and workshops meeting for the first time in Copenhagen may like to invite the chairs of the ICES Science or Advisory Committees to give a short welcome and introduction to ICES, and to place the groups work in the context of the Science Plan or Advisory Plan.

All participants in expert group meetings are expected to share responsibility for the contents of the expert group report. Ideally, this means that the full draft report should be adopted in a plenary session before the end of the meeting. As a minimum all text that may be contentious within the group and/or will be an essential input to an advice drafting group should be reviewed in a plenary session and adopted before the end of the meeting.

For fixed-term working groups, time should be allocated to discuss the content of, and ideally to complete, the short interim e-evaluation or final evaluation for the working group. If a final evaluation includes a recommendation for the continuation of the same or a closely-related follow-on group then it is also recommended to draft a resolution at the meeting.

3.6.3 Decision-making in expert groups

ICES expert groups are not bound by specific rules describing their configuration, including numbers of participants. They are thus open for participation to any number of representatives from a specific group, organization, or ICES member country. The understanding is that expert groups will base their work on evidence and argument to reach consensus, consistent with ICES Code of Conduct. In this context consensus is a fuzzy concept, the Merriam-Webster and Oxford dictionaries define it as "general agreement". The interpretation commonly used is that consensus consists of accepting the conclusions even if they do not entirely reflect everyone's views. The chair of the expert group has been delegated by Council to be in charge of the process of achieving

consensus and is ultimately responsible for bringing together conclusions of the meeting to be expressed in the report.

The process for arriving at meeting conclusions should be hierarchical. Each subsequent step in the hierarchy should only be considered if every attempt at completing the previous step has been exhausted

- 1) The expert group should develop consensus text with agreed conclusions.
- 2) If consensus cannot be reached, the expert group report should present the different opinions regarding specific issues with supporting arguments, pros and cons. In the case of ToR linked to requests for advice, this text should convey transparently to the advice drafting group the range of opinions and the rationale used to support them.
- 3) As a last resort, in the very unusual situation where an expert group cannot follow step 2, the expert group chair(s) should decide the text to be included in the report. In addition, those who disagree with the text decided by the expert group chair may prepare a text succinctly stating the substance of the disagreement. This text should be referenced in the appropriate section of the expert group report and included as an annex.

Ideally any contentious issues should be brought up and resolved during the meeting and not afterwards. However, if a contentious issue is raised after the meeting, but before the report is finalized, then the process for resolution should follow steps 1–3 above. If steps 2 and 3 are reached then the expert group chair(s) is/are also encouraged to discuss options for resolving the concerns of the expert group with the steering group chair and/or Advisory Committee chair and/or Science Committee chair depending on the focus and significance of the issue to be resolved.

3.6.4 Online meetings

Expert Group meetings can be held remotely as online meetings. Guiding principles to support Expert Group Chairs and Members can be found in Annex 11. A clear benefit of online expert group meetings is that they provide opportunities for greater participation in ICES. However, only the expert group chair(s) and ICES secretariat should send invitations to expert group meetings. Expert Group members are requested not to forward meeting invitations. In case of suggestions for new chair-invited members (working groups) or participants (workshops) please direct these suggestions to the group chairs and include contact details. The group chairs should then address arrangements for membership (working groups) or participation (workshops) following the processes described in sections 3.5.1 and 3.5.2. Chairs are welcome to seek advice on running meetings by correspondence from the supporting officer. Processes for planning the remote meeting(s), decision-making and report production should follow the guidance above.

3.6.5 Meetings by correspondence

In the case of meetings by correspondence, the ToR are fulfilled without any physical or virtual meeting. Meetings by correspondence normally place a much greater burden on the chair who is responsible for encouraging and collating input from the expert group. Ongoing advances in online tools have significantly facilitated the way groups may interact “by correspondence”. These tools include the SharePoint to organize documents and avoid different versions of a given document being shared. Chairs are welcome to seek advice on working by correspondence from the supporting officer.

3.6.6 Online tools

Several online tools are available to support and organize the work of expert groups.

3.6.6.1 SharePoint

A SharePoint site is offered to all expert groups to provide a tool for sharing information and documents. SharePoint is a content management system with integrated search functionality that allows users to work in a web-based collaborative environment. Members of the expert group will receive a username and password for the site. Forgotten passwords can be reset on [ICES website](#).

The expert group chair should be aware, and inform all expert group members, that personal folders on the SharePoint site and the version history of all documents are usually deleted when the report of the meeting has been finalized and should not be treated as permanent repositories.

3.6.6.2 WebEx

ICES uses WebEx or Teams as PC-based web conferencing facilities. No special software is needed to use these tools, only internet (or phone) connection.

3.6.6.3 GitHub

GitHub is a convenient website that expert groups can use to store analytical scripts. It is an open system that tracks changes and invites collaboration. Documents, spreadsheets, and larger data files are best stored on the SharePoint, but GitHub is ideal for scripts and source code that the expert group uses in their analysis. Expert group sites are listed [here](#). Chairs should send an email to github@ices.dk to create a new site. ICES GitHub guidelines can be found [here](#). Expert group chairs may recommend a certain GitHub workflow for that group.

3.6.6.4 Transparent Assessment Framework (TAF)

TAF (taf.ices.dk) makes ICES stock assessments open and reproducible. Professional officers in ICES Secretariat will assist stock assessors to write their assessments as a series of R scripts that run on TAF. Stock assessment scripts are gradually being migrated from SharePoint to TAF. Chairs of stock assessment expert groups will be contacted by the Secretariat to help coordinate the migration of stock assessments into TAF. Expert group chairs are encouraged to learn enough about TAF to answer questions that experts in their group will have.

3.7 Expert group reporting and evaluation

The main publication series used by expert groups to share details of their work with the international marine science community is “ICES Scientific Reports”.

A small number of expert groups focusing on ICES internal processes, co-ordinating the work of groups in the ICES system or proposing changes and developments for ICES working procedures and structures publish their work in the “ICES Business Reports” series rather than the ICES Scientific Reports series.

ICES report series’, the purposes and processes of reporting, and the e-evaluation system are detailed in the remainder of Section 3.7.

As well as producing reports for the ICES series, fixed-term working groups are asked to report on progress to Steering Groups, the Science Committee, Advisory Committee

and Secretariat using an e-evaluation process. The e-evaluation forms are internal reports and they are not published as part of the report series.

All fixed-term working groups are requested to submit one e-evaluation per year. In case the outcome of a meeting is relevant for another group (e.g. survey groups) or a ToR dealt with is relevant for advice, the meeting needs to produce either a scientific or business report. All groups need to provide either a scientific or business report, at the end of their three-year cycle.

Overview of interim and final deliverables for fixed-term working groups

	E-EVALUATION	REPORTS
Year 1 and all interim years	All fixed-term working groups must submit an e-evaluation in each year	Any fixed-term working group addressing an advice related ToR must publish a report in that year. As this report forms the scientific basis for the advice, this report must be in the "ICES Scientific Report" series Other fixed-term working groups have the option to write a report in the "ICES Scientific Report" series if they have enough science content.
Final Year	Final e-evaluation	All fixed-term working groups should publish their final report in the "ICES Scientific Report Series".

3.7.1 ICES Scientific Reports

The purpose of the "ICES Scientific Reports" series is to make scientific outputs from our expert groups available to marine scientists and others with an interest in obtaining information on the state and sustainable use of our seas and oceans. Many of the known and potential readers of these reports are outside the existing ICES community, and it benefits ICES if they are interested in, and engage with, our work. This is best achieved when (i) the series gains a reputation for consistently highlighting science, in an accessible way, and (ii) when that science is visibly linked to the science topics ICES describes in the Strategic, Science and Advisory Plans.

All the "ICES Scientific Reports" that are written by expert groups should be as concise as possible, while at the same time providing accurate and complete descriptions of data, assumptions made, methods and analytical procedures used, inputs to relevant analyses, results and conclusions.

The "ICES Scientific Reports" are published with an ISSN, DOI and a specified citation format. All reports in this series must include significant science and analytical content and not just descriptions of expert group process. For this reason, many but not all fixed-term working groups have the option to undertake only an interim e-evaluation (not published as part of the report series), rather than publish an ICES Scientific Report, if they do not have science content to publish in the initial years of work (Section 3.7.5). Note, however, that any fixed-term working group addressing an advice-related ToR in any interim year must publish a report including, at least, the output linked to this ToR (as this will form the background to the advice). All fixed-term working groups must publish in the "ICES Scientific Reports" series at the end of

their term, whether or not they have already published in the series in the initial years of work.

Expert group chairs should aim to reserve at least 1–2 days shortly after a meeting to finalize the ICES Scientific Report and e-evaluation. When expert groups meet at ICES Headquarters, the chair is encouraged to stay for at least 1–2 days immediately after the expert group meeting to finalize the report.

All expert group reports should be uploaded to SharePoint (see Section 3.6.5) or sent electronically to the Secretariat. The deadline for submitting the report is stated in the resolution, and is usually 6 weeks after the final (or only) meeting of the group. If there are any delays in report writing that could mean the deadline will not be met, then the supporting officer and relevant steering group chair should be informed as soon as possible to help resolve this delay. A report needs to be published before a group submits its next resolution for approval.

All working papers, data and work sheets, computer code and output, and any other material used, considered, and/or produced by a group during its meeting and deemed necessary for future use or reference should be deposited on the relevant ICES SharePoint (see Section 3.6.5) site. Such documents must not be deposited in personal folders.

The Secretariat will inform the expert group chair and all nominated group members, as well as the parent and any reference committees, when the expert group report is published. The Secretariat also circulates a copy of the Executive Summary of the ICES Scientific Report at this time, along with a table detailing the meeting(s) of the group and information on how the ICES Scientific Report should be cited.

“ICES Scientific Reports” template

ICES Secretariat will provide the expert group chair with the ICES Scientific Reports template and guidelines on how it should be used. This information will also be available on SharePoint. The template ensures a uniform design and structure of ICES expert group reports in the “ICES Scientific Reports” series.

Responsibility for listing editorship and authorship of expert group reports will rest with expert group chairs. But, unless specific requests regarding the sequencing of author names are agreed by the expert group and then passed to the ICES Secretariat by the expert group chairs, the following (default) arrangements apply:

- Chair(s) are named as editors and are responsible for editing the report
- Expert group members are named as authors if they participate in meeting(s) of the expert group leading to the report and/ or make a contribution to background analyses or review in person or remotely and/ or are responsible for contributing to the report
- All authors are assumed to agree to the content of the report (refer to “Guidelines for ICES groups” section 3.6.3. for the steps to take if this is not the case)
- Sequencing of editor list is alphabetical by surname
- Sequencing of author list is alphabetical by surname

Writing Executive Summaries for “ICES Scientific Reports”

Collectively, ICES expert groups produce many “ICES Scientific Reports” each year. Some of these are very long (up to 1000 pages). As many of the target audience will not have time to read the whole of each report, it is imperative that reports start with a clear, succinct, and factual executive summary to showcase the key issues addressed in the report. Each expert group should therefore write an executive summary to be included at the start of the report. This will also be circulated widely as a standalone text, to draw attention to the full report.

Audience: The executive summary is written for scientists and people who use scientific information. Readers should not have to rely on specialist knowledge of the analyses conducted by the expert group to interpret the summary. Some readers will be outside the existing ICES community, and the summary should be accessible to them.

Content: An executive summary should describe the remit and objectives of the expert group, the questions addressed in the report, the results and their implications, and priorities for future work.

Style: Executive summaries may be written in third person or first person. Maximum sentence length should generally be 20-25 words, interspersed with short sentences.

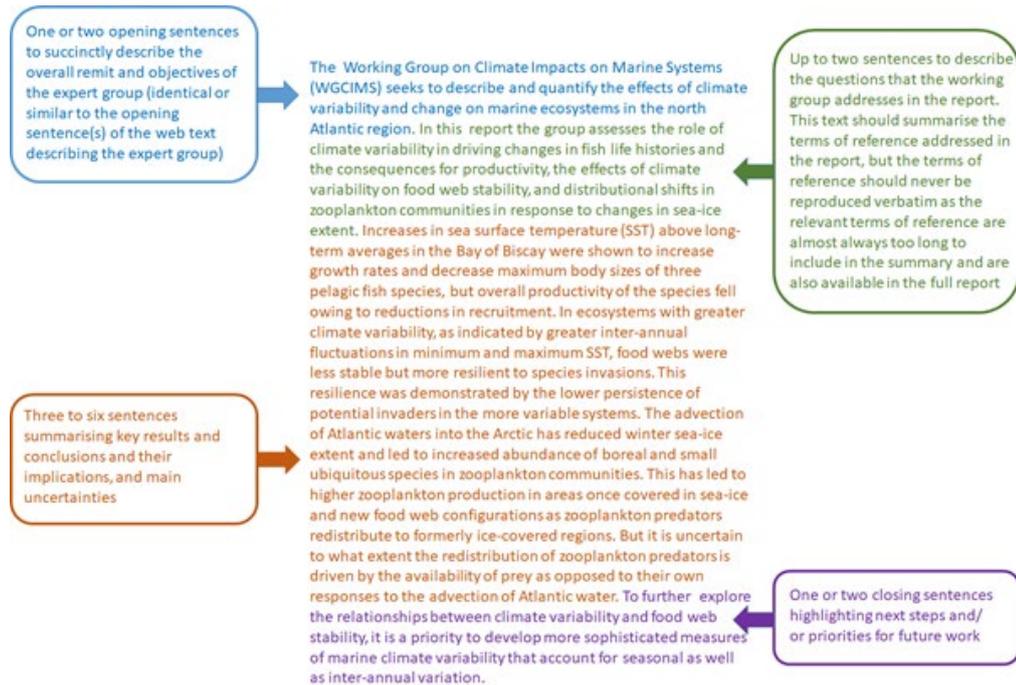
Length: Executive summaries should not usually exceed 350 words. Exceptionally, if the report is very complicated and lengthy, up to 500 words (1 page) would be acceptable. Stock assessment groups may occasionally describe the key trends and forecasts for each stock. If the groups strongly prefer to continue this practice then these descriptions should never exceed 100 words per stock, but the overall length of the summary may exceed 500 words when a group assesses multiple stocks.

Structure: The following structure is requested:

- One or two opening sentences to succinctly describe the overall remit and objectives of the expert group (identical or similar to the opening sentence(s) of the web text describing the expert group).
- Up to two sentences to describe the questions that the working group addresses in the report. This text should summarise the terms of reference addressed in the report, but the terms of reference should never be reproduced verbatim as the relevant terms of reference are almost always too long to include in the summary and are also available in the full report.
- Three to six sentences summarising key results and conclusions and their implications, and the main uncertainties.
- One or two closing sentences highlighting priorities for future work (optional).

If multiple topics are addressed by the group, then it may be better to structure the executive summary so that results, conclusions and future work are grouped by topic.

The example below describes an appropriate structure for an executive summary.



If there are science highlights arising from the work of any expert group, then these should be highlighted in the executive summary and brought to the attention of ICES Communications and the chair of the parent steering group. Guidelines for developing and submitting science highlights are provided in Annex 7.

Executive summaries **should not include**:

- details of the times and dates, location and attendance at meetings, as these are provided in a separate summary table;
- vague statements that cannot be interpreted without reference to other parts of the report;
- any use of language that implies that the expert group report could be treated as advice;
- cross references to pages in, or sections of, the report;
- self-congratulation;
- point-form lists without adequate context;
- full terms of reference pasted in from the resolution;
- chronological descriptions of the action being summarized;
- acronyms (use full titles and wording at first use of any acronym);
- jargon (write for a general scientific reader and not a specialist in the expert group topic);
- details of chairs or membership of the expert group or the name of any rapporteur;
- lengthy descriptions of methods;
- requests for funding, changes to ICES structures, recommendations for other expert groups, etc. (the latter can be submitted online following the recommendations process, see Section 3.8).

3.7.2 ICES Business Reports

The effectiveness of ICES internal processes influences our capability to generate public facing science (as shared using the "ICES Scientific Reports" series). Thus a small number of expert groups in the ICES community undertake important activities that strive to improve the effectiveness of our internal process and the ways we generate science or advice. These groups may, for example, co-ordinate the work of groups in the ICES system or propose changes and developments to ICES working procedures and structures. Examples of expert groups with these responsibilities are WGCHAIRS, which focuses on supporting expert groups chairs to manage their groups, and WGDIAD, which co-ordinates work on diadromous fishes to support the role of the Fisheries Resources Steering Group. The audience for the work of these groups is predominantly engaged individuals in a small number of groups and committees within the ICES community.

A "ICES Business Reports" template rather than an "ICES Scientific Reports" template is used for reporting by groups addressing ICES internal processes, co-ordinating the work of groups in the ICES system or proposing changes and developments for ICES working procedures and structures. Business Reports are formatted in a standard way and made widely available through the ICES website and library. Reports of the main ICES bodies such as Council and the Science Committee are also published as "Business Reports". The cases when a "Business Reports" template should be used by an expert group are indicated on the approved resolution for the group, and the secretariat will then provide the relevant template in advance of report writing.

A simple initial test to assess whether an "ICES Business Reports" template should be used in place of an "ICES Scientific Reports" template is to ask (1) does the report focus on ICES internal structures and operational processes? (2) does less than one quarter of the report contain scientific analyses that will add to scientific understanding the state and sustainable use of our seas and oceans? If the answer to both questions is "yes" then it is highly likely that the "Business Reports" template should be used. If in doubt about the appropriate choice of report type and template then please discuss this with ICES secretariat and the relevant Steering Group chair.

The Executive Summaries of ICES Business Reports should follow the word limits and basic structures outlined for "ICES Scientific Reports" but recognising the reduced emphasis on external-facing science and greater emphasis on ICES processes.

3.7.3 Dissemination of expert group reports

Following completion of the expert group report, the Secretariat informs the expert group that the report is published on the [ICES website](#) and circulates the executive summary and citation information to ICES community and some contacts in other organisations. Expert groups are also encouraged to share the link with interested parties and the ICES communication team may also help to promote expert group outputs.

Since expert groups do not and may not provide ICES advice on behalf of the Council (Section 3.1.2., Box 2), the information, results of analyses, or conclusions contained in the reports of expert groups supporting advice requests cannot be assumed to represent the final advice prepared by the advice drafting group and signed off as advice by ACOM.

Perspectives on other topics addressed by expert groups are not ICES advice and should only be described as outputs of the expert groups. In drafting executive

summaries in particular, care should be taken to use language that does not to give the impression that the contents of an expert group report could be treated as advice.

As described in Section 3.1.2 the status of expert group reports is explained in the following statement that is always included in the report “The document is a report of an expert group under the auspices of the International Council for the Exploration of the Sea and does not necessarily represent the views of the Council.”

3.7.4 Archiving and documentation of work referred to in ICES advice or other official ICES documents, and which is not included in expert group reports or otherwise published.

There may be cases where documentation, which is not part of an ICES Scientific Report or otherwise published, needs to be used as the basis for advice or referred to in official ICES documents. In the interest of transparency such documentation must be made publicly available.

There are two categories of documentation to consider: 1) work done in the expert group but not included in the report as agreed by the expert group; 2) work done outside expert groups and not published.

In relation to the first category, a description of the work should be published as an annex to the relevant expert group report.

In relation to the second category, the work should be published as an [ad-hoc report](#). These reports will be authored.

If the author of the work does not want it published as described above, because it is to be published in another way, then the work cannot be used, or referred to, before it is published.

3.7.5 E-evaluation

E-evaluations are used to assess the ongoing and overall progress of fixed-term working groups. Each fixed-term working group completes an interim e-evaluation in every interim year and a final e-evaluation in the final year of the term. The e-evaluation template is provided by ICES Secretariat.

The interim e-evaluation is completed by fixed-term working groups in interim years, whether or not an “ICES Scientific Report” or “ICES Business Report” is also published.

Completed interim evaluations for fixed-term working groups provide sufficient information to assess whether the working group is on track and to identify and rectify any concerns that need to be addressed. Interim e-evaluations should be completed within 10 working days of the end of the main annual working group meeting. Ideally, the interim e-evaluation is completed towards the end of the meeting by the chair(s) with input from working group members.

Final e-evaluations, at the end of each term, are used to evaluate the group and the extent of completion of terms of reference, identify major achievements, science highlights, outreach activities, publications and plans for the future (including the groups wishes as regards continuation for another fixed-term). Final e-evaluations should be completed within 10 working days of the end of the final working group meeting. Ideally the final e-evaluation is completed towards the end of the meeting by the chair(s) with input from working group members.

3.8 Recommendations

Recommendations are requested from expert groups and advice drafting groups to ensure that other expert groups, steering group chairs, ICES Secretariat, ICES Data Centre, ACOM, and SCICOM are aware of information from the expert group that influences work in other parts of the network. Expert group chairs (and in the case of ADGs, the supporting officer) should upload recommendations [online](#) using the recommendations database. Recommendations that are not uploaded to the database are not processed.

Recommendations and their implications should be carefully considered by the expert group before submission and should relate to issues that the ICES network has the capacity to address (i.e. consider if there is a mechanism by which the network can take action). Expert groups should list no more than five recommendations that they deem to be of high priority in any given year. Each recommendation should be no more than 75 words. ICES Secretariat extracts all recommendations for systematic review, by the ACOM and SCICOM chairs and the Secretariat in the first instance. Please apply the following guidelines when developing and writing recommendations:

- Recommendations should have stand-alone meaning as they will be read in isolation during review
- Recommendations should always include a clear action that other expert groups, ICES Secretariat, ICES Data Centre, ACOM, or SCICOM can consider. For example:
 - To establish an expert group (these also require draft resolutions, which must be submitted as a separate document to the Secretariat via the relevant Steering Group chair);
 - To propose a ToR and/ or action for another ICES expert group (draft the ToR and/ or action and name the receiving expert group and state whether they have been consulted and the outcome- as recommendations will only be progressed when the submitter states that such consultation has taken place);
 - To propose generic issues to be addressed by e.g. ACOM or SCICOM.
- Spell out any acronyms used.
- Proposals for ASC sessions from expert groups should be submitted to the annual call for ASC theme sessions. They are not recommendations.
- Resolutions for workshops should be submitted in consultation with the Steering Group Chair using the resolution template (see 3.3.3). They are not recommendations.
- Make it clear that it is the expert group (not ICES) presenting the recommendation.

Recommendations can be addressed to one or more of the following: other expert groups, ICES Secretariat, ICES Data Centre, ACOM, or SCICOM (to include material for the attention of operational groups as well) or an RCG. Any recommendation directed to an RCG will be passed to WGQUALITY for consideration, as ACOM and SCICOM have mandated WGQUALITY to synthesise ICES comment to the RCG). Recommendations can also be addressed specifically to the North Atlantic Salmon Conservation Organization (NASCO), because there is a specific request from NASCO

to receive recommendations. Recommendations not clearly addressed to one or more of these bodies are not processed.

If an expert group identifies another issue of high importance or urgency that cannot be addressed through the recommendations process then it should be raised directly with the relevant steering group chair.

Recommendations are processed annually by a group including the secretariat, ACOM chair and SCICOM chair. This occurs four times a year. Those recommendations that lead to actions are redirected to the appropriate group by the Secretariat.

Please do not:

- address recommendations to “ICES” or “ICES Member Countries”;
- include recommendations in the database that are directed to the originating expert group. These recommendations are an internal matter for the expert group and can be proposed as ToR in the draft resolution for the following year;
- include recommendations giving advice;
- include recommendations for other expert groups that have not been discussed, in advance, with those groups;
- request funding or ask that other funding agencies should support expert group work;

because recommendations in these categories are not processed.

4 ICES Code of Conduct and Conflicts of Interest

4.1 Background

Given ICES role as a knowledge provider, it is essential that experts contributing to ICES science and advice maintain scientific independence, integrity, and impartiality. It is also essential that their behaviours and actions minimize any risk of actual, potential or perceived Conflicts of Interest (CoI). A CoI arises when there is an actual, potential or perceived possibility that a scientist or adviser makes a contribution to ICES work that is not based on a systematic scientific review of the available information and evidence. An actual, potential, or perceived CoI arises because the decision or outcome of a process may be influenced, or is perceived to be influenced, by self-interest, professional-interest, external pressures and other factors.

ICES has the ambition to be an inclusive organization. This implies that experts are primarily judged by their expertise, behaviours, and contributions, not their affiliations. Experts with a potential or perceived CoI can be included, provided they follow the Code of Conduct (below) and show through their behaviours and contributions to be fully capable of managing the CoI.

To ensure credibility, salience, legitimacy, transparency, and accountability in ICES work, to avoid CoI, and to safeguard the reputation of ICES as an impartial knowledge provider, all contributors to ICES work are required to abide by ICES Code of Conduct below.

The ICES Code of Conduct provides guidance on identifying and handling actual, potential or perceived Conflicts of Interest, defines the standard for behaviours of ICES experts contributing to ICES science and advice and sets the responsibilities of those contributing to ICES work.

4.2 Roles of Delegates and chairs

The national Delegates and chairs (in the case of “chair-invited experts”) are the gatekeepers of the system when nominating experts. It is their responsibility to ensure active adherence to ICES Code of Conduct. This implies that they are responsible for ensuring:

- All experts contributing to ICES work are aware of ICES Code of Conduct.
- Actual, potential, or perceived Conflicts of Interest are identified and assessed prior to nominating experts.
- Experts are only nominated or invited if the nominating delegate or inviting chair are confident that the experts have provided adequate evidence that they can and will abide by this Code of Conduct.

4.3 Relevance of the Code of Conduct

The Code of Conduct applies to all scientists participating in ICES expert groups, Review and advice drafting groups and ACOM and SCICOM meetings. Occasionally, ICES may run meetings which are intended to solicit stakeholder views. For these meetings, explicitly identified by the Secretariat and in advance of the meeting, participants will be asked to represent specific professional interests.

4.4 Code of Conduct

1. The purpose of this code is to ensure transparency and accountability in ICES work and to safeguard the reputation of ICES as an impartial knowledge provider
2. The Code of Conduct applies to all contributors to ICES work and all contributors to ICES work must abide by the Code of Conduct.
- 3 All contributors to ICES work are expected to conduct themselves in a manner consistent with scientific independence, integrity, and impartiality and to declare any Conflicts of Interest.
4. All contributors to ICES work must actively support ICES vision and mission.
5. All participants at the meeting, including the chair, are required to declare any Conflicts of Interest and their commitment to abide by the Code of Conduct before their work commences. It is the responsibility of the chair to ensure these declarations are made.
6. In cases of uncertainty as to whether an action or activity constitutes an actual, potential, or perceived Conflict of Interest, it is expected that all persons engaged in ICES work will err on the side of caution and identify, disclose, and manage the actual, potential or perceived Conflict of Interest. In situations of actual, potential, or perceived Conflict of Interest, all those involved in the discussions are expected to actively seek feedback from one-another, in an open and transparent discussion and in line with the expectations outlined in this Code of Conduct.
7. In cases of actual, potential, or perceived Conflict of Interest an expert can still contribute to ICES work if the national Delegate and chair involved are satisfied that the independence and objectivity of work to be carried out are not at risk, or will not be perceived to be at risk, and that long-term confidence in the impartiality, vision and mission of ICES will not be diminished.
8. In cases when there is an actual, potential or perceived Conflict of Interest of the chair, the chair can still contribute to ICES work if the National Delegate and Secretariat are satisfied that the independence and objectivity of work to be carried out are not at risk, or will not be perceived to be at risk, and that long-term confidence in the impartiality, vision and mission of ICES will not be diminished.
9. Chairs should ensure that the full range of available data, evidence, and scientific opinions are considered in their groups and that any differences are identified and explored before reaching conclusions.
10. All contributors to ICES work should present and review data, scientific evidence, theory, or interpretation honestly and accurately and no contributor to ICES work should knowingly mislead, or allow others to be misled, about scientific matters.

4.5 Action in case of a perceived or actual breach of the Code of Conduct

1. The expert involved must seek feedback, from the meeting chair and participants, on how to resolve the breach and ensure the Code of Conduct is followed.
2. If the discussion (1) does not resolve the issue, the chair should consult the Secretariat before making a decision on the participation of the expert, either excluding the expert for the entire meeting or for the period during which the issue leading to the perceived or actual breach is being addressed. In this case, the Secretariat will inform and if necessary consult ICES Bureau about the decision within 24 hours. Council acts as the final arbiter in the case of ongoing dispute.

3. To record perceived or actual breaches of the Code of Conduct and to ensure that the Code is being applied in a consistent and transparent manner, the Secretariat will provide Council with an annual report listing breaches and the actions taken to address them.

4.6 Adoption and review of the Code of Conduct

The Code of Conduct in Sections 4.4. and 4.5. was adopted by ICES Council on 17 October 2018. The Code of Conduct will be evaluated after 3-years. To inform this evaluation, expert group chairs are encouraged to provide ongoing feedback to the ACOM and SCICOM chairs on their experience with applying the Code of Conduct and proposals for improvement. Specific breaches of the Code of Conduct should always be reported to the ACOM chair, SCICOM chair and secretariat as outlined in Section 4.

4.7 Practical application of the Code of Conduct in meetings

The Code of Conduct is a relatively long document. While all people participating in ICES work are expected to read it and act on it, meeting chairs will have to strike a balance between drawing attention to the code and timely management of the introduction to a meeting. But, at the **start of each meeting**, group members should always be given an opportunity to declare any conflicts of interest and to indicate their willingness to abide by the code. ICES Secretariat place some slides in the SharePoint folders for every expert group to provide a brief overview of the Code of Conduct and links to the full document.

In case of doubt about how to introduce the Code of Conduct at the start of a meeting, then the following words would provide an appropriate introduction from the chair(s).

"Before we begin our work, I am drawing your attention to the ICES Code of Conduct. This code applies to all of us in this group as well as to me/us as chair/s.

The code exists to ensure transparency and accountability in ICES work, to guarantee the impartiality of our work and protect ICES reputation as an impartial knowledge provider. The full code should be read in the "Guidelines for ICES groups".

The code requires that all of us should conduct ourselves, throughout this meeting and in relation to issues addressed at this meeting, in a manner consistent with scientific independence, integrity, and impartiality.

The code also requires that we should also declare any Conflicts of Interest that may prevent us from acting with scientific independence, integrity, and impartiality.

As chair/s, I/we am/are therefore asking you to state immediately if, first, you have any Conflicts of Interest that prevent you from acting with scientific independence, integrity, and impartiality, and second, if you cannot abide by the Code of Conduct."

In the event that members (or the chair):

- (1) declare a conflict of interest, or
- (2) state they cannot abide by the Code of Conduct,

then the following actions should be taken:

- (1) refer to item 7 and 8 in the Code of Conduct to decide how to proceed
- (2) the member or chair should not participate in ICES work

Breaches of the Code of Conduct should always be reported to the ACOM chair, SCICOM chair and secretariat.

To minimise the risk of breaches it is important that expert group chairs should only invite members to expert groups if they are confident that the invitees can, and will, abide by the Code of Conduct.

5 Guidelines for the Advisory Committee (ACOM)

5.1 Responsibilities of the Advisory Committee

In ICES, ACOM has sole responsibility for generating and signing-off scientific advice in support of the management of coastal and ocean resources and ecosystems. Its tasks are to oversee ICES advisory services, set the strategic direction and provide leadership in all areas linked to the provision and development of advice.

ACOM's main responsibilities are to:

- Design strategies and processes for preparation of advice,
- Manage advisory processes,
- Create and deliver advice,
- Interact with SCICOM to identify science priorities in support of ICES advisory services.

ACOM has the authority to establish and dissolve expert groups as well as advice drafting groups, benchmark groups/processes, scoping workshops and review groups, and to add advisory ToR to existing expert groups in consultation with the Fisheries Resources Steering Group chair and the Secretariat.

5.2 Membership and chair of the Advisory Committee

ACOM has one member per country appointed by the respective national Delegates, as well as a chair and vice-chairs. The SCICOM chair and the chair of the Fisheries Resources Steering Group are *ex-officio* non-voting ACOM members. National Delegates can appoint alternates to their ACOM member.

The ACOM chair is appointed by Council following a recruitment process managed by the Secretariat. Vice-chairs are nominated by ACOM and appointed by Council. The Fisheries Resources Steering Group chair is elected by ACOM and SCICOM.

The ACOM chair and vice-chairs constitute the ACOM Leadership. The FRSG chair works pro-actively with the ACOM leadership group to guide and support expert groups and identify advisory priorities.

Observers can observe ACOM meetings.

5.3 Role of Advisory Committee members

Members and alternates of ACOM are expected to use their expertise in ensuring that ICES advice is based on best-available science, ensuring that the advice is relevant, timely, unbiased, independent, peer-reviewed and transparent.

1. Collectively, ACOM members:

- a) ensure that ICES Advisory Services responds to current needs of ICES requesters of advice;
- b) ensure that ICES Advisory Services develops to meet strategic needs of both ICES and its requesters;
- c) support the development and implementation of mutually agreed frameworks for advice between ICES and its requesters;
- d) agree on an annual plan for ICES advisory activities;
- e) help to develop Terms of Reference and scientific ideas of relevance for ICES Advisory Service for ICES expert groups;

- f) ensure procedures/best practices / guidelines of relevance for ICES Advisory Services are developed.

In addition, ACOM will

- g) help SCICOM to define and to develop a science programme to underpin current and emerging needs for advice;
- h) identify shortfalls in skills and knowledge needed in support of ICES Advisory Service and to work with ICES community to develop the required skills and knowledge.

2. Individually, ACOM members:

- a) participate in all aspects of ACOM activities;
- b) chair advice drafting groups as agreed by ACOM;
- c) take a strategic view of direction of ICES advice, provide an oversight of the ICES advisory process, agree /modify guidelines, provide input to strategic and immediate planning of advisory process;
- d) communicate frequently and actively with national Delegates and SCICOM members on advisory matters relevant to their work with ICES;
- e) maintain and further strengthen links between ICES Secretariat, science, data, and advice;
- f) encourage experts to take part in ICES activities, particularly advisory work by highlighting the benefits and importance;
- g) ensure adherence to procedures, best practices and guidelines.

In addition, ACOM members may:

- h) review outputs from the expert groups and other structures in the network, identify gaps in scope and impact of work, or shortfalls in skills and knowledge, and advise on ways to fill these gaps and to improve our advice;
- i) provide feedback to ACOM on science work needed for advice and the development of methods.

3. ACOM members also play a role individually in their home countries through:

- a) coordination of Member Country advisory role;
- b) promote and support effective communication between ACOM and the ICES requesters of advice and national administrations/ bodies, including representing ICES advisory service nationally;
- c) inform relevant national science communities about ICES advisory work;
- d) managing national involvement in ACOM work, ensuring range of science/knowledge covered;
- e) ensuring relevant expertise supplied to advice drafting groups allocated to the country in addition to those of national interest;
- f) ensuring that nominated advice drafting group members understand their role;
- g) working with national SCICOM Member to support national participants in expert groups supporting ICES Advisory Services.

5.4 Role of Advisory Committee Leadership

The ACOM Chair's main roles are to work in close cooperation with the vice-chairs, the Head of ICES Advisory Support and the Fisheries Resources Steering Group chair to:

- a) Chair ACOM and the ACOM Leadership meetings,
- b) Oversee the delivery of ICES advice,
- c) Ensure that ICES continues to respond to advisory requests,
- d) Develop ICES advice to meet the demands of evolving maritime policies,
- e) Implement advisory elements of ICES Strategic Plan,
- f) Engage with ICES community on all matters of relevance for ICES Advisory Services,
- g) Cooperate closely with all parts of ICES organization including participation in the Coordination Group, Bureau meetings, and SCICOM meetings.
- h) Maintain and develop contacts with established and new requesters to ICES advice,
- i) Engage with stakeholders,
- j) Present ICES advice to stakeholders,
- k) Promote communication of ICES process, products, and work.

The roles of the ACOM vice-chairs are to:

- a) Oversee advisory processes addressing recurrent and special requests,
- b) Chair advice drafting groups, review groups and ACOM web-conferences,
- c) Present advice to advice recipients and observers,
- d) Contribute to development of ICES advisory approaches,
- e) Participate in ACOM leadership meetings, ACOM meetings, and meetings with recipients and observers.

6 Guidelines for the Science Committee (SCICOM) and steering group chairs

The Science Committee (SCICOM) is the consultative committee of ICES as specified in the [Rules of Procedure](#). SCICOM shall *inter alia* oversee the scientific interests of the Council and its scientific work as well as the programmes of research organized or coordinated by the Council through expert groups. The broad objectives of SCICOM are:

- a) To keep ICES science programme dynamic, internationally relevant, and impactful;
- b) To engage scientists in ICES Member Countries and beyond by planning an annual cycle of meetings and workshops as well as the Annual Science Conference;
- c) To ensure seamless links between ICES science, data, and advice.

6.1 Responsibilities of the Science Committee

SCICOM is empowered to speak on behalf of ICES on science priorities and strategies, and on the state of knowledge of topical marine issues. The empowerment is provided by national representation from member countries on SCICOM.

The Science Committee has the authority to establish and dissolve expert groups and subordinate governance bodies (strategic initiatives, operational groups) as deemed necessary to deliver ICES Science Plan.

The following functions are the responsibility of SCICOM:

- a) Working with ACOM to identify science priorities
- b) Strategic science planning
- c) Implementation of the science plan
- d) Management of science activities to support ICES vision and mission
- e) Implementation of cross-cutting science activities through partnerships
- f) Nurturing scientific disciplines and methods
- g) Overseeing and guiding the Annual Science Conference and co-sponsored symposia
- h) Overseeing and guiding operational groups focused on data, training and publication

6.2 Membership and chair of the Science Committee

The Science Committee has one voting member per ICES member country and alternates nominated by the national Delegates. The seven steering group chairs are voting members and the ACOM chair, General Secretary and Head of Science Support are *ex-officio* members. If needed, up to five members-at-large may be appointed by the Committee. The members-at-large are to fill gaps in disciplinary expertise, or other gaps that SCICOM need to fill to fulfil its mandate. In practice, most members-at-large are the operational group chairs.

The SCICOM chair is a full-time position and the chair is appointed by Council following a recruitment process managed by the Secretariat. Emphasis will be placed on selecting a chair with leadership, communication, scientific, and managerial skills. There is an option to appoint vice-chair(s), who (if required), would be elected by

SCICOM members. In practice, steering group chairs currently fulfil the roles of vice-chairs.

6.3 Role of Science Committee members

Members of SCICOM are expected to use their expertise in the practice and management/coordination of marine science, including national, international and subject-specific expertise, and to draw on their networks:

- a) To actively participate in SCICOM and to effectively represent SCICOM and ICES science within ICES network and beyond;
- b) To help SCICOM to define and to develop a science programme that is dynamic, inclusive, internationally relevant and impactful; underpinning current and emerging needs for advice and shaping the medium and long-term direction of marine science;
- c) To help develop and sustain effective and mutually beneficial collaborations with other international organizations working on marine science and management;
- d) To contribute to planning an annual cycle of meetings and workshops, as well as the Annual Science Conference, to support ICES mission;
- e) To help develop Terms of Reference and scientific ideas for ICES expert, steering and operational groups and to participate in meetings or calls to discuss/approve their resolutions;
- f) To communicate frequently and actively with national Delegates and ACOM members on science matters relevant to their work with ICES;
- g) To communicate with the science community in the member country, raise awareness of their activity within SCICOM and identify opportunities for international collaboration through ICES;
- h) To identify shortfalls in skills and knowledge needed to achieve ICES objectives and to work within or through SCICOM, ACOM, steering groups, operational groups and strategic initiatives to develop the required skills and knowledge;
- i) To contribute to updating communications and web materials relating to ICES science and scientists to increase awareness, visibility and impact of our science and scientists;
- j) To maintain and further strengthen links between the Secretariat, science, data, and advice;
- k) To identify science relevant for ICES advisory services and to contribute to the uptake of the science into advice by planning, supporting and participating in processes to facilitate uptake;

And, to contribute to the role of SCICOM in some of the following ways:

- l) By promoting and supporting effective communication between SCICOM and the international marine science community, including speaking on behalf of ICES on our science priorities and achievements;
- m) By encouraging scientists to take part in ICES activities and highlighting the benefits;
- n) By working with other SCICOM members to identify where multidisciplinary and cross-cutting issues can add value to marine science;

- o) By reviewing scientific outputs from the expert group and other structures in the network, identifying gaps in scope and impact of work, or shortfalls in skills and knowledge, and advising on ways to fill these gaps and improve our knowledge;
- p) By providing feedback to SCICOM on research priorities and the conduct of science-related activity identified in ICES strategic plan;
- q) By guiding and informing the work of SCICOM operational groups and strategic initiatives and proposing consolidation, rationalization, or forming of SCICOM structures to best support the SCICOM role and ensure visibility of ICES science;
- r) By encouraging colleagues and/or taking roles as steering group chairs or in SCICOM operational groups, strategic initiatives and ad-hoc groups to further the work of ICES.

6.4 Steering groups

Interactions between SCICOM, ACOM, and the expert groups are supported by seven steering groups. Each steering group addresses a broad and enduring area of science and advice and “parents” a number of expert groups.

There are seven steering groups:

[Ecosystem Processes and Dynamics Steering Group](#)

[Human Activities, Pressures and Impacts Steering Group](#)

[Ecosystem Observation Steering Group](#)

[Aquaculture Steering Group](#)

[Fisheries Resources Steering Group](#)

[Integrated Ecosystem Assessments Steering Group](#)

[Data Science and Technology Steering Group \(from 1 January 2021\)](#)

Each chair is elected and appointed by ACOM and SCICOM and becomes a member of SCICOM (if not already a member of SCICOM in a national capacity). The chair of the Fisheries Resources Steering Group also becomes a non-voting *ex-officio* member of ACOM (if not already a member of ACOM in a national capacity). Chairs of all expert groups parented by a given steering group are members of that steering group.

Nominations for steering group chair candidates are sought from among SCICOM, ACOM, Delegates and the members of the steering group. Candidates for the position of steering group chair do not have to be SCICOM or ACOM members and are often expert group chairs from within a given steering group. If an elected steering group chair is not already a SCICOM member, he/ she becomes *ex officio* member of SCICOM. If the chair of the Fisheries Resources Steering Group is not already an ACOM member, he/ she becomes *ex officio* non-voting member of ACOM. If an elected steering group chair is a SCICOM member, then a new SCICOM member for the relevant country is appointed by the relevant national Delegate. If an elected steering group chair is an ACOM member, then a new ACOM member for the relevant country is appointed by the relevant national Delegate.

Each steering group chair is elected for a 4-year term, beginning 1 January. Elections for the post of steering group chair are usually held 3-6 months before the start of a new term to allow some transfer of information and expertise between the outgoing

and incoming chair. A given person may only take the role of steering group chair for one 4-year term, but this person is permitted to stand again for election as a steering group chair if one full year has elapsed since the completion of the previous term. Any given person is restricted to a maximum of two 4-year terms as a steering group chair overall (maximum of eight years in this role).

In the event that any elected chair does not complete an advertised 4-year term then SCICOM are encouraged to approve a transitional adjustment to the length of the following term with the objective of minimising year-to-year variability in the numbers of steering group chairs that are changing.

Note that transitional arrangements to reduce year-to-year variability in the turnover of steering group chairs were introduced from 1 January 2021. For this reason, the chairs of the Ecosystem Processes and Dynamics Steering Group and the Ecosystem Observation Steering Group will be elected for 3-year terms from 1 January 2021, with the terms ending on 31 December 2023. Subsequent terms for elected chairs of these Steering Groups will be 4-years.

6.5 Role of steering group chairs

Steering group chairs are voting members of SCICOM and, in addition to their roles as SCICOM members, they:

- a) Engage with and work with chairs of expert groups to ensure that expert group work supports and meets the science objectives and advisory needs of ICES;
- b) Help expert groups formulate and prepare their draft terms of reference and resolutions;
- c) Review and report on the science being undertaken within expert groups to SCICOM and ACOM, with a focus on identifying science highlights and priorities and demonstrating the impact of their science;
- d) Review scientific products/deliverables of the expert groups and provide feedback on ways to improve the impact and influence of their work;
- e) Provide feedback to SCICOM on research priorities and implementation of ICES strategy;
- f) Identify shortfalls in skills and knowledge needed to achieve ICES objectives within the steering groups area and work within the steering group and through SCICOM, ACOM and operational groups to develop capability;
- g) Identify gaps and overlaps in the work of expert groups, and propose consolidation, rationalization or forming of new expert groups to SCICOM and ACOM as appropriate;
- h) Help expert group chairs to adopt working practices, which ensure scientific information generated by expert groups is receiving adequate quality control consistent with scientific norms;
- i) Facilitate active horizontal and vertical communication, collaboration and coordination between expert groups and all other relevant ICES groups and identify, in cooperation with expert group chairs, opportunities for internal and external collaboration;

- j) Represent the steering group at SCICOM meetings (and ACOM meetings in the case of the Fisheries Resources Steering Group chair), at SCICOM/ACOM leadership meetings and at the ASC.

6.6 Strategic initiatives

Strategic initiatives can be established by SCICOM. Strategic initiatives are intended to introduce innovative and interdisciplinary thinking to ICES on topics that are cross-cutting and require input from partners outside the existing ICES network. Their work helps to increase the profile and relevance of ICES in a rapidly changing scientific and policy landscape. Strategic initiatives are always time-bound and have clear objectives that are reviewed by SCICOM. Council may also establish strategic initiatives that are referred to as Council strategic initiatives. Council strategic initiatives are managed by Council and not by SCICOM and are not addressed in these guidelines.

To encourage wide engagement and interaction, strategic initiatives can appoint up to four chairs. At least two chairs should come from ICES Member Countries and be active in ICES networks. At least one chair of the strategic initiative should usually be a SCICOM member and should provide regular reports to SCICOM on objectives and outputs of the strategic initiative. This allows SCICOM to help guide the work of the strategic initiative and to assess benefits to ICES. In the event that two or more chairs of the strategic initiative are members of SCICOM one of the chairs should undertake to represent the strategic initiative at any given meeting. If no existing national SCICOM member is a chair of a given strategic initiative, or if there is a national SCICOM member who is a chair of the given strategic initiative but cannot attend a given SCICOM meeting, then SCICOM may identify a single chair of the strategic initiative as a non-voting member of SCICOM for the duration of the meeting. This non-voting member of SCICOM is funded to attend the SCICOM spring meeting. This approach helps to ensure that the strategic initiative is represented by at least one member who can report to SCICOM. The chairs of the strategic initiative are responsible for deciding who to propose to SCICOM as the single non-voting member. Any strategic initiative chairs who are not SCICOM members, or have not been identified as non-voting members, are invited to attend SCICOM meetings as observers, but are not funded to attend these meetings.

6.7 Science Committee operational groups (OG)

SCICOM oversees three operational groups: Data and Information Group (DIG), Science Impact and Publication Group (SIPG), and the Training Group (TG). It forms temporary groups such as the Annual Science Conference Group to address specific short-term (typically less than one year) tasks. SCICOM also provides three members for the Awards Committee, a body established and chaired by Council but also reporting to SCICOM. If an operational group does not have a chair who is a national SCICOM member, ICES will fund travel and subsistence for one chair from the group to attend the SCICOM March meeting.

6.7.1 Data and Information Group (DIG)

The Data and Information Group provides ICES with advice on all aspects of data management including data policy, data strategy, data quality, technical issues and user-oriented guidance. DIG provides feedback and guidance to ICES Data Centre on topics such as existing data products, current developments in data management and potential new data products. DIG acts as a coordinating body between the Data Centre,

ACOM, and SCICOM on issues related to the national data centres and data policies, data handling and storage, metadata, and the use of IT in the Data Centre.

DIG members are nominated by Delegates (managed as part of the process for handling EG nominations) with the intention of developing a group that provides broad representation by the national data centres and disciplines. A representative of ACOM, the Head of Data Centre and the Head of Science Support are *ex-officio* members of the Data and Information Group. DIG meets annually with the Data Centre in Copenhagen. In addition, a subset of members of the DIG meet during the ASC. DIG reports to the full meetings of ACOM and SCICOM. DIG Group may invite additional expertise to address requirements at an individual meeting. The chair of DIG is elected by SCICOM for three years, with the option of a maximum one-year extension. Candidates for the chair are usually based on a recommendation from the group.

6.7.2 Science Impact and Publication Group (SIPG)

The Science Impact and Publication Group monitors ICES publication output and provides advice to SCICOM, ACOM, the Secretariat and network on increasing the reach and impact of ICES publications and science, including expert group reports. It also develops and recommends policies governing scientific publications as requested by SCICOM, reviews and provides guidance (to SCICOM, ACOM, the Secretariat, and network) on the evolution of science publication and communication and the opportunities and risks it presents for ICES and reviews and provides recommendations on resolutions for ICES publications prior to SCICOM meetings and intersessionally.

Science Impact and Publication Group members are appointed by SCICOM following a call on the Forum. Members are selected for their expertise in assessing scientific impact, analysis of publication and citation metrics, editorial experience and interest in developing ICES scientific impact. ICES Editor (a post in the Secretariat, not the Editor of ICES Journal of Marine Science) and the Head of Science Support are *ex-officio* members of SIPG. SIPG reports to all full meetings of SCICOM. Membership terms are 3 years in the first instance with the possibility of renewal for a maximum of a further 3 years. SIPG may invite additional expertise to address requirements at an individual meeting, by requesting a membership of one calendar year. The chair is elected by SCICOM for three years, with the option of a maximum one-year extension. Candidates for the chair are usually based on a recommendation from the group.

6.7.2.1 Series Editors

The SCICOM chair and General Secretary are responsible for appointing Series Editors for ICES Publications. This task is not within the remit of the Science Impact and Publication Group. For the appointment of Series Editors, a recruitment panel, consisting of the Head of Science Support and ICES Editor will compile and evaluate applications/appointments, and re-appointments, supported by relevant colleagues in the Secretariat, and make a recommendation to the SCICOM chair and the General Secretary for approval.

The Series Editor contracts are awarded for a three-year period. For all reappointments it will be possible for successful applicants to be reappointed twice, but following that period they will need to re-apply through an open and competitive recruitment procedure.

6.7.3 Training Group (TG)

The Training Group oversees ICES Training Programme and guides the development of the training provided by ICES. This involves identifying and developing courses with instructors, running and annual programme of courses, soliciting feedback on those courses and ensuring that training supports demands for expertise in science and advisory processes.

Training Group members are appointed by SCICOM. ICES Conference and Training Coordinator and the Head of Science Support are *ex-officio* members of Training Group. Members are selected for their interest and expertise in education and training and technical knowledge of the development of training methods and courses. Membership terms are 3 years in the first instance with the possibility of further 3-year terms. The chair of Training Group is elected by SCICOM for three years, with the option of a maximum one-year extension. Candidates for the chair are usually based on a recommendation from the group.

6.7.4 Annual Science Conference Group (ASCG)

The Annual Science Conference Group is established at the spring SCICOM meeting, approximately 18 months in advance of each ASC. The group guides the selection of theme and network sessions for the ASC and keynote speakers based on the votes and rankings provided by SCICOM members, as well as advising on formats and logistics for the ASC. More information on these processes is provided in the “Guidelines for ICES Annual Science Conference”

Members are a subset of SCICOM members selected to provide broad coverage of the scientific topics that may be addressed at the ASC. The Head of Science Support is an *ex officio* member of the group. The chair is always the SCICOM member who represents the country hosting the ASC.

6.7.5 Awards Committee (AC)

The Awards Committee is established and chaired by Council but also reports to SCICOM. SCICOM appoints three members of the Awards Committee from among SCICOM members for a maximum of two three-year terms. Council appoints the chair and one member from among Council members.

Table. Overview of steering group, strategic initiative and operational group member and chair selection.

GROUP	MEMBERS	CHAIR
Science Impact and Publication Group (SIPG)	Appointed by SCICOM	Chair appointed by SCICOM (Term 3+1yr)
Training Group (TG)	Appointed by SCICOM	Chair appointed by SCICOM (Term 3+1yr)
Data and Information Group (DIG)	Based on representation by national data centres and good coverage of disciplines subject to SCICOM approval.	Chair nominated by DIG, subject to SCICOM approval (Term 3 + 1yr)
Annual Science Conference Group (ASCG)	Appointed by SCICOM	Chair is the SCICOM member from ASC host country (Term 18 mo)
Awards Committee (AC)	Three members appointed by SCICOM (chair and one member from Council)	Chair appointed by Council (Term 3 + 3yr)
Steering Groups (SG)	All chairs of expert groups parented by the SG	Chair appointed by ACOM and SCICOM (Term 4 yr)
Strategic Initiatives (SI)¹	Appointed by SCICOM	Chair (s) nominated by SI and approved by SCICOM (Term 3+1yr)

1. For Strategic Initiatives established and managed by Council, Council make their own arrangements.

6.8 Science Committee Report

SCICOM produces an annual report for Council to describe the scope, scale, and impact of ICES science and plans for future science delivery. The review of scope, scale, and impact describes the delivery of science and supporting activity in the SCICOM steering groups, expert groups, strategic initiatives and operational groups and outcomes of the Annual Science Conference. The report is made available on ICES website.

Annex 1: Example of a draft resolution for an ICES publication

This type of resolution is used to request publication of a Co-operative Research Report (CRR) or a Techniques in Marine Environmental Sciences (TIMES)

Note on Annex 1 in version 2021-1 of the “Guidelines for ICES groups”

This version of the guidelines is being published while ICES is transitioning to an improved system for processing resolutions. The next version of the guidelines will include Annex 1 and will be published as soon as the resolution forms are finalised and adopted. Information on the adoption of the new resolution process will also be shared widely via ICES forums and through direct correspondence with expert group chairs.

Annex 2: Example of a draft resolution for a symposium

This type of resolution is used to request ICES co-sponsorship for a conference or symposium, or for organisation of a conference or symposium under the auspices of ICES

Note on Annex 2 in version 2021-1 of the “Guidelines for ICES groups”

This version of the guidelines is being published while ICES is transitioning to an improved system for processing resolutions. The next version of the guidelines will include Annex 2 and will be published as soon as the resolution forms are finalised and adopted. Information on the adoption of the new resolution process will also be shared widely via ICES forums and through direct correspondence with expert group chairs.

Annex 3: Example of a draft resolution for a new expert group

This type of resolution is used to request the formation of, and define the work plan of, a Working Group or Workshop

Note on Annex 3 in version 2021-1 of the “Guidelines for ICES groups”

This version of the guidelines is being published while ICES is transitioning to an improved system for processing resolutions. The next version of the guidelines will include Annex 3 and will be published as soon as the resolution forms are finalised and adopted. Information on the adoption of the new resolution process will also be shared widely via ICES forums and through direct correspondence with expert group chairs.

Annex 4: Example of a draft resolution for a Council Working Group

This type of resolution is used to request the formation of, and define the work plan for, a Council Strategic Initiative, Council Working Groups, or other Council activities. This example shows a correctly completed form for a Council Working Group.

Note on Annex 4 in version 2021-1 of the “Guidelines for ICES groups”

This version of the guidelines is being published while ICES is transitioning to an improved system for processing resolutions. The next version of the guidelines will include Annex 4 and will be published as soon as the resolution forms are finalised and adopted. Information on the adoption of the new resolution process will also be shared widely via ICES forums and through direct correspondence with expert group chairs.

Annex 5: Example of a draft resolution for a Steering Group

This type of resolution is used to request the formation and/or define the work plan of a Steering Group, Operational Group, Committee or Strategic Initiative, and to request support for science cooperation with other organisations. This example shows a correctly completed form for a Steering Group

Note on Annex 5 in version 2021-1 of the “Guidelines for ICES groups”

This version of the guidelines is being published while ICES is transitioning to an improved system for processing resolutions. The next version of the guidelines will include Annex 5 and will be published as soon as the resolution forms are finalised and adopted. Information on the adoption of the new resolution process will also be shared widely via ICES forums and through direct correspondence with expert group chairs.

Annex 6: Example of a draft resolution for a Strategic Initiative

This type of resolution is used to request the formation and/or define the work plan of a Steering Group, Operational Group, Committee or Strategic Initiative, and to request support for science cooperation with other organisations. This example shows a correctly completed form for a Strategic Initiative

Note on Annex 6 in version 2021-1 of the “Guidelines for ICES groups”

This version of the guidelines is being published while ICES is transitioning to an improved system for processing resolutions. The next version of the guidelines will include Annex 6 and will be published as soon as the resolution forms are finalised and adopted. Information on the adoption of the new resolution process will also be shared widely via ICES forums and through direct correspondence with expert group chairs.

Annex 7: Science highlights in ICES

Coordination, leadership, and facilitation of science are central to realizing ICES vision: to be a world-leading marine science organization, effectively meeting societal needs for impartial evidence on the state and sustainable use of our seas and oceans.

Science highlights are used to draw attention to the most impactful and societally relevant science from our ICES network. Highlights serve to raise awareness of the breadth and impact of our scientific activity and expertise and to demonstrate the importance of our science for understanding marine ecosystems and securing their sustainable use.

What are science highlights?

Science highlights are concise and accessible written summaries of the most novel, important and impactful ICES science. Highlights are used to draw attention to the most impactful and societally relevant science from our ICES network. They serve to raise awareness of the breadth and impact of our scientific activity and expertise and to demonstrate the importance of our science for understanding marine ecosystems and securing their sustainable use.

Highlights will be used to promote ICES science on the web and in printed and spoken communication targeted to the network and beyond. Additionally, highlights may be used by the ICES Communications Team and by communications teams in national laboratories to develop stories, news releases, and social media posts. They are a way to get recognition for your science, network, and expert group, and reach a wider audience for your work.

Submitting science highlights

Science highlights are newsworthy because they are based on a very recent or forthcoming finding and supported with accessible images and a short biography of the scientist(s) conducting the work. A table and examples of potential types of ICES-relevant science that can be developed into science highlights is provided at the end of this Annex.

Submissions of science highlights are welcomed from any scientist in the ICES network who wishes to report new and impactful work conducted by ICES scientists and groups. The template for submission (included for information at the end of this Annex) and any related documents (such as publications, images and figures) can be uploaded to the [ICES Science Highlights SharePoint page](#). Since ICES is renowned for generating authoritative and impartial science, highlights should not compromise or unreasonably sensationalise the underlying science.

Submitted highlights are treated as suggestions for potential ICES news and/or social media posts. If the ICES communications team decides to develop a suggested highlight for promotion, they will contact the submitter to develop stories, news releases, and tweets. If requested, we can also collaborate with your home institution's communications team to coordinate a joint science highlight press release.

For additional information or questions about science highlights, contact ICES communications at communications@ices.dk.

ICES news and social media webpages

News and events: <https://www.ices.dk/news-and-events/Pages/default.aspx>

Twitter: https://twitter.com/ICES_ASC

Facebook: <https://www.facebook.com/ICES.Marine/>

YouTube: <https://www.youtube.com/user/ICESmarine/videos>

LinkedIn: <https://www.linkedin.com/groups/1153507/>

Types of ICES-relevant science that can be developed into science highlights

TYPE	ADDITIONAL INFORMATION AND EXAMPLES
Forthcoming papers, books, or other scientific output	<ul style="list-style-type: none"> Whenever possible, please contact ICES immediately after the draft has been accepted so we can develop a science highlight to disseminate in tandem with the publication date. In addition to traditional journal articles, reports, or books, we are also interested in highlighting the publication of new data sets, methods, and models that will be publically disseminated.
Emerging technology being developed and advanced by ICES expert groups	<p>Example article: At the forefront of fisheries acoustics</p> <ul style="list-style-type: none"> https://www.ices.dk/news-and-events/news-archive/news/Pages/At-the-forefront-of-fisheries-acoustics.aspx <p>Example article: Age reading just got smarter</p> <ul style="list-style-type: none"> https://www.ices.dk/news-and-events/news-archive/news/Pages/Age-reading-just-got-smarter.aspx <p>Example article: Tutoring computers</p> <ul style="list-style-type: none"> https://www.ices.dk/news-and-events/news-archive/news/Pages/Tutoring-computers.aspx
Trends and shifts in ocean conditions and marine populations that have been identified by ICES expert groups	<p>Example article: Barents capelin bounce back – and other highlights</p> <ul style="list-style-type: none"> https://www.ices.dk/news-and-events/news-archive/news/Pages/Barents-capelin-bounce-back-%E2%80%93-and-other-highlights.aspx <p>Example article: Ocean climate highlights</p> <ul style="list-style-type: none"> https://www.ices.dk/news-and-events/news-archive/news/Pages/Ocean-climate-highlights.aspx <p>Example article: Charting the current climate</p> <ul style="list-style-type: none"> http://www.ices.dk/news-and-events/news-archive/news/Pages/Charting%20the%20current%20climate.aspx
Current and future challenges to marine management that are being addressed by ICES expert groups	<p>Example article: Managing deep-sea ecosystems</p> <ul style="list-style-type: none"> https://www.ices.dk/news-and-events/news-archive/news/Pages/Managing-deep-sea-ecosystems.aspx <p>Example article: Hazard awareness: managing oil spill risk in the Baltic Sea</p> <ul style="list-style-type: none"> http://www.ices.dk/news-and-events/news-archive/news/Pages/Feature-article-%E2%80%93-Hazard-awareness---managing-risk-of-oil-spills-in-the-Baltic-Sea.aspx
Upcoming or recent research cruises and expeditions	<ul style="list-style-type: none"> We are also interested in trips where researcher(s) will be providing updates while in the field (e.g., blogging, real-time data collection and

TYPE	ADDITIONAL INFORMATION AND EXAMPLES
relevant to advancements in ICES science and advice	dissemination). Example article: Sailing towards a better understanding of ballast water management <ul style="list-style-type: none"> • http://ices.dk/news-and-events/news-archive/news/Pages/Sailing-towards-a-better-understanding-of-ballast-water-management.aspx
Upcoming keynote talks on projects and science related to your ICES work	<ul style="list-style-type: none"> • This is an optimal time to write about your work and highlight the science in your upcoming keynote talk at international conferences.
Activities that broaden participation in ICES science and advice	<ul style="list-style-type: none"> • This may include activities such as early career training opportunities and broader inclusion of socio-economics in ICES analyses. <p>Example article: Combining indigenous and scientific knowledge in Arctic assessments</p> <ul style="list-style-type: none"> • https://www.ices.dk/news-and-events/news-archive/news/Pages/Combining-indigenous-and-scientific-knowledge-in-Arctic-assessments.aspx <p>Example article: Social systems and ecosystem services databases launched</p> <ul style="list-style-type: none"> • https://www.ices.dk/news-and-events/news-archive/news/Pages/Social-systems-and-ecosystem-services-databases-launched.aspx
Anniversary dates (e.g., 5 or 10 years) of long-term data sets	<ul style="list-style-type: none"> • We are interested in highlighting long-term data sets that have provided important contributions to the development of ICES science and advice.

The following template may be used for submitting science highlights to the [ICES Science Highlights SharePoint page](#).

YOUR NAME:	
Your email:	
Your home institution and country:	
Name of ICES expert group(s) associated with this highlight:	
Provide below a short summary paragraph (typically 200-300 words) describing your science highlight. Some questions to address in your summary: What question/challenge/problem was (or will) be addressed? What was discovered/achieved/solved? What is the expected significance/impact of the discovery/achievement/solution? What will follow?	

<p>Provide below a 1-2 sentence explanation of how this work is related to your expert group(s) (e.g., a direct product of the expert group, information that has been key to supporting the expert group analyses, etc.)</p>	
<p> </p>	
<p>Check the relevant science priorities from the ICES science plan:</p>	<p> <input type="checkbox"/> Ecosystem Science <input type="checkbox"/> Impacts of human activities <input type="checkbox"/> Observation and exploration <input type="checkbox"/> Emerging techniques and technologies <input type="checkbox"/> Seafood production <input type="checkbox"/> Conservation and management science <input type="checkbox"/> Sea and society </p>
<p>Please list any related documents and references such as DOIs for publications, web links, images, etc. When possible, please upload these supporting documents to the SharePoint folder along with this template.</p>	<p> </p>
<p>List the name(s) and email(s) of any additional expert group members and/or other key people that we may want to contact regarding this science highlight suggestion. Additionally, if you also plan to work with your institution's communications team on this science highlight, please let us know here.</p>	<p> </p>

Annex 8: Acknowledging ICES in publications

To allow the Science Publication and Impact Group (SIPG), SCICOM, and ICES Secretariat to track ICES outputs and impacts it is helpful if (i) an ICES acknowledgement is added to the acknowledgements section in journal papers, reports, and books (see recommended text below); and (ii) the ICES Editor (editor@ices.dk) is informed of accepted peer-reviewed publications in journals and books, so they can be added to the ICES Bibliographical database.

The following generic acknowledgement should be used when ICES facilitates or supports the scientific work and/or resulting publication. The most important requirement is to name the “International Council for the Exploration of the Sea” in full as well as referring to “ICES”.

“The authors thank the [XXX Group] of the International Council for the Exploration of the Sea (ICES) for facilitating this research”

This generic acknowledgement should be treated as a minimum requirement when part or all of a published work is developed in an ICES expert group, but authors may wish to add to this acknowledgement to recognize the work of specific individuals or other services, support, or data provided by ICES. In the case that a group is co-sponsored by another organisation (e.g. PICES) this organisation should be mentioned alongside ICES in the text above.

When published analyses draw extensively on the work of Expert groups that have generated and processed data it is important that their contributions to the work are also recognized. Specific citations for ICES datasets are already linked to data and data products available through [ICES data portal](#). These should always be used in publications, in addition to the generic acknowledgement above if the work uses ICES data and is also facilitated by an ICES expert group.

Annex 9: Guidance for ICES expert groups seeking to use their science as an input to ICES advice

Introduction

A key criterion for ICES advice is that it should be based on the best available science. For this reason, ICES wants to facilitate the uptake and translation of science into the advisory process.

This guidance is for expert group chairs and members who would like to see the science they are developing used in ICES advisory system or consider that the science they have developed is sufficiently mature to be used to support advice. It is written primarily for expert groups that rarely receive advice-related terms of reference.

This guidance was developed following a review of the factors affecting the influence of science conducted in a range of expert groups on ICES advisory process. Perhaps the most important lesson from this review was that successful uptake relies on a pull from the needs and priorities of the advisory system and a push from the expert group to raise awareness of their science among advisers and to develop it in ways that meet advisory norms for quality, repeatability and fitness for purpose.

Key action for expert group chairs

If the science developed by an ICES expert group is not used in the advisory system and the expert group would like to see it used in this way then the key action for the expert group chair is to:

Contact the ACOM leadership (cc SCICOM chair and relevant Steering Group chair) to explore if the science is relevant for ICES advisory services

If the science is considered relevant the expert group should, in cooperation with the ACOM and SCICOM leadership, set up a plan detailing responsibilities for translating the science into advice, including development of advice-related terms of reference.

Further guidance

If expert group chairs and members are committed to applying their science in the advisory process, the probability of uptake is increased when the advisory community is willing to accept and assimilate their science. The chance of such acceptance is increased by interaction between the expert group and members of ICES Advisory Committee (ACOM). Increased interaction leads to a better understanding of ACOMs emerging needs and priorities, makes ACOM members aware of the possibilities provided by the available scientific methods or information, and encourages support from the committee that is responsible for signing-off ICES advice. Thus, we recommend that scientists who are seeking to contribute to advisory products make early contact with the ACOM leadership to gauge the role of their science in supporting future advice (cc. SCICOM and Steering Group chair). The ACOM leadership can then assess whether there is a current or future advice need or priority relating to the topic proposed by the expert group and can give them further guidance on developing advice-related terms of reference.

Translation of science into advice requires a significant commitment of time and resources to engage people and groups with expertise in advice generation. However, it is highly rewarding for the people involved, can create an impactful legacy for the

expert group, and make a real difference to the conservation and management of the seas.

It is helpful if people with experience generating advice can actively contribute to the expert group and if the majority of expert group members are motivated in their own right to translate science into advice.

Within ICES, the translation of science into advice has generally been more successful when one person takes clear responsibility for maintaining strong and active links between science and advice. This person may be, but does not have to be, the chair of the expert group. It is also more likely to be successful if the terms of reference of the expert group clearly explain the intention to generate products that can help to meet advisory needs and are developed in consultation with scientists familiar with the advisory system.

When working planning the work of an expert group it is important to allow a reasonable allocation of time and effort for developing existing science to meet advisory needs. The allocation of time and effort to this step of the process is often underestimated, and an appropriate allocation to support translation should be carefully considered with scientists who are familiar with the characteristics of scientific studies and methods that would underpin draft advice that would ultimately meet expectations for sign-off by ACOM (because it is based on the best available science and characterized by quality assurance, developed in a transparent process, unbiased, independent, and recognized by all relevant parties as applicable to management).

The following summary highlights factors that previous analyses have shown to influence the probability of successfully translating science to advice, categorized according to the roles and expertise of people involved in the expert groups and the advisory system, the fitness for purpose of science conducted, the perceived legitimacy of the science, and the analytical approaches applied and their repeatability.

People	Many people with advisory expertise engage with the expert group
	There are positive incentives for a range of experts with advisory expertise to contribute to the expert group and they are motivated to do so
	Expert group members develop high awareness of opportunities to contribute to advice
	Expert groups seek to draw in participants with knowledge of advice development from inside and outside ICES and seek to constructively engage these new contributors
	Expert group members devote a larger proportion of their working time to developing existing science to meet advisory needs
	Expert group terms of reference are reviewed by people with sufficient knowledge to assess the viability of a process leading to advice

	Diverse expertise is engaged in the translation of science to advice, in and outside the expert group (spanning science, advice, advice recipient, knowledge broker and stakeholder)
	There is a clearly defined and known person(s) responsible for taking the science into advice
	ACOM members' have high awareness of the work of the expert group and support the plans of the expert group to translate their science into advice
Analytical approaches	Quality assurance of the science has been conducted
	There is a clearly defined and durable follow-up process to support contributions to advice after terms of reference are fulfilled
Fitness for purpose	Term of reference formulation is effectively and strongly tailored to supporting advice priorities
	Terms of reference focus on the suitability of proposed work to support advice and advisers have been consulted during their development
	The science output is salient to the advisory needs and priorities
Trust and legitimacy	The advisory community have trust in the impartiality and credibility of scientists in the expert group
	The advisory community is willing to accept and assimilate subjects and the scientific evidence base
	The scientific consensus on the science that may form the basis for advice is strong

Annex 10: Working groups with Advisory Committee (ACOM) affiliation prior to 1 Jan 2019

ACRONYM	NAME	STEERING GROUP
AFWG	Arctic Fisheries Working Group	FRSG
HAWG	Herring Assessment Working Group for the Area South of 62° N	FRSG
JWGBIRD	Joint OSPAR/HELCOM/ICES Working Group on Seabirds	EPDSG
NIPAG	Joint NAFO/ICES <i>Pandalus</i> Assessment Working Group	FRSG
NWWG	North-Western Working Group	FRSG
SCRDB	Steering Committee of the Regional Fisheries Database	FRSG
WGBAST	Assessment Working Group on Baltic Salmon and Trout	FRSG
WGBFAS	Baltic Fisheries Assessment Working Group	FRSG
WGBIE	Working Group for the Bay of Biscay and the Iberian Waters Ecoregion	FRSG
WGBYC	Working Group on Bycatch of Protected Species	HAPISG
WGCSE	Working Group for the Celtic Seas Ecoregion	FRSG
WGDEC	Working Group on Deep-water Ecology	HAPISG
WGDEEP	Working Group on the Biology and Assessment of Deep-sea Fisheries Resources	FRSG
WGECO	Working Group on Ecosystem Effects of Fishing Activities	HAPISG
WGEEL	Joint EIFAAC/ICES/GFCM Working Group on Eels	FRSG
WGEF	Working Group on Elasmobranch Fishes	FRSG
WGHANSA	Working Group on Southern Horse Mackerel, Anchovy, and Sardine	FRSG
WGHARP	ICES/NAFO/NAMMCO Working Group on Harp and Hooded Seals	FRSG
WGMIXFISH	Working Group on Mixed Fisheries Advice	FRSG
WGMIXFISH-METH	Working Group on Mixed Fisheries Advice Methodology	FRSG
WGMME	Working Group on Marine Mammal Ecology	EPDSG
WGNAS	Working Group on North Atlantic Salmon	FRSG
WGNSSK	Working Group on the Assessment of Demersal Stocks in the North Sea and Skagerrak	FRSG
WGWIDE	Working Group on Widely Distributed Stocks	FRSG

Annex 11: Recommendations to Chairs of online expert group meetings in ICES

Prior to the COVID 19 pandemic, ICES was increasingly using online and remote methods for expert groups and meetings. The move in 2020 to 100% remote meetings has highlighted a number of opportunities and challenges. This document provides guidance for Chairing online meetings. It has been constructed using responses to a number of surveys of expert group experiences in 2020, and discussions with SCICOM and ACOM on best practice.

Many Chairs have found the online format useful, e.g. perhaps in terms of broadening participation, and yet many have reported frustrations, such as reduced discussion space and a reduced ability to read the mood of the meeting. These recommendations will hopefully assist the following round of remote and online expert group meetings.

Planning the meeting

- a) Be aware of the different time zones of participants. Be mindful that the timing of a meeting will impact different members of the expert group differently. Attempt to spread the impact of awkward timing equitability across the expert group.
- b) Plan for a maximum of 5-hour sessions per day and accordingly spread over more days, and include breaks. Breaks should be scheduled at least every two hours and be a minimum of 15 minutes duration. Respect the allocated time, running over-time in a remote setting is not good practice.
- c) Limit the number of ToRs for the meeting and allocate subgroups to individual tasks.
- d) Prepare an annotated agenda with timings including key points outlining the expected outcomes for each of the agenda items and tasks. Where possible, include links to the relevant background documents in the agenda headings.
- e) Prioritize using the online time for discussion, decision making and setting action points. Allocate offline time or subgroup time to work on the tasks agreed during the meeting time; include a plan for feedback on subgroups.
- f) Consider what issues can be resolved in plenary, and what issues need to be taken offline, in subgroups or postponed.
- g) Make yourself familiar with the meeting tool. Do not assume that your primary web conference tool will work for all, and have a backup web conference tool (consult with Secretariat).
- h) Ensure roles are well defined before the meeting, especially with regard to technical support, monitoring the chat, rapporteur. It may be helpful to allocate an established member of the group to check-in with new or junior member of the group at regular intervals.

Running the meeting

- a) Have cameras turned on if possible as it is easier to relate to people you can see; when not speaking, mics should be on mute; use of headsets is recommended
- b) During the opening of an online meeting, it is helpful to outline expectations that are specific to this meeting format.

- c) The Chair should invite each participant to introduce themselves, with particular attention to new participants so they feel welcomed and able to engage online.
- d) Encourage screen sharing, using virtual whiteboards and where appropriate chat windows.
- e) Expected actions and assignments may not be as clear as in physical meetings. Chairs are encouraged to express actions and assignments clearly and check with participants that these are understood.
- f) It can be harder to find volunteers for tasks at an online meeting. Various structured approaches for seeking volunteers are available. For example, including calls and messages in advance, or providing a sign-up sheet on SharePoint.
- g) Be aware of language barriers and cultural differences. Speak slowly, clearly and as Chair, regularly check with participants that their views are being represented and voices heard. Some web conferences offer live captioning (subtitles).

Annex 12 – Change Log of past versions

DATE	VERSION	SUMMARY OF CHANGES
	2020-2	<ol style="list-style-type: none"> 1. A new section on the presentation and discussion of ICES advice to emphasise that participants in expert groups should never state or imply that they are providing, or able to provide, advice on behalf of ICES (Section 3.1.3). 2. Codification of existing practice in relation to preferences and limits on the number of persons chairing an expert group (Section 3.4). 3. Emphasis that expert group chairs are responsible for ensuring that chair-invited members are willing to abide by ICES Code of Conduct (Section 3.5.2). 4. New text to indicate that working group chairs must provide contact details of chair-invited members and observers (for review) to ICES Secretariat at least five working days before the first day of any meeting they will attend (Section 3.5.2). 5. A new section on the need to ensure that persons joining online expert group meetings are formally recognised by the chairs as members or participants (Section 3.5.3). 6. Further elaboration of the differences between “ICES Scientific Reports” and “ICES Business Reports”, appropriate content in these reports, timing of publication, and circulation of these reports (Section 3.7.1). 7. Changes to Steering Group chair terms from 3+1 years to 4 years and associated transitional arrangements (Section 6.4). 8. Addition of information on the new Data Science and Technology Steering Group (to be operational from 1 January 2021) (Section 6.4). 9. Clarification of arrangements for funding travel and subsistence of Operational Group chairs who are not national members of the Science Committee (Section 6.7).
	2020-1	<ol style="list-style-type: none"> 1. Further development of guidance for expert group chairs on how to write the web texts to present their groups on ICES website (Section 3.1.1). 2. Reference to the ICES Advisory Plan (as released Dec 2019) added as driver of ICES work plans in many sections of the guidelines. 3. Further elaboration of the differences between “ICES Scientific Reports” and “Business Reports”, appropriate content in these reports, timing of publication and expectations for report writing by fixed-term working groups (Section 2.2., 3.2.1). 4. Changes to the descriptions of the resolutions forms and process to reflect the ongoing introduction of new resolution forms (Section 3.1, 3.3). 5. Update on the process for developing web texts for ICES expert groups as part of the resolutions process (Section 3.1.1). 6. Additions to guidance on preparing Terms of Reference to align with the forthcoming changes to resolutions forms (Section 3.2.2). 7. Revision of text to guide writing Executive Summaries in “ICES Scientific Reports” This elaborates the existing requirements for these texts and adds an example of an Executive Summary and its expected structure (Section 3.7.3). 8. Description of the process by which guidance on the Code of

	<p>Conduct is made available at expert group meetings (Section 4.7).</p> <p>9. Emphasis that recommendations are no longer processed if they are not included in the recommendations database (Section 3.8).</p>
2019-2	<ol style="list-style-type: none"> 1. Inclusion of guidance for expert group chairs on how to write web texts to present their groups on ICES website (new Section 3.1.1) 2. Inclusion of information on the ICES privacy policy (to Section 3.6.1) 3. Emphasis that the interim e-evaluation was not an option for any expert group addressing a term of reference that supports an advisory request (Section 3.7.1) 4. Use of the business report template by expert and other groups that are not responsible for producing scientific output that would appear in the "ICES Scientific Reports" series (Section 3.7.1) 5. Request that Executive Summaries in "ICES Scientific Reports" should not include details of the times and dates and attendance at meetings, given that a table is now used to provide this information (Section 3.7.3) 6. Use of recommendations database to submit all recommendations from expert groups, removal of recommendations from expert group reports and handling of recommendations in general (Section 3.8) 7. Addition to the role of Science Committee members: "To identify science relevant for ICES advisory services and to contribute to the uptake of the science into advice by planning, supporting and participating in processes to facilitate uptake" (Section 6.3) 8. Revised guidance on developing and submitting science highlights (Annex 7) 9. Sections and annexes relating to the development of theme and network sessions at the ASC have been removed and incorporated into a new publication "Guidelines for ICES Annual Science Conference" 10. Addition of Steering Group affiliations to the list of ACOM "legacy" groups (Annex 10)
