

16.5.5 Guidelines for review processes

Introduction

A key part of ICES advice process is peer review. Principle 7 of ICES ten principles for advice states: *“To ensure that the best available, credible science has been used and to confirm that the analysis provides a sound basis for advice, all analyses and methods are peer-reviewed by at least two independent reviewers. For recurrent advice, the review is generally conducted through a benchmark process. For special requests through one-off reviews.”*

The review is generally of an ICES Scientific Report– the output of an expert group – which provides the knowledge and evidence base for the advice. In benchmark workshops, reviewers participate by providing objective feedback on the suitability and validity of the data and methods employed by the expert group, alternative fit-for-purpose approaches, the appropriate interpretation of results, and further work to address unresolved issues.

These guidelines outline the nature of and processes associated with reviews. They supplement the [Guide to ICES Advice](#) document as well as other guidelines for the production of advice. This document is regularly amended in response to lessons learnt and the changing portfolio of ICES advice.

Tasks

A review shall ensure that the analyses and assessments used are of suitable quality to form the basis of the given advice. It must evaluate both the application of the best available science and whether the knowledge, either synthesized or new, is appropriate to provide the advice. This requires a technical assessment of the credibility of scientific findings and the appropriateness of methods. It also requires an evaluation of the conclusions reached by the expert group(s), whose work is published in an ICES Scientific Report.

A review should ask:

- a) Is the analysis technically correct?
- b) Are the scope and depth of the science appropriate for the request?
- c) Does the analysis contain the knowledge to answer the request for advice?

The review, together with the expert group’s ICES Scientific Report, will be submitted to the advice drafting group (ADG) responsible for preparing the draft advice for the Advisory Committee (ACOM). A representative of the review group will participate in the ADG. The review will be appended as an annex to the published ICES Scientific Report. In general, it is the draft versions of these reports that are reviewed; however, in the case of benchmark workshops, the reviewers usually participate by engaging in the workshop and reporting their review afterwards. For the review of certain technical (usually stock assessment) expert groups, students are also invited to review these groups’ draft ICES Scientific Reports on a semi-*ad hoc* rotational basis.

Roles of reviewers and others in the process

Ordinary reviewers

A review group shall consist of two or three nominated independent experts, either from within or external to ICES. In addition, a chair may be appointed to lead the group. The ACOM Leadership, supported by the Secretariat, selects the reviewers and the Chair. Reviewers are supported in their role by the Secretariat.

Reviewers are appointed based on their competence, integrity, and objectivity, and they are technical experts in the relevant scientific fields. To the extent possible they are experts external to the region, stock, or issue being considered and are not associated with the ICES Scientific Report(s) being reviewed. Reviewers shall not have been involved with the analyses for the given advice, nor shall they have a vested interest in the activity affected by the advice. They must adhere to [ICES Code of Conduct](#).

Student review group

For advice on fishing opportunities (including technical calculations), a supplementary process exists where a review is conducted by graduate students and postdoctoral fellows under the guidance of a supervisor or professor. ICES Secretariat collaborates with the professor or supervisor to ensure sufficient student expertise to fulfil the tasks and works with the group to make all background information available in time. On the recommendation of the supervisor or professor, the ACOM Leadership appoints a chair of the review from the group of students. The Chair participates in the review and reports to the relevant ADG. Usually, draft ICES Scientific Reports from two expert groups are reviewed per year, on a rotational basis.

General

The Chair of or appropriate experts from an expert group will be available to assist the reviewers and clarify issues for them as necessary. The expert group Chair will provide recalculations or additional calculations if required and document them for the reviewers' report, in particular for advice on fishing opportunities.

The reviewers will be supported by a professional officer and supporting officer from ICES Secretariat to ensure the consistency of reviews over time and across regions and topics.

Working procedure

When a chair has been appointed to lead a review, that person is responsible for the review process, adherence to the guidelines, and the delivery of the reviewers' report by the pre-agreed deadline. In other instances, these functions will be carried out by a member of ICES Secretariat.

Each element of the ICES Scientific Report(s) that will be used to inform the advice should be reviewed by at least two reviewers.

The reviewers' report should be by consensus whenever possible; otherwise it can be a compilation of the reports of the individual reviewers. The Chair, supported by the ACOM Leadership, will decide which reporting mechanism is appropriate. Individual reviews can also be submitted with a synthesis.

All decisions and conclusions of the reviewers should be well documented, including the basis for the decision and the process that was followed to arrive at the decision.

The reviewers' report must include a clear yes/no statement on whether the contribution of knowledge in the ICES Scientific Report(s), is of sufficient quality and relevance to form the basis of the advice and whether it uses the best available science.

If necessary, the reviewers can ask for updates of assessments or projections or for additional analysis or information to be considered or included. In such cases the input and output of these calculations and sources of additional information should be included in the technical minutes of the ADG, and the files should be left on the SharePoint system.

Procedure for detecting errors and challenging the findings of expert groups

An expert group owns the authorship of an ICES Scientific Report and thus the group, rather than the reviewers or ADG, are responsible for its contents.

It is the responsibility of the ADG to consider and decide on the appropriateness of the reviewers' evaluation of the ICES Scientific Report(s) and whether ICES is able to provide advice based on the best available science.

If viewed as necessary and to aid transparency of decision-making, the ADG Chair, supported by the Secretariat, will facilitate the writing of an additional annex to be included in the expert group's report. This annex will explain the advice in light of the reviews and ADG decision. The expert group chairs are responsible for communicating this information to

the members of the expert group(s) concerned. The representative of the reviewers in the ADG is responsible for communicating this information to the rest of the review group.

Errors in a draft ICES Scientific Report detected by reviewers will be corrected before publishing. For advice on fishing opportunities, changes in assumptions for interim year and catch scenarios will be included in draft ICES Scientific Reports before publication (e.g. through adjusting and adding options in tables).

Audits of data and knowledge by expert groups (Annex 1)

Expert groups are required to audit data and knowledge flows using the templates in Annex 1.

Recommended citation: ICES. 2021. Guidelines for review processes. In Report of the ICES Advisory Committee, 2021. ICES Advice 2021, Section 16.5.5. <https://doi.org/10.17895/ices.advice.7682>.

Annex 1

Reporting formats to be used

1. **Format for audits** (to be drawn up by expert groups and not review groups)

Review of ICES Scientific Report, (*expert group/workshop title*) (*year*) (*dates*)

Reviewers:

Expert group Chair:

Secretariat representative:

Audience to write for: advice drafting group, ACOM, and next year's expert group

General

Recommendations, general remarks for expert groups, etc. (use bullet points and subheadings if needed)

For advice other than single-stock summary fisheries advice

Section:

Short description

Comments

(Repeat for all sections)

For single-stock summary sheet advice

Stock

Short description of the assessment as follows (examples in grey text):

- 1) **Assessment type:** benchmark/update
- 2) **Assessment:** accepted/rejected/not presented
- 3) **Forecast:** accepted/rejected/not presented
- 4) **Assessment model:** XSA + VPA Bayesian assess – proposed by expert group, accepted by review group – tuning by three comm + two surveys
- 5) **Consistency:** last year's assessment rejected – this year's accepted; the view of the review group was that last year's assessment should have been accepted.
- 6) **Stock status:** $B < B_{lim}$ for a while; $F_{lim} < F < F_{pa}$; R uncertain, seems to be high in recent years
- 7) **Management plan:** agreed in 2006: SSB to be above 35 000 t within ten years and fishing mortality to be reduced to 0.27. The main elements in the plan are a 10% annual reduction in F and a 15% constrain on TAC change between years. Plan is not evaluated by ICES.

General comments

Technical comments

Conclusions

(Single tables or figures can be added in the text, longer texts should be added as annexes.)

4. Format for ecosystem services and effects draft text advice

When drafting the advice, the following headlines for formulations may be considered:

1. Advice request
2. Recommendation and advice
3. Summary
4. Scientific background
5. Source of information