



ISC/26/ANNEX/11

ANNEX 11

*26th Meeting of the
International Scientific Committee for Tuna
and Tuna-Like Species in the North Pacific Ocean
Taipei City, Chinese Taipei
22-29 June 2026*

DRAFT TERMS OF REFERENCE FOR THE EXTERNAL PEER REVIEW OF THE ISC

June 2026

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ANNEX 11

Draft Terms of Reference for the External Peer Review of the ISC International Scientific Committee for Tuna and Tuna-Like Species in the North Pacific Ocean (ISC)

I. BACKGROUND AND GOALS

In accordance with Section C9 of the Rules and Procedures for Conduct of the ISC and Subsidiary Bodies (ISC Operations Manual):

C9. Peer review of function. Every five years, or more frequently as may be decided, the Committee shall organize a panel of three recognized peers with no Committee affiliation, to review the function of the Committee and subsidiary bodies and to offer recommendations for improvement.

The most recent five-year peer review of ISC function was completed in 2018–2019 (ISC/19/PLENARY/11). That review focused on the ISC stock assessment review process and produced a comprehensive set of recommendations concerning data and model working group structure, active external reviewer engagement, workshop timelines, data availability, and inter-organizational collaboration. ISC25 agreed that the next five-year review will focus on: (1) evaluating ISC’s progress in responding to the prior review’s recommendations; (2) assessing the transparency of ISC operations; and (3) identifying opportunities to improve operational and scientific efficiency.

The charge to the Peer Review Panel (PRP) is to:

Review and evaluate ISC’s progress in implementing recommendations from the 2018–2019 five-year review, assess the transparency and collaborative practices of the ISC, and provide actionable recommendations to improve the operational and scientific efficiency of the ISC and its subsidiary bodies.

II. SCOPE AND TASKS FOR THE REVIEW

The PRP’s assignment is organized around three thematic areas, each with specific questions the Panel is asked to address.

Theme 1: Progress Since the 2018–2019 Review

The PRP will assess the degree to which ISC has responded to, and made progress on, recommendations contained in the 2018–2019 Peer Review Report (ISC/19/PLENARY/11). Specific questions include:

1. To what extent has ISC implemented the recommendation to incorporate active external reviewers into benchmark stock assessment working groups? What barriers, if any, have impeded implementation?
2. Has ISC established a standardized set of stock projections and harvest policy scenarios as recommended by the prior PRT? If so, how consistently is this applied across species working groups?
3. Has ISC improved the timeline and structure of DATA and MODEL working group reports, including the requirement for working papers to be available at least one month prior to workshops and draft reports delivered to the ISC Chair within one month of each workshop?
4. Has ISC established transparent data-sharing frameworks with IATTC, WCPFC, and other relevant RFMOs that allow independent analyst access to data used in stock assessments?
5. What research priorities and directed programs (e.g., tagging, recruitment surveys, ecosystem-based approaches) identified in the prior review have been initiated or completed?
6. Are there specific aspects of the ISC progress since the last review not covered by the above questions that the Panel considers material to ISC's scientific credibility or management utility? If so, please describe."

Theme 2: Transparency, Collaboration, and Communication

The PRP will evaluate the overall transparency of ISC operations, taking into account ISC's unique structure, reliance on in-kind member support, and its relationships with other scientific and management bodies. Specific questions include:

7. Does ISC's documentation of its operational processes meet standards sufficient for external parties to evaluate the scientific basis of ISC conclusions?
8. Are key assessment decisions and model development pathways documented clearly enough to support independent review, reproducibility, and continuity between assessment cycles? This includes documentation of data exclusions, weighting approaches, selectivity assumptions, model structure changes, sensitivity analyses, and rationale for final model selection?
9. Are there opportunities for ISC to improve reproducibility and open-science practices within assessment workflows, including the use of version-controlled code repositories,

archived model configurations, standardized documentation, and reproducible reporting pipelines?

10. How effectively does ISC communicate its scientific findings and stock assessment results to member governments, RFMOs (particularly WCPFC and IATTC), and other stakeholders? Are there opportunities to improve the accessibility and impact of ISC scientific advice?
11. Are meeting logistics, scheduling, and inter-sessional communication structured to facilitate effective collaboration among member scientists and with scientists from non-member entities, as required? Are there improvements to meeting frequency, format (e.g., virtual or hybrid options), or intersessional workflow that could enhance collaboration?
12. How effectively does ISC coordinate with WCPFC, IATTC, and other relevant bodies on shared data needs, joint analyses, and avoidance of duplicative effort?
13. Are there specific aspects of the ISC transparency, collaboration, and communication not covered by the above questions that the Panel considers material to ISC's scientific credibility or management utility? If so, please describe."

Theme 3: Operational and Scientific Efficiency

The PRP will assess the efficiency of ISC operations and scientific processes, with attention to resource constraints, evolving ocean conditions, and opportunities for innovation. Specific questions include:

14. Are the current frequency, duration, and structure of ISC working group meetings (benchmark and update cycles) well-matched to the data available, the complexity of the assessments, and the needs of management bodies? Are there species for which assessment frequency or scope should be reconsidered?
15. Review and assess the adequacy of ISC's pre-assessment planning process for the most recent benchmark assessments completed during the review period (specify species? PBF, NPALB, BUM).
16. Are there emerging scientific methods or technologies—such as close-kin mark-recapture (CKMR), electronic monitoring, environmental DNA, habitat-based abundance indices, or machine learning approaches to CPUE standardization—that ISC should be actively integrating or piloting? What organizational or resource barriers exist?
17. How is ISC accounting for shifting species distributions, environmentally-driven changes in productivity, and other ecosystem-level dynamics in its stock assessments and research priorities? Is the current framework adequate to address these challenges over the next five-year cycle?
18. Are ISC's organizational structure, working group composition, and resource base (funding, staff, member scientist time) sufficient to sustain and improve the quality of its

scientific products? What changes to structure, funding mechanisms, or member contributions could improve efficiency?

19. Are there opportunities to streamline or standardize ISC processes—such as report formats, model diagnostic requirements (residual analysis, retrospective analysis interpretation, convergence and jitter evaluation, sensitivity analysis frameworks, and reporting of uncertainty), or reference point frameworks—that would reduce burden on working group scientists while improving consistency and comparability across assessments?
20. Are there specific aspects of the ISC operational and scientific efficiency not covered by the above questions that the Panel considers material to ISC's scientific credibility or management utility? If so, please describe."

III. RESPONSIBILITIES

A. ISC Member Responsibilities

Three ISC Member countries (Sponsors) will each be responsible for identifying, funding, and supporting one review panelist. The Sponsors will provide logistical assistance to their respective panelists to enable completion of review responsibilities within the defined timeframe. Sponsors will provide updates on panel progress to the ISC Chair and ISC Plenary. All ISC Members are responsible for cooperating with panelists, facilitating access to relevant documents, and providing responses to panelist inquiries in a timely manner.

B. ISC Chair Responsibilities

The ISC Chair will ensure that the Terms of Reference are fulfilled and will work with Sponsors to ensure completion of their responsibilities. The ISC Chair will designate one panelist as PRP Chair. The ISC Chair will provide panelists with all necessary documents for the review, facilitate access to ISC working group members for interviews, and review PRP progress at key milestones.

C. Peer Review Panel (PRP) Responsibilities

The PRP will address the questions outlined in Section II. Panelists will attend and observe at least one working group meeting and the ISC Plenary during the review period, without participating in or interfering with working group activities. Panelists will not distribute their notes or interim findings publicly and will share draft reports only with the ISC Chair and Vice Chair as specified in Section V.

The PRP will produce one Final Report addressing all items in Section II. A draft report and final report will be delivered to the ISC Chair and Vice Chair according to the timeline in Section V.

D. Working Group Responsibilities

Working Group Chairs and members will allow panelists to observe working group meetings and will provide documents requested by the panel. They will make themselves available for interviews if requested by the PRP.

E. PRP Chair Responsibilities

The PRP Chair will develop a panel work plan in consultation with the ISC Chair, coordinate among panelists, and produce a single coherent Final Report following the format in Section IV.

IV. OUTPUT: SUGGESTED TEMPLATE FOR PRP FINAL REPORT

The report shall be a stand-alone, independently produced peer review document in PDF format providing consensus findings addressing all items in Section II. If a consensus cannot be reached on any item(s), then a majority finding will be provided and the minority finding may be presented, as well. The report shall include:

- A. Executive Summary providing a concise synthesis of findings and prioritized recommendations addressing the three thematic areas in Section II.
- B. Thematic sections providing specific observations, evidence, and conclusions for each of the three review themes (Progress Since Prior Review; Transparency and Collaboration; Operational and Scientific Efficiency), including responses to each numbered question in Section II.
- C. A description of review activities, including panel membership and affiliations, a list of ISC participants interviewed and their roles, working group meetings and Plenary sessions attended, and a bibliography of documents reviewed.
- D. Prioritized Conclusions and Recommendations, organized by theme and annotated with suggested timeframes for implementation (near-term, medium-term, long-term) and identification of responsible parties. (Criteria for priorities should be documented.)

V. TIMEFRAME

The following timeline is approximate and subject to adjustment by the ISC Chair in consultation with Sponsors and the PRP Chair.

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| [Month YYYY] | ISC Plenary approves Terms of Reference and identifies three Sponsor member countries. |
| [+1–2 months] | Sponsors consult with ISC Chair and Vice Chair on panelist selection. ISC Chair announces formation of PRP and circulates Terms of Reference. |
| [+3 months] | PRP Chair develops work plan and submits to ISC Chair for review. |

- [+4–6 months]** PRP attends at least one working group meeting (timing dependent on assessment cycle).
- [+6 months]** PRP Chair and ISC Chair review progress; first status report due to ISC Chair.
- [+10–12 months]** PRP attends ISC Plenary.
- [+14 months]** First draft of PRP report delivered to ISC Chair and Vice Chair for review and comment.
- [+16 months]** PRP Final Report delivered to ISC Chair and Vice Chair, who distribute to ISC Members.
- Following Plenary** PRP Final Report considered by ISC Plenary for action.