



INTERNATIONAL PACIFIC



HALIBUT COMMISSION

Reports of the Scientific Review Board (SRB)

Agenda Item 9

IPHC-2019-SRB014-R

IPHC-2019-SRB015-R

SRB IN 2019



Dr. Sean
Cox

May 2013-
current
(6 years)



Dr. Marc
Mangel

May 2013-
Sept 2019
(6 years)

Retired



Dr. James
Ianelli

May 2013-
current
(6 years)



Dr. Kim
Scribner

July 2017-
current
(2 years)



Dr. Sven
Kupschus

June 2019-
current
(<1 year)



BACKGROUND

The 15th Session of the International Pacific Halibut Commission (IPHC) Scientific Advisory Board (SRB015) was held in Seattle, WA, U.S.A. from 24-26 September 2019.

The SRB consists of five (5) board members, required to be independent of the Contracting Parties.

- 7 Recommendations
- 4 Requests



RECOMMENDATIONS

Discard mortality in non-directed fisheries

SRB015–Rec.01 (para. 10) The SRB **RECOMMENDED** that the analysis of the effects of historical discard mortality in non-directed fisheries ('bycatch'), be interpreted with caution, as there are multiple methods for evaluating how bycatch in non-directed fisheries impact stock productivity and biomass over time. The estimated rates of bycatch impact on directed fishery changed over time in part due to the variability in recruitment and/or sublegal abundance relative to the vulnerable stock. The choice of the appropriate method will depend on how the results feed into management advice.



RECOMMENDATIONS

Discard mortality in non-directed fisheries

SRB015–Rec.02 (para. 11) The SRB **RECOMMENDED** that, if a bycatch management strategy is a priority for the Commission, then the MSE process would be a more appropriate venue for evaluating methods of bycatch accounting for reasons outlined at SRB012:

“NOTING the request for “replay” analyses, the SRB AGREED that “what if” questions about past behaviour are not appropriate for stock assessment models because those analyses do not adequately reflect the information available at the time or information feedbacks to future decision over time. An MSE analysis, on the other hand is specifically designed to answer “what if” questions under particular future scenarios while properly accounting for stock assessment errors in response to changing information.” (IPHC-2018-SRB012-R, para. 23)



RECOMMENDATIONS

Independent external peer review of the IPHC stock assessment

[SRB015–Rec.03 \(para. 19\)](#) The SRB RECOMMENDED that as was the case in the 2019 external peer review, any future external review would also benefit from an in-person review component. The biannual peer review that the SRB undertakes should continue as a complimentary element, thereby providing ongoing verification for the Commission.



RECOMMENDATIONS

Pacific halibut stock assessment: 2019

SRB015–Rec.04 (para. 34) **NOTING** the discussion of recommendations arising from the external peer review of the IPHC stock assessment (Section 4), the SRB **RECOMMENDED** that the IPHC Secretariat:

- a) Update data weighting for the 2019 assessment;
- b) For SRB016:
 - i. evaluate the types of weightings (e.g. Dirichlet-multinomial) for compositional data;
 - ii. advise on the impact of data re-weighting as new information arises. This could be more sensitive as new sex-composition data are included;
 - iii. keep apprised of new software developments (e.g. CAPAM meeting in NZ) and report on potential future directions (e.g. if alternatives provide improved Bayesian integration or adaptations for simulation testing etc.).



RECOMMENDATIONS

Management Strategy Evaluation: Goals, Objectives and Performance Metrics

SRB015–Rec.05 (para. 41) The SRB **RECOMMENDED** that if the original objective to have annual mortality limits related to local abundances was of broad interest to the Commission, then candidate management procedures be developed and tested in which regional mortality limits are set annually in proportion to modelled survey abundance trends by IPHC Regulatory Area (noting that splitting regions into Regulatory Areas would require assumptions about within-region abundance proportions).



RECOMMENDATIONS

Management Strategy Evaluation: Dynamic reference points

[SRB015–Rec.06 \(para. 45\)](#) The SRB **RECOMMENDED** that the MSAB define objectives independently of the management procedures used to achieve them and, instead, focus on the outcomes/consequences they wish to avoid (e.g. low catch, fishery closures, large drops in TCEY, public perceptions of poor stock status).



RECOMMENDATIONS

Management Strategy Evaluation: Updates to MSE framework and closed-loop simulations

[SRB015–Rec.07 \(para. 51\)](#) The SRB **RECOMMENDED** that the Commission develop a standard criterion for achieving a limited set of (or one over-arching) objectives. This would ensure that any candidate management procedure achieves common goals with differences in trade-offs between risks and benefits. Doing so will improve the efficiency of the iterative approach that is required for MSE.



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PEER-REVIEW

The SRB's primary role is to provide a timely peer-review process that is independent of IPHC contracting parties.

- What is “peer-review” in IPHC context?
- What is the SRB peer-review process?



PEER-REVIEW

Types of peer review:

- **Scholarly** – most commonly understood. Dating back the founding of Philosophical Transactions in 1665. Aims to ensure reliability and reputation of scholarly work (i.e., journal publications, books, conference proceedings)
- *Review of scholarly publications is not IPHC SRB's purpose*
 - *Standards are different*
 - *Scholarly reviewers may not have expertise in specific context and/or methods*
 - *Scholarly reviewers are free to REJECT entire works or parts thereof*



PEER-REVIEW

Types of peer review:

- **Professional** – oldest form of peer review but not typically associated with what we think as peer review. Used in health care (e.g., clinical trials), engineering, software, accounting, etc. to ensure compliance with standards and accreditation. Also used to establish competency for promotion and tenure in academic departments (e.g., for professors)
- *Review of IPHC science against professional standards is not exactly IPHC SRB's purpose*
 - *fisheries science and stock assessment has no commonly accepted standards*
 - *SRB has no input on promotion of IPHC staff*



PEER-REVIEW

Types of peer review:

- **Technical** – mainly used in engineering to ensure compliance with, e.g., statements of work, technical specifications, and safety codes.



TECHNICAL PEER-REVIEW

“Peer reviews/inspections are a well-defined review process for finding and fixing defects, conducted by a team of peers with assigned roles, each having a vested interest in the work product under review.”

- roles in SRB are not explicitly assigned, but do cover main areas, including survey design/analysis, stock assessment methods, MSE, fish population biology, fisheries genetics, etc.



Appendix N. Guidance on technical peer reviews/inspections



TECHNICAL PEER-REVIEW

“Peer reviews/inspections are held within development phases, between milestone reviews, on completed products or completed portions of products.”

- *SRB reviews/comments on development of IPHC science products, including assessment methods, data (e.g., male/female ID in catch), survey design (e.g., expansion), etc.*
- *SRB is also invited to comment on completed assessments and MSE phases*



Appendix N. Guidance on technical peer reviews/inspections



PEER-REVIEW

- **Technical** – mainly used in engineering to ensure compliance with, e.g., statements of work, technical specifications, and safety codes.
- *Technical review is the closest to IPHC SRB's purpose with some differences:*
 - *SRB reports to a bilateral Commission, whereas most systems engineering TRs occur within a unilateral private or government entity where goals, objectives, SOWs are clear.*
 - *SRB reviews progress against previous REQUESTS rather than explicit Statements of Work. Process is a bit more iterative than rigid SOWs.*



ROLE OF TECHNICAL REVIEWERS

“Reviewers have a vested interest in the work product (e.g., they are peers representing areas of the life cycle affected by the material being reviewed)...”



Appendix N. Guidance on technical peer reviews/inspections



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“peers representing areas of the life cycle affected by the material being reviewed”

- Peers need expertise specific to IPHC science topics under development.
- At least some peers have “skin in the game”, i.e., concern about errors that may propagate to other parts of a system resulting in unexpected consequences (right or wrong).
- Reviewers lacking skin-in-the-game should therefore be complemented by reviewers with specific expertise on a fishery
 - SRB 2013-2019 had 2-3 academics (2 USA, 1 CAN) + 1 gov’t scientist (1 USA)
 - SRB 2020 has 2 academics (1 USA, 1 CAN) + 2 gov’t scientists (1 USA, 1 EU)



SRB REVIEW PROCESS

Background materials
(30 d prior to meeting)

- Documents presenting progress on outstanding REQUESTS
- Documents proposing new and/or revised topics
- IPHC Staff requests for advice and comment
- IPHC Staff draft RECOMMENDATIONS on specific topics



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SRB Meetings (Sept and June)

- Review input from party reps
- Review REQUESTS from Commissioners
- Staff presentations and open (incl. live webinar) Discussion
- SRB in-camera drafting session. Response to REQUESTs, draft new REQUESTs and RECOMMENDATIONS
- SRB-Staff joint review of draft SRB Report (incl. live webinar)
- Revisions, adoption, publication



SRB REVIEW PROCESS

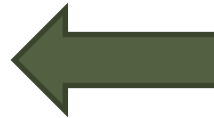
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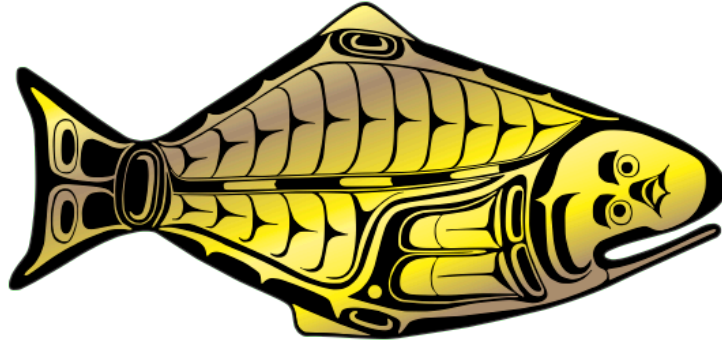


ACTION

That the Commission **NOTE** the Reports of the 14th and 15th Sessions of the IPHC Scientific Review Board (SRB014: IPHC-2019-SRB014-R; SRB015: IPHC-2019-SRB014-R), including the seven (7) recommendations to the Commission.



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