UPDATE ON THE ACTIONS ARISING FROM THE 27TH SESSION OF THE IPHC SCIENTIFIC REVIEW BOARD (SRB027)

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PURPOSE

To provide the Scientific Review Board (SRB) with an opportunity to consider the progress made during the intersessional period, on the recommendations/requests arising from the SRB027.

BACKGROUND

At the SRB027, the members recommended/requested a series of actions to be taken by the IPHC Secretariat, as detailed in the SRB026 meeting report (IPHC-2025-SRB027-R) available from the IPHC website, and as provided in Appendix A.

DISCUSSION

During the 28th Session of the SRB (SRB028), efforts will be made to ensure that any recommendations/requests for action are carefully constructed so that each contains the following elements:

1) a specific action to be undertaken (deliverable);
2) clear responsibility for the action to be undertaken (such as the IPHC Secretariat or SRB officers);
3) a desired time frame for delivery of the action (such as by the next session of the SRB or by some other specified date).

RECOMMENDATIONS

That the SRB:

1) **NOTE** paper IPHC-2026-SRB028-03, that provided the SRB with an opportunity to consider the progress made during the inter-sessional period, in relation to the consolidated list of recommendations/requests arising from the previous SRB meeting (SRB027).
2) **AGREE** to consider and revise the actions as necessary, and to combine them with any new actions arising from SRB028.

APPENDICES

Appendix A: Update on actions arising from the 27th Session of the IPHC Scientific Review Board (SRB027).

APPENDIX A

Update on actions arising from the 27th Session of the IPHC Scientific Review Board (SRB027)

RECOMMENDATIONS

Action No.	Description	Update
SRB027–Rec.01 (para. 14)	***Research - Biology and ecology*** The SRB **RECOMMENDED** that evaluation of epigenetic aging be expanded from random selection of cross-validation samples to include testing out-of-sample interannual predictive performance. That is, how well can an epigenetic aging method trained on data from one set of years predict age of individuals sampled in other years?	***In Progress*** **Update**: The IPHC Secretariat has selected a set of genetic samples separate from those used for the epigenetic clock development to test out-of-sample interannual predictive performance, as detailed in document IPHC-2026-SRB028-06.
SRB027–Rec.02 (para. 16)	***Pacific halibut stock assessment*** The SRB **RECOMMENDED** that the analysis of projection performance be expanded to include plotting receiver operating characteristic (ROC) curves and evaluating the area under the curve (AUC) to understand the predictive performance of probabilistic advice from the stock assessment projections. This approach is commonly used as a threshold-independent metric of performance in applications such as species distribution modelling.	***Completed*** **Update**: Analysis provided in document IPHC-2026-SRB028-07.
SRB027–Rec.03 (para. 18)	***Management strategy evaluation*** The SRB **RECOMMENDED** that the definition of "overfishing" be tied to the Fmsy proxy rather than a probability of becoming overfished or depleted. This is a standard definition of overfishing and distinguishes it from the state of being overfished/depleted.	***Completed*** **Update**: The IPHC Harvest Strategy Policy (IPHC-2025-HSP) was updated and adopted by the Commission with language suggested by the SRB.
SRB027–Rec.04 (para. 19)	The SRB **NOTED** the definition of "overfishing" in the draft Harvest Strategy Policy and **RECOMMENDED** adopting the revised definition developed at SRB027 to align with the recommendation in paragraph 18.	***Completed*** **Update**: The IPHC Harvest Strategy Policy (IPHC-2025-HSP) was updated and adopted by the Commission with language suggested by the SRB.

	a) **Overfishing**: When the annual fishing intensity is higher than the level required to sustain maximum sustainable yield (MSY). The MSY fishing intensity is currently FSPR=35% based on current understanding of Pacific halibut population dynamics and fishery characteristics. The MSY fishing intensity may be revised as new information becomes available.	
SRB027–Rec.05 (para. 20)	The SRB **NOTED** the paragraphs describing "overfished" and "depleted" in the draft Harvest Strategy Policy and **RECOMMENDED** adopting the revised paragraphs developed at SRB027 which clarify these descriptions while retaining the intended meaning. a) Overfished is a relative limit reference point defining an unacceptably low ratio of spawning biomass to dynamic unfished spawning biomass that results from fishing alone rather than the combined effects of fishing and the environment. The dynamic unfished spawning biomass is that which would have occurred without any fishing given natural variability (e.g. recruitment deviations, changes in size-at-age, etc). Therefore, an overfished state may be fully mitigated by management actions. b) Depleted is an absolute limit reference point defined by a spawning biomass below which the potential for recovery is uncertain. Natural variability affects stock size resulting in fluctuations of the spawning biomass, which along with fishing may result in a 'depleted' stock where reductions in fishing mortality may not lead to recovery without a change in the environmental conditions affecting the stock. Therefore, a depleted state may be only partially mitigated by management actions. c) Because overfished and depleted represent 'limit' reference points, the Commission may choose additional	***Completed*** **Update**: The IPHC Harvest Strategy Policy (IPHC-2025-HSP) was updated and adopted by the Commission with language suggested by the SRB.

	precautionary actions whenever needed, including when at, or approaching, either of these states.	
SRB027–Rec.06 (para. 21)	The SRB **RECOMMENDED** defining an "exceptional circumstance" if the stock is determined to be "depleted" as this state is unlikely to occur under the circumstances in which the HSP is implemented and may be indicative of a need for model revision.	***In Progress*** **Update**: This will be discussed with the MSAB and SRB following more work on defining a Depleted reference point.
SRB027–Rec.07 (para. 22)	The SRB **RECOMMENDED** considering some fishery performance indicators that represent metrics directly observable by stakeholders, e.g. fishery CPUE.	***In Progress*** **Update**: This will be discussed at MSAB022.
SRB027–Rec.08 (para. 23)	The SRB **RECOMMENDED** increasing simulation sample sizes to achieve a smooth curve so that a "depleted" threshold can be identified as the lowest spawning stock biomass that results in near 100% probability of recovery.	***In Progress*** **Update**: This will be completed following the conditioning of the OM.
SRB027–Rec.09 (para. 24)	The SRB **RECOMMENDED** considering the development of an assessment model within the MSE framework. This would have multiple benefits including: a) facilitating analysis of the economic consequences of reduced FISS sampling and the associated increased potential for bias in assessment-relevant metrics such as WPUE, the maturity schedule, size-at-age, and age composition. b) Understanding the impacts of uncertainty in natural mortality on management performance.	***In Progress*** **Update**: An estimating model is currently being developed and tested.
SRB027–Rec.10 (para. 31)	***Updates to space-time modelling*** The SRB **RECOMMENDED** continuing the development of the spatial models of maturity and expanding this very promising modelling approach in the following ways: a) Adding a temporal component to the model; b) Extending this approach to coast-wide modelling of WPUE and NPUE.	***In Progress*** **Update**: A verbal update will be provided at SRB028, as the development of the spatial models of maturity is still a work in progress.

REQUESTS

Action No.	Description	Update
SRB027–Req.01 (para. 12)	***International Pacific Halibut Commission Integrated Research and Monitoring Plan*** The SRB **REQUESTED** that, in a future iteration of the Plan, the following elements be considered: a) **Tactical workplan**: Develop a 3-5 year tactical workplan with defined milestones. b) **Prioritizing research**: according to needs for stock assessment, MSE, and other potential applications. This may require a new process for determining priority such as sensitivity analyses on the stock assessment or MSE. c) **Range-wide research**: including collaboration with western Pacific Ocean countries fishing for Pacific halibut (Ref. PRIPHC02-Rec.03). d) **Cost-benefit analysis**: innovation and emerging scientific methods could use a procedure for determining the cost-benefit of proposed or ongoing projects. For example, AI-assisted ageing and epigenetic ageing presumably have different operational costs as supplemental ageing methods (although non-lethal epigenetic ageing has other potential applications) e) **Addition of decision-points**: to determine whether internally funded projects continue or stop. Many of the items in the IRMP are potentially open-ended but should not be continued indefinitely if the question is answered sufficiently to remove it from the high priority list. For example, questions about stock structure could certainly be continued, but they have been sufficiently addressed that the possibility of stock structure is no longer a high priority risk f) **Observer coverage**: Evaluation of observer coverage and/or other methods of catch and	***Completed & Ongoing*** **Update**: See paper IPHC-2026-SRB028-05

	discard reporting across the entire fishery (Ref. PRIPHC02-Rec.09) g) **Dashboards**: The IRMP emphasizes outreach via websites, meetings, publications, and plain language summaries. Outputs could be made more actionable for decision-makers and other stakeholders through graphical dashboard summaries of key stock and harvest indicators, perhaps by IPHC Regulatory Area. h) **Communication**: supplemental documentation is needed of completed projects, progress against independent review recommendations, etc., and how these may or may not affect organization and prioritization of ongoing projects. For example, the IRMP Supplement could include a brief summary of the stock structure conclusions and what that means for ongoing stock structure related projects. i) **Measures of Success**: although the plan lists broad performance categories, there is a need for project-level indicators. Some performance measures, such as relevance and impact, may require surveys of science information users to elicit performance data. j) **Capacity building**: Is there a formal capacity building plan to ensure the long-term viability of the IRMP?	