UPDATE ON THE ACTIONS ARISING FROM THE 20TH SESSION OF THE IPHC SCIENTIFIC REVIEW BOARD (SRB020)

PREPARED BY: IPHC SECRETARIAT (17 AUGUST 2022)

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 SRB020.

BACKGROUND

At the SRB020, the members recommended/requested a series of actions to be taken by the IPHC Secretariat, as detailed in the SRB020 meeting report (IPHC-2022-SRB020-R) available from the IPHC website, and as provided in Appendix A.

DISCUSSION

During the 20th Session of the SRB (SRB020), 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 Staff 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).

RECOMMENDATION/S

That the SRB:

1) **NOTE** paper IPHC-2022-SRB021-03, which 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 (SRB020).

2) **AGREE** to consider and revise the actions as necessary, and to combine them with any new actions arising from SRB021.

APPENDICES

Appendix A: Update on actions arising from the 20th Session of the IPHC Scientific Review Board (SRB020)

APPENDIX A
Update on actions arising from the 20th Session of the IPHC Scientific Review Board (SRB020)

RECOMMENDATIONS

Action No.	Description	Update
SRB020–Rec.01 ([para. 11](#))	***IPHC Fishery-independent setline survey (FISS)*** **NOTING** that the coefficient of variation (CV) for IPHC Regulatory Area 4B exceeded the 15% threshold in 2021 because some stations could not be sampled for logistical reasons (in 2022 the issue is likely to persist due to non-viable bids (economic and logistical reasons)), which may continue into the foreseeable future, the SRB **RECOMMENDED** continuing to investigate potential means to mitigate these effects. For example, by increasing the pool of potential bidders by including vessel using snap-gear.	In progress This will occur in late 2022 as we prepare for the 2023 FISS season.
SRB020–Rec.02 ([para. 23](#))	***Pacific halibut stock assessment: 2022*** The SRB **NOTED** that most models within the ensemble produced reasonable and well-constrained estimates of natural mortality (M) and **RECOMMENDED** that estimation of M should be adopted in the short AAF assessment model with consideration in other models as part of the stock assessment research program.	Completed This improvement will be retained in the final 2022 assessment. Further investigation will proceed during 2023.
SRB020–Rec.03 ([para. 24](#))	The SRB **NOTED** that the bootstrapping approach to determining maximum samples sizes for age-composition data improved assessment model performance and stability and, therefore, **RECOMMENDED** that the bootstrapping approach be adopted for data-weighting in future assessments.	Completed Bootstrapping has now been incorporated in all data processing code for the 2022 and future assessments.
SRB020–Rec.04 ([para. 25](#))	The SRB **NOTED** apparent discrepancies in marine mammal prevalence among anecdotal reports, FISS observations, and preliminary evaluation of logbook data, and therefore **RECOMMENDED** further investigation of methods to better estimate marine mammal prevalence and impacts on the fishery.	In progress The Secretariat has continued to explore avenues for better understanding the prevalence of marine mammal depredation in the directed commercial Pacific halibut fishery. More details are provided in IPHC-2022-SRB021-08. Additional data and analyses will be explored during 2023.

Action No.	Description	Update
SRB020–Rec.05 (para. 36)	**International Pacific Halibut Commission 5-year program of integrated research and monitoring (2022-26)** The SRB **NOTED** the exceptional level of transparency and commitment to the principles of open science represented by the Secretariat's data and code-sharing practices and, therefore, **RECOMMENDED** that the Secretariat consider producing peer-reviewed data report publications, which would (a) enhance outreach to potential external data users and (b) allow for tracking external use of IPHC data and resources.	**In progress:** As time permits, we will work towards meeting this recommendation. We request that this recommended be carried over into the SRB021 report for formal approval by the Commission.

REQUESTS

Action No.	Description	Update
SRB020–Req.01 (para. 14)	**IPHC Fishery-independent setline survey (FISS)** **NOTING** Table 4 in paper IPHC-2022-SRB020-05 showing that observed CVs for the 2021 O32 WPUE for IPHC Regulatory Areas 2A was 20% higher than expected based on space-time model projections, the SRB **REQUESTED** that the Secretariat examine whether changes in the depth-CPUE relationship could explain extra spatial variation.	**Pending** To be completed for SRB022.
SRB020–Req.02 (para. 18)	**Management Strategy Evaluation: update** The SRB **NOTED** the Secretariat's plan to further explore migration scenarios in the MSE and therefore **REQUESTED** that the set of migrations scenarios remain within bounds of plausible values identified via the OM development/fitting and previous tagging studies.	**In progress** Scenarios have not been developed at this time, but will be after the core set of simulations are complete.
SRB020–Req.03 (para. 19)	The SRB **REQUESTED** that the ramped implementation bias scenario (Fig. 17 in paper IPHC-2022-SRB020-06 Rev 1) be run under the most aggressive fishing intensity targets to determine the scale of performance sensitivity to that source of implementation variability.	**In progress** The simulations with implementation bias are currently being completed will be presented at SRB021.
SRB020–Req.04 (para. 20)	The SRB **REQUESTED** that the MSE not attempt to implement a Stock Synthesis estimation procedure as part of the management procedure and, instead, to integrate a simpler assessment modelling approach into the management procedure via tuning.	**In progress** No additional work on an SS estimation model has been done. The Secretariat looks

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		forward to discussing tuning with the SRB.
SRB020–Req.05 (para. 21)	The SRB **REQUESTED** evaluating whether the relative ranking of MPs – defined only by multi-year assessment cycle and size limits - remains similar across the set of proposed distribution scenarios using objectives identified as priorities by the Commission.	**In progress** The differences among distribution procedures will be done when the core set of simulations is complete.
SRB020–Req.06 (para. 26)	***Pacific halibut stock assessment: 2022*** The SRB **NOTED** the proposed new ensemble model weighting scheme using the MASE criterion and **REQUESTED** investigation of predictive skill on additional quantities such as fishery CPUE and mean age in FISS samples.	**Completed** A description of the MASE criterion applied to fishery CPUE is described in document IPHC-2022-SRB021-08, for discussion during SRB021.
SRB020–Req.07 (para. 29)	***Biological and ecosystem sciences – Project updates*** The SRB **NOTED** continued progress toward integration of biological and ecosystem sciences activities with the needs of Stock Assessment (SA) and MSE programs, and **REQUESTED** that future presentations/documents identify (a) the planned statistical analysis of biological data and (b) parameters or structural decisions within SA and MSE to be informed by the results.	**Completed**: The IPHC Secretariat will comply with this request in future presentations/documents.
SRB020–Req.08 (para. 30)	The SRB **NOTED** progress on further developing genomic resources through low-coverage whole genome sequencing and, therefore, **REQUESTED** that the Secretariat provide a detailed plan for bioinformatic interrogation and how data will be used to address IPHC questions related to stock assessment.	**Completed**: Update:The IPHC Secretariat has complied to this request in paper IPHC-2022-SRB021-08.
SRB020–Req.09 (para. 37)	***International Pacific Halibut Commission 5-year program of integrated research and monitoring (2022-26)*** The SRB **REQUESTED** that during the next update of the Plan, the following could be considered: a) revise the Focal Area Objectives for the Stock Assessment and MSE sections; b) revise Measures of Success to: i. Replace "3) Accuracy" and "4) Reduction in uncertainty" with "3) Relevance" and "4)	**Completed**: See paper **IPHC-2022-SRB021-05**

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	Impact" with the latter two defined by the above Focal Objectives; ii. change "Transparency" to "Accessibility". c) more completely account for external research funding in support of IPHC's mission, for example, by funding students working on stock assessment topics directly related to halibut stock assessment; d) explore genetics-based mark-recapture within the long-term research plan to better inform migration in the MSE operating model.	