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## UPDATE ON THE ACTIONS ARISING FROM THE 18<sup>TH</sup> SESSION OF THE IPHC SCIENTIFIC REVIEW BOARD (SRB018)

PREPARED BY: IPHC SECRETARIAT (19 AUGUST 2021)

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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 SRB018.

### BACKGROUND

At the SRB018, the members recommended/requested a series of actions to be taken by the IPHC Secretariat, as detailed in the SRB018 meeting report ([IPHC-2021-SRB018-R](#)) available from the IPHC website, and as provided in [Appendix A](#).

### DISCUSSION

During the 19<sup>th</sup> Session of the SRB (SRB019), 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-2021-SRB019-03, 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 (SRB018).
- 2) **AGREE** to consider and revise the actions as necessary, and to combine them with any new actions arising from SRB019.

### APPENDICES

[Appendix A: Update on actions arising from the 18<sup>th</sup> Session of the IPHC Scientific Review Board \(SRB018\)](#)

**APPENDIX A**  
**Update on actions arising from the 18<sup>th</sup> Session of the IPHC Scientific Review Board (SRB018)**

**RECOMMENDATIONS**

(para. 4) *NOTING* that the core purpose of the SRB018 is to review progress on the IPHC science program, and to provide guidance for the delivery of products to the SRB019 in September 2021, the SRB **RECALLED** that formal recommendations to the Commission would not be developed at the present meeting, but rather, these would be developed at the SRB019.

**REQUESTS**

Action No.	Description	Update
SRB018– Req.1  ( <a href="#">para. 13</a> )	<b>IPHC Fishery-independent setline survey (FISS): 2022-24 FISS design evaluation</b>  The SRB <b>REQUESTED</b> plots by survey area of WPUE vs. depth from both FISS and commercial fisheries to help understand if there is part of the Pacific halibut stock in deeper waters not covered by the FISS.	<b>Pending:</b>  Task for SRB020 in 2022
SRB018– Req.2  ( <a href="#">para. 14</a> )	The SRB <b>REQUESTED</b> that the IPHC Secretariat conduct a preliminary comparison, to be presented at SRB020, between male, female, and sex-aggregated analysis of the FISS data using the spatial-temporal model.	<b>Pending:</b>  Task for SRB020 in 2022
SRB018– Req.3  ( <a href="#">para. 15</a> )	The SRB <b>REQUESTED</b> that the shiny-tool to investigate data and model outputs for the FISS be made available to the SRB by SRB019.	<b>Completed:</b>  See paper IPHC-2021-SRB019-05
SRB018– Req.4  ( <a href="#">para. 24</a> )	<b>Pacific halibut stock assessment: 2021</b>  The SRB <b>REQUESTED</b> an analysis of annual surplus production and the fraction of that production harvested.	<b>Completed:</b>  See paper IPHC-2021-SRB019-06
SRB018– Req.5  ( <a href="#">para. 30</a> )	<b>Management Strategy Evaluation: update</b>  The SRB <b>REQUESTED</b> that the IPHC Secretariat present a revised system diagram of the MSE, showing components of variability and their implementation within MSE.	<b>Completed:</b>  See paper IPHC-2021-SRB019-07
SRB018– Req.6  ( <a href="#">para. 32</a> )	The SRB <b>REQUESTED</b> that the Secretariat review potential indicators for use in defining ECs.	<b>Ongoing:</b>  The Secretariat will continue working on this request and



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		report outcomes at SRB020 after discussions with the MSAB and Commission.
SRB018– Req.7 ( <a href="#">para. 36</a> )	The SRB <b>REQUESTED</b> that the IPHC Secretariat prioritize tasks for the MSE Program of Work that lead to adoption of a well-defined management procedure, taking into account interdependencies among tasks and presenting tasks as linked sets.	<b>Ongoing:</b> See paper IPHC-2021-SRB019-07
SRB018– Req.8 ( <a href="#">para. 39</a> )	<b>Biological and ecosystem sciences research</b> The SRB <b>REQUESTED</b> that the IPHC Secretariat focus future reproductive biology studies on the development of updated regulatory area-specific maturity ogives (schedules of percent maturity by age).	<b>Ongoing:</b> See paper IPHC-2021-SRB019-10
SRB018– Req.9 ( <a href="#">para. 40</a> )	The SRB <b>REQUESTED</b> that the IPHC Secretariat provide information on the age distribution of all females collected to characterize reproductive development throughout the annual cycle in order to refine efforts to identify potential skip-spawning females.	<b>Completed:</b> See paper IPHC-2021-SRB019-08
SRB018– Req.10 ( <a href="#">para. 41</a> )	The SRB <b>REQUESTED</b> that planned studies on fecundity assessment are prioritized and that the sampling design be developed in coordination with the SA to ensure that the results are as informative as possible for assessment purposes. Effective sample stratification along age, weight and length gradients that maximise the contrast in the effect of these variables will be key to precise estimates of fecundity. Oocyte diameter in contrast may be a important covariate to provide but cannot be used in stratification. The primary goal of the fecundity research should be to estimate the exponent of the fecundity vs. weight relationship for incorporation in the SA.	<b>Ongoing:</b> See paper IPHC-2021-SRB019-10
SRB018– Req.11 ( <a href="#">para. 42</a> )	The SRB <b>NOTED</b> that growth marker genes identified in transcriptomic profiling studies can be informative in future genome scans. However, the SRB <b>REQUESTED</b> that the Secretariat explicitly describe how the gene regions identified as ‘over’ or ‘under’	<b>Ongoing:</b> See paper IPHC-2021-SRB019-08



Action No.	Description	Update
	<p>expressed would be used. For example, research has yet to determine mechanisms for transcriptional differences other than there is over- or under-representation of mRNA transcripts associated with different treatment groups (e.g. warm vs. cool water) from a heterogeneous set of individuals collected from a single location. The Secretariat has not yet established that results can be generalized to other regions in the species range. Neither has the transcriptional patterns been generalized to individuals of different size/age. These questions should be investigated.</p>	
<p>SRB018– Req.12 (<a href="#">para. 43</a>)</p>	<p>The SRB <b>REQUESTED</b> that the Secretariat use these gene regions and align sequences to the whole genome sequence data. Specifically, the Secretariat should investigate whether there is sequence variability within gene coding regions or in regions around gene coding regions that may be transcriptional modifiers (e.g. promoters). If genetic variation exists in or near these genes, these variable base pair position(s) (i.e. single nucleotide polymorphisms or SNPs) should be incorporated in other aspects of the Secretariat research; for example for research activities under the Migration and Population Dynamics Research area.</p>	<p><b>Completed:</b> See paper IPHC-2021-SRB019-08</p>
<p>SRB018– Req.13 (<a href="#">para. 44</a>)</p>	<p>The SRB <b>REQUESTED</b> that the analysis of seasonal patterns in gonad development be explicitly tied to the development/improvement of the maturity ogive (the vector of proportion mature at age that SA requires).</p>	<p><b>Completed:</b> See paper IPHC-2021-SRB019-08</p>
<p>SRB018– Req.14 (<a href="#">para. 52</a>)</p>	<p><i>Pacific halibut fishery economics update</i></p> <p>The SRB <b>NOTED</b> that, without a clearer understanding of the Commissions purpose for future use of this work, it is difficult to provide guidance on prioritising model development (e.g. improve spatial resolution, incorporate dynamic / predictive processes, adding more detail on subsistence and recreational fisheries, including uncertainty in the assessment). The SRB therefore <b>REQUESTED</b> specific guidance and clarification from the Commission on the objectives and intended use of this study.</p>	<p><b>Ongoing:</b> See paper IPHC-2021-SRB019-09 and 10</p>



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SRB018– Req.15 <a href="#">(para. 57)</a>	<p><i>International Pacific Halibut Commission 5-year program of integrated science and research (2021-26)</i></p> <p>The SRB <b>REQUESTED</b> that the forward-looking document on future integrated science and research priorities (IPHC-2021-SRB018-10) incorporate the following elements:</p> <ul style="list-style-type: none"><li>a) Previous research priorities of stock assessment;</li><li>b) How the Biological Division of the IPHC prioritized their research agenda in the previous 5-year plan to produce data to meet stock assessment needs;</li><li>c) Introspective assessment of the success of the previous 5-year plan;</li><li>d) Changing/New needs for stock assessment and MSE;</li><li>e) Direction of new 5-year plan to continue unfinished objectives of the previous 5-yr plan and justification for goals and objectives of the proposed 5-year plan.</li></ul>	<p><b>Ongoing:</b></p> <p>See paper IPHC-2021-SRB019-10</p>
SRB018– Req.16 <a href="#">(para. 58)</a>	<p>The SRB <b>REQUESTED</b> that Measures of Success (sub-section 5 of IPHC-2021-SRB018-10) be cast in metrics of quantifiable improvements to MSE and SA performance, particularly subsections 5.1 and 5.2.</p>	<p><b>Ongoing:</b></p> <p>See paper IPHC-2021-SRB019-10</p>



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SRB018– Req.17 <a href="#">(para. 59)</a>	<p>The SRB <b>REQUESTED</b> that the Secretariat provide explicit statements of the direction of external funding grant requests and the justification based on MSE and SA needs. For example:</p> <ul style="list-style-type: none"><li>a) What is the IPHC contributing to the Biological and Ecosystem Science Branch budget?</li><li>b) What is needed in terms of additional resources and personnel and in which areas to support the proposed direction stated in the next 5-year plan?</li><li>c) What are the grant priorities, what are the targeted granting agencies, who will be tasked to write the grants, what intellectual resources are needed to be successful (i.e. research agency or academic partners with desired technical and/or analytical skills)?</li><li>d) Where could the SA and MSE analytical staff provide analytical support to the Biological Sciences section?</li></ul>	<p><b>Ongoing:</b> See paper IPHC-2021-SRB019-10</p>