



Outcomes of the 15th Session of the IPHC Scientific Review Board (SRB015)

PREPARED BY: IPHC SECRETARIAT (10 APRIL 2020)

PURPOSE

To provide the MSAB with the outcomes of the 15th Session of the IPHC Scientific Review Board (SRB015) relevant to the mandate of the MSAB.

BACKGROUND

The agenda of the 15th Session of the IPHC Scientific Review Board (SRB) included an agenda item dedicated to Management Strategy Evaluation (MSE).

DISCUSSION

During the course of the 15th Session of the IPHC Scientific Review Board (SRB015), a number of specific requests and recommendations regarding the IPHC MSE process were proposed by the SRB. Relevant sections from the report of the meeting are provided in [Appendix A](#) for the MSAB's consideration.

RECOMMENDATION

That the MSAB:

- 1) **NOTE** paper IPHC-2020-MSAB015-05 which details the outcomes of the 15th Session of the IPHC Scientific Review Board (SRB015) relevant to the mandate of the MSAB.

APPENDICES

[Appendix A](#): Excerpt from the 15th Session of the IPHC Scientific Review Board (SRB015) Report ([IPHC-2019-SRB015-R](#)).

APPENDIX A

Excerpt from the 15th Session of the IPHC Scientific Review Board (SRB015) Report ([IPHC-2019-SRB015-R](#))

7. MANAGEMENT STRATEGY EVALUATION: UPDATE

37 The SRB **NOTED** paper IPHC-2019-SRB015-09 which provided the SRB with an update on the IPHC MSE process including defining objectives, results for management procedures related to coastwide fishing intensity, a framework for distributing the TCEY, and a program of work.

Goals, Objectives and Performance Metrics

38 The SRB **NOTED** paper IPHC-2019-SRB015-INF01, which provided the outcomes of the Ad-hoc Working Group on ideas to Refine Goals, Objectives, and Performance Metrics for the IPHC Management Strategy Evaluation (MSE).

39 **NOTING** the new objectives provided in paper IPHC-2019-SRB015-09, and that objectives for minimum catch levels by IPHC Regulatory Area may be useful for evaluating management procedures, the SRB **AGREED** that proportional shares are a different concept and should also be defined for each IPHC Regulatory Area to examine trade-offs.

40 The SRB **NOTED** the proposed objective to have annual mortality limits related to local abundances. While this could provide transparency from a policy perspective, it ignores the biological realities of movement and other processes that remain poorly understood at both coastwide and Regulatory Area scales.

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).

Dynamic reference points

42 The SRB **NOTED** paper IPHC-2019-SRB015-11 Rev_1, which provided an evaluation of dynamic reference points for Pacific halibut.

43 The SRB **NOTED** that a precautionary RSB_{MSY} proxy of 30% of unfished spawning biomass, putting a proxy for RSB_{MEY} between 36% and 44%, could provide a reasonable range of values for the coastwide objective to maintain the spawning biomass around a target (objective 2.1B).

44 The SRB **NOTED** that candidate control rule development is an iterative process, and that:

- a) use of the trigger from the control rule in coastwide objective 2.1A (*Maintain the female spawning biomass above a trigger reference point at least 80% of the time*) conflates the objective and management procedure;
- b) avoiding a spawning biomass limit of 20% unfished with a tolerance of 0.05 is a potential conservation objective based on the analysis of MSY-related reference points and is consistent with some international standards;
- c) SPR values between 38% and 48% could satisfy the coastwide conservation objective and the biomass target objective based on a proxy for SB_{MEY} between 36% and 44%, and the stability objective may be met by applying one of two constraints: a maximum annual change in the mortality limit of 15% or a slow-up fast-down approach.

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).

7.1 Updates to MSE framework and closed-loop simulations

- 46 The SRB **NOTED** paper IPHC-2019-SRB015-10 Rev_1, which provided technical details of the IPHC MSE framework.
- 47 The SRB **AGREED** on the valuable contribution provided by the conceptual model and mapping reviewing the different life-history phases and putative movement and settlement patterns, and **ENCOURAGED** presenting this more broadly, linking to existing IPHC data archives, and also highlighting specific gaps in knowledge. In particular, this is useful for guiding operating model specifications.
- 48 The SRB **NOTED** the yield-per-recruit analysis and the changes in relative estimated $F_{0.1}$ among Biological Regions in the recent year compared to the past three decades and that this analysis along with a general understanding of the life-history of Pacific halibut in each Biological Region suggests that eastern areas may be able to sustain higher harvest rates than western areas, at least in some years.
- 49 The SRB **NOTED** that the distribution framework consisting of a coastwide TCEY distributed to Biological Regions based on stock distribution, relative fishing intensities, and other allocation adjustments, and then distributed to IPHC Regulatory Areas based on other data, observations, or agreement is a useful starting point for developing management procedures to distribute the TCEY.
- 50 The SRB **REQUESTED** that the initial performance of the above proposals for candidate management procedures be evaluated and presented at the SRB016 in 2020. At that time the appropriateness of different performance measures and objectives could be more carefully evaluated.
- 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.

7.2 MSAB Program of Work and delivery of timeline for 2019-21

- 52 The SRB **NOTED** that the full MSE results will be provided to the SRB for review no later than at the 17th Session of the SRB in September 2020 (SRB017), and that these results, including scale and distribution management procedures, will be presented to the Commission at the 97th Session of the Annual Meeting (AM097), in January 2021.