

INTERNATIONAL PACIFIC



HALIBUT COMMISSION

Independent peer review of the IPHC Management Strategy Evaluation process

Agenda Item 8.2

IPHC-2020-IM096-17



Purpose

To provide the Commission with an opportunity to further consider the report of the independent peer review of the IPHC Management Strategy Evaluation process.



Background

At the 96th Session of the IPHC Annual Meeting (AM096) on 7 February 2020, the Commission noted the following:

96th Session of the IPHC Annual Meeting (AM096)

(para. 81) “*The Commission **NOTED** that an independent peer review of the MSE will take place in April 2020 and August 2020 with a report supplied to the SRB, MSAB, and Commission.*” Reference paper [IPHC-2020-AM096-INF03](#)

The IPHC Secretariat undertook an Expression of Interest process and recruited Dr Trevor Branch, Associate Professor, School of Aquatic and Fishery Sciences, University of Washington.



Background

- The IPHC Scientific Review Board (SRB) considered a draft version of the report at its 17th Session from 22-24 September 2020, and provided feedback within the SRB report ([IPHC-2020-SRB017-R](#)), and also directly to the peer reviewer immediately following the meeting.
- The final report was published on 25 September 2020, via [IPHC Circular 2020-022](#).
- The report is also available on the Management Strategy Evaluation page of the IPHC website:

<https://www.iphc.int/management/science-and-research/management-strategy-evaluation>

- The IPHC Management Strategy Advisory Board (MSAB) considered the final report at its 16th Session from 19-22 October 2020 ([IPHC-2020-MASB016-R](#)).



MSE Peer reviewer



Dr. Trevor Branch

Associate Professor

School of Aquatic and Fishery Sciences

University of Washington



TERMS OF REFERENCE



My review is intended to provide advice on and contribute to a subset of the following topics, both in terms of peer review and technical contribution:

- 1) Review the goals and objectives used to evaluate management procedure.
- 2) Review the IPHC MSE closed-loop simulation framework.
- 3) Review and advise on the operating model and how it is conditioned to mimic the Pacific halibut population.
- 4) Review tools and methods used to communicate simulation results for the evaluation of management procedures.
- 5) Evaluate the process of soliciting objectives from stakeholders and managers and creating performance metrics from those objectives.
- 6) Assist with developing and defining reference points and management procedures.
- 7) Advise on methods to communicate results of the simulations, the trade-offs between various management procedures, and the ranking of management procedures.



REVIEW PROCESS



Desktop review components:

Reviewed documents and decisions from recent IPHC meetings (2019-20) including MSAB, SRB, and Commission meetings, including the independent peer review of the IPHC stock assessment, the second performance review of the IPHC, and the main stock assessment and MSE documents.

Direct engagement review components:

I attended the August informational meeting presenting preliminary MSE results to members of the MSAB; conducted a series of informal conversations with a diverse array of MSAB members including the MSE team, scientists, managers, and industry representatives; and presented interim recommendations to the SRB meeting in September for feedback.



SUMMARY FINDINGS



The Management Strategy Evaluation (MSE) of IPHC is intended to simulate test rules for setting allowable catch for Pacific halibut and the allocation of catch and bycatch among IPHC Regulatory Areas.

In my judgment the MSE is technically sound. Furthermore, the MSE team led by Dr. Allan Hicks was praised by all interviewed participants involved in the process for their technical work, collaboration with stakeholders in developing harvest control rules, and communication of results to stakeholders.

The MSE model framework was implemented according to international guidelines and standards for the evaluation of harvest control rules, and comprises a simulated model of truth (the operating model), a simulation of the stock assessment process (estimation model) and a simulation of the catch setting and catch allocation process (the harvest control rule).



SUMMARY FINDINGS



The following issues need to be resolved to ensure the continued success and accuracy of MSE simulations for IPHC:

- (1) decide soon on the future of the MSE process beyond January 2021 and allocate necessary funding;
- (2) treat the MSE framework as an ongoing process that will be used over many years alongside the stock assessment, to test the effectiveness of data gathering, stock assessment assumptions, and catch-setting in IPHC;
- (3) require the Commission to codify the rules they used to adjust catch levels within each Regulatory Area after the harvest control rule is applied, so that the MSE framework accurately evaluates risk to the stock and catches within each such Area.



PRIORITY RECOMMENDATIONS



Recommendation #1. That the Commission plans ahead for the future of the MSE process beyond January 2021, and allocates required funding and personnel accordingly.

Recommendation #2. That the MSE process be treated as an ongoing process that is used each year alongside the stock assessment itself, to test different features of the data gathering, stock assessment, and catch-setting components of Pacific halibut.

Recommendation #3. To analyze the impact of the Commission modifying catch levels in each Regulatory Area after the TCEY recommendation from the harvest control rule. Such analysis should preferably be conducted using the MSE process and be based empirically on past Commission modifications. Since catch-setting is an integral part of the MSE, the MSE framework will be most accurate when it accurately models the decision-making process of the Commission.



ADDITIONAL RECOMMENDATIONS

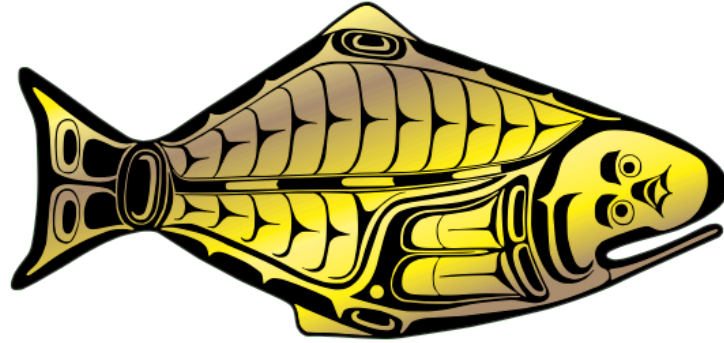


Recommendation #4. MSAB membership could be expanded to include representatives for crew members, fishing communities, and environmental organizations.

Recommendation #5. Complete the documentation of technical details of the IPHC MSE framework (Hicks et al. 2019), which is currently an incomplete working document. To ensure the methods can be repeated, a full description of the methods used to obtain the results presented in January 2021 should be presented at the same time as the results.



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