



Outcomes of the 95th Session of the IPHC Annual Meeting (AM095)

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PURPOSE

To provide the MSAB with the outcomes of the 95th Session of the IPHC Annual Meeting (AM095) relevant to the mandate of the MSAB.

BACKGROUND

The agenda of the Commission's 95th Session of the Annual Meeting (AM095) included an agenda item (Section 10) dedicated to Management Strategy Evaluation (MSE).

DISCUSSION

During the course of the 95th Session of the IPHC Annual Meeting (AM095) the Commission made a number of specific recommendations and requests for action regarding the MSE process. 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-2019-MSAB014-06 which details the outcomes of the 95th Session of the IPHC Annual Meeting (AM095) relevant to the mandate of the MSAB.

APPENDICES

[Appendix A](#): Excerpt from the 95th Session of the IPHC Annual Meeting (AM095) Report ([IPHC-2019-AM095-R](#)).

APPENDIX A
Excerpt from the 95th Session of the IPHC Annual Meeting (AM095) Report
(IPHC-2019-AM095-R)

RECOMMENDATIONS

IPHC Management Strategy Evaluation

AM095–Rec.01 ([para. 59c](#)) The Commission **RECOMMENDED** the MSAB develop the following additional objective, as well as prioritize this objective in the evaluation of management procedures, for the Commission’s consideration.

- i. A conservation objective that meets a spawning biomass target.

Report of the 12th Session of the IPHC Management Strategy Advisory Board (MSAB012)

AM095–Rec.02 ([para. 62](#)) The Commission **RECOMMENDED** that the MSAB and IPHC Secretariat continue its program of work on the Management Procedure for the Scale portion of the harvest strategy, **NOTING** that Scale and Distribution components will be evaluated and presented no later than at AM097 in 2021, for potential adoption and subsequent implementation as a harvest strategy. The management procedure that best meets the primary objectives for coastwide scale is:

- a) A target SPR of 40% with a fishery trigger of 30% and a fishery limit of 20% in the control rule;
- b) An annual constraint of 15% from the previous year’s mortality limit.

Supporting report text

10. MANAGEMENT STRATEGY EVALUATION

10.1 IPHC Management Strategy Evaluation: update

54. The Commission **NOTED** paper IPHC-2019-AM095-12 which provided an update on the MSE including goals and objectives, the simulation framework, results for management procedures consisting of a range of SPR values from 0.56 to 0.30, three control rules (25:10, 30:20, and 40:20), and investigation of constrained management procedures, a framework for a management procedure to distribute TCEY across the coast, possible elements of management procedures related to distribution, and a 5-year program of work.
55. The Commission **NOTED** that uncertainty is an important component of the MSE process when developing management procedures. The primary sources of uncertainty in the MSE framework are changes in weight-at-age over time, variable recruitment, and estimation error. Additional sources of uncertainty include sector-specific realized mortality, life-history parameters, fishery selectivity, and structural assumption of population dynamics.
56. The Commission **NOTED** that the MSE process is separate from the stock assessment in that the goal of the MSE is to develop a management procedure that is robust to uncertainty and meets the defined objectives if the management procedure is implemented in a consistent manner. The goal of the stock assessment is to provide tactical advice to inform short-term decision making. Deviating from the management procedure may result in unpredictable outcomes and a lack of meeting objectives.
57. The Commission **NOTED** that a management procedures was ranked if it first met the biological sustainability objective and subsequently met the catch stability objective. Ranks between management procedures that met these two priority objectives are determined from the resulting median total mortality limit.

58. The Commission **NOTED** that the biological objective of the stock status not being below 20% of spawning biomass with a tolerance of 10% can be interpreted as accepting the stock status being below 20% in 1 out of 10 years. This is a common biological objective in fisheries, and addressing concerns of fishery performance can be stated as fishery objectives, such as defining a low tolerance for fishery closures.
59. The Commission:
- a. **ENDORSED** the primary objectives and associated performance metrics used to evaluate management procedures in the MSE process (as detailed in paper IPHC-2019-AM095-12).
 - b. **NOTED** secondary objectives, performance metrics, and statistics of interest that will be used to supplement the evaluation of management procedures.
 - c. **RECOMMENDED** the MSAB develop the following additional objective, as well as prioritize this objective in the evaluation of management procedures, for the Commission's consideration.
 - i. A conservation objective that meets a spawning biomass target.
 - d. **NOTED** the primary performance metrics reported for various management procedures incorporating a range of SPR values from 56% to 30% and control rules of 30:20, 40:20, and 25:10.
 - e. **NOTED** the overall results of the MSE simulations (Section 5) including:
 - i. that all management procedures for SPR values greater than or equal to 32% (lower fishing intensities) met the priority biological objective, but did not meet the catch stability objective;
 - ii. at SPR values less than 40% (higher fishing intensities) the yield curve was flattening and variability in mortality limits increased at a faster rate;
 - iii. adding a constraint on changes to the total mortality limit from the previous year resulted in some management procedures meeting all primary objectives.
 - iv. of the management procedures evaluated, an SPR of 40% with a 30:20 control rule and a constraint to not change the annual mortality limit by more than 15% in either direction met all objectives and was ranked the highest based on the primary objectives.

10.2 Report of the 12th Session of the IPHC Management Strategy Advisory Board (MSAB012)

60. The Commission **NOTED** the Report of the 12th Session of the IPHC Management Strategy Advisory Board (MSAB012) (IPHC-2018-MSAB012-R) which was presented by Mr Adam Keizer (Canada).
61. The Commission **AGREED** with the MSAB recommendation that the harvest strategy policy consist of a coast wide fishing intensity SPR should not be lower than 40% nor higher than 46%, with a target SPR of 42%-43% and with a 30:20 HCR.
62. The Commission **RECOMMENDED** that the MSAB and IPHC Secretariat continue its program of work on the Management Procedure for the Scale portion of the harvest strategy, **NOTING** that Scale and Distribution components will be evaluated and presented no later than at AM097 in 2021, for potential adoption and subsequent implementation as a harvest strategy. The management procedure that best meets the primary objectives for coastwide scale is:
- a. A target SPR of 40% with a fishery trigger of 30% and a fishery limit of 20% in the control rule;
 - b. An annual constraint of 15% from the previous year's mortality limit.