



Report of the 21st Session of the IPHC Management Strategy Advisory Board (MSAB021)

Meeting held in a hybrid format, from Juneau, AK, USA, 13-15 May 2025

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BIBLIOGRAPHIC ENTRY

IPHC 2025. Report of the 21st Session of the IPHC Management Strategy Advisory Board (MSAB021). Meeting held in a hybrid format, from Juneau, AK, USA, 13-15 May 2025.
IPHC-2025-MSAB021-R, 20 pp.



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ACRONYMS

AAV	Average Annual Variability
AK	Alaska
AM	Annual Meeting
ADFG	Alaska Department of Fish & Game
CDN	Canada/Canadian
DFO	Fisheries and Oceans Canada
FISS	Fishery-Independent Setline Survey
HSP	Harvest Strategy Policy
IPHC	International Pacific Halibut Commission
MP	Management Procedure
MSAB	Management Strategy Advisory Board
MSE	Management Strategy Evaluation
O32	Over 32" (fish length)
OM	Operating Model
RSB	Relative Spawning Biomass
SRB	Scientific Review Board
SPR	Spawning Potential Ratio
TCEY	Total Constant Exploitation Yield
USA	United States of America
WPUE	Weight-Per-Unit-Effort

DEFINITIONS

A set of working definitions are provided in the IPHC Glossary of Terms and abbreviations:
<https://www.iphc.int/the-commission/glossary-of-terms-and-abbreviations>

HOW TO INTERPRET TERMINOLOGY CONTAINED IN THIS REPORT

This report has been written using the following terms and associated definitions so as to remove ambiguity surrounding how particular paragraphs should be interpreted.

- Level 1: RECOMMENDED; RECOMMENDATION; ADOPTED** (formal); **REQUESTED; ENDORSED; ACCEPTED** (informal): A conclusion for an action to be undertaken, by a Contracting Party, a subsidiary (advisory) body of the Commission and/or the IPHC Secretariat.
- Level 2: AGREED:** Any point of discussion from a meeting which the Commission considers to be an agreed course of action covered by its mandate, which has not already been dealt with under Level 1 above; a general point of agreement among delegations/participants of a meeting which does not need to be elevated in the Commission's reporting structure.
- Level 3: NOTED/NOTING; CONSIDERED; URGED; ACKNOWLEDGED:** General terms to be used for consistency. Any point of discussion from a meeting which the Commission considers to be important enough to record in a meeting report for future reference. Any other term may be used to highlight to the reader of an IPHC report, the importance of the relevant paragraph. Other terms may be used but will be considered for explanatory/informational purposes only and shall have no higher rating within the reporting terminology hierarchy than Level 3.



EXECUTIVE SUMMARY

The 21st Session of the International Pacific Halibut Commission (IPHC) Management Strategy Advisory Board (MSAB021) was held in a hybrid format, from Juneau, AK, USA, from 13-15 May 2025. The MSAB currently consists of twenty-two (22) board members/positions, twenty-one (21) of which attended the Session from the two (2) Contracting Parties. A total of four (4) individuals attended the Session as Observers. The list of participants is provided at [Appendix I](#). The meeting was opened by the Co-Chairpersons Ms Gwyn Mason (Canada) and Dr Pete Hulson (U.S.A.), who welcomed participants.

The following are a subset of the complete recommendations/requests for action from the MSAB021, which are provided in full at [Appendix V](#).

RECOMMENDATIONS

Update: Harvest Strategy Policy

MSAB021–Rec.01 ([para. 44](#)) The MSAB **RECOMMENDED** the following wording for the objectives in the Harvest Strategy Policy:

- a) maintain the long-term coastwide Pacific halibut female relative spawning biomass above a biomass limit reference point (RSB_{20%}) at least 95% of the time;
- b) maintain the long-term coastwide Pacific halibut female relative spawning biomass at or above a threshold reference point (RSB_{36%}) at least 50% of the time;
- c) subject to meeting the previous two objectives, maximise the sustainable coastwide yield while minimising annual changes in the coastwide mortality limit.

Other Business

MSAB021–Rec.02 ([para. 48](#)) The MSAB **RECOMMENDED** that the 22nd Session of the MSAB (MSAB022) be held over two (2) to three (3) days during the week of 20 October 2025 with a virtual option.

REQUESTS

Management Strategy Evaluation Program of Work (2025-2026)

MSAB021–Req.01 ([para. 36](#)) The MSAB **REQUESTED** further evaluations of the following MP elements, after the OM is conditioned following the full 2025 stock assessment:

- a) fishing intensities including, but not limited to, SPRs of 40%, 43%, 46%, 52%, 55%, and 100% (no directed fishing);
- b) a triennial assessment frequency;
- c) various empirical rules to determine the reference coastwide TCEY in non-assessment years;
- d) control rules with triggers at higher values than RSB_{30%} or based on absolute spawning biomass relative to the spawning biomass estimated at the beginning of 2024.

MSAB021–Req.02 ([para. 37](#)) The MSAB **REQUESTED** evaluating constraints and smoothers, along with MP elements listed in [para. 36](#), that would potentially reduce the interannual variability in the TCEY, including:

- a) a 3-year rolling average (arithmetic or geometric) on the FISS O32 WPUE used in the empirical rule in a triennial stock assessment frequency;



- b) constraints applied only to non-assessment years and/or applied only to assessment years;
- c) a phase-in approach for the change in TCEY in assessment years;
- d) using the trends in fishery CPUE and/or FISS WPUE to determine if a bigger reduction should be taken than suggested by the unconstrained reference TCEY to curtail further reductions in the SB.

MSAB021–Req.03 ([para. 38](#)) The MSAB **REQUESTED** the evaluation of some elements (e.g. SPR=43%, SPR=52%, and triennial assessment) in paras. [36](#) and [37](#) with each of the three FISS designs.

MSAB021–Req.04 ([para. 39](#)) The MSAB **REQUESTED** conducting simulations assuming the following productivity regimes with a subset of the MPs from paras. [36](#) and [37](#) and all other sources of variability:

- a) low recruitment and low weight-at-age;
- b) low recruitment and current weight-at-age;
- c) high recruitment and low weight-at-age.

MSAB021–Req.05 ([para. 40](#)) The MSAB **REQUESTED** conducting analyses of MPs, reference points, and the effects of recruitment regimes and variable weight-at-age after conditioning the OM following the full 2025 stock assessment.

MSAB021–Req.06 ([para. 41](#)) The MSAB **REQUESTED** presenting dynamic unfished spawning biomass along with simulated spawning biomass, and trace plots (the purple plots in document [IPHC-2025-MSAB021-06](#)) with uncertainty for the productivity regimes at MSAB022 for productivity regimes described in [para. 39](#), with SPRs of 43% and 52%.

Harvest Strategy Policy

MSAB021–Req.07 ([para. 43](#)) The MSAB **REQUESTED** that the Commission clarify the intent of the phrase “spatial and temporal scale relevant to the fishery” which is stated in the objective in the draft Harvest Strategy Policy ([IPHC-2025-MSAB021-09](#)) related to a threshold reference point, but is not in objective b) from AM099 ([para. 16](#) above).



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1. OPENING OF THE SESSION

1. The 21st Session of the International Pacific Halibut Commission (IPHC) Management Strategy Advisory Board (MSAB021) was held in a hybrid format, from Juneau, AK, USA, from 13-15 May 2025. The MSAB currently consists of twenty-two (22) board members/positions, twenty-one (21) of which attended the Session from the two (2) Contracting Parties. A total of four (4) individuals attended the Session as Observers. The list of participants is provided at [Appendix I](#). The meeting was opened by the Co-Chairpersons Ms Gwyn Mason (Canada) and Dr Pete Hulson (U.S.A.), who welcomed participants.
2. The MSAB **NOTED** that one (1) apology was received by the IPHC Secretariat from Ms Angel Drobnica ([Appendix I](#)).
3. The MSAB **RECALLED** that the primary role of the MSAB is to advise the Commission on the Management Strategy Evaluation (MSE) process. To meet this advisory role, the Commission has articulated the following specific representation and objectives for the MSAB, as described in Appendix V, paras 1 and 2 of the IPHC Rules of Procedure (2024):

(para. 1) The Management Strategy Advisory Board (MSAB), on which individuals representing harvesters (commercial, sport, and subsistence), fisheries managers, processors, IPHC Secretariat, science advisors and other experts as required may be represented. The primary roles of the MSAB are to:

- a) Suggest topics to be considered in the Management Strategy Evaluation (MSE) process, within the scope defined in paragraph 2.*
- b) Provide the IPHC Secretariat with direct input and advice on current and planned MSE activities.*
- c) Represent constituent views in the MSE process.*

(para. 2) The MSAB will:

- a) recommend clear measurable objectives and performance metrics for the fisheries;*
- b) propose candidate management strategies, which include aspects of the fisheries that can be managed (e.g. regulatory requirements);*
- c) provide suggestions to the IPHC Secretariat about plausible fisheries-related scenarios for investigation, which include aspects of the fisheries that cannot be managed by the IPHC (e.g. removals under the management authority of a domestic management agency or changes in fisheries dynamics due to various factors);*
- d) encourage and allow members to propose tentative or exploratory ideas without prejudice to future discussions;*
- e) assist with interpreting results and identifying important trade-offs between management procedures;*
- f) represent information, views, and outcomes of the MSAB discussions to constituents accurately and appropriately;*
- g) gather and clearly articulate the interests and concerns of constituents and incorporate them into the MSAB's discussions.*

4. **NOTING** [paragraph 3](#), the MSAB **RECALLED** that the Management Strategy Evaluation process is a stakeholder informed, scientifically driven process.

2. ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION

5. The MSAB **ADOPTED** the Agenda as provided at [Appendix II](#). The documents provided to the MSAB021 are listed at [Appendix III](#).



3. IPHC PROCESS

3.1 MSAB Membership

6. The MSAB **NOTED** paper [IPHC-2025-MSAB021-03](#) that provided the MSAB membership list as of 3 April 2025 and term expirations.
7. The MSAB **NOTED** that the next term expirations occur on 31 December 2026.
8. The MSAB **ACKNOWLEDGED** Mr Per Odegaard and Mr Kurt Iverson for their exemplary service as MSAB members.
9. The MSAB **WELCOMED** new members Mr Garrett Elwood representing the U.S.A. (Commercial) with a term expiration on 2 April 2029, and Mr Andrew Olson representing the U.S.A. (NOAA-fisheries) with a term expiration 27 April 2029.
10. The MSAB **NOTED** that there are vacancies on the Board, as shown in [Appendix III](#), and that interested stakeholders submit Expressions of Interest (EOI) for MSAB vacant positions on an ongoing basis to the IPHC Secretariat (secretariat@iphc.int). The IPHC Secretariat collates and provides EOIs to the Commission on a periodic basis for their consideration.

3.2 Update on the actions arising from the 20th Session of the MSAB (MSAB020)

11. The MSAB **NOTED** paper [IPHC-2025-MSAB021-04](#) that provided the MSAB with an opportunity to consider the progress made during the inter-sessional period in relation to the recommendations and requests of the 20th Session of the IPHC Management Strategy Advisory Board (MSAB020).
12. The MSAB **AGREED** to consider and revise as necessary, the actions arising from MSAB020, and for these to be combined with any new actions arising from MSAB021.
13. The MSAB **RECALLED** the following recommendations from MSAB020 ([IPHC-2024-MSAB020-R](#)) that are still in progress:
 - a) **MSAB020-Rec.1** (para. 14) *The MSAB RECOMMENDED that the Commission priority objective “optimise average coastwide TCEY” (c in paragraph 12) be changed to “maximise average coastwide TCEY” and that this objective along with the variability in yield objective (d in paragraph 12) be given equal consideration to allow for the evaluation of tradeoffs between these two objectives.*
 - b) **MSAB020-Rec.2** (para. 41) *The MSAB RECOMMENDED updating the reference MP for one three-year cycle on a trial basis using a triennial stock assessment frequency (synchronised with the full stock assessment scheduled in 2025 to inform 2026 mortality limits). The coastwide TCEY would be based on SPR=46% in assessment years and based on the proportional change in the FISS O32 WPUE index in non-assessment years. The triennial stock assessment frequency may increase the median coastwide TCEY and reduce the interannual variability in the coastwide TCEY. A lower fishing intensity would also reduce the probability that the spawning biomass is less than the 2023 spawning biomass in the short- and long-term, and result in lower interannual variability as noted in paragraph 26.*
 - c) **MSAB020-Rec.3** (para. 42) *The MSAB RECOMMENDED further evaluations of the following MP elements: d) A triennial assessment frequency with each of the three FISS designs; e) Various empirical rules to determine the reference coastwide TCEY in non-assessment years; f) Constraints on the interannual change in the reference coastwide TCEY, such as a maximum change in the coastwide TCEY of 15%, a slow-up fast down approach, or a fixed TCEY in non-assessment year.*

3.3 Outcomes of the 101st Session of the IPHC Annual Meeting (AM101)

14. The MSAB **NOTED** paper [IPHC-2025-MSAB021-05](#) that detailed the outcomes of the 101st Session of the IPHC Annual Meeting (AM101), relevant to the mandate of the MSAB.



4. MANAGEMENT STRATEGY EVALUATION

4.1 *Understanding MSE and how it is used for Pacific halibut management*

15. The MSAB **NOTED** paper [IPHC-2025-MSAB021-06](#) that provided an overview of the IPHC Management Strategy Evaluation (MSE) and how it has supported the development of the draft IPHC Harvest Strategy Policy (HSP).
16. The MSAB **RECALLED** the Commissions priority objectives from the 99th Annual Meeting of the IPHC (AM099):

AM099–Rec.02 (para. 76). *The Commission RECOMMENDED that for the purpose of a comprehensive and intelligible Harvest Strategy Policy (HSP), four coastwide objectives should be documented within the HSP, in priority order:*

 - a) *Maintain the long-term coastwide female spawning stock biomass above a biomass limit reference point (B20%) at least 95% of the time.*
 - b) *Maintain the long-term coastwide female spawning stock biomass at or above a biomass reference point (B36%) 50% or more of the time.*
 - c) *Optimise average coastwide TCEY.*
 - d) *Limit annual changes in the coastwide TCEY.*
17. The MSAB **RECALLED** recommendation **MSAB020-Rec.01** (shown in [para. 13a](#) above) and **NOTED** that the two fishery objectives are subject to meeting the sustainability objectives, do not have priority over each other, and are best evaluated by examining the trade-off between them.
18. The MSAB **RECALLED** recommendation **MSAB020-Rec.02** (shown in [para. 13b](#) above) and **NOTED** that recent MSE results show a trade-off between the TCEY and variability in the TCEY where the variability is minimised near an SPR of 46% and is a balance between maximising yield and minimising the variability in yield.
19. The MSAB **AGREED** that it would be useful to explore productivity regimes, their effect on the MSE results, and how it may assist in the selection of a management procedure.

4.2 *Update on the IPHC MSE process*

20. The MSAB **NOTED** paper [IPHC-2025-MSAB021-07](#) that provided an overview of work done since the 20th Session of the IPHC Management Strategy Advisory Board (MSAB020) using the IPHC Management Strategy Evaluation (MSE) framework.
21. The MSAB **NOTED** the trade-offs between high and low TCEYs at various fishing intensities and that the lowest TCEYs were avoided at SPR values near 46%.
22. The MSAB **NOTED** that based on simulation results the average variability in the TCEY over a 10-year period was smaller with a triennial assessment frequency, but the change in the TCEY from the previous year in a year with an assessment was more often greater with a triennial assessment frequency than with an annual assessment frequency.
23. The MSAB **AGREED** that a constraint would help to reduce interannual variability in the TCEY when using an annual or triennial assessment frequency
24. The MSAB **NOTED** that performance metrics related to variability in the TCEY were not calculated for periods when the population is increasing or when the population is decreasing, which may show important differences.
25. The MSAB **NOTED** that a triennial assessment frequency would free up resources and allow for more research on the assessment and biology of Pacific halibut, which may reduce uncertainty and bias in the stock assessment. However, this may introduce greater change in the TCEY when an assessment is done



due to updating the stock estimates after applying empirically derived TCEYs and because additional research may result in more updates to assumptions in the stock assessment.

26. The MSAB **NOTED** that presenting the annual change in the TCEY from the previous year as an absolute metric would offer additional insight into the significance of differences between MPs.
27. The MSAB **NOTED** that analyses of the triennial assessment frequency with reduced FISS designs were not done, and that the increased uncertainty and bias in the FISS O32 WPUE with reduced designs would likely result in increased interannual variability in the coastwide TCEY, especially in non-assessment years, which rely on the FISS O32 WPUE to determine the reference coastwide TCEY.
28. The MSAB **AGREED** that the FISS base block design is the preferred design to optimise yield by minimising the interannual variability and maximising the coastwide TCEY, in the short term.
29. The MSAB **NOTED** that long-term differences in FISS designs did not show much difference, which was because there was an even number of simulations with increasing and decreasing trends, thus the bias in the reduced FISS designs was on average near zero but could be high in any individual year.
30. The MSAB **NOTED** that under certain circumstances, there are increased risks with reduced FISS designs that are not captured when averaging over many simulations and longer time-periods.
31. The MSAB **NOTED** that simulation results with fixed weight-at-age and high or low Pacific Decadal Oscillation (PDO) (i.e. productivity regimes) were helpful to understand the variability, current stock status, and the implication of different MPs under different productivity regimes.

5. MANAGEMENT STRATEGY EVALUATION PROGRAM OF WORK (2025-2026)

5.1 Development of a Program of Work for 2025

32. The MSAB **NOTED** paper [IPHC-2025-MSAB021-08](#) that provided an overview of potential work topics for the IPHC MSE in 2025-2026.
33. The MSAB **RECALLED** paragraph 17 from [IPHC-2024-MSAB020-R](#):
(para. 17) The MSAB NOTED that the RSB_{36%} objective (b in paragraph 12) is a useful objective because it separates fishing effects from environmental effects on the stock, scales with changes in productivity, defines a desired relative spawning biomass to be at or above, is based on a proxy for RSB_{MEY}, and is an objective that is often important to fishery certification agencies.
34. The MSAB **AGREED** that an objective to stay above a threshold based on a TCEY or minimum absolute historical spawning biomass (e.g. SB₂₀₂₄) may be useful to continue investigating at MSAB022.
35. The MSAB **RECALLED** paragraph 14 in [IPHC-2024-MSAB020-R](#):
(para. 14) The MSAB RECOMMENDED that the Commission priority objective “optimise average coastwide TCEY” (c in paragraph 12) be changed to “maximise average coastwide TCEY” and that this objective along with the variability in yield objective (d in paragraph 12) be given equal consideration to allow for the evaluation of trade-offs between these two objectives.
36. The MSAB **REQUESTED** further evaluations of the following MP elements, after the OM is conditioned following the full 2025 stock assessment:
 - a) fishing intensities including, but not limited to, SPRs of 40%, 43%, 46%, 52%, 55%, and 100% (no directed fishing);
 - b) a triennial assessment frequency;
 - c) various empirical rules to determine the reference coastwide TCEY in non-assessment years;
 - d) control rules with triggers at higher values than RSB_{30%} or based on absolute spawning biomass relative to the spawning biomass estimated at the beginning of 2024.



37. The MSAB **REQUESTED** evaluating constraints and smoothers, along with MP elements listed in [para. 36](#), that would potentially reduce the interannual variability in the TCEY, including:
- a) a 3-year rolling average (arithmetic or geometric) on the FISS O32 WPUE used in the empirical rule in a triennial stock assessment frequency;
 - b) constraints applied only to non-assessment years and/or applied only to assessment years;
 - c) a phase-in approach for the change in TCEY in assessment years;
 - d) using the trends in fishery CPUE and/or FISS WPUE to determine if a bigger reduction should be taken than suggested by the unconstrained reference TCEY to curtail further reductions in the SB.
38. The MSAB **REQUESTED** the evaluation of some elements (e.g. SPR=43%, SPR=52%, and triennial assessment) in paras. [36](#) and [37](#) with each of the three FISS designs.
39. The MSAB **REQUESTED** conducting simulations assuming the following productivity regimes with a subset of the MPs from paras. [36](#) and [37](#) and all other sources of variability:
- a) low recruitment and low weight-at-age;
 - b) low recruitment and current weight-at-age;
 - c) high recruitment and low weight-at-age.
40. The MSAB **REQUESTED** conducting analyses of MPs, reference points, and the effects of recruitment regimes and variable weight-at-age after conditioning the OM following the full 2025 stock assessment.
41. The MSAB **REQUESTED** presenting dynamic unfished spawning biomass along with simulated spawning biomass, and trace plots (the purple plots in document [IPHC-2025-MSAB021-06](#)) with uncertainty for the productivity regimes at MSAB022 for productivity regimes described in [para. 39](#), with SPRs of 43% and 52%.

6. UPDATE: HARVEST STRATEGY POLICY

6.1 *Update: Harvest Strategy Policy*

42. The MSAB **NOTED** paper [IPHC-2025-MSAB021-09](#) that provided a draft of the interim Harvest Strategy Policy (HSP) as presented at AM101.
43. The MSAB **REQUESTED** that the Commission clarify the intent of the phrase “spatial and temporal scale relevant to the fishery” which is stated in the objective in the draft Harvest Strategy Policy ([IPHC-2025-MSAB021-09](#)) related to a threshold reference point, but is not in objective b) from AM099 ([para. 16](#) above).
44. The MSAB **RECOMMENDED** the following wording for the objectives in the Harvest Strategy Policy:
- a) maintain the long-term coastwide Pacific halibut female relative spawning biomass above a biomass limit reference point (RSB_{20%}) at least 95% of the time;
 - b) maintain the long-term coastwide Pacific halibut female relative spawning biomass at or above a threshold reference point (RSB_{36%}) at least 50% of the time;
 - c) subject to meeting the previous two objectives, maximise the sustainable coastwide yield while minimising annual changes in the coastwide mortality limit.
45. The MSAB **NOTED** that the stock could reach low spawning biomass levels, that may be of concern, due solely to environmental factors (i.e. in the absence of fishing).



7. OTHER BUSINESS

46. The MSAB **NOTED** that recent updates to the stock assessment (e.g. the inclusion of commercial sex ratios and increased natural mortality estimates) have retrospectively increased reference TCEYs, and that these updates, while methodologically justifiable, have occurred during a sustained period of low productivity, characterized by declining weight-at-age, poor recruitment, and historically low FISS WPUE. This results in increased interannual variability of the TCEY, which may not be captured in the MSE simulations that assume a consistent application of a stock assessment model. This has also recently resulted in an inconsistency between the stock assessment and the operating model until the operating model is reconditioned.
47. The MSAB **AGREED** that two (2) meetings of the MSAB should occur each year, one in the spring before the Scientific Review Board meeting and one in the fall before the Interim Meeting.
48. The MSAB **RECOMMENDED** that the 22nd Session of the MSAB (MSAB022) be held over two (2) to three (3) days during the week of 20 October 2025 with a virtual option.

8. REVIEW OF THE DRAFT AND ADOPTION OF THE REPORT OF THE 21ST SESSION OF THE IPHC MANAGEMENT STRATEGY ADVISORY BOARD (MSAB021)

49. The report of the 21st Session of the IPHC Management Strategy Advisory Board ([IPHC-2025-MSAB021-R](#)) was **ADOPTED** on 15 May 2025, including the consolidated set of recommendations and/or requests arising from MSAB021, provided at [Appendix V](#).

APPENDIX I

LIST OF PARTICIPANTS FOR THE 21ST SESSION OF THE IPHC MANAGEMENT STRATEGY ADVISORY BOARD (MSAB021)

Officers

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APPENDIX II
AGENDA FOR THE 21ST SESSION OF THE IPHC MANAGEMENT STRATEGY ADVISORY BOARD
(MSAB021)

1. OPENING OF THE SESSION

2. ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION

- *IPHC-2025-MSAB021-01: Agenda & Schedule for the 21st Session of the IPHC Management Strategy Advisory Board (MSAB021)*
- *IPHC-2025-MSAB021-02: List of Documents for the 21st Session of the IPHC Management Strategy Advisory Board (MSAB021)*

3. IPHC PROCESS

3.1. MSAB Membership (D. Wilson)

- *IPHC-2025-MSAB021-03: MSAB Membership (D. Wilson)*

3.2. Update on the actions arising from the 20th Session of the MSAB (MSAB020) (A. Hicks)

- *IPHC-2025-MSAB021-04: Update on the actions arising from the 20th Session of the MSAB (MSAB020) (A. Hicks)*

3.3. Outcomes of the 101st Session of the IPHC Annual Meeting (AM101) (A. Hicks)

- *IPHC-2025-MSAB021-05: Outcomes of the 101st Session of the IPHC Annual Meeting (AM101) (A. Hicks)*

4. MANAGEMENT STRATEGY EVALUATION

4.1. Understanding MSE and how it is used for Pacific halibut management

- *IPHC-2025-MSAB021-06: Understanding MSE and its role in the management of Pacific halibut (A. Hicks)*

4.2. Update on the IPHC MSE process

- *IPHC-2025-MSAB021-07: Updates to the IPHC MSE and a review of coastwide management procedures (A. Hicks & I. Stewart)*

5. MANAGEMENT STRATEGY EVALUATION PROGRAM OF WORK (2025-2026)

5.1. Development of a Program of Work for 2025

- *IPHC-2025-MSAB021-08: Considerations for the Management Strategy Evaluation Program of Work for 2025-2026 (A. Hicks & I. Stewart)*

6. UPDATE: HARVEST STRATEGY POLICY

6.1. Update: Harvest Strategy Policy (A. Hicks)

- *IPHC-2025-MSAB021-09: Interim IPHC Harvest Strategy Policy (IPHC Secretariat)*

7. OTHER BUSINESS

8. REVIEW OF THE DRAFT AND ADOPTION OF THE REPORT OF THE 21ST SESSION OF THE IPHC MANAGEMENT STRATEGY ADVISORY BOARD (MSAB021)



APPENDIX III
**LIST OF DOCUMENTS FOR THE 21ST SESSION OF THE MANAGEMENT STRATEGY ADVISORY
BOARD (MSAB021)**

Meeting documents	Title	Availability
IPHC-2025-MSAB021-01	Agenda & Schedule for the 21 st Session of the IPHC Management Strategy Advisory Board (MSAB021)	✓ 11 Feb 2025 ✓ 28 Mar 2025
IPHC-2025-MSAB021-02	List of Documents for the 21 st Session of the IPHC Management Strategy Advisory Board (MSAB021)	✓ 11 Feb 2025 ✓ 10 Apr 2025 ✓ 06 May 2025
IPHC-2025-MSAB021-03	MSAB membership (D. Wilson)	✓ 7 Apr 2025
IPHC-2025-MSAB021-04	Update on actions arising from the 20 th Session of the MSAB (MSAB020) (A. Hicks)	✓ 7 Apr 2025
IPHC-2025-MSAB021-05	Outcomes of the 101 st Session of the IPHC Annual Meeting (AM101) (A. Hicks)	✓ 7 Apr 2025
IPHC-2025-MSAB021-06	Understanding MSE and its role in the management of Pacific halibut (A. Hicks)	✓ 7 Apr 2025
IPHC-2025-MSAB021-07	Updates to the IPHC MSE and a review of coastwide management procedures (A. Hicks & I. Stewart)	✓ 7 Apr 2025
IPHC-2025-MSAB021-08	Considerations for the Management Strategy Evaluation Program of Work for 2025-2026 (A. Hicks & I. Stewart)	✓ 10 Apr 2025
IPHC-2025-MSAB021-09	Interim: IPHC Harvest Strategy Policy (IPHC Secretariat)	✓ 7 Apr 2025



APPENDIX IV
MSAB MEMBERSHIP
(as of 28 April 2025)

Membership category	Member	Canada	U.S.A.	Current Term commencement	Current Term expiration
Commercial harvesters (6-8)					
1	Sporer, Chris	CDN Commercial		10-April-23	31-Dec-26
2	Hauknes, Robert	CDN Commercial		03-Apr-25	02-Apr-29
3	Grout, Angus	CDN Commercial		10-April-23	31-Dec-26
4	Vacant	CDN Commercial			Vacant
5	Behnken, Linda		USA Commercial	01-May-24	30-April-28
6	Elwood, Garrett		USA Commercial	03-Apr-25	02-Apr-29
7	Conrad, Michele		USA Commercial	01-May-24	30-Apr-28
8	Johnson, James		USA Commercial	03-Apr-25	02-Apr-29
First Nations/ Tribal fisheries (2-4)					
1	Lane, Jim	CDN First Nations		10-April-23	31-Dec-26
2	Vacant	CDN First Nations			Vacant
3	Mazzone, Scott		USA Treaty Tribes	03-Apr-25	02-Apr-29
4	Fitting, Emily		USA Treaty Tribes	25-Sept-24	24-Sept-28



Membership category	Member	Canada	U.S.A.	Current Term commencement	Current Term expiration
Government Agencies (4-8)					
1	Mason, Gwyn	DFO		16-April-24	15-April-28
2	Huang, Ann-Marie	CDN Science Advisor		1-Jan-25	31-Dec-28
3	Vacant	DFO			Vacant
4	Olson, Andrew		NOAA-Fisheries	28-Apr-25	27-Apr-29
5	Hulson, Pete		USA Science Advisor	1-Jan-25	31-Dec-28
6	Mattes, Lynn		PFMC	25-Jun-24	31-Dec-26
7	Bush, Karla		NPFMC	10-Jan-25	9-Jan-29
8	Joy, Philip		ADFG	1-Jan-25	31-Dec-28
Processors (2-4)					
1	Vacant	CDN Processing			Vacant
2	Vacant	CDN Processing			Vacant
3	Parker, Peggy		USA Processing	03-Apr-25	02-Apr-29
4	Drobnica, Angel		USA Processing	17-Apr-23	31-Dec-26
Recreational/ Sport fisheries (2-4)					
1	Fowler, Michael	CDN Sportfishing		01-May-24	30-April-28
2	Vacant	CDN Sportfishing			Vacant
3	Marking, Tom		USA Sportfishing (CA)	9-May-23	31-Dec-26
4	Braden, Forrest		USA sportfishing (AK)	03-Apr-25	02-Apr-29



APPENDIX V

CONSOLIDATED SET OF RECOMMENDATIONS AND REQUESTS OF THE 21ST SESSION OF THE
IPHC MANAGEMENT STRATEGY ADVISORY BOARD (MSAB021)

RECOMMENDATIONS

Update: Harvest Strategy Policy

- MSAB021–Rec.01** ([para. 44](#)) The MSAB **RECOMMENDED** the following wording for the objectives in the Harvest Strategy Policy:
- a) maintain the long-term coastwide Pacific halibut female relative spawning biomass above a biomass limit reference point (RSB_{20%}) at least 95% of the time;
 - b) maintain the long-term coastwide Pacific halibut female relative spawning biomass at or above a threshold reference point (RSB_{36%}) at least 50% of the time;
 - c) subject to meeting the previous two objectives, maximise the sustainable coastwide yield while minimising annual changes in the coastwide mortality limit.

Other Business

- MSAB021–Rec.02** ([para. 48](#)) The MSAB **RECOMMENDED** that the 22nd Session of the MSAB (MSAB022) be held over two (2) to three (3) days during the week of 20 October 2025 with a virtual option.

REQUESTS

Management Strategy Evaluation Program of Work (2025-2026)

- MSAB021–Req.01** ([para. 36](#)) The MSAB **REQUESTED** further evaluations of the following MP elements, after the OM is conditioned following the full 2025 stock assessment:
- a) fishing intensities including, but not limited to, SPRs of 40%, 43%, 46%, 52%, 55%, and 100% (no directed fishing);
 - b) a triennial assessment frequency;
 - c) various empirical rules to determine the reference coastwide TCEY in non-assessment years;
 - d) control rules with triggers at higher values than RSB_{30%} or based on absolute spawning biomass relative to the spawning biomass estimated at the beginning of 2024.
- MSAB021–Req.02** ([para. 37](#)) The MSAB **REQUESTED** evaluating constraints and smoothers, along with MP elements listed in [para. 36](#), that would potentially reduce the interannual variability in the TCEY, including:
- a) a 3-year rolling average (arithmetic or geometric) on the FISS O32 WPUE used in the empirical rule in a triennial stock assessment frequency;
 - b) constraints applied only to non-assessment years and/or applied only to assessment years;
 - c) a phase-in approach for the change in TCEY in assessment years;
 - d) using the trends in fishery CPUE and/or FISS WPUE to determine if a bigger reduction should be taken than suggested by the unconstrained reference TCEY to curtail further reductions in the SB.



- MSAB021–Req.03** ([para. 38](#)) The MSAB **REQUESTED** the evaluation of some elements (e.g. SPR=43%, SPR=52%, and triennial assessment) in paras. [36](#) and [37](#) with each of the three FISS designs.
- MSAB021–Req.04** ([para. 39](#)) The MSAB **REQUESTED** conducting simulations assuming the following productivity regimes with a subset of the MPs from paras. [36](#) and [37](#) and all other sources of variability:
- a) low recruitment and low weight-at-age;
 - b) low recruitment and current weight-at-age;
 - c) high recruitment and low weight-at-age.
- MSAB021–Req.05** ([para. 40](#)) The MSAB **REQUESTED** conducting analyses of MPs, reference points, and the effects of recruitment regimes and variable weight-at-age after conditioning the OM following the full 2025 stock assessment.
- MSAB021–Req.06** ([para. 41](#)) The MSAB **REQUESTED** presenting dynamic unfished spawning biomass along with simulated spawning biomass, and trace plots (the purple plots in document [IPHC-2025-MSAB021-06](#)) with uncertainty for the productivity regimes at MSAB022 for productivity regimes described in [para. 39](#), with SPRs of 43% and 52%.

Update: Harvest Strategy Policy

- MSAB021–Req.07** ([para. 43](#)) The MSAB **REQUESTED** that the Commission clarify the intent of the phrase “spatial and temporal scale relevant to the fishery” which is stated in the objective in the draft Harvest Strategy Policy ([IPHC-2025-MSAB021-09](#)) related to a threshold reference point, but is not in objective b) from AM099 ([para. 16](#) above).