

Report of the 20th Session of the IPHC Management Strategy Advisory Board (MSAB020)

Meeting held electronically, 29-30 October 2024

Commissioners

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BIBLIOGRAPHIC ENTRY

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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 20th Session of the International Pacific Halibut Commission (IPHC) Management Strategy Advisory Board (MSAB020) was held in an electronic format (remote participation), from 29-30 October 2024. The MSAB currently consists of twenty-two (22) board members/positions, eighteen (18) of which attended the Session from the two (2) Contracting Parties. A total of eight (8) individuals attended the Session as Observers. The list of participants is provided at <u>Appendix I</u>. 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 MSAB020, which are provided in full at Appendix V.

RECOMMENDATIONS

Primary MSE objectives and associated performance metrics

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 trade-offs between these two objectives.

Evaluation of management procedures

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.

MSAB020-Rec.3

(para. 42) The MSAB **RECOMMENDED** further evaluations of the following MP elements:

- a) A triennial assessment frequency with each of the three FISS designs;
- b) Various empirical rules to determine the reference coastwide TCEY in non-assessment years;
- c) 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 years

Consideration of the draft Harvest Strategy Policy

MSAB020-Rec.4

(para. 47) The MSAB **RECOMMENDED** that the Commission consider endorsing the draft HSP **NOTING** that changes may be made to the HSP in the future as more research and MSE evaluations are completed.



Other Business

MSAB020-Rec.5 (para. 49) The MSAB **RECOMMENDED** that the 21st Session of the MSAB

(MSAB021) be held in the first half of May 2025, occur over 2-3 days, and be in-

person, if possible.

REQUESTS

Evaluation of management procedures

MSAB020-Req.1 (para. 28) The MSAB **REQUESTED** more exploration into understanding the patterns presented in paragraph 27.

MSAB020-Req.2 (para. 31) The MSAB **REQUESTED** more research into performance metrics that

may be informative of changes in the TCEY for non-assessment years and changes in the TCEY for assessment years when using a triennial assessment frequency.

MSAB020-Req.3 (para. 37) **NOTING** that increased uncertainty due to reductions in the FISS design

resulted in only declines in the median coastwide TCEY, the MSAB **REQUESTED** further exploration into the causes of this, especially since there is a monetary value

being attributed to the FISS design

Consideration of the draft Harvest Strategy Policy

MSAB020-Req.4 (para. 45) The MSAB **REQUESTED** the following edits to the draft HSP:

a) Improvements to the Harvest Strategy Policy figure including specifying that the adopted coastwide TCEY is an outcome along with the Regulatory Area Mortality Limits

OTHER

Evaluation of management procedures

(para. 36) The MSAB ACCEPTED that the average coastwide TCEY declined by approximately 450,000 pounds when moving from the FISS base block design to the FISS core block design, due to increased uncertainty and potential bias in the FISS WPUE. This equates to an estimated loss of US\$2.7 million if the price was US\$6.00/lb. A further reduction, on average, of approximately 450,000 pounds would occur moving from the core block design to the reduced core design, due to further increases in uncertainty and potential bias in the FISS WPUE.

Consideration of the draft Harvest Strategy Policy

(<u>para. 46</u>) The MSAB **ENDORSED** the documentation of the HSP and sees the value of the document as a communication tool describing the management of Pacific halibut.



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1. OPENING OF THE SESSION

- 1. The 20th Session of the International Pacific Halibut Commission (IPHC) Management Strategy Advisory Board (MSAB020) was held in an electronic format (remote participation), from 29-30 October 2024. The MSAB currently consists of twenty-two (22) board members/positions, eighteen (18) of which attended the Session from the two (2) Contracting Parties. A total of eight (8) 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 two (2) apologies were received by the IPHC Secretariat from the four (4) absent board members (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 <u>Appendix II</u>. The documents provided to the MSAB020 are listed at <u>Appendix III</u>.



3. IPHC PROCESS

3.1 MSAB Membership

- 6. The MSAB **NOTED** paper <u>IPHC-2024-MSAB020-03 Rev_1</u> that provided the membership list as of 29 September 2024 and term expirations for the MSAB.
- 7. The MSAB **NOTED** that the current terms of ten (10) members are scheduled to expire before the 21st Session of the MSAB (MSAB021). Members in attendance indicated they would be willing to serve another term.

3.2 Update on the actions arising from the 19th Session of the MSAB (MSAB019)

- 8. The MSAB **NOTED** paper <u>IPHC-2024-MSAB020-04</u> 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 19th Session of the IPHC Management Strategy Advisory Board (MSAB019).
- 9. The MSAB **AGREED** to consider and revise as necessary, the actions arising from MSAB019, and for these to be combined with any new actions arising from MSAB020.

3.3 Outcomes of the 100th Session of the IPHC Annual Meeting (AM100)

10. The MSAB **NOTED** paper <u>IPHC-2024-MSAB020-05</u> that detailed the outcomes of the 100th Session of the IPHC Annual Meeting (AM100) and 2024 intersessional decisions, relevant to the mandate of the MSAB.

4. MANAGEMENT STRATEGY EVALUATION PROGRAM OF WORK (2024-2025)

11. The MSAB **NOTED** paper <u>IPHC-2024-MSAB020-06</u> that provided an update on Management Strategy Evaluation (MSE) progress in 2024 and work supporting the development of the harvest strategy policy (HSP).

4.1 Primary MSE objectives and associated performance metrics

12. 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.*
- 13. The MSAB **NOTED** that the objective "optimise average coastwide TCEY" encompasses the amount of yield as well as the interannual variability in yield.
- 14. The MSAB **RECOMMENDED** that the Commission priority objective "optimise average coastwide TCEY" (c in <u>paragraph 12</u>) be changed to "maximise average coastwide TCEY" and that this objective along with the variability in yield objective (d in <u>paragraph 12</u>) be given equal consideration to allow for the evaluation of trade-offs between these two objectives.
- 15. The MSAB **NOTED** that a new objective may be defined using absolute biomass, commercial catchrates, or coastwide TCEY. However, commercial catchrates may not be the best option because they are dependent on other factors. The coastwide TCEY and/or a reference absolute spawning biomass



based on what has been observed may be more meaningful, but all have downsides in being a holistic metric.

- 16. The MSAB **NOTED** that a new objective to maintain the coastwide TCEY above a threshold may be useful because it is meaningful to stakeholders, may define a minimum coastwide TCEY necessary for economic viability, and may be a proxy for maintaining catch-rates and absolute spawning biomass above a threshold which may be important to stakeholders.
- 17. The MSAB **NOTED** that the RSB_{36%} objective (b in <u>paragraph 12</u>) 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.
- 18. The MSAB **NOTED** that the RSB_{MEY} proxy is based on 1.2 times RSB_{MSY}, but a multiplier of 1.45 has been used for data-poor fisheries. Therefore, a suitable proxy for RSB_{MEY} may be between RSB_{36%} and RSB_{43%}.
- 19. The MSAB **NOTED** that a higher reference fishing intensity (approximately F_{SPR=39%}) than has been used in the last decade would be necessary to achieve a spawning biomass of RSB_{36%}.
- 20. The MSAB **NOTED** that the phrase "at or above" in the Commission objective "Maintain the long-term coastwide female spawning stock biomass at or above a biomass reference point (RSB_{36%}) at least 50% or more of the time" allows for this objective to represent a target with the word "at", while the wording "or above" allows the flexibility to select an MP that results in a higher RSB than a target reference point would imply, which may better satisfy additional objectives.
- 21. The MSAB **NOTED** that objectives such as avoiding low stock sizes or low catch-rates, may be met by adding an element to the MP, such as reducing fishing intensity when the spawning biomass is below a threshold.

4.2 Evaluation of management procedures

- 22. The MSAB **NOTED** that all MPs evaluated met the conservation objective to maintain the female spawning biomass above RSB_{20%}, which was partly a result of the 30:20 control rule reducing the fishing intensity as the relative spawning biomass approached the biomass limit.
- 23. The MSAB **NOTED** that all MPs evaluated met the threshold biomass objective to maintain the female relative spawning biomass above RSB₃₆%, and that a fishing intensity higher than F_{SPR=40}% would be required to not meet this objective.
- 24. The MSAB **NOTED** that the TCEY was reduced by approximately 1.3 Mlbs with every 1% increase in SPR.
- 25. The MSAB **NOTED** high average annual variability (AAV) in the TCEY is mostly due to three types of uncertainty: assessment, observation (including FISS), and decision-making.
- 26. The MSAB **NOTED** that interannual variability (AAV) in the coastwide TCEY increased at a greater rate for SPR values less than 46% (higher fishing intensities) and was similar at SPR values of 46% or greater.
- 27. The MSAB **NOTED** that lower fishing intensities (i.e. higher SPR values) resulted in higher absolute spawning biomass but reduced the median coastwide TCEY. There is a greater than 1-in-3 chance that the short-term absolute spawning biomass will be less than the 2023 spawning biomass when fishing at a reference SPR=43%. The chance was approximately 1-in-4 for long-term spawning biomass. Fishing at an SPR=52% reduced these chances to approximately 1-in-4 and 1-in-6 for the short- and long-terms, respectively. However, lower fishing intensities did not realize high TCEYs seen at higher fishing intensities, and did result in lower TCEYs more often than seen at higher fishing intensities, over the short-term.



- 28. The MSAB **REQUESTED** more exploration into understanding the patterns presented in <u>paragraph 27</u>.
- 29. The MSAB **NOTED** that the median coastwide TCEY was slightly greater and interannual variability was less with a triennial assessment frequency for SPR values between 40% and 52%.
- 30. The MSAB **NOTED** that the annual pattern of changes in the coastwide TCEY with a triennial assessment was not clear. It is possible that smaller changes occur between assessments and occasional changes larger than with an annual assessment frequency occur in triennial assessment years.
- 31. The MSAB **REQUESTED** more research into performance metrics that may be informative of changes in the TCEY for non-assessment years and changes in the TCEY for assessment years when using a triennial assessment frequency.
- 32. The MSAB **NOTED** that a constraint on the coastwide TCEY reduces the interannual variability (AAV) and also reduces the median coastwide TCEY.
- 33. The MSAB **NOTED** that reduced FISS designs met the conservation objective but resulted in lower median coastwide TCEYs and higher interannual variability in the coastwide TCEY.
- 34. The MSAB **NOTED** that there are many uses for the FISS data, such as considerations when making decisions and a better understanding of area-specific population trends and demographics.
- 35. The MSAB **NOTED** that reduced FISS designs did not survey non-core areas, resulting in increased uncertainty and likely bias in those areas.
- 36. The MSAB **ACCEPTED** that the average coastwide TCEY declined by approximately 450,000 pounds when moving from the FISS base block design to the FISS core block design, due to increased uncertainty and potential bias in the FISS WPUE. This equates to an estimated loss of US\$2.7 million if the price was US\$6.00/lb. A further reduction, on average, of approximately 450,000 pounds would occur moving from the core block design to the reduced core design, due to further increases in uncertainty and potential bias in the FISS WPUE.
- 37. **NOTING** that increased uncertainty due to reductions in the FISS design resulted in only declines in the median coastwide TCEY, the MSAB **REQUESTED** further exploration into the causes of this, especially since there is a monetary value being attributed to the FISS design.
- 38. The MSAB **NOTED** that analyses of the triennial assessment frequency with reduced FISS designs were not done, and that the increased uncertainty in the FISS O32 WPUE with reduced designs would 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.
- 39. The MSAB **AGREED** that the FISS base block design is the preferable design to optimise yield by minimising the interannual variability and maximising the coastwide TCEY.
- 40. The MSAB **NOTED** that decision-making variability is an important component to the MSE simulations, but it is difficult to model because the decision-making variability and bias are unknown in the future and may differ from the past.
- 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.



- 42. The MSAB **RECOMMENDED** further evaluations of the following MP elements:
 - a) A triennial assessment frequency with each of the three FISS designs;
 - b) Various empirical rules to determine the reference coastwide TCEY in non-assessment years;
 - c) 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 years.

5. DRAFT HARVEST STRATEGY POLICY

- 43. The MSAB **NOTED** paper <u>IPHC-2024-MSAB019-07</u> that provided a draft of the interim Harvest Strategy Policy (HSP).
- 44. The MSAB **NOTED** that the Commission has the flexibility to depart from the reference management procedure which is included as decision-making variability in the MSE simulations. Recent departures from the reference MP have been justified based on short-term trends in the spawning biomass among other considerations.

5.1 Consideration of the draft Harvest Strategy Policy

- 45. The MSAB **REQUESTED** the following edits to the draft HSP:
 - a) Improvements to the Harvest Strategy Policy figure including specifying that the adopted coastwide TCEY is an outcome along with the Regulatory Area Mortality Limits.
- 46. The MSAB **ENDORSED** the documentation of the HSP and sees the value of the document as a communication tool describing the management of Pacific halibut.
- 47. The MSAB **RECOMMENDED** that the Commission consider endorsing the draft HSP **NOTING** that changes may be made to the HSP in the future as more research and MSE evaluations are completed.

6. OTHER BUSINESS

- 48. 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.
- 49. The MSAB **RECOMMENDED** that the 21st Session of the MSAB (MSAB021) be held in the first half of May 2025, occur over 2-3 days, and be in-person, if possible.
- 50. The MSAB **AGREED** that the costs of an in-person meeting could be reduced by holding meetings in locations with no cost meeting spaces, that are easily accessible and are close to some members of the MSAB.

7. REVIEW OF THE DRAFT AND ADOPTION OF THE REPORT OF THE 19th Session of the IPHC Management Strategy Advisory Board (MSAB019)

51. The report of the 20th Session of the IPHC Management Strategy Advisory Board (<u>IPHC-2024-MSAB020-R</u>) was **ADOPTED** on 30 October 2024, including the consolidated set of recommendations and/or requests arising from MSAB020, provided at <u>Appendix V</u>.

APPENDIX I

LIST OF PARTICIPANTS FOR THE 20TH SESSION OF THE IPHC MANAGEMENT STRATEGY ADVISORY BOARD (MSAB020)

Officers

Co-Chairperson	Co-Chairperson
(Canada)	(United States of America)
Ms Gwyn Mason: Gwynhyfar.Mason@dfo-	Dr Pete Hulson : pete.hulson@noaa.gov
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Commissioners

Canada	United States of America		
Nil	Nil		

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Ms Evelyn Roozee	Mr Dan Falvey
Ms Crista Rusel	Ms Heather Fitch
	Mr Brian Hoffman
	Ms Leah Mellinger
	Mr Adrian Purser
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APPENDIX II AGENDA FOR THE 20th Session of the IPHC Management Strategy Advisory Board (MSAB020)

Date: 29-30 October 2024 Location: Electronic Time (PDT): 09:00-17:00 (daily)

Co-Chairpersons: Ms Gwyn Mason (Canada); Dr Pete Hulson (USA)

1. OPENING OF THE SESSION

2. ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION

- ➤ IPHC-2024-MSAB020-01: Agenda & Schedule for the 20th Session of the IPHC Management Strategy Advisory Board (MSAB020)
- ➤ IPHC-2024-MSAB020-02: List of Documents for the 20th Session of the IPHC Management Strategy Advisory Board (MSAB020)

3. IPHC PROCESS

- 3.1. MSAB Membership (D. Wilson)
 - > IPHC-2024-MSAB020-03: MSAB Membership (D. Wilson)
- 3.2. Update on the actions arising from the 19th Session of the MSAB (MSAB019) (A. Hicks)
 - ➤ IPHC-2024-MSAB020-04: Update on the actions arising from the 19th Session of the MSAB (MSAB019) (A. Hicks)
- 3.3. Outcomes of the 100th Session of the IPHC Annual Meeting (AM100) (A. Hicks)
 - ➤ IPHC-2024-MSAB020-05: Outcomes of the 100th Session of the IPHC Annual Meeting (AM100) (A. Hicks)

4. MANAGEMENT STRATEGY EVALUATION PROGRAM OF WORK (2024-2025)

- 4.1. Primary MSE objectives and associated performance metrics (A. Hicks)
- 4.2. Evaluation of management procedures (A. Hicks)
 - ➤ IPHC-2024-MSAB020-06: Update to the Management Strategy Evaluation Program of Work for 2024-2025 (A. Hicks & I. Stewart)

5. DRAFT HARVEST STRATEGY POLICY

- 5.1. Consideration of the draft Harvest Strategy Policy (A. Hicks)
 - ➤ IPHC-2024-MSAB020-07: Interim: IPHC Harvest Strategy Policy (IPHC Secretariat)

6. OTHER BUSINESS

7. REVIEW OF THE DRAFT AND ADOPTION OF THE REPORT OF THE 20TH SESSION OF THE IPHC MANAGEMENT STRATEGY ADVISORY BOARD (MSAB020)



APPENDIX III LIST OF DOCUMENTS FOR THE 20TH SESSION OF THE MANAGEMENT STRATEGY ADVISORY BOARD (MSAB020)

Meeting documents	Title	Availability	
IPHC-2024-MSAB020-01	Agenda & Schedule for the 20 th Session of the IPHC Management Strategy Advisory Board (MSAB020)	✓ 29 Jul 2024 ✓ 27 Sept 2024	
IPHC-2024-MSAB020-02	List of Documents for the 20 th Session of the IPHC Management Strategy Advisory Board (MSAB020)	✓ 29 Jul 2024 ✓ 28 Oct 2024	
IPHC-2024-MSAB020-03 Rev_1	MSAB membership (IPHC Secretariat)	✓ 20 Sept 2024 ✓ 29 Sept 2024	
IPHC-2024-MSAB020-04	Update on actions arising from the 19 th Session of the MSAB (MSAB019) (A. Hicks)		
IPHC-2024-MSAB020-05	Outcomes of the 100th Session of the IPHC Annual Meeting (AM100) and 2024 Intersessional Decisions (A. Hicks)		
IPHC-2024-MSAB020-06 MSE update on progress in 2024 and development of a revised Harvest Strategy Policy (A. Hicks, I. Stewart, & D. Wilson)		✓ 27 Sept 2024	
IPHC-2024-MSAB020-07	Interim: IPHC Harvest Strategy Policy (A. Hicks, I. Stewart, & D. Wilson)	✓ 29 Sept 2024	
Information Papers			
IPHC-2024-MSAB020-INF01	Informal meeting summary of the 4 th MSAB Ad-Hoc Working Group (MSAB-AdHoc04)		
IPHC-2024-MSAB020-INF02 Using Management Strategy evaluation to investigate the effect of fishing and the environment on Pacific halibut (IPHC Secretariat)		✓ 28 Oct 2024	



APPENDIX IV MSAB MEMBERSHIP

(as of 29 September 2024)

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		10-April-23	31-Dec-24
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	Odegaard, Per		USA Commercial	10-April-23	31-Dec-24
7	Conrad, Michele		USA Commercial	01-May-24	30-April-28
8	Johnson, James		USA Commercial	17-Apr-23	31-Dec-24
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	9-May-23	31-Dec-24
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		01-May-24	30-April-28
2	Huang, Ann-Marie	CDN Science Advisor		10-April-23	31-Dec-24
3	Vacant	DFO			Vacant
4	Iverson, Kurt		NOAA-Fisheries	17-Oct-22	16-Oct-26
5	Hulson, Pete		USA Science Advisor	13-Jul-22	31-Dec-24
6	Mattes, Lynn		PFMC	25-June-24	31-Dec-26
7	Bush, Karla		NPFMC	25-Oct-21	31-Dec-24
8	Vacant		ADFG		Vacant
Processors (2-4)					
1	Vacant	CDN Processing			Vacant
2	Vacant	CDN Processing			Vacant
3	Parker, Peggy		USA Processing	9-May-23	31-Dec-24
4	Drobnica, Angel		USA Processing	17-Apr-23	31-Dec-26
Recreational/ Sport fisheries (2-4)					
1	Ashcroft, Chuck	CDN Sportfishing		17-Apr-23	31-Dec-24
2	Fowler, Michael	CDN Sportfishing		01-May-24	30-April-28
3	Marking, Tom		USA Sportfishing (CA)	9-May-23	31-Dec-26
4	Braden, Forrest		USA sportfishing (AK)	17-Apr-23	31-Dec-24

APPENDIX V

CONSOLIDATED SET OF RECOMMENDATIONS AND REQUESTS OF THE 20TH SESSION OF THE IPHC MANAGEMENT STRATEGY ADVISORY BOARD (MSAB020)

RECOMMENDATIONS

Primary MSE objectives and associated performance metrics

MSAB020-Rec.1

(<u>para. 14</u>) The MSAB **RECOMMENDED** that the Commission priority objective "optimise average coastwide TCEY" (c in <u>paragraph 12</u>) be changed to "maximise average coastwide TCEY" and that this objective along with the variability in yield objective (d in <u>paragraph 12</u>) be given equal consideration to allow for the evaluation of trade-offs between these two objectives.

Evaluation of management procedures

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.

MSAB020-Rec.3

(<u>para. 42</u>) 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 years

Consideration of the draft Harvest Strategy Policy

MSAB020-Rec.4

(<u>para. 47</u>) The MSAB **RECOMMENDED** that the Commission consider endorsing the draft HSP **NOTING** that changes may be made to the HSP in the future as more research and MSE evaluations are completed.

Other Business

MSAB020-Rec.5

(para. 49) The MSAB **RECOMMENDED** that the 21st Session of the MSAB (MSAB021) be held in the first half of May 2025, occur over 2-3 days, and be inperson, if possible.



REQUESTS

Evaluation of management procedures

MSAB020-Req.1 (para. 28) The MSAB **REQUESTED** more exploration into understanding the patterns presented in paragraph 27.

MSAB020-Req.2 (para. 31) The MSAB **REQUESTED** more research into performance metrics that may be informative of changes in the TCEY for non-assessment years and changes in the TCEY for assessment years when using a triennial assessment frequency.

MSAB020-Req.3 (para. 37) **NOTING** that increased uncertainty due to reductions in the FISS design resulted in only declines in the median coastwide TCEY, the MSAB **REQUESTED** further exploration into the causes of this, especially since there is a monetary value being attributed to the FISS design

Consideration of the draft Harvest Strategy Policy

MSAB020-Req.4 (para. 45) The MSAB **REQUESTED** the following edits to the draft HSP:

b) Improvements to the Harvest Strategy Policy figure including specifying that the adopted coastwide TCEY is an outcome along with the Regulatory Area Mortality Limits

OTHER

Evaluation of management procedures

(para. 36) The MSAB ACCEPTED that the average coastwide TCEY declined by approximately 450,000 pounds when moving from the FISS base block design to the FISS core block design, due to increased uncertainty and potential bias in the FISS WPUE. This equates to an estimated loss of US\$2.7 million if the price was US\$6.00/lb. A further reduction, on average, of approximately 450,000 pounds would occur moving from the core block design to the reduced core design, due to further increases in uncertainty and potential bias in the FISS WPUE.

Consideration of the draft Harvest Strategy Policy

(<u>para. 46</u>) The MSAB **ENDORSED** the documentation of the HSP and sees the value of the document as a communication tool describing the management of Pacific halibut.