Report of the 95th Session of the IPHC Interim Meeting (IM095)

Seattle, Washington, United States of America, 25-26 November 2019

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Bibliographic Entry
ACRONYMS

CB    Conference Board  
DFO   Department of Fisheries and Ocean (Canada)  
DMR   Discard Mortality Rate  
FCEY  Fishery Constant Exploitation Yield  
FISS  Fishery-Independent Setline Survey  
IPHC  International Pacific Halibut Commission  
NMFS  National Marine Fisheries Services, of NOAA  
NOAA  National Oceanic and Atmospheric Administration  
NPFMC North Pacific Fishery Management Council  
PFMC  Pacific Fisheries Management Council  
RAB   Research Advisory Board  
SB    Spawning Biomass  
SRB   Scientific Review Board  
SPR   Spawning Potential Ratio  
TCEY  Total Constant Exploitation Yield  
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** (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.
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EXECUTIVE SUMMARY

The 95th Session of the International Pacific Halibut Commission (IPHC) Interim Meeting (IM095) was held in Seattle, Washington, USA from 25-26 November 2019. A total of 23 members (6 Commissioners; 17 advisors/experts) attended the Session from the two (2) Contracting Parties, as well as 46 observers in person and 67 via the webcast. The meeting was opened by the Chairperson, Mr Chris Oliver (USA), who welcomed participants to Seattle.

The following are a subset of the complete recommendations and requests for action from the IM095, which are provided at Appendix IV.

RECOMMENDATIONS

Management Strategy Evaluation

IM095-Rec.01 (para. 78) The Commission RECOMMENDED that the MSAB use the primary objectives and associated performance metrics detailed in Appendix V of IPHC-2019-MSAB014-R for the evaluation of management procedures.

REQUESTS

Space-time modelling of survey data (WPUE; FISS expansion results, etc.)

IM095-Req.01 (para. 23) The Commission REQUESTED that information on FISS cost and revenue projections for design options for 2021 and 2022 be presented at AM096 for further consideration.

Alternative projections for 2019 (last year) adjusted for the effects of U26 Pacific halibut discard mortality in non-directed fisheries (‘bycatch’)

IM095-Req.04 (para. 50) The Commission REQUESTED that the IPHC Secretariat prepare the following alternatives for presentation at AM096:

a) changing the relative harvest rate for IPHC Regulatory Area 4CDE to a value of 1.0 (from 0.75) after the adjustments to the Interim Management Procedure; and

b) comparing the adjusted management procedure (as presented, and including the U26 non-directed fishery discard mortality mitigation) further modified to add the TCEY pounds additional to the historical Interim Management Procedure calculation for IPHC Regulatory Areas 2A and 2B to the total TCEY.

Options for FISS mortality accounting in projections

IM095-Req.05 (para. 53) The Commission REQUESTED that the IPHC Secretariat develop the time-series table of FISS mortality by IPHC Regulatory Area for comparison of Total and Distribution mortality as sampling designs vary in the future under a rationalised approach, and provide the table as a web-based resource to be updated each for the Annual Meeting.

Pacific Fishery Management Council (PFMC)

IM095-Req.08 (para. 89) The Commission WELCOMED the PFMC’s commitment to transition management of Pacific halibut fisheries in IPHC Regulatory Area 2A from the IPHC to domestic agencies and REQUESTED that the IPHC Secretariat continue to support this process in the short-term, with the aim of transitioning management of the fishery to the domestic agencies at the earliest opportunity.
1. **OPENING OF THE SESSION**

   1. The 95th Session of the International Pacific Halibut Commission (IPHC) Interim Meeting (IM095) was held in Seattle, Washington, USA from 25-26 November 2019. A total of 23 members (6 Commissioners; 17 advisors/experts) attended the Session from the two (2) Contracting Parties, as well as 46 observers in person and 67 via the webcast. The list of participants is provided at Appendix I. The meeting was opened by the Chairperson, Mr Chris Oliver (USA), who welcomed participants to Seattle.

2. **ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION**

   2. The Commission ADOPTED the Agenda as provided at Appendix II. The documents provided to the IM095 are listed in Appendix III.

3. **UPDATE ON ACTIONS ARISING FROM THE 95TH SESSION OF THE IPHC ANNUAL MEETING (AM095)**

   3. The Commission NOTED paper IPHC-2019-IM095-03 Rev_1 which provided an opportunity to consider the progress made during the inter-sessional period, in relation to the direct requests for action by Commission during the 95th Session of the IPHC Annual Meeting (AM095) in 2019.

   4. The Commission AGREED to consider and revise as necessary, the actions arising, and for these to be combined with any new actions arising from the IM095.


   5. The Commission NOTED paper IPHC-2019-IM095-04 which provided the Commission with a draft update on the activities of the IPHC Secretariat in 2019, not already contained within other papers before the Commission.

   6. The Commission NOTED that the IPHC funds several Merit Scholarships to support university, technical college, and other post-secondary education for students from Canada and the USA who are connected to the Pacific halibut fishery, with a single new four-year scholarship valued at US$4,000 per year awarded every two years.

   7. The Commission NOTED that the next scholarship announcement will occur in early 2020, and that the IPHC Secretariat intends to publicise it widely among the stakeholder community.

   8. The Commission CONGRATULATED the IPHC Secretariat for the extensive communications, outreach, and educations activities carried out in 2019, which ranged from public outreach events, attending conferences and symposia, contributing expertise to the broader scientific community through participation on boards and committees, and seeking further education and training.

   9. The Commission ENCOURAGED the movement towards increased peer-reviewed journal publication of IPHC science activities.

5. **FISHERY STATISTICS (2019)**

   10. The Commission NOTED paper IPHC-2019-IM095-05 Rev_1 which provided an overview of the key fishery statistics from fisheries catching Pacific halibut during 2019, including the status of landings compared to fishery limits implemented by the Contracting Parties of the Commission.

   11. The Commission NOTED the Pacific halibut non-directed commercial discard mortality provided was the total amount including both O26 and U26 and that this breakout will be incorporated into the next revision of the paper for consideration at the 96th Session of the IPHC Annual Meeting (AM096; February 2020).

   12. The Commission NOTED the Pacific halibut non-directed commercial discard mortality levels include projected O26 removals within the adopted 2019 TCEYs. These projected values are the 2018 O26 removal estimates. The values and percentages presented included both O26 and U26. This breakout will be clarified for the AM096 paper and presentation.
13. The Commission **NOTED** the Pacific halibut that were landed in Canada in a head-off fresh condition and that the IPHC Secretariat continues to follow up with the relevant Contracting Party agency to address these regulatory breaches.

6. **STOCK STATUS OF PACIFIC HALIBUT (2019) AND HARVEST DECISION TABLE**

6.1 *Fishery-Independent Setline Survey (FISS) design and implementation in 2019*


15. The Commission **NOTED** that few expansion stations were deemed ineffective in 2019 and that because those stations are close in space to effectively fished stations, the space-time model provides good-quality prediction at these locations.

16. The Commission **NOTED** that marine mammal encounters on the FISS may be less frequent than those seen within the commercial fishery due to differences in FISS design and implementation and existing FISS avoidance protocols.

6.2 *Space-time modelling of survey data (WPUE; FISS expansion results, etc.)*

17. The Commission **NOTED** paper [IPHC-2019-IM095-07 Rev_1](#) which provided the results of the 2019 space-time modelling of Pacific halibut survey data (which includes data from several fishery-independent surveys), as well as the detailed results of the FISS expansions in IPHC Regulatory Areas 3A and 3B, and modelling results from fixed and snap gear comparison in IPHC Regulatory Area 2C. Also presented were methods for rationalising IPHC fishery-independent setline survey (FISS) following completion of the expansion series in 2019.

18. The Commission **NOTED** that in its considerations of FISS rationalisation:

   a) coefficients of variation for each Regulatory Area’s indices from a FISS design that fished all stations in 2020 would be at least as low as those estimated in recent years during the period of the expansion;

   b) omitting blocks of stations as in the presented proposal can have implications for biological sampling and environmental monitoring. The IPHC Secretariat presented an alternative minimum design based on the same number of stations but sampled at random from the full grid (“thinned” design) which preserves the geographic scope of biological and environmental data sampling in core Regulatory Areas (2C, 3A and 3B). Bias would not be a concern in indices estimated from such a thinned design due to the randomisation, and CVs for the core Regulatory Areas could also be expected to be lower. Operational costs may be higher, however, relative to a design where entire FISS regions are omitted.

19. The Commission **NOTED** that the proposed design represents a re-allocation of resources rather than a reduction, compared to the pre-expansion FISS design.

20. The Commission **NOTED** that a full design is the other end of the spectrum, representing a greater source of removals from the stock and infrastructure needs, but providing the maximum scientific return in the form of minimum bias and maximum precision. The full post-expansion design would be costly and logistically difficult to do, and the proposed design prioritises FISS effort based on scientific criteria.

21. The Commission **NOTED** that beyond 2020, the intention would be to rotate stations in unfished regions into the design in subsequent years.

22. The Commission **NOTED** that cost and revenue have not yet been accounted for, but that the long-term goal is revenue neutrality for the FISS, although with variation across years. The Secretariat sought endorsement of a minimum design in terms of station numbers for 2020, which may be supplemented with additional stations for cost or other purposes. FISS tenders need to go out in December but the design could be enhanced at the 96th Session of the IPHC Annual Meeting (AM096).
23. The Commission **REQUESTED** that information on FISS cost and revenue projections for design options for 2021 and 2022 be presented at AM096 for further consideration.

24. The Commission **NOTED** that the Secretariat would solicit tenders for the 2020 FISS in December 2019, incorporating a rationalised FISS design, with tenders due in mid-February 2020.

25. The Commission **NOTED** the modified FISS design being implemented by the IPHC Secretariat for 2020 to be able to collect the information required for stock assessment and stock distribution estimation purposes. An additional layer of FISS costs would need to be considered, to ensure long-term revenue neutrality. The Commission will have an opportunity to make ad-hoc adjustments at AM096.

6.3 **Independent peer review of the IPHC stock assessment**

26. The Commission **NOTED** paper [IPHC-2019-IM095-08](#) which provided the Commission with an opportunity to further consider the independent peer review report of the IPHC Stock Assessment for Pacific halibut.


28. The Commission **NOTED** that:
   a) the SRB will continue to act as the primary peer review mechanism for the Pacific halibut stock assessment on an annual basis (and associated data input series);
   b) the stock assessment will be undertaken in full every 3-4 years, with stock assessment updates being undertaken in the intervening years. Ideally, an external peer review would occur each time a full assessment is undertaken, with the SRB involved to the extent identified by the Commission.

6.4 **Data overview and preliminary stock assessment (2019), and draft harvest decision table (2019)**

29. The Commission **NOTED** paper [IPHC-2019-IM095-09 Rev_1](#) which provided an opportunity to consider the results of the 2019 IPHC stock assessment for Pacific halibut within the Convention Area, including data used in the assessment, and the draft harvest decision table at the end of 2019.

30. The Commission **NOTED** that the 2019 stock assessment represents the first full analysis since 2015 incorporating new data sources, improved model structure and comments from both Scientific Review Board and external peer reviews.

31. The Commission **NOTED** the modified FISS design being implemented by the IPHC Secretariat for 2020 to be able to collect the information required for stock assessment and stock distribution estimation purposes. The Commission will have an opportunity to make ad-hoc adjustments at AM096.

32. The Commission **NOTED** several clarifications related to the stock assessment and data sources on which it is based:
   a) The newly available sex-ratio data from the 2017 and 2018 commercial fisheries had a strong effect on the estimates of both female spawning biomass and fishing intensity. Both estimates increased in the assessment models in order to better fit the high fraction female observed in the commercial landings;
   b) Male Pacific halibut are not understood to be limiting to the reproductive output of the stock, due to the broadcast-spawning life-history and the relatively early maturity and relative abundance of males. Therefore, reference points are designed to measure the effects of fishing on the female spawning output.
33. The Commission **NOTED** the results of the Management Procedure calculations including:

a) the historical Interim Management Procedure based on O32 stock distribution and relative harvest rates of 1.0 for IPHC Regulatory Areas 2A-3A and 0.75 for Areas 3B-4CDE;

b) the adjustments made to the Interim Management Procedure at AM095, setting a fixed TCEY of 1.65 million pounds for IPHC Regulatory Area 2A and a share-based allocation for IPHC Regulatory Area 2B of 0.7*20% +0.3*(current year’s Interim Management Procedure’s target TCEY distribution);

c) an additional adjustment mitigating for non-directed fishery discard mortality of U26 Pacific halibut in Alaska on the TCEY in IPHC Regulatory Area 2B amounting to 0.42 million pounds at the F46% reference TCEY and 0.44 million pounds at the TCEYs from 2019 (corresponding to a projection of F40% for 2020).

34. The Commission **NOTED** that the Reference level of fishing mortality (F46%), based on the historically-estimated average of 2014-16 differs from the estimate for that period (F41%) in the 2019 assessment.

35. The Commission **NOTED** that the age distributions (inferred from length data) from recent year’s non-directed fisheries discard mortality clearly show the 2011 and 2012 year classes. As these fish continue to grow, they may further increase the proportion of this source of mortality comprising O26 Pacific halibut.

36. The Commission **AGREED** to continue to explore options for reducing discard mortality in non-directed fisheries (bycatch) as the primary means of increasing fishing opportunity for directed harvesters in IPHC Regulatory Area 4CDE, and that this has been a Commission goal for some time.

37. **NOTING** that the Interim Management Procedure uses the previous year's estimated discard mortality in non-directed fisheries as the basis for mortality projections, and that the actual estimates the following year can differ from those predictions due to changes in both the Pacific halibut stock and in the non-directed fisheries, and noting that the Commission is seeking to generate a bycatch estimate that is as accurate as possible, the Commission **REQUESTED** an additional projection be prepared for comparison at AM096 based on an average of the most recent 3-years of discard mortality in non-directed fisheries.

38. The Commission **AGREED** that the USA would attempt to gather information intersessionally for consideration at AM096, to assist in determining what factors affected the amount of discard mortality in non-directed fisheries (bycatch) in 2018 and 2019, and what factors may influence future amounts.

**U26 discard mortality from non-directed fisheries (bycatch)**

39. The Commission **NOTED** paper [IPHC-2019-IM095-10](#) with a set of options and a discussion of those options in response to:

AM095–Rec.04 (para. 66) “The Commission RECOMMENDED evaluating and redefining TCEY to include the U26 component of discard mortalities, including bycatch, as steps towards more comprehensive and responsible management of the resource, in coordination with the IPHC Secretariat and Contracting Parties. The intent is that each Contracting Party to the Treaty would be responsible for counting its U26 mortalities against its collective TCEY. This change would be intended to take effect for TCEYs established at the 2020 Annual Meeting.”

40. The Commission **NOTED** that U26 discard mortality in non-directed fisheries is a source of mortality not currently included in the TCEY; however, it is included in all stock assessment and harvest strategy calculations.

41. The Commission **NOTED** that the terms FCEY and TCEY are used in domestic catch sharing agreements/plans, and that retaining these terms would be efficient for these processes.

42. The Commission **NOTED** that the effects of U26 mortality differs from O26 mortality in its effect on fishing intensity due to the small size and young age of U26fish.

43. The Commission **NOTED** that the options provided were sufficient for consideration at AM096, and made no specific requests for further action by the Secretariat at IM095.
44. The Commission NOTED paper IPHC-2019-IM095-11 which provided a response to the Commission’s request:

   AM095–Rec.05 (para. 67) “The Commission RECOMMENDED that the IPHC Secretariat expand upon the analysis completed in IPHC-2019-AM095-INF08 “Treatment and effects of Pacific halibut discard mortality (bycatch) in non-directed fisheries projected for 2019”, to be reviewed by the SRB at its next meeting. The objective of this work is to estimate lost yield from bycatch of Pacific halibut in non-directed fisheries for the years of 1991-2018.”

45. The Commission NOTED that the commercial fishery yield gain rate (pounds gained per pound of non-directed fishery discards) has varied among historical analyses. Over the time series included in this paper, the rate has averaged 1.15 ranging from a low of 0.86 to a high of 1.39.

46. The Commission NOTED that the effects of non-directed fishery discard mortality depend on the biology and age-structure of the stock, the selectivity of the various fisheries, the relative level of fishing intensity and other factors, such that there is no single ‘exchange rate’ of directed fishery yield and non-directed fishery discard mortality.

Alternative projections for 2019 (last year) adjusted for the effects of U26 Pacific halibut discard mortality in non-directed fisheries (‘bycatch’)

47. The Commission NOTED paper IPHC-2019-IM095-12 which provided the Commission with alternative projections for 2019 (last year) for comparison with adopted mortality limits from AM095, as requested by the Commission.

48. The Commission NOTED that this paper provided an example from 2019 (last year) and therefore reviewed this item in the context of the stock assessment presentation which provided updated calculations applying the mitigation steps to the preliminary 2020 projections.

49. The Commission REQUESTED that the method described in paper IPHC-2019-IM095-12, in addition to the adjustments to the Interim Management procedure adopted at AM095, be applied as a basis for the mortality projection tool for use in the decision-making processes at AM096.

50. The Commission REQUESTED that the IPHC Secretariat prepare the following alternatives for presentation at AM096:

   a) changing the relative harvest rate for IPHC Regulatory Area 4CDE to a value of 1.0 (from 0.75) after the adjustments to the Interim Management Procedure; and

   b) comparing the adjusted management procedure (as presented, and including the U26 non-directed fishery discard mortality mitigation) further modified to add the TCEY pounds additional to the historical Interim Management Procedure calculation for IPHC Regulatory Areas 2A and 2B to the total TCEY.

Options for FISS mortality accounting in projections


52. The Commission AGREED that all FISS mortality is reported at the end of the year along with other fisheries statistics, and that all FISS mortality is included in the stock assessment and Interim Management Procedure calculations.

53. The Commission REQUESTED that the IPHC Secretariat develop the time-series table of FISS mortality by IPHC Regulatory Area for comparison of Total and Distribution mortality as sampling designs vary in the future under a rationalised approach, and provide the table as a web-based resource to be updated each for the Annual Meeting.

54. The Commission REQUESTED that ‘Option 1: The status quo (no change to current accounting’ as detailed in paper IPHC-2019-IM095-INF03, should be the accounting practice for FISS landings. Predicted commercial landings in the IPHC’s current mortality projection tool include FISS mortality.
This leaves the accounting for the mortality associated with the FISS to the managers implementing the applicable quota programs and CSPs. FISS landings have been relatively small in recent years, and have represented an average of only 3% of the total fish ticket landings (FISS and commercial combined). It does not appear that in recent year’s managers have opted to set aside quota to offset FISS mortality, and the IPHC has not provided explicit projections of FISS landings. However, the magnitude of the actual mortality accruing to the TCEY compared to the adopted TCEY in recent years does not appear to be related to years of higher or lower FISS activity. This may suggest that the current approach is not causing actual mortality (FISS and commercial combined) to exceed the adopted mortality limits, although in concept if all other sources were fully harvested this would be the case. The status quo approach does not require use of uncertain projections of FISS landings, but as this paper outlines, does not provide for transparent accounting.

7. **IPHC SCIENCE AND RESEARCH**

7.1 **Report of the 20th Session of the IPHC Research Advisory Board (RAB020)**

55. The Commission **NOTED** the Report of the 20th Session of the IPHC Research Advisory Board (RAB020) ([IPHC-2019-RAB020-R](#)), which was presented by Dr David Wilson (IPHC Executive Director) on behalf of the RAB.

56. The Commission **NOTED** that the RAB020 made two (2) recommendations to the Commission as follows:

**IPHC Closed Area**

**RAB020-Rec.01** (para. 10) The RAB AGREED that the IPHC Closed Area (Pacific Halibut Fishery Regulations 2019, Sect. 11) is not currently meeting its intended objective of protecting juvenile Pacific halibut when it is open to non-directed fisheries, and **RECOMMENDED**, in coordination with the NPMFC, that the IPHC Secretariat examine alternative management regimes for the Closed Area, and for these to be presented at the 96th Session of the IPHC Annual Meeting (AM096) in 2020.

**Hook standardisation**

**RAB020-Rec.02** (para. 33) The RAB **RECOMMENDED** that the IPHC consider standardising the FISS to use a particular model hook and to encourage each vessel to begin its FISS contract work each year with all new hooks.

7.2 **Report of the 14th and 15th Sessions of the IPHC Scientific Review Board (SRB014 and SRB015)**

57. The Commission **NOTED** the Reports of the 14th and 15th Sessions of the IPHC Scientific Review Board (SRB014: [IPHC-2019-SRB014-R](#); SRB015: [IPHC-2019-SRB015-R](#)) which were presented by Dr Sean Cox (Chairperson) on behalf of the SRB.

58. The Commission **NOTED** that the SRB015 made seven (7) recommendations to the Commission as follows:

**Discard mortality in non-directed fisheries**

**SRB015–Rec.01** (para. 10) The SRB **RECOMMENDED** that the analysis of the effects of historical discard mortality in non-directed fisheries (‘bycatch’), be interpreted with caution, as there are multiple methods for evaluating how bycatch in non-directed fisheries impact stock productivity and biomass over time. The estimated rates of bycatch impact on directed fishery changed over time in part due to the variability in recruitment and/or sublegal abundance relative to the vulnerable stock. The choice of the appropriate method will depend on how the results feed into management advice.

**SRB015–Rec.02** (para. 11) The SRB **RECOMMENDED** that, if a bycatch management strategy is a priority for the Commission, then the MSE process would be a more appropriate venue for evaluating methods of bycatch accounting for reasons outlined at SRB012:
“NOTING the request for "replay" analyses, the SRB AGREED that "what if" questions about past behaviour are not appropriate for stock assessment models because those analyses do not adequately reflect the information available at the time or information feedbacks to future decision over time. An MSE analysis, on the other hand is specifically designed to answer "what if" questions under particular future scenarios while properly accounting for stock assessment errors in response to changing information.” (IPHC-2018-SRB012-R, para. 23)

**Independent external peer review of the IPHC stock assessment**

**SRB015–Rec.03** (para. 19) The SRB RECOMMENDED that as was the case in the 2019 external peer review, any future external review would also benefit from an in-person review component. The biannual peer review that the SRB undertakes should continue as a complimentary element, thereby providing ongoing verification for the Commission.

**Pacific halibut stock assessment: 2019**

**SRB015–Rec.04** (para. 34) NOTING the discussion of recommendations arising from the external peer review of the IPHC stock assessment (Section 4), the SRB RECOMMENDED that the IPHC Secretariat:

a) Update data weighting for the 2019 assessment;

b) For SRB016:

i. evaluate the types of weightings (e.g., Dirichlet-multinomial) for compositional data;

ii. advise on the impact of data re-weighting as new information arises. This could be more sensitive as new sex-composition data are included;

iii. keep apprised of new software developments (e.g. CAPAM meeting in NZ) and report on potential future directions (e.g. if alternatives provide improved Bayesian integration or adaptations for simulation testing etc.).

**Management Strategy Evaluation: Goals, Objectives and Performance Metrics**

**SRB015–Rec.05** (para. 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).

**Management Strategy Evaluation: Dynamic reference points**

**SRB015–Rec.06** (para. 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).

**Management Strategy Evaluation: Updates to MSE framework and closed-loop simulations**

**SRB015–Rec.07** (para. 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.

59. The Commission NOTED the departure of Dr Marc Mangel from the SRB in 2019 after completing six (6) years of outstanding contributions to IPHC scientific activities. As a founding member of the Board, Dr Mangel’s contributions and advice have played a very large part in shaping IPHC science.

7.3 **IPHC 5-year Biological & Ecosystem Sciences Research Plan: update**

60. The Commission NOTED paper IPHC-2019-IM095-13 which provided a description of progress on Biological and Ecosystem Science Research by the IPHC Secretariat.

61. The Commission NOTED the primary biological research activities at the IPHC that follow Commission objectives are identified and described in the IPHC 5-Year Biological and Ecosystem Science Research
These activities are summarized in five broad research areas designed to provide inputs into stock assessment and the management strategy evaluation processes, as follows:

1) **Migration.** Studies are aimed at further understanding reproductive migration and identification of spawning times and locations as well as larval and juvenile dispersal.

2) **Reproduction.** Studies are aimed at providing information on the sex ratio of the commercial catch and to improve current estimates of maturity.

3) **Growth and Physiological Condition.** Studies are aimed at describing the role of some of the factors responsible for the observed changes in size-at-age and to provide tools for measuring growth and physiological condition in Pacific halibut.

4) **Discard Mortality Rates (DMRs) and Survival.** Studies are aimed at providing updated estimates of DMRs in both the longline and the trawl fisheries.

5) **Genetics and Genomics.** Studies are aimed at describing the genetic structure of the Pacific halibut population and at providing the means to investigate rapid adaptive changes in response to fishery-dependent and fishery-independent influences.

62. The Commission **NOTED** the Pacific halibut workshop co-organized by the IPHC Secretariat within the 2019 PICES Annual Meeting to bring together scientists from countries invested in the Pacific halibut resource and to establish plans to engage in international data sharing and collaborative research activities. These efforts will be continued in the form of a second Pacific halibut workshop under the PICES meeting umbrella in its 2020 Annual Meeting that will include topics related to climate variability and changes in species distribution in the North Pacific Ocean.

8. **MANAGEMENT STRATEGY EVALUATION**

8.1 **IPHC Management Strategy Evaluation: update**

63. The Commission **NOTED** paper IPHC-2019-IM095-14 which provided an update on the Management Strategy Evaluation (MSE) activities including definition of scale and distribution objectives, development of a framework to evaluate management procedures for distributing the TCEY, identification of management procedures to evaluate, and a summary of the MSE program of work.

64. The Commission **NOTED** the primary coastwide biological sustainability objective of maintaining the female spawning biomass above a biomass limit of 20% of unfished spawning biomass at least 95% of the time.

65. The Commission **NOTED** the primary coastwide fishery objectives to be used to evaluate management procedures, including maintaining the female spawning biomass around a proxy target biomass of 36%; limit annual changes in the TCEY; and optimise directed fishing yield.

66. The Commission **NOTED** the primary biological sustainability objective of conserving spatial population structure across Biological Regions to be used to evaluate management procedures.

67. The Commission **NOTED** the primary fishery objectives at the IPHC Regulatory Area scale to evaluate management procedures, including limit annual changes in the TCEY for each IPHC Regulatory Area; optimise the TCEY among IPHC Regulatory Areas; optimise a percentage of the coastwide TCEY among IPHC Regulatory Areas; maintain the TCEY above a minimum absolute level within each IPHC Regulatory Area; and maintain a percentage of the coastwide TCEY above a minimum level within each IPHC Regulatory Area.

68. The Commission **NOTED** that given the results from the coastwide MSE, the following elements from the scale (coastwide) component of the management procedure meet the coastwide objectives:

   a) SPR values greater than 40%;
   b) A control rule of 30:20;
   c) Constraints on the annual change in the TCEY that limit it to 15%, use a slow-up, fast-down approach, and fix the mortality limits for three-year periods.
69. The Commission NOTED the yield-per-recruit analysis and the indication that differences in productivity between Biological Regions supported reduced harvest rates in Regions 4 and 4B in the past, and that recently, equal harvest rates may be supported across Biological Regions 2, 3, and 4 based solely on productivity.

70. The Commission RECALLED paragraph 48 in IPHC-2019-SRB015-R:

“The SRB NOTED the yield-per-recruit analysis and the changes in relative estimated F0.1 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.”

71. The Commission NOTED that incorporating different relative harvest rates across regions should consider more than productivity, such as net movement in and out of each Biological Region and uncertainty in many different factors, and that it is appropriate for the SRB to review analyses related to relative harvest rates and report on the completeness of those analyses to the Commission.

72. The Commission NOTED that the MSE is the appropriate tool to evaluate distribution procedures, including relative harvest rates, against conservation and fishery objectives.

73. The Commission NOTED the various elements of the scale and distribution components of the management procedure, including those listed in Tables 5 and 6 of paper IPHC-2019-IM095-14, will be evaluated for consideration at AM097 in 2021.

74. 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 SRB017, MSAB016, and to the Commission before AM097.

75. The Commission NOTED that the SRB will review the MSE process and MSE results in September 2020, and these results including scale and distribution management procedures will be presented to the Commission at AM097 in 2021.

8.2 Reports of the 13th and 14th Sessions of the IPHC Management Strategy Advisory Board (MSAB013 and MSAB014)

76. The Commission NOTED the Reports of the 13th and 14th Sessions of the IPHC Management Strategy Advisory Board (MSAB013: IPHC-2019-MSAB013-R; MSAB014: IPHC-2019-MSAB014-R) which was presented by Mr Adam Keizer (Canada) and Dr Carey McGilliard (U.S.A).

77. The Commission NOTED that the MSAB014 made five (5) recommendations to the Commission as follows:

A review of the coastwide goals and objectives of the IPHC MSE process

MSAB014–Rec.01 (para. 34) The MSAB RECOMMENDED a coastwide fishery objective, in response to a request from the Commissioners, to maintain the spawning biomass above a target reference point of RSB36%, 50% of the time over the long-term.

Identification of goals and objectives related to distributing the TCEY

MSAB014–Rec.02 (para. 41) The MSAB RECOMMENDED the primary objectives and associated performance metrics detailed in Appendix V to be used for the evaluation of management procedures at MSAB015.

Performance metrics for evaluation

MSAB014–Rec.03 (para. 46) NOTING the current progress on evaluating coastwide fishing intensity, the MSAB RECOMMENDED that:

a) a coastwide fishing intensity SPR of 43%, with a 30:20 HCR, and with one of two constraints 1) +/-15% maximum change in total mortality, and/or 2) slow up, fast down, be used in harvest strategy development process; and
b) a range of management procedures including fishing intensity SPR of 40-46% be considered in light of implementation variability within the closed-loop simulations when investigating distribution.

Management procedures for coastwide scale

MSAB014–Rec.04 (para. 49) The MSAB RECOMMENDED that SPR values of 0.3, 0.34, 0.38, 0.40, 0.42, 0.46, and 0.50 with a 30:20 control rule be evaluated at MSAB015 along with constraints defined by a maximum change in the TCEY of 15%, a slow-up fast-down approach, and/or setting quotas every third year.

Management procedures for distributing the TCEY

MSAB014–Rec.05 (para. 56) The MSAB RECOMMENDED that the management procedures listed in Table 2 in Appendix VI be evaluated at MSAB015.

78. The Commission RECOMMENDED that the MSAB use the primary objectives and associated performance metrics detailed in Appendix V of IPHC-2019-MSAB014-R for the evaluation of management procedures.

79. The Commission NOTED the MSAB’s work on the coastwide reference level of fishing intensity of SPR 43%.

80. The Commission NOTED that relative harvest rates will be evaluated as a component of management procedures at MSAB015 and MSAB016.

81. The Commission NOTED the MSE Program of Work (2019–21) and REQUESTED that the MSAB and IPHC Secretariat continue its program of work with delivery of recommended management procedures at AM097.

9. CONTRACTING PARTY UPDATES

9.1 Canada

82. The Commission NOTED that no national report was provided by Canada for consideration at the IM095.

9.1.1 Fisheries and Oceans Canada (DFO)

83. The Commission NOTED that no update on Pacific halibut matters was received from Fisheries and Oceans Canada for consideration at the IM095.

9.2 United States of America

84. The Commission NOTED that no national report was provided by the United States of America for consideration at the IM095.

9.2.1 National Oceanic and Atmospheric Administration (NOAA) – Fisheries

a) National Marine Fisheries Service (NOAA-Fisheries)

85. The Commission NOTED that no update on Pacific halibut matters was received from NOAA-Fisheries for consideration at the IM095.

b) North Pacific Fishery Management Council (NPFMC)

86. The Commission NOTED the informal presentation from the NPFMC on Council actions related to Pacific halibut, research priorities, and abundance-based Protected Species Catch (PSC) management (ABM).

87. The Commission NOTED that NOAA-Fisheries intends to provide additional information to the Commission for AM096 regarding:

a) The North Pacific Observer Program, including differences in costs between the full and partial coverage categories, and what strategies the NPFMC is considering to lower costs;
b) mortality in non-directed fisheries that took place in Alaska during 2019.

c) Pacific Fishery Management Council (PFMC)

88. The Commission NOTED the informal presentation from the PFMC on Council actions related to Pacific halibut fisheries management in IPHC Regulatory Area 2A.

89. The Commission WELCOMED the PFMC’s commitment to transition management of Pacific halibut fisheries in IPHC Regulatory Area 2A from the IPHC to domestic agencies and REQUESTED that the IPHC Secretariat continue to support this process in the short-term, with the aim of transitioning management of the fishery to the domestic agencies at the earliest opportunity.

90. The Commission NOTED the PFMC’s recommendations in reference to IPHC-2019-IM095-PropA2 regarding fishing periods (i.e. 3 days) for the non-tribal directed commercial fishery in IPHC Regulatory Area 2A.

10. REGULATORY PROPOSALS FOR THE 2019-20 PROCESS

91. The Commission NOTED that the IPHC Secretariat and the relevant Contracting Party agencies intend to coordinate a joint review of regulatory proposals, with the aim of identifying and resolving issues and clarifying draft regulatory language in advance of AM096.

10.1 IPHC Secretariat regulatory proposals

10.1.1 IPHC Pacific Halibut Fishery Regulations: Fishery Limits (Sect. 4)

92. The Commission NOTED paper IPHC-2019-IM095-PropA1, which aimed to improve clarity and transparency of fishery limits in the IPHC Fishery Regulations, and that it would be considered in detail at AM096.

10.1.2 IPHC Pacific Halibut Fishery Regulations: Fishing Periods (Sect. 9)

93. The Commission NOTED paper IPHC-2019-IM095-PropA2, which proposed fishing periods for the commercial Pacific halibut fisheries.

94. The Commission NOTED that the IPHC Secretariat will be contacting all IPHC Regulatory Area 2A license holders (from 2017-19) to be surveyed for their preferences regarding longer fishing periods, either 2 or 3 days. Responses will be summarised and provided to the Commission for its consideration at AM096.

10.1.3 IPHC Fishery Regulations: minor amendments

95. The Commission NOTED paper IPHC-2019-IM095-PropA3, which proposed amendments to ensure clarity and consistency in the IPHC Fishery Regulations, and that it would be considered in detail at AM096.

10.1.4 IPHC Fishery Regulations: Observer/EM and clearances (Sect. 16)

96. The Commission NOTED paper IPHC-2019-IM095-PropA4, which proposed amendments to address the need for clearances when a National Oceanic and Atmospheric Administration (NOAA) Fisheries observer or electronic monitoring device is present.

10.1.5 IPHC Fishery Regulations: IPHC Closed Area (Sect. 11)

97. The Commission NOTED that the IPHC Secretariat intends to submit a regulatory proposal concerning the IPHC Closed Area (Section 11 of the IPHC Fishery Regulations) for the Commission’s consideration at the 96th Session of the IPHC Annual Meeting (AM096), in response to the Commission’s request at the 94th Session of the IPHC Annual Meeting (AM094).
10.2 **Contracting Party regulatory proposals**

98. The Commission **NOTED** that no Contracting Party regulatory proposals were received for consideration at the IM095.

10.3 **Stakeholder regulatory proposals**

99. The Commission **NOTED** that no Stakeholder regulatory proposals were received for consideration at the IM095.

10.4 **Stakeholder statements**

100. The Commission **NOTED** that no Stakeholder statements were received for consideration at the IM095, as part of paper IPHC-2019-IM095-INF01.

11. **IPHC PERFORMANCE REVIEW**

11.1 **Report of the 2nd IPHC Performance Review (PRIPHC02)**

101. The Commission **NOTED** paper IPHC-2019-IM095-16, which provided the Commission with an opportunity to consider the Report of the 2nd Performance Review of the IPHC (PRIPHC02), and direct the IPHC Secretariat accordingly.

102. The Commission **NOTED** that the PRIPHC02 was carried out over the course of 2019 via three face-to-face meetings: one in Seattle, USA (4-6 June 2019), one in New York City, USA (25 August 2019) and one in Ottawa, Canada (7-11 October 2019). The Panel held several additional tele-conferences, both among themselves, and with stakeholders. The meeting was also supported by Independent Legal and Science Experts who each dedicated additional working days to providing technical reviews and reports on specific components of the review criteria relevant to their areas of expertise.

103. The Commission **NOTED** para. 22 of the report which stated:

(para. 22) “The PRIPHC02 CONGRATULATED the Commission and Secretariat for the positive strides in response to the first performance review. Through the course of the consultations, document review and interviews, the panel saw consistent and significant improvements in transparency, availability and modernisation of documentation and background information, and heard resounding praise for this increased transparency and the movement away from previously “closed-door” and perceived “secretive” processes and decision-making.”

104. **NOTING** the 26 recommendations arising from the PRIPHC02, the Commission **REQUESTED** that the IPHC Secretariat prepare a table for consideration at AM096 which would include each recommendation, and proposed/draft 1) responsibilities, 2) timeline, 3) priorities; and 4) any initial comments of relevance. The intention will be for the Commission to review the table at AM096, modify and adopt plan for implementation moving forward.

12. **FINANCE AND ADMINISTRATION**

105. The Commission **NOTED** paper IPHC-2019-IM095-17 which provided a status update on IPHC finance and accounting processes leading up to the next meeting of the IPHC Finance and Administration Committee (FAC), scheduled for 3 February 2020.

13. **OTHER BUSINESS**

13.1 **Preparation for 96th Session of the IPHC Annual Meeting (AM096)**

106. The Commission **NOTED** paper IPHC-2019-IM095-18 which provided an opportunity to direct preparations for the 96th Session of the IPHC Annual Meeting (AM096), to be held in Anchorage, Alaska, USA from 3 to 7 February 2020.

107. The Commission **NOTED** that information concerning the meeting, including electronic versions of documents to be considered, will be published on the meeting webpages as they become available, but
no later than 30 days prior to the commencement of each meeting, in accordance with Rule 8.4 of the IPHC Rules of Procedure (2019), as follows:

- 96th Session of the IPHC Finance and Administration Committee (FAC096): 3 February 2020
- 96th Session of the IPHC Annual Meeting (AM096): 3-7 February 2020
- 90th Session of the IPHC Conference Board (CB090): 4-6 February 2020
- 25th Session of the IPHC Processor Advisory Board (PAB025): 4-6 February 2020

13.2 **IPH C 3-year meetings calendar (2020-22)**

108. The Commission **NOTED** paper IPHC-2019-IM095-19 which provided an opportunity to consider the draft IPHC meetings calendar (2020-21).

109. The Commission **NOTED** that the 15th Session of the Management Strategy Advisory Board (MSAB015) will be held on Vancouver Island, BC, Canada.


110. The report of the 95th Session of the IPHC Interim Meeting (IPHC-2019-IM095-R) was **ADOPTED** on 26 November 2019, including the consolidated set of recommendations and requests arising from IM095, provided at Appendix IV.
# APPENDIX I

**LIST OF PARTICIPANTS FOR THE 95TH SESSION OF THE IPHC INTERIM MEETING (IM095)**

## Commission Officers

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<tr>
<td><strong>Vice-Chairperson</strong></td>
<td><strong>Chairperson</strong></td>
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<td>Mr Paul Ryall (Canada)</td>
<td>Mr Chris Oliver (United States of America)</td>
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## Commissioners

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<td><strong>Canada</strong></td>
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<td>Mr Paul Ryall</td>
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<td>Mr Robert Alverson</td>
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<td>Mr Peter DeGreef</td>
<td>Mr Richard Yamada</td>
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## Advisors/experts

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<tr>
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</table>
APPENDIX II

AGENDA FOR THE 95TH SESSION OF THE IPHC INTERIM MEETING (IM095)

Date: 25-26 November 2019
Location: Seattle, Washington, USA
Venue: Grand Hyatt Seattle
Time: 09:00-17:00 daily
Chairperson: Mr Chris Oliver (USA)
Vice-Chairperson: Mr Paul Ryall (Canada)

1. OPENING OF THE SESSION (Chairperson)

2. ADOPTION OF THE AGENDA AND ARRANGEMENTS FOR THE SESSION (Chairperson)
   - IPHC-2019-IM095-01: Agenda & Schedule for the 95th Session of the IPHC Interim Meeting (IM095)
   - IPHC-2019-IM095-02: List of Documents for the 95th Session of the IPHC Interim Meeting (IM095)

3. UPDATE ON ACTIONS ARISING FROM THE 95TH SESSION OF THE IPHC ANNUAL MEETING (AM095) (D. Wilson)
   - IPHC-2019-IM095-03: Update on actions arising from the 95th Session of the IPHC Annual Meeting (AM095) (D. Wilson)


5. FISHERY STATISTICS (2019) (L. Erikson)

6. STOCK STATUS OF PACIFIC HALIBUT (2019) AND HARVEST DECISION TABLE
   6.1 Fishery Independent Setline Survey (FISS) design and implementation in 2019 (L. Erikson)
   - IPHC-2019-IM095-06: Fishery Independent Setline Survey (FISS) design and implementation in 2019 (L. Erikson)
   6.2 Space-time modelling of survey data (WPUE; FISS expansion results, etc.) (R. Webster)
   - IPHC-2019-IM095-07: Space-time modelling of IPHC fishery-independent setline survey data (R. Webster)
   6.3 Independent peer review of the IPHC stock assessment (D. Wilson for K. Stokes)
   6.4 Data overview and preliminary stock assessment (2019), and draft harvest decision table (2019) (I. Stewart)
   - IPHC-2019-IM095-09: Summary of the data, stock assessment, and harvest decision table for Pacific halibut (Hippoglossus stenolepis) at the end of 2019 (I. Stewart, A. Hicks, R. Webster & D. Wilson)
   - IPHC-2019-IM095-10: Options for the treatment of U26 discard mortality from non-directed fisheries (bycatch) within a total mortality limit (I. Stewart)
7. **IPHC SCIENCE AND RESEARCH**

7.1 Report of the 20th Session of the IPHC Research Advisory Board (RAB020) (D. Wilson)


7.2 Report of the 14th and 15th Sessions of the IPHC Scientific Review Board (SRB014 and SRB015) (SRB Chairperson)


7.3 IPHC 5-year Biological and Ecosystem Science Research Plan: update (J. Planas)


8. **MANAGEMENT STRATEGY EVALUATION**

8.1 IPHC Management Strategy Evaluation: update (A. Hicks & P. Carpi)


8.2 Report of the 13th and 14th Sessions of the IPHC Management Strategy Advisory Board (MSAB013 and MSAB014) (MASB Co-Chairpersons)

- IPHC-2019-MSAB014-R: Report of the 14th Session of the IPHC Management Strategy Advisory Board (MSAB014)

9. **CONTRACTING PARTY UPDATES**

9.1 Canada

- 9.1.1 Fisheries and Oceans Canada (DFO)

9.2 United States of America

- 9.2.1 National Oceanic and Atmospheric Administration (NOAA) – Fisheries
  - 9.2.1.1 National Marine Fisheries Service (NOAA-Fisheries)
  - 9.2.1.2 North Pacific Fishery Management Council (NPFMC)
  - 9.2.1.3 Pacific Fishery Management Council (PFMC)

10. **REGULATORY PROPOSALS FOR THE 2019-20 PROCESS**

10.1 IPHC Secretariat regulatory proposals (S. Keith)

- IPHC-2019-IM095-PropA1: Fishery Limits (Sect. 4) (IPHC Secretariat)
- IPHC-2019-IM095-PropA2: Fishing Periods (Sect. 9) (IPHC Secretariat)
- IPHC-2019-IM095-PropA4: Observer/EM and clearances (Sect. 16) (IPHC Secretariat)

10.2 Contracting Party regulatory proposals

10.3 Stakeholder regulatory proposals (S. Keith)

10.4 Stakeholder statements (S. Keith)

11. **IPHC PERFORMANCE REVIEW**

11.1 Report of the 2nd IPHC Performance Review (PRIPHC02) (D. Wilson for Terje Løbach)

12.  **FINANCE AND ADMINISTRATION**

13.  **OTHER BUSINESS**
   13.1 Preparation for 96th Session of the IPHC Annual Meeting (AM096) (S. Keith)
   13.2 IPHC 3-year meetings calendar (2020-22) (S. Keith)

14.  **REVIEW OF THE DRAFT AND ADOPTION OF THE REPORT OF THE 95th SESSION OF THE IPHC INTERIM MEETING (IM095)** (Chairperson & Executive Director)
## APPENDIX III

### LIST OF DOCUMENTS FOR THE 95TH SESSION OF THE IPHC INTERIM MEETING (IM095)

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<td>IPHC-2019-IM095-06</td>
<td>IPHC Fishery-Independent Setline Survey (FISS) design and implementation in 2019 (L. Erikson, R. Webster)</td>
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<td>IPHC-2019-IM095-09 Rev_1</td>
<td>Summary of the data, stock assessment, and harvest decision table for Pacific halibut (<em>Hippoglossus stenolepis</em>) at the end of 2019 (I. Stewart, A. Hicks, R. Webster &amp; D. Wilson)</td>
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<td>IPHC-2019-IM095-10</td>
<td>Options for the treatment of U26 discard mortality from non-directed fisheries (bycatch) within a total mortality limit (I. Stewart)</td>
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**Contracting Party updates**

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<td>IPHC-2019-IM095-NR02</td>
<td><strong>United States of America</strong>: NOAA – National Marine Fisheries Service (NMFS); North Pacific Fishery Management Council (NPFMC); Pacific Fishery Management Council (PFMC) none provided</td>
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**Regulatory proposals for 2020**

**IPHC Secretariat regulatory proposals for 2020**

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<td>IPHC-2019-IM095-PropA2</td>
<td>Fishing Periods (Sect. 9) (IPHC Secretariat)</td>
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<td>IPHC-2019-IM095-PropA3</td>
<td>IPHC Fishery Regulations: minor amendments (IPHC Secretariat)</td>
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**Contracting Party regulatory proposals for 2020**

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**Other Stakeholder regulatory proposals for 2020**

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**Reports from IPHC subsidiary bodies**

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<td>IPHC-2019-CB089-R</td>
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**Information papers**

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<td>IPHC-2019-IM095-INF01</td>
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Options for FISS mortality accounting in projections
(I. Stewart, L. Erikson)
APPENDIX IV
CONSOLIDATED SET OF RECOMMENDATIONS AND REQUESTS OF THE 95TH SESSION OF THE
IPHC INTERIM MEETING (IM095) (25-26 NOVEMBER 2019)

RECOMMENDATIONS

Management Strategy Evaluation
IM095-Rec.01 (para. 78) The Commission RECOMMENDED that the MSAB use the primary objectives and associated performance metrics detailed in Appendix V of IPHC-2019-MSAB014-R for the evaluation of management procedures.

REQUESTS

Space-time modelling of survey data (WPUE; FISS expansion results, etc.)
IM095-Req.01 (para. 23) The Commission REQUESTED that information on FISS cost and revenue projections for design options for 2021 and 2022 be presented at AM096 for further consideration.

Data overview and preliminary stock assessment (2019), and draft harvest decision table (2019)
IM095-Req.02 (para. 37) NOTING that the Interim Management Procedure uses the previous year's estimated discard mortality in non-directed fisheries as the basis for mortality projections, and that the actual estimates the following year can differ from those predictions due to changes in both the Pacific halibut stock and in the non-directed fisheries, and noting that the Commission is seeking to generate a bycatch estimate that is as accurate as possible, the Commission REQUESTED an additional projection be prepared for comparison at AM096 based on an average of the most recent 3-years of discard mortality in non-directed fisheries.

Alternative projections for 2019 (last year) adjusted for the effects of U26 Pacific halibut discard mortality in non-directed fisheries (‘bycatch’)
IM095-Req.03 (para. 49) The Commission REQUESTED that the method described in paper IPHC-2019-IM095-12, in addition to the adjustments to the Interim Management procedure adopted at AM095, be applied as a basis for the mortality projection tool for use in the decision-making processes at AM096.

IM095-Req.04 (para. 50) The Commission REQUESTED that the IPHC Secretariat prepare the following alternatives for presentation at AM096:

a) changing the relative harvest rate for IPHC Regulatory Area 4CDE to a value of 1.0 (from 0.75) after the adjustments to the Interim Management Procedure; and

b) comparing the adjusted management procedure (as presented, and including the U26 non-directed fishery discard mortality mitigation) further modified to add the TCEY pounds additional to the historical Interim Management Procedure calculation for IPHC Regulatory Areas 2A and 2B to the total TCEY.

Options for FISS mortality accounting in projections
IM095-Req.05 (para. 53) The Commission REQUESTED that the IPHC Secretariat develop the time-series table of FISS mortality by IPHC Regulatory Area for comparison of Total and Distribution mortality as sampling designs vary in the future under a rationalised approach, and provide the table as a web-based resource to be updated each for the Annual Meeting.

IM095-Req.06 (para. 54) The Commission REQUESTED that ‘Option 1: The status quo (no change to current accounting’ as detailed in paper IPHC-2019-IM095-INF03, should be the accounting practice for FISS landings. Predicted commercial landings in the IPHC’s current mortality projection tool include FISS mortality. This leaves the accounting for the mortality associated with the FISS to the managers implementing the applicable quota programs and CSPs. FISS
landings have been relatively small in recent years, and have represented an average of only 3% of the total fish ticket landings (FISS and commercial combined). It does not appear that in recent year’s managers have opted to set aside quota to offset FISS mortality, and the IPHC has not provided explicit projections of FISS landings. However, the magnitude of the actual mortality accruing to the TCEY compared to the adopted TCEY in recent years does not appear to be related to years of higher or lower FISS activity. This may suggest that the current approach is not causing actual mortality (FISS and commercial combined) to exceed the adopted mortality limits, although in concept if all other sources were fully harvested this would be the case. The status quo approach does not require use of uncertain projections of FISS landings, but as this paper outlines, does not provide for transparent accounting.

**Management Strategy Evaluation**

IM095-Req.07 (para. 81) The Commission **NOTED** the MSE Program of Work (2019–21) and **REQUESTED** that the MSAB and IPHC Secretariat continue its program of work with delivery of recommended management procedures at AM097.

**Pacific Fishery Management Council (PFMC)**

IM095-Req.08 (para. 89) The Commission **WELCOMED** the PFMC’s commitment to transition management of Pacific halibut fisheries in IPHC Regulatory Area 2A from the IPHC to domestic agencies and **REQUESTED** that the IPHC Secretariat continue to support this process in the short-term, with the aim of transitioning management of the fishery to the domestic agencies at the earliest opportunity.

**Report of the 2nd IPHC Performance Review (PRIPHC02)**

IM095-Req.09 (para. 104) **NOTING** the 26 recommendations arising from the PRIPHC02, the Commission **REQUESTED** that the IPHC Secretariat prepare a table for consideration at AM096 which would include each recommendation, and proposed/draft 1) responsibilities, 2) timeline, 3) priorities; and 4) any initial comments of relevance. The intention will be for the Commission to review the table at AM096, modify and adopt plan for implementation moving forward.