North Pacific Fisheries Commission

6th Meeting of the Joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS) REPORT

13–14 February 2025

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North Pacific Fisheries Commission
6th Meeting of the Joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS)

13–14 February 2025
(Virtual)

REPORT

Agenda Item 1. Introductory items

1.1 Opening of the meeting

1. The 6th meeting of the joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS) was held online via WebEx on 13–14 February 2025. The meeting was attended by Members from Canada, China, Japan, the Republic of Korea, the Russian Federation, Chinese Taipei, the United States of America, and the Republic of Vanuatu. The Pew Charitable Trusts (Pew) attended as an observer. Dr. Larry Jacobson participated as an invited expert. The meeting was chaired by Mr. Derek Mahoney (Canada) and Dr. Toshihide Kitakado (Japan), the co-Chairs of the SWG MSE PS.

2. Mr. Mahoney opened the meeting and welcomed the participants.

3. Mr. Alex Meyer was selected as rapporteur.

1.2 Adoption of agenda

4. The agenda was adopted without revision (Annex A). The List of Documents and List of Participants are attached (Annexes B, C).

1.3 Meeting logistics

5. The Science Manager, Dr. Aleksandr Zavolokin, outlined the meeting arrangements.

Agenda Item 2. Overview of the outcomes of previous NPFC meetings

2.1 SWG MSE PS05

6. Dr. Kitakado (hereafter “co-Chair”) presented the outcomes and recommendations from the SWG MSE PS05 meeting.

2.2 COM08

7. The Science Manager presented the outcomes from the 8th Commission meeting of relevance

to the SWG MSE PS. He highlighted the adoption of Conservation and Management Measure (CMM) 2024-08 for Pacific Saury, including the adoption of the interim HCR and interim biological reference points, and the setting of the total allowable catch (TAC).

2.3 SSC PS13 and 14

8. The co-Chair presented the outcomes and recommendations from the 13th and 14th meetings of the Small Scientific Committee on Pacific Saury (SSC PS).

Agenda Item 3. Overview of MSE

3.1 Roles of SWG MSE PS in the NPFC process

3.2 Basic principles of MSE

9. The co-Chair presented an overview of the management strategy evaluation (MSE) process (NPFC-2024-SWG MSE PS05-IP01), including the role of the SWG MSE PS, the basic principles of an MSE, the merits of an MSE, and the need to define meta-rules to deal with exceptional circumstances in the future.

Agenda Item 4. Review of results of the adopted HCR

4.1 TAC for 2024

10. The SWG MSE PS noted the TAC set for 2024 in CMM 2024-08.

4.2 HCR-generated TAC for 2025

11. The co-Chair presented the TAC for 2025 computed by the SSC PS by applying the interim HCR for Pacific saury adopted by NPFC in April 2024 under CMM 2024-08. Based on inputs from the assessment, TAC2025 = ($B2024*F_{MSY}*(B_{2024}/B_{MSY})$ 75,741 mt. Based on the adopted HCR, the TAC will be constrained to change by no more than 10% from one year to the next. The constrained 2025 TAC would be 0.9 x 225,000 = 202,500 mt.

12. The SWG MSE PS reviewed the application and endorsed the TAC calculation.

13. China expressed concern about the potential uncertainty in the long-term stock projections caused by scaling issues in the BSSPM model, which influences the outcomes of the interim HCR. China noted that, in the hypothetical case the biomass of Pacific Saury estimated by the stock assessment stays at its current level and/or if the scaling issue cannot be resolved in future stock assessments, then based on the adopted interim HCR, the calculated TAC with a 10% MAC will be progressively reduced to 78,453 mt by 2034. After this point, it will begin to increase, as the calculated TAC with the 10% MAC will become smaller than the unconstrained TAC (75,741 mt). This TAC trend significantly differs from the simulation testing results based on the base case scenario presented during the SWG MSE PS05 meeting, which could substantially influence the expectations of fishery managers and stakeholders regarding stock

status and management measures.

14. Other Members noted the analysis from China was not reviewed by the SSC PS and is premature to be used as the basis of management advice. It was pointed out that the TAC calculated for 2025, as well as the trends in the hypothetical case presented by China, were not substantially different from the simulation testing robustness case where there was reduced stock productivity due to persistent unfavorable environmental conditions.

Agenda Item 5. Discussion toward development of management procedures (MPs) as a mid-term goal

5.1 Management objectives

5.2 Operating models

5.3 Management procedures

5.4 Performance indicators and simulation

15. The SWG MSE PS held initial discussions on additional elements that could be considered when developing a full MP and compiled them into a table (Annex D). The table needs to be continuously refined as the full MP development progresses.

Agenda Item 6. Other matters

16. No other matters were raised.

Agenda Item 7. Timeline and future process

7.1 Timeline

7.2 Future process with assistance of SSC PS

7.3 Workplan till SSC PS15&16 and SWG MSE PS07 meetings

17. The SWG MSE PS developed a timeline, with future tasks, for 2025–2027 (Annex E).

18. The invited expert noted the intensive workload planned for the SSC PS and the SWG MSE PS and encouraged them to simplify their work to develop a full MP to the extent possible.

Agenda Item 8. Recommendations to the Commission

19. The SWG MSE PS recommends that the Commission note the TAC calculated for 2025 (paragraph 11).

20. The SWG MSE PS recommends that an invited expert be invited to the next SWG MSE PS meeting.

21. The SWG MSE PS recommends that the Commission endorse the holding of SWG MSE PS07 for one or two days between SC10 and COM10 in a virtual or hybrid format (Annex E).

22. The SWG MSE PS recommends that the Commission reaffirm the importance of including scientists, managers, and stakeholders at future meetings to facilitate communication and completion of this important work.

Agenda Item 9. Adoption of report

23. The SWG MSE PS06 Report was adopted by consensus.

Agenda Item 10. Close of the meeting

24. The co-Chairs thanked the participants for their cooperation, the Secretariat for organizing the meeting, the rapporteur for his support, and the invited expert for his advice.

25. The SWG MSE PS thanked the co-Chairs for their leadership.

26. The invited expert expressed his gratitude for the opportunity to work with the NPFC.

27. The meeting closed at 10:40 on 14 February 2025, Tokyo time.

Annex A – Agenda
Annex B – List of documents
Annex C – List of participants
Annex D – A draft table of elements that could be considered when developing a full MP in the MSE for Pacific saury
Annex E – Timeline and tasks for developing a full MP for the Pacific saury MSE

Annex A

Agenda

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- 2.2 COM08
- 2.3 SSC PS13 and 14

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- 5.2 Operating models
- 5.3 Management procedures
- 5.4 Performance indicators

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- 7.1 Timeline
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- 7.3 Workplan till SSC PS15&16 and SWG MSE PS07 meetings

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Agenda Item 10. Close of the meeting

Annex B

List of Documents

MEETING INFORMATION PAPERS

Document Number	Title
NPFC-2025-SWG MSE PS06-MIP01	Meeting Information
NPFC-2025-SWG MSE PS06-MIP02	Provisional Agenda
NPFC-2025-SWG MSE PS06-MIP03	Annotated Indicative Schedule

INFORMATION PAPERS

Document Number	Title
NPFC-2025-SWG MSE PS06-IP01	Overview of the outcomes of previous NPFC meetings

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Annex D

A draft table of elements that could be considered when developing a full MP in the MSE for Pacific saury

Items	Development of interim HCR	Development of full MP
Management objectives	• Primary (recovery) • Secondary (avoid risk) • Tertiary (catch)	The three main objectives will be used as previously agreed. Members may also consider additional objectives relating to the following. • Categories: Stock Status (e.g. B, PGK, Abundance), Safety (Avoiding Blim), Yield (catch) stability, socio-economic (incl. consideration of aspirations of SIDS) and ecological/ecosystem • Achieve robustness under climate changes.
Operating models	BSSMP • Age: aggregated over life • Space: combined over EEZ & CA • Time: annual	Age-structured models (SS3, other state-space models) • Age: 0/1 • Space: so far combined • Time: so far annual (seasonal/monthly) • Include key uncertainties (M, S-R, selectivity…) May consider some spatial elements (i.e. distribution shift) for investigating spatial management (depending on progress on new modelling)
HCRs and MPs	• Set an annual TAC • Just HCR assuming availability of unbiased estimates	• Set an annual TAC • Model-based (incl. assessment) or empirical MPs or combined • May need to consider spatial allocation particularly for juvenile protection • Evaluate advantages and disadvantages of constraints such as existing MAC and a minimum TAC (particularly in light of scale and climate uncertainties)
Main input (incl. assessment)	• Estimates of key reference points from BSSPM analyses	• Estimates of key reference points from BSSPM or others • Address uncertainty in estimates
Time lag btw data & implementation	• 1-yr (survey) • 2-yrs (fisheries CPUE)	• Use the most recent CPUE and survey information from the current fishing year? • Consider the use of an in-season adjustment if possible
Climate impacts	• Considered as robustness case	• Routinely use as part of reference models or robustness testing • Explicitly link climate effects and biological parameters that affect stock size & productivities
Meta rules and others	• No definition of exceptional circumstances	• Develop definition of exceptional circumstances

Annex E

Timeline and tasks for developing a full MP for the Pacific saury MSE

Meeting	Date	Task	Note
COM09	24-27 Mar 2025	Review outcomes and recommendations from SWG MSE PS 06	In-person (hybrid)
Intersessional work (SSC-PS)	April-June 2025	Development of age-structured models (as a part of work on conditioning of OMs)	Virtual
WG NSAM (SSC-PS)	July 2025	Review further progress on age-structured modelling	In-person (hybrid)
SSC PS15	Sep 1-5, 2025	• Review abundance indices etc. • Review progress on new assessment models • Review progress on review of HCR works (specifically issues on the retrospective patterns and scale uncertainty in BSSPM) • Prepare for demonstration of empirical HCRs (if possible)	Virtual
Intersessional work (SSC-PS)	Oct-Nov 2025	• Review further progress on age-structured modelling • Review further progress on evaluation of HCRs (specifically issues on BSSPM)	Virtual
SSC PS16	Dec 11-14, 2025	• Update BSSPM analyses and update HCR-generated TAC for 2026 • Review progress on new assessment models and finalize a set of models and specification (relevant to the mid-term MSE work as conditioning of operating models) • Try to finalize specification of OMs for meeting the mid-term tasks on MSE	In-person (hybrid)
SWG MSE PS 07	Jan/Feb 2026	• Prepare for simple demonstration of MPs including empirical one • Review OMs and develop list of candidate MPs • Dialogue between managers, scientists and stakeholders	?
COM10	2026	Review outcomes and recommendations from SWG MSE PS 07	In-person (hybrid)
SC PS17-18, WG NSAM	2026	Conduct technical works	
SWG MSE PS 8-9	Summer 2026 Winter 2027	• Finalize evaluation of performance of candidate MPs • Recommendations of a few MPs to COM11	In-person (hybrid)
COM11	2027	Adoption of CMM on MP?	In-person (hybrid)