North Pacific Fisheries Commission

10th Commission Meeting
REPORT

14–17 April 2026

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North Pacific Fisheries Commission
10th Commission Meeting

14–17 April 2026
Osaka, Japan

FINAL REPORT

Agenda Item 1. Opening of the Meeting

1a. Welcome Address

1. The 10th Meeting of the North Pacific Fisheries Commission (NPFC) was held in a hybrid format, with participants attending in-person in Osaka, Japan, or online via WebEx, on 14–17 April 2026, and was attended by Members from Canada, China, the European Union (EU), Japan, the Republic of Korea, the Russian Federation, Chinese Taipei, the United States of America (USA), and Vanuatu, and Panama as a Cooperating Non-Contracting Party (CNCP). The United Nations Food and Agriculture Organization (FAO), the North Pacific Anadromous Fish Commission (NPAFC), the Deep Sea Conservation Coalition (DSCC), the Pew Charitable Trusts (Pew), World Wildlife Fund (WWF), the International Monitoring, Control and Surveillance (IMCS) Network, the Australian National Centre for Ocean Resources and Security (ANCORS), the Ocean Foundation, the Ocean Governance Institute (OGI), the Marine Stewardship Council (MSC), the Natural Resources Defense Council (NRDC), and Greenpeace International attended as observers. The meeting was opened by Mr. Shingo Ota (Japan), who served as the Commission Chair.

2. The Chair thanked the Secretariat for organizing this series of meetings and welcomed the participants to Osaka again. The Chair noted the entry into force of the Agreement under United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas beyond National Jurisdiction (BBNJ Agreement) in January 2026 and reiterated the importance of the NPFC adopting effective Conservation and Management Measures (CMMs), particularly for bottom fishing. He also noted the progress the Commission has made by adopting interim harvest control rules (HCR) for Pacific saury, but noted that this year, the SC was unable to reach consensus on the Pacific saury stock assessment, and he emphasized the urgent need to develop a full Management Strategy Evaluation (MSE) process, including exceptional circumstance provisions. The Chair hoped that the Commission would be able to reach consensus on enhanced CMMs for the protection of other NPFC species as well. In addition, the Chair noted the adoption of the NPFC Transshipment Observer Program (TOP) in 2025, which, together with the NPFC Vessel Monitoring System (VMS) and high seas boarding and inspection (HSBI), should enhance the NPFC's monitoring, control, and surveillance (MCS) capacity. Finally, the Chair requested

Members' cooperation and flexibility and expressed his hope for a fruitful meeting. The Chair's full statement is attached as Annex A.

3. China made an opening statement. China pointed out the need, when considering the setting of catch limits, to take into consideration the extraordinary cooperation shown by the Chinese fishing industry, the heavy burden of high oil prices on fishing-related industries, and the need to take decisions based on science, including actual catch levels. China also noted the importance it places on NPFC's continued development and highlighted the extensive voluntary contributions it has made to that end. The full statement is attached as Annex B.

4. Japan made an opening statement. Japan emphasized the concerning signs in the Pacific saury, chub mackerel, and Japanese sardine stocks, the importance of these stocks to Japan as a coastal Member, and the need to ensure that NPFC measures do not undermine coastal Members' longstanding efforts to conserve NPFC stocks.

1b. Appointment of Rapporteur

5. Mr. Alex Meyer was selected as rapporteur.

1c. Adoption of Agenda

6. The Commission adopted its agenda (Annex C). The List of Documents and List of Participants are attached (Annexes D, E).

1d. Meeting Arrangements

7. The Executive Secretary, Dr. Robert Day, outlined the meeting arrangements.

Agenda Item 2. Membership of the Commission

2a. Status of the Membership

8. The Republic of Korea, the Depositary of the NPFC, reported on the status of the Convention (NPFC-2026-COM10-IP01). Since the previous Commission meeting, the total number of Members remains at nine.

2b. CNCP applications

9. The Commission noted that no applications for CNCP status have been received.

Agenda Item 3. Report from the Secretariat

10. The Executive Secretary presented a summary of the Commission's intersessional activities and work programs carried out during the 2025/2026 period and the proposed Secretariat work plan for the 2026 operational year (NPFC-2026-SR).

11. With regard to the ongoing work to develop a new database for scientific data, the Commission requested that the Secretariat consider how to ensure that the NPFC data management systems would be able to accommodate the data collection requirements under a new CMM for minimum standards for the collection, reporting, verification and exchange of data in NPFC, which the Commission is currently developing.

Agenda Item 4. Performance Review of the Commission – overview of progress

12. The Executive Secretary presented an update on the status of the implementation of the Performance Review Recommendations (NPFC-2026-COM10-IP09).

13. The Commission noted the ongoing work to address the recommendations from the Performance Review Panel and the progress made in the intersessional period. The Commission tasked the Secretariat to update the status of the implementation of the Performance Review Panel Recommendations based on the outcomes of this meeting. The Commission agreed to continue to review and provide updated input on the Performance Review Panel Recommendations through the intersessional process initiated in 2025–2026.

Agenda Item 5. Report of the 10th Scientific Committee meeting

5a. Review of the SC10 Report and response to COM09 taskings

14. After a brief introduction by the Chair of the Scientific Committee (SC), Dr. Janelle Curtis (Canada), the SC Vice-Chair, Dr. Jie Cao (China), presented a summary of the outcomes of the 10th SC meeting and the meetings of its subsidiary bodies (NPFC-2026-SC10-Final Report & NPFC-2026-COM10-IP12) on behalf of the SC Chair.

15. The SC Chair added some closing remarks. She expressed her confidence in the abilities of Dr. Cao, if endorsed as the new SC Chair. She also recommended that the Commission meet formally with the chairs of the SC subsidiary bodies and the SC heads of delegation during this and future Commission meetings to discuss potential tasks and activities. In the context of the BBNJ Agreement, the SC Chair noted room for biodiversity conservation, fisheries and potentially other activities on seamounts throughout the Convention Area and believed that the BBNJ Agreement provides a good incentive for the NPFC to start working on the application of spatial optimization to prioritize areas for biodiversity conservation and fisheries. Lastly, she noted that although the collection of more data through a regional observer program (ROP) would strengthen the SC's stock assessments, the SC has limited capacity to provide more input on ROP design given its many other responsibilities.

16. The Commission thanked the SC Chair for her great dedication over her three terms.

17. The Commission considered the request for clarity on whether the SC can provide "advice"

while capturing the majority and minority views of Members consistent with Article 10 (3) of the NPFC Convention. Some Members believed that the SC could provide "advice" while capturing the majority and minority views, as provided for under the Convention and the Rules of Procedure. Other Members believed that the SC could not provide "advice" without consensus and could only capture the majority and minority views. The Commission noted that nevertheless, the Commission is to make decisions based on the discussions of the SC and it can take into account majority and minority views as part of that.

18. The Commission considered the request for guidance from the SC on making catch and effort data publicly available. The Commission agreed to make the information in the Annual Summary Footprint publicly available subject to the provisions of the NPFC Data Sharing and Data Security Protocol.

5b. Adoption of revised SC Terms of Reference

19. The Commission reviewed the proposed revisions to the SC Terms of Reference (SC10 report, Annex N). The Commission adopted the revised SC Terms of Reference (Annex F).

5c. Selection of SC Chair and Vice-Chair

20. The Commission endorsed the recommendation of the SC to select Dr. Jie Cao (China) to serve as the SC Chair.

21. Canada nominated Dr. Mackenzie Mazur (Canada) for the position of SC Vice-Chair. The Commission agreed to select Dr. Mazur to serve as the SC Vice-Chair.

5d. Adoption of the SC10 Report and Recommendations

22. The Commission considered the recommendation from the SC to develop a general framework for the application of the precautionary approach and conduct this work through a small working group that is established under the Commission, is composed of managers and scientists, and is led by managers. The Commission reaffirmed the importance of implementing the precautionary approach but believed that it should be applied on a case-by-case basis. Some Members had reservations about establishing the proposed small working group, noting the added burden of establishing another small working group and the tendency for discussions on this topic to be largely conceptual and unlikely to produce many practical outcomes.

23. The SC Chair clarified that the SC has tasked its subsidiary bodies that do not have stock assessments in place to provide science-based options for operationalizing the precautionary approach and the scientific rationales behind those options.

24. The Commission adopted the report and the recommendations of SC10, aside from the recommendation in paragraph 22 above (Annex G).

Agenda Item 6. Report of the 9th Technical and Compliance Committee meeting

6a. Review of TCC09 Report and response to COM09 taskings

25. The Chair of the TCC, Ms. Alisha Falberg (USA), summarized the outcomes of the 9th TCC meeting (NPFC-2026-TCC09-Final Report) for discussion by the Commission.

26. The Commission considered the request from the TCC for guidance on the appropriate procedure to follow when there is a lack of consensus at the TCC on whether or not to include a vessel on the Provisional IUU Vessel List. Some Members pointed out that paragraph 16 of CMM 2024-02 states the TCC shall "adopt" a Provisional IUU Vessel List and were of the view that adoption requires consensus. They believed, therefore, that a vessel cannot be included on the Provisional IUU Vessel List unless there is consensus to do so. Other Members were of the view that because this is a "provisional" list, it is less formal in nature and consensus is not needed for its adoption. They believed that a vessel could be included on the Provisional IUU Vessel List even if there is no consensus, provided the majority and minority views are captured, as stipulated in Article 11, paragraph 3 of the Convention and considering past practice at TCC. The Commission noted that there was no consensus interpretation among Members but that a solution could potentially be found by amending the language of the CMM and tasked the Small Working Group on Planning and Development (SWG PD) to review this measure intersessionally.

27. The Commission considered the request for guidance from the TCC regarding the treatment of climate change as a standing agenda item. Many Members noted the importance of discussions on climate change, while acknowledging that no papers have been submitted to the three most recent TCC meetings and that no discussions have taken place. The Commission agreed that climate change should be maintained as a standalone agenda item on an as needed basis, rather than as a standing agenda item. The Commission agreed that if climate change-related discussions and developments have occurred at the Commission or its subsidiary bodies that are relevant to TCC, the Secretariat should prepare a paper with a summary thereof and submit it to the TCC for its discussions.

6b. Adoption of IUU Vessel List for 2026

28. The Commission reviewed the Provisional IUU Vessel List provided to COM10 by TCC09, which contained one Chinese vessel and one Russian vessel. The Commission noted that there had been a lack of consensus at TCC on the inclusion of the Russian vessel on the list.

29. Regarding the Chinese vessel on the Provisional IUU Vessel List, China expressed its

commitment that when a purse seine fishing vessel encounters a mixed catch of Japanese sardine and small chub mackerel, the fishing vessel will be required to conduct random sampling at least from 4 plates (later to be 4 bags) for each haul and acquire the best estimation of the mixture rate of each species. Based on the above sampling, catch amount for each species shall be recorded on its logbook on a daily basis, along with the estimated average mixture rate for chub mackerel, the total number of these mixture bags of the day. Sampled mixture bags are required to be clearly marked together with the date of catch. The fishing vessel shall ensure the consistency of data among its electronic logbook, paper logbook and transshipment reports. In the course of HSBI, upon request by inspectors, the fishing vessel is required to facilitate the inspection of these mixture bags on board. At the landing site, the Chinese authority will continue to strengthen the conducting of random landing inspections/samplings to assess the accuracy of the estimation by its fishing vessels of species mixing rates for these mixtures bags.

30. The Commission was satisfied with the commitment expressed by China and agreed not to include the vessel on the final IUU Vessel List. The Commission requested China to report at TCC10 on its follow-up actions to implement the above commitment. Some Members requested that China also report at TCC10 on follow-up actions to the commitments it expressed under paragraphs 49–50 of the COM09 Report.

31. Canada highlighted its concerns regarding the Russian vessel on the Provisional IUU Vessel List. Canada pointed out that it had identified several very concerning violations through an HSBI event, specifically unrecorded and unreported bycatch and discards. Varying responses from Russia indicated that the e-log system was not able to record bycatch or the bycatch was reported through other channels. Canada noted that Russia had indicated some of the incidental catch on board was taken outside the Convention Area but there was no reporting to document that. Canada also noted that this matter helped identify opportunities for further enhancing the NPFC's CMMs, including reporting onboard catch upon entry into the Convention Area, ensuring e-log systems on Members' vessels are set up to meet NPFC CMMs, and additional work to ensure Members understand the requirements around ensuring that mobile transmitting units (MTUs) are tamper-proof.

32. Russia pointed out that it has presented detailed materials on each identified violation, thoroughly investigated each case, and provided comprehensive explanations on them. Russia believed that it had been as constructive as possible, including in informal consultations with Canada and the USA. Russia explained that during its detailed investigations, some violations were confirmed, but these were violations that took place in the Russian EEZ. Sanctions were imposed for these violations and the fines were fully paid by the vessel owner. Russia believed that it had taken necessary and adequate measures to hold the vessel owner accountable and

prevent recurrence of similar violations as the flag Member and believed the vessel should not be included on the final IUU Vessel List. Russia emphasized that it values cooperation with the NPFC HSBI framework and expressed its openness to cooperate with all Members, including on the improvement of annual reporting and e-logbooks, to ensure full compliance with domestic regulations and NPFC CMMs.

33. Considerable discussion was held regarding the Russian Federation's flagged vessels that had been proposed to the NPFC IUU Vessel List. During these discussions, Members noted the need to further clarify the Russian Federation's responsibilities as they pertain to accurate reporting requirements.

34. The Russian Federation confirmed that improvements to the Russian Federation's electronic catch reporting system now allows for the recording of all bycatch (in particular anadromous and shark species), both retained and released/discarded. In this regard, the Russian Federation committed to reporting all bycatch in a complete manner in accordance with NPFC obligations moving forward. The Russian Federation committed to ensure all records pertaining to bycatch and discards of all species onboard of fishing vessels will be made available to Members during inspections upon request in accordance with HSBI procedures. The Commission acknowledged that the CMM 2025-07 amendments adopted this year, which will require vessels to report catch on-board trawlers upon entering the Convention Area, will help to provide clarity to inspectors on the location where species were caught.

35. Some Members noted that it would be appropriate for TCC and SC to further consider potential mechanisms to address the at-sea processing of NPFC fisheries resources to a state that makes them impossible to inspect by species and weight.

36. Based on the above discussions, the Commission agreed to not include the Russian vessel on the final IUU Vessel List.

37. As recommended by the TCC, the Commission agreed to amend the current NPFC IUU Vessel List by removing the photographs of the legitimate, authorized Chinese vessels (LU RONG YUAN YU Nos. 101, 102, 103, 105, 106, 108 and 109) and tasked the Secretariat to amend any incorrect text descriptions on the current NPFC IUU Vessel List that were based on the photographs of the legitimate, authorized Chinese vessels.

38. The Commission adopted the NPFC IUU Vessel List for 2026 (Annex H).

6c. Adoption of Final Compliance Report

39. The TCC Chair presented the Provisional Compliance Report which assessed each Member's

compliance with all obligations in Annex II of CMM 2025-13, and attached an executive summary that summarized outstanding issues, general feedback on the process, and identified data gaps. She explained that the TCC assessed 23 areas of potential non-compliance identified by the Secretariat and that all other areas were assumed to be compliant. She further explained that the TCC could not reach consensus on the assessment of 9 areas of potential non-compliance.

40. Regarding Vanuatu's vessel marking issue (CMM 2023-01, paragraph 5), Vanuatu followed up on the verbal explanation it provided at TCC09 and submitted a written explanation on the actions it has taken in response to the potential non-compliance issue. Based on the information provided, the Commission determined this case to be "Compliant."

41. Regarding China's potential non-compliance with CMM 2025-03, paragraph 9, CMM 2025-07, paragraph 6, and CMM 2025-11, paragraph 6, the Commission noted that China has fulfilled its duty as a flag Member to impose sanctions on the vessel and has committed to implementing improved measures for recording mixed bags of chub mackerel and Japanese sardine catch. The Commission determined these cases to be "Compliant."

42. Regarding Russia's potential non-compliance with CMM 2025-03, paragraph 9, and CMM 2025-07, paragraph 6, the Commission noted Russia's explanation of the improvements it has made subsequently to its electronic catch reporting system and welcomed the future commitments it made regarding the reporting of bycatch and the provision of these records during inspections. Nevertheless, the Commission determined that for the compliance assessment period, these cases should be assessed as "Non-Compliant."

43. Regarding Russia's potential non-compliance issue related to transshipment observer obligations (CMM 2025-03, paragraphs 26, 29, 31), the Commission determined these cases to be "Unable to be assessed," which was the majority view, as it had been supported by four Members. These Members believed that there were ambiguities in the CMM drafting and that it was unclear whether these obligations apply only to the Convention Area or also to Members' EEZs. Three Members had supported a status of "Non-compliant." They believed that these obligations clearly applied to both the Convention Area and Members' EEZs and had serious concerns with other Members' interpretations to the contrary. One Member had supported a status of "Compliant." This Member noted that there was ambiguity in the definition of "an observer" in the CMM and noted Russia's explanation that it had deployed independent inspectors who were equivalent to observers.

44. Regarding Russia's potential non-compliance issues related to the recording and reporting of shark catches (CMM 2023-14, paragraphs 9 and 10), the Commission noted the corrective

actions Russia has taken and the improvements it is making to its e-logbook system and determined these cases to be "Compliant."

45. Regarding Russia's potential non-compliance issues related to anadromous fish (CMM 2024-16, paragraphs 5 and 11), the Commission noted the additional written explanations and documentation that Russia had provided, including that the violations took place in the Russian EEZ and that sanctions had been imposed on the vessel owner and paid. The Commission determined these cases to be "Compliant."

46. The Commission added revisions to the Provisional Compliance Report based on the above discussions and adopted the final Compliance Report (Annex I).

47. Some Members emphasized when a Member has been notified of cases of its potential non-compliance, it is important for the Member to take timely actions and provide follow-up information in writing by the requisite deadlines in accordance with the procedures set out in 2025-13 For The CMS. Such information is essential for ensuring an effective assessment process.

48. The Commission noted that in accordance with CMM 2025-13, the Final Compliance Report shall include all responses taken and to be taken to address areas of non-compliance, as well as an Executive Summary with recommendations or observations from the TCC. The Commission agreed to conduct a more thorough review of these aspects when developing the Final Compliance Report at its next meeting.

6d. Adoption of the TCC09 Report and Recommendations

49. The Commission adopted the report and the recommendations of TCC09 (Annex J) with the understanding that the definition of historical existing levels and the draft CMMs discussed at TCC09 would be discussed under Agenda Item 8.

6e. Consideration of other TCC issues identified during TCC09 or by COM10 meeting

50. The Commission reviewed proposed updates, based on the discussions at TCC09, to the list of obligations to be assessed as part of the Compliance Monitoring Scheme (CMS) in Annex II of CMM 2025-13 (updated as NPFC-2026-TCC09-IP10 Rev.1).

51. The Commission agreed to add paragraphs 34 and 37 of CMM 2024-09 to the list of obligations to be assessed as part of the CMS in Annex II of CMM 2025-13 (Annex K).

52. Members were unable to reach consensus on the other potential additions and deletions that were considered at TCC.

53. Members reiterated the different interpretations they expressed at TCC regarding the applicability of some of the provisions of CMM 2025-17 On NPFC Transshipment Observer Program to Members' EEZs. Some Members were of the view that the CMM contained ambiguities in this regard, and considered that the reporting requirements under the CMM applied to both the Convention Area and Members' EEZs, but that the observer deployment requirements only applied to the Convention Area. These Members were of the view that the CMM needed to be amended to address these issues and that in the meantime, the related provisions under the CMM should not be included in the list of obligations to be assessed as part of the CMS. Other Members were of the view that the CMM did not contain ambiguities in its scope and that all provisions applied to both the Convention Area and Members' EEZs. These Members emphasized that the CMM had been agreed to and adopted by consensus and were concerned about the suggestion of excluding certain obligations from the CMS simply because they are challenging for Members to implement.

54. Some Members pointed out that they would face legal and technical challenges in permitting regional observers to conduct MCS-related activities in their areas of jurisdiction.

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55. The Commission noted the legal and technical challenges some Members would face in implementing CMM 2025-17 On NPFC Transshipment Observer Program. The Commission agreed to task the TCC Small Working Groups (SWGs) to work intersessionally to review CMM 2025-17 and CMM 2025-03 On Transshipments to consider potential implementation of the TOP, while avoiding the creation of MCS loopholes.

56. The USA nominated Mr. Conor Sullivan (USA) for the vacant SWG on Ops (SWG Ops) Co-Lead position. The Commission agreed to select Mr. Sullivan to serve as the SWG Ops Co-Lead.

57. The Secretariat updated the TCC Work Plan based on the Commission's discussions (NPFC-2026-TCC09-WP10 (Rev.4)).

58. The Commission reviewed the TCC Work Plan and added minor amendments. The Commission adopted the revised TCC Work Plan (Annex L).

Agenda Item 7. Report of the 8th Finance and Administration Committee meeting

7a. Review of FAC Report

59. The Chair of the Finance and Administration Committee (FAC), Mr. Haruo Tominaga (Japan), summarized the outcomes of the 8th FAC meeting (NPFC-2026-FAC08-Final Report) for discussion by the Commission.

7b. Adoption of the proposed budget for 2026/2027 and 2027/2028

60. The Commission adopted the proposed budgets for 2026/2027 (Annex M) and 2027/2028 (Annex N) as submitted by the FAC08 (NPFC-2026-FAC08-WP01 Rev.1) along with the associated assessed contributions, noting that the assessed contribution amounts for 2027/2028 would be updated based on GDP and catch history at that time. The Commission confirmed that the budget for 2027/2028 could be subject to review at the 2027 annual meeting.

7c. Adoption of the FAC08 Report and Recommendations

61. The Commission adopted the report and the recommendations of FAC08 (Annex O).

7d. Consideration of other FAC issues identified during FAC08 or by COM10 meeting

62. As requested by the FAC, the Commission considered potential amendments to the Financial Regulations to address the lack of clarity regarding the treatment and execution of payments to cover costs such as those for the operation of the TOP. One Member noted the need for more time to consider potential amendments to the Financial Regulations to address this issue, expressing concern that such amendments could be interpreted as being linked to Member contributions, which would have wide-ranging implications.

63. The Commission noted the lack of consensus among Members and agreed to defer discussions on this issue to FAC09.

Agenda Item 8. Conservation and Management Measures

8a. Review of the amendments to existing CMM's and any new CMMs

Review of CMM 2025-05 for Bottom Fisheries and Protection of Vulnerable Marine Ecosystems in the Northwestern Pacific Ocean

64. The USA presented a proposal to amend CMM 2025-05 for Bottom Fisheries and Protection of Vulnerable Marine Ecosystems in the Northwestern Pacific Ocean (NPFC-2026-COM10-WP01). The USA explained that the best available scientific information for North Pacific armorhead (NPA) and splendid alfonsino (SA) in the Convention Area indicates that both stocks are currently subject to unsustainable exploitation rates and depleted biomass levels. The USA noted the importance of managing these fisheries consistent with the precautionary approach. Noting these stock status concerns as well as other concerns about bycatch and vulnerable marine ecosystems, the USA has therefore recommended the establishment of temporary measures to ensure that vessels refrain from targeting NPA and SA until the SC recommends catch and effort limits consistent with long-term sustainable use objectives.

65. Japan pointed out that NPA has unique biological characteristics unlike other bottom fish and has tended to show high recruitment every 10–20 years. Furthermore, the Commission has adopted adaptive management measures for NPA in 2017. As for SA, Japan pointed out that, to address concerns of overfishing, the Commission has adopted mesh size regulations to reduce catches of juvenile fish and implemented total fisheries closures from November to January each year.

66. Japan suggested to reduce Members' catch of SA to 50% of its annual highest catch recorded since the establishment of the NPFC as a provisional and precautionary measure until the SC completes an assessment of the SA stock.

67. Some Members shared the concerns raised by the USA regarding the NPA and SA stocks but expressed their preference for the Japanese proposal, as they considered a complete temporary closure of the fisheries to be disproportionate. Other Members expressed support for the US proposal, believing it to be measured and precautionary, and questioning the effectiveness of the measures proposed by Japan.

68. The DSCC, the NRDC, and Pew reiterated their longstanding concerns of overfishing of SA and NPA, and continued degradation of biodiversity by these bottom trawl fisheries. They were of the view that these fisheries were inconsistent with the Convention, the United Nations Fish Stocks Agreement, and the BBNJ Agreement, and contrary to the commitments made by NPFC Members to manage bottom fisheries under UNGA Resolutions. They welcomed the support expressed by some Members for the US proposal and hoped that it would be adopted. In addition, they drew the Commission's attention to NPFC-2026-COM10-OP02, a letter submitted on behalf of 122 scientists that calls on the Commission to take steps toward stronger protection of the Emperor Seamount Chain, based on the best available science and current understanding of the long-term impacts of bottom fishing in the region. The letter has since garnered more than double the number of signatories since it was presented at COM09, underscoring the growing scientific consensus on the need for urgent and effective measures in this area.

69. The FAO Deep-Sea Fisheries (DSF) Project noted that discussion of this issue centered on the application of the precautionary approach and the balancing of scientific advice and socioeconomic considerations. The FAO DSF Project expressed support for the SC's recommendation for the development of a general framework for the application of the precautionary approach and establishment of a small working group to that end, and believed that this would facilitate discussion and adoption of appropriate measures for stocks facing conditions like those of SA and NPA.

70. Korea reiterated the need to target the recovery of the NPA and SA stocks by focusing on the active fishery and suggested a two-year closure of these fisheries that would expire after COM12 unless otherwise decided by the Commission. Korea explained that the suggestion was intended to strike the right balance between contributing to the protection and recovery of the stocks and establishing a clear time-bound framework to encourage progress by the SC on the relevant stock assessments.

71. The Commission considered the various proposals but could not reach consensus on amending CMM 2025-05 for Bottom Fisheries and Protection of Vulnerable Marine Ecosystems in the Northwestern Pacific Ocean.

72. The Commission tasked the SC with the following:
    (a) Drawing on the preliminary analyses already done in the SSC BF-ME on the stock dynamics of NPA and SA, as well CPUE indices which were recommended to COM10 by the SC as trend indicators, provide precautionary advice on catch levels that would be sufficient to address the current scientific concerns identified for NPA and SA. The preliminary analyses might include: Depletion model analysis for North Pacific armorhead in the Southern Emperor-Northern Hawaiian Ridge seamounts, NPFC-2025-SSC BFME06-WP18; Yield per recruit and spawning biomass per recruit analyses for splendid alfonsino (*Beryx splendens*) in the North Pacific, NPFC-2024-SSC BFME05-WP09.
    (b) Complete the stock assessments for North Pacific armorhead and splendid alfonsino according to the work plan, by 2027 if possible. The SC should provide advice on management measures, including the measures outlined in paragraph (c), in the absence of a stock assessment, consistent with the precautionary approach.
    (c) Recommend any management measures other than catch limits that may be beneficial to the NPA and SA populations, particularly management options aimed at reducing the capture of splendid alfonsino before maturity, including through selectivity-related or operational measures or additional seasonal / area closures.
    (d) Provide a summary analysis of the relationship between NPA monitoring survey results and other stock status metrics such as per recruit metrics, fishing mortality, or biomass trend indicators to help the commission in understanding the efficacy of the high recruitment identification as a management tool and further explore potential contribution to management advice provided by the NPA monitoring surveys.
    (e) Review the updated impact assessments of Members' bottomfish fisheries, which should be prepared taking into account input from SSC BF-ME on improvements to the draft assessments, and provide a concise summary to the Commission on whether the current fisheries present a risk to the ongoing recovery of seamount fish stocks or benthic marine ecosystems.

73. The DSCC, Pew and NRDC drew the Commission's attention to its observer paper, NPFC-2026-COM10-OP03, which provided recommendations for the updated bottom fisheries impact assessments that relevant Members have committed to deliver to SC11. In particular, they highlighted the recommendations that the impact assessments should include comprehensive mapping of the areas where bottom fishing is permitted combined with predictive modeling, habitat-suitability modeling, and/or species distribution modeling; identification of areas where deep-water species and vulnerable marine ecosystems are likely to better survive the impacts of climate change and ocean acidification; and application of the precautionary approach and reverse burden of proof in assessing the risk of significant adverse impacts. They emphasized that all of these recommendations are consistent with the NPFC Convention, Annex 2 of CMM 2025-05, and the UNGA resolutions related to bottom fisheries in Areas Beyond National Jurisdiction.

74. The USA supported the recommendations in NPFC-2026-COM10-OP03.

Review of CMM 2025-07 For Chub Mackerel

75. Japan presented a proposal, co-sponsored by Korea, to amend CMM 2025-07 For Chub Mackerel (NPFC-2026-COM10-WP02 (Rev.1)). Japan explained that the proposed amendments are intended to update the CMM with 2026 catch limits that are based on the advice of SC10 and the NPFC chub mackerel stock assessment. The catch limits are aimed at achieving the 70th percentile of spawning stock biomass (SSB) in 2036 with a probability of at least 50% and preventing fishing operations in the Convention Area from undermining the conservation efforts by coastal Members.

76. Canada presented a proposal to amend CMM 2025-07 For Chub Mackerel (NPFC-2026-COM10-WP07). Canada explained that the proposed amendments are intended to firstly ensure that trawl vessel expansion limits are in place for Members with significant catch, pointing out that the current measure limits the EU and China to a specific number of authorized trawlers but does not include a limit for other Members. Secondly, Canada noted that catch from outside the Convention Area may be intermingled with catch from NPFC waters and explained that the proposed amendments would introduce a requirement to report catch on board upon entry/exit to and from the Convention Area, making it possible to differentiate between NPFC and other fisheries resources on vessels to support effective MCS activities.

77. Pew expressed support for the Japanese and Canadian proposals to amend CMM 2025-07 and suggested that they be merged. Pew suggested the addition of the following as the penultimate paragraph "The Scientific Committee shall endeavor to consider the establishment of a

management procedure to be formulated through an MSE process by the 13th Commission meeting in 2029. The Commission shall fund an external expert to support the process." Pew also welcomed the completion of an NPFC chub mackerel stock assessment in 2025 but noted that work to develop a Management Procedure for chub mackerel has stalled as Members have concerns about personnel and funding capacity while the Pacific saury MSE process is still ongoing. Pew suggested that, to alleviate some of those concerns, the Commission could consider turning the Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS) into a more general MSE working group addressing multiple species.

78. Canada worked with Members in the margins to provide an updated proposal that only sought to add a requirement for catch on entry reporting (NPFC-2026-COM10-WP07 (Rev.2)). The Commission added some editorial changes (NPFC-2026-COM10-WP07 (Rev.3)) and endorsed the proposed amendments.

79. Japan presented an updated proposal (NPFC-2026-COM10-WP02 (Rev.2)) that it had worked with Members in the margins to develop. The updated proposal added blue mackerel to the scope of the measure, changed the management period from fishing season to calendar year, and added provisions for the carry-over and transfer of unused catch limits.

80. The Commission noted that there is no NPFC stock assessment for blue mackerel and that the scope of this CMM should continue to be limited to chub mackerel. The Commission also recognized that harvests of chub mackerel are often mixed with that of blue mackerel and that the mixing rate between the two species should be taken into account when determining catch limits for chub mackerel. The Commission agreed that references to blue mackerel could be included for provisions on the determination of the chub mackerel catch limits.

81. Japan presented a revised proposal (NPFC-2026-COM10-WP02 (Rev.3)) that reflected the above discussion and incorporated the proposed amendments in the Canadian proposal to the same CMM.

82. The Commission reviewed the proposal and added further changes (NPFC-2026-COM10-WP02 (Rev.4)). The Commission adopted the proposed amendments to CMM 2025-07 For Chub Mackerel (Annex P). The Commission noted that the CMM is intended to apply to fisheries targeting chub mackerel.

83. The Commission endorsed the recommendation from SC10 to require Members to submit gear specific catch-at-age / catch-at-length data by all Members including accessory devices used for fishing purposes for both the Convention Area and EEZs, so that the TWG CMSA can complete Task 1 from the Commission in Annex T of the COM09 Report. The Commission

requested that the Chair of TWG CMSA circulate a letter explaining how such data from the 2025/2026 fishing season should be submitted to TWG CMSA12.

84. Canada expressed concerns about the condition of the chub mackerel stock and the ability of the adopted CMM to deliver sustainable outcomes. Canada expressed its intention to submit a proposal to COM11 for establishing an MSE process for chub mackerel.

85. Canada presented a proposal to introduce bycatch exclusion strategies for NPFC pelagic trawl fisheries under CMM 2025-07 For Chub Mackerel, 2025-08 For Pacific Saury and 2025-11 For Japanese Sardine, Neon Flying Squid and Japanese Flying Squid (NPFC-2026-COM10-WP08 (Rev.2)). Canada explained that NPFC trawl fisheries targeting pelagic species are at risk of intercepting sharks, marine mammals, and other vulnerable, large non-target species (collectively "megafauna") and that such incidents have in fact been increasing. The proposed amendments would implement gear modification requirements to reduce the number of incidentally caught megafauna and require mandatory reporting on all incidental megafauna bycatch and interactions.

86. Pew expressed support for the Canadian proposal.

87. Canada worked with Members in the margins to update the proposal (NPFC-2026-COM10-WP08 (Rev.3)).

88. The Commission noted that there was general agreement with the likely benefit from use of the proposed devices but that some Members would need to change their domestic law to enable use of those devices. Therefore, Canada agreed to withdraw its proposal and present it again at COM11.

Review of CMM 2025-08 For Pacific Saury

89. Japan presented a proposal to amend CMM 2025-08 For Pacific Saury (NPFC-2026-COM10-WP03). Japan explained that the proposed amendments update the CMM with the 2026 catch level based on the adopted interim harvest control rule (HCR) for Pacific saury and require Members to promptly notify the Executive Secretary of the starting date of any diversion of part of their catch limit for areas under their jurisdiction to their own catch of Pacific saury in the Convention Area.

90. Korea presented a proposal to amend CMM 2025-08 For Pacific Saury (NPFC-2026-COM10-WP05). Korea explained that the proposed amendments update the CMM with the 2026 catch level based on the adopted interim HCR for Pacific saury and add preambular text that reflects the ongoing work by the SC and the SWG MSE PS and the need to maintain an effective,

predictable and practicable interim management framework pending further development of the management procedure and related scientific work.

91. Chinese Taipei presented a proposal to amend CMM 2025-08 For Pacific Saury (NPFC-2026-COM10-WP06). Chinese Taipei explained that substantial uncertainties persist in the current BSSPM stock assessments for Pacific saury stemming from a variety of factors and that the omission of these factors from the current assessment model may have resulted in an overly pessimistic and unrealistic view of the stock status. Chinese Taipei believed that achieving a full recovery to B_{tar} within a five-year timeframe may therefore be practically unfeasible and explained that it had proposed amendments to the interim HCR in Annex I of the CMM to reflect this.

92. Several Members expressed concern with the proposal to amend one of the management objectives in the agreed interim HCR, noting that the potential impact of such a change had not been assessed at the SC or the SWG, and that work to develop a full-fledged MSE is ongoing.

93. Canada and the USA expressed concern with the deviation from the interim HCR given the state of the Pacific saury stock. They reminded other Members that when the interim HCR was adopted, the selection of a 10% maximum allowable change (MAC) rather than a larger MAC was done as a part of a compromise to address Members' socio-economic concerns. They also pointed out that the adopted TAC would be much higher than the unconstrained annual catch level for 2026 estimated by the latest stock assessment.

94. Japan worked with Members in the margins to develop an updated proposal (NPFC-2026-COM10-WP03 (Rev.1)). The updated proposal incorporated aspects of the Korean proposal. It also sought to accommodate strong socio-economic concerns raised by some Members through a temporary deviation from the interim HCR and the setting of a total allowable catch (TAC) that is based on a 5% reduction from the 2025 level.

95. Chinese Taipei expressed the need for further consideration for its socio-economic difficulties and proposed the inclusion of a provision for the carry-over of 10% of the unused portion of the 2026 catch. Some Members expressed concern with the inclusion of such a provision and believed that there was no scientific justification for it. Noting the lack of support from other Members, Chinese Taipei withdrew its proposal.

96. The Commission reviewed the proposal and added further changes (NPFC-2026-COM10-WP03 (Rev.2)). The Commission adopted the proposed amendments to CMM 2025-08 For Pacific Saury (Annex Q).

Review of CMM 2025-11 For Japanese Sardine, Neon Flying Squid, And Japanese Flying Squid

97. Japan presented a proposal to amend CMM 2025-11 For Japanese Sardine, Neon Flying Squid and Japanese Flying Squid (NPFC-2026-COM10-WP04). Japan explained that its domestic stock assessment for Japanese sardine indicates that the stock biomass has declined and the fishing mortality ratio has increased, resulting in a sharp increase in the exploitation rate since 2022, while the recruitment indices in the recent three years also indicate sharp declines. Furthermore, although Japan has reduced its domestic TAC for Japanese sardine, the limits on the number of authorized vessels under CMM 2025-11 have not been effective in controlling fishing pressure on Japanese sardine in the Convention Area. Japan has therefore proposed to 1) separate sardines and squid, 2) create a stand-alone CMM for sardine and introduce a catch limit for sardines, and 3) create a stand-alone squid CMM with the text essentially unchanged from CMM 2025-11 except with references to sardine removed.

98. Japan worked with Members in the margins to develop an updated proposal (NPFC-2026-COM10-WP04 (Rev.1)).

99. The Commission added some further changes (NPFC-2026-COM10-WP04 (Rev.2)). The CMM endorsed the proposed amendments to CMM 2025-11 For Japanese Sardine, Neon Flying Squid and Japanese Flying Squid and adopted a standalone CMM for Japanese sardine (Annex R) and another standalone CMM for neon flying squid and Japanese flying squid (Annex S). The Commission noted that the Japanese sardine CMM is intended to apply to fisheries targeting Japanese sardine but not Japanese sardine bycatch.

100. The EU expressed its view that as a principle, it is not a good practice for an RFMO to set catch limits based on domestic stock assessments without having first conducted scientific assessment by the NPFC SC.

Review of CMM 2024-02 to Establish a List of Vessels Presumed to Have Carried Out Illegal, Unreported and Unregulated Fishing Activities in the Convention Area of the North Pacific Fisheries Commission

101. The Commission reviewed the TCC09-endorsed amendments to CMM 2024-02 (NPFC-2026-TCC09-WP05 (Rev.2)). The Commission adopted the proposed amendments (Annex T).

102. The Commission also considered amendments to paragraph 16a) of CMM 2024-02 to provide greater clarification around the procedure for the Provisional IUU Vessel List, as discussed under agenda item 6, but could not reach consensus.

103. Some Members also expressed concerns about the low threshold at the NPFC for the

nomination of vessels to the draft IUU vessel list compared to other regional fisheries management organizations (RFMOs) due to the wording of the CMM and pointed out that discussions related to potential IUU vessel listings that would have been sufficiently addressed in the compliance evaluation process have taken up a disproportionate amount of time at TCC meetings.

104. The Commission tasked the TCC SWG PD to review the entirety of the CMM To Establish A List Of Vessels Presumed To Have Carried Out Illegal, Unreported And Unregulated Fishing Activities In The Convention Area Of The North Pacific Fisheries Commission taking into account the practice of other RFMOs.

Review of CMM 2023-01 on Information Requirements for Vessel Registration

105. The Commission reviewed the TCC-endorsed amendments to CMM 2023-01 On Information Requirements for Vessel Registration (NPFC-2026-TCC09-WP07). The Commission adopted the proposed amendments (Annex U).

Proposed new CMM on Scientific Research Activities

106. The USA and Korea presented a joint proposal for the establishment of a CMM on Scientific Research Activities (NPFC-2026-TCC09-WP04 (Rev.2)). They explained that they had presented the proposal at TCC09 and updated the proposal following the meeting based on Members' comments.

107. Some Members believed that the definition of "fisheries-related scientific research activities" under paragraph 2 of the proposed CMM was overly broad and expressed concern that under the current wording a wide range of non-fisheries-related research could be included in the CMM's scope. They also believed that several provisions in the proposed CMM would create undue burdens that would disincentivize Members from conducting research.

108. Noting Members' reservations, the Commission agreed to defer discussion of the proposal for the establishment of a CMM on Scientific Research Activities. The Commission tasked the SC with developing a definition for "fisheries-related research activities."

Proposed New CMM on Minimum Standards for the Collection, Reporting, Verification and Exchange of Data

109. The EU presented a proposal for the establishment of a CMM On Minimum Standards for the Collection, Reporting, Verification, and Exchange of Data (NPFC-2026-TCC09-WP06 (Rev.3)). The EU explained that it had presented the proposal at TCC09 and that the TCC had reviewed and updated the proposal but that several substantive issues remained unresolved despite productive discussions.

110. The EU worked with Members in the margins to provide an updated proposal (NPFC-2026-TCC09-WP06 (Rev.4)).

111. The Commission reviewed the proposal and added further revisions (NPFC-2026-TCC09-WP06 (Rev.5)). Members shared the understanding that the language "shall, as appropriate" in paragraph 1 reflects the fact that some data collection fields are mandatory and some are optional. They agreed that the collection of data in fields marked as "Mandatory" in the Annexes of the CMM are obligatory, while collection of data in fields marked as "Optional" is not obligatory.

112. The Commission adopted the CMM On Minimum Standards for the Collection, Reporting, Verification, and Exchange of Data (Annex V).

Proposed New CMM on Minimum Standards for Port State Measures

113. The TCC Chair presented a proposal for a CMM on Minimum Standards for Port State Measures, which had been drafted by the TCC SWG PD and was further developed by the TCC but contained a number of issues that remained unresolved (NPFC-2026-TCC09-WP08 (Rev.2)).

114. The Commission considered the potential technological solutions for collecting and managing the data required under the proposed measure and noted that a hybrid solution, whereby Members could use either the Global Information Exchange System (GIES) or notification to the Secretariat, could accommodate all Members' needs.

115. The TCC Chair worked with Members in the margins to develop an updated proposal (NPFC-2026-TCC09-WP08 (Rev.3)).

116. The Commission reviewed the proposal and added further changes (NPFC-2026-TCC09-WP08 (Rev.4)).

117. The Commission adopted a CMM on Minimum Standards for Port State Measures (Annex W).

Historic Existing Level

118. The Commission discussed the definition of historical existing level and the options considered at the TCC. The Commission recalled the preferences expressed by Members at the TCC, including one Member that had suggested that a three-year timeframe for defining historical existing levels was too short.

119. The Commission considered a new option, whereby historical existing level would be defined as the maximum number of vessels authorized to fish for each species by a flag Member between the year when the NPFC was established (2015) and the year when the provision to restrict the expansion in the number of authorized vessels was adopted in the relevant CMM.

120. One Member expressed continued reservation over the proposed options and expressed concern about potential implications for other wide-ranging issues, such as potential allocation discussions in the future. This Member proposed another option, whereby the historical existing level is defined as "The maximum number of vessels authorized to fish for each species by a flag Member between the year when the catch history firstly started, supported by catch data for the flag Member in the area to which the Convention applies, and the year when the provision to restrict the expansion in the number of authorized vessels was adopted in the relevant CMM."

121. The Commission could not reach consensus on defining historical existing level. The Commission agreed to hold further discussions intersessionally through the TCC SWG Ops. The Commission tasked the TCC SWG Ops to consider all options presented at TCC09 and COM10 (NPFC-2026-TCC09-IP11, NPFC-2026-COM10-IP14, NPFC-2026-COM10-IP15) and to provide the outcomes of its discussions to TCC10 and COM11. The Commission requested that Members submit their historical data regarding their vessel authorizations, in accordance with the requisite Excel template, no later than one week before the next meeting of the SWG Ops. The Commission agreed that Members that had already submitted these data need not submit them again. The Commission agreed that Members may also submit additional data if they wish.

8b. Review of measures with specified review provisions

122. The Commission reviewed a table listing the review provisions of existing NPFC CMMs (NPFC-2026-COM10-IP11). The Commission noted that most of the necessary reviews have been undertaken at TCC09 and COM10. Due to time constraints, the Commission had no opportunity to review CMM 2024-15 but agreed to review this CMM at the 2027 annual meeting. The Commission also agreed to defer the review in paragraph 10 of CMM 2024-16 to the 2027 annual meeting.

8c. Review of existing resolutions and any new Resolutions

123. The Commission did not review any existing or new Resolutions.

Agenda Item 9. Report of the 7th Meeting of the joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS)

124. The Science Co-Chair of the joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS), Dr. Toshihide Kitakado (Japan), summarized the outcomes of the 7th SWG MSE PS meeting (NPFC-2026-SWG MSE PS07-Final Report – Annex X).

125. The Commission noted the annual catch level calculated for the 2026 fishing year using the interim HCR for Pacific saury under CMM 2025, while noting that there had been a lack of endorsement from China at SWG MSE PS07.

126. The Commission agreed that invited experts would continue to be invited to the next SWG MSE PS.

127. The Commission discussed the possibility of a new schedule for completing the full MSE development one year later than originally planned in light of the workload involved and capacity constraints. The USA expressed reservations about delaying the full MSE given some Member concerns about the interim HCR and their requests to not apply it as agreed, and said that would need to be discussed in the context of negotiations on the Pacific saury measure. The Commission endorsed the corresponding meeting schedule as appeared as option 2 in NPFC-2026-SWG MSE PS07-Final Report, after adopting the revisions to the Pacific saury CMM under agenda item 8.

128. The Commission reaffirmed the importance of participation by scientists, managers, and stakeholders in future SWG MS PS meetings.

129. Pew expressed the view that there would not be time to revise the interim HCR and develop a full MSE process at the same time, noting that when the interim HCR was adopted it was intended to be a short-term strategy and there was an understanding that the SWG MSE PS would develop a full-fledged MSE. Pew believed that many of the concerns raised by Members about the stock assessment and the interim HCR could be addressed through the MSE process. Pew also pointed out that observations of increased catch-per-unit-effort (CPUE) in a certain area did not necessarily mean the improved health of the stock, and that this could be due to hyperstability resulting from factors such as a change in the species range or improving fisher skill in finding fish.

130. WWF expressed deep concern regarding the decline not only in the Pacific saury stock but also the chub mackerel and Japanese sardine stocks. WWF noted that while there was no consensus on Pacific saury stock assessment results, the results from the individual

assessments conducted by China, Japan, and Chinese Taipei indicated that stock levels are very low and below B_{MSY}. WWF emphasized that the current HCR is based on agreement among Members, including managers, and pointed out that if there is the possibility that, under the HCR's 10% maximum allowable reduction in the TAC, the target cannot be achieved, then a reduction of more than 10% should be considered. WWF emphasized that the NPFC must take responsible action to demonstrate that it is an RFMO that can manage fisheries sustainably.

131. Chinese Taipei emphasized that the Pacific saury stock has not worsened and is in the process of recovering. Chinese Taipei pointed out that whether the current TAC is maintained or reduced would determine the speed of recovery, not whether the stock would or would not continue to recover.

Agenda Item 10. Cooperation with Other Organizations

132. The Executive Secretary presented a summary of the Commission's efforts and progress in liaising with other relevant international organizations during 2025/2026 (NPFC-2026-COM10-IP08). Further details are provided in the sub-agenda items below.

10a. PICES

133. The Executive Secretary highlighted the extensive engagement by NPFC scientists in PICES processes, the regular interaction between the NPFC and PICES secretariats, support in SC10 and FAC08 for NPFC co-sponsorship of the upcoming Small Pelagic Fish symposium, and support expressed by the Commission previously for the project Basin Scale Events and Coastal Impacts (BECI).

134. The Commission noted that an update on recent and upcoming planned joint activities between NPFC and PICES from the Executive Secretary of PICES, Dr. Sonia Batten, had been submitted to the meeting (NPFC-2026-COM10-OP05).

10b. NPAFC

135. The NPAFC Executive Director, Mr. Yoshikiyo Kondo, thanked the NPFC for its adoption of CMM 2024-16 On Anadromous Fish at COM08, the implementation of which has been of great support to the NPAFC. He also provided an update on NPFC-NPAFC cooperation (NPFC-2026-COM10-OP10). Many items in the five-year NPFC-NPAFC Work Plan are completed or ongoing. Key remaining items are the exchange of data and information between the two organizations through a data sharing platform and the voluntary sharing of Pacific salmon bycatch data from NPFC fishing vessels. Terms of Reference for the NPAFC/NPFC SharePoint have been agreed. NPAFC has also updated its IUU vessel list and will discuss it further at its annual meeting in May. In addition, NPAFC is holding two upcoming workshops

of potential interest to the NPFC: a Workshop on Interactions between Fisheries and Anadromous Fish in the North Pacific High Seas and a Workshop on Interactions Between Salmon, Ecosystems, and Climate: From Mechanisms to Predictive Models. NPAFC remains committed to continuing its close cooperation with NPFC, which is essential to the NPAFC's efforts to fulfil its purpose.

10c. FAO: Deep Sea Fisheries project and FIRMS

136. Ms. Eszter Hidas (FAO, DSF Project) provided an update on the Common Oceans Deep Sea Fisheries Project (NPFC-2026-COM10-OP06). In 2022–2026, the DSF Project reviewed the implementation of the International Guidelines for the Management of Deep-sea Fisheries in the High Seas (DSF Guidelines), produced an introductory e-learning course on the management of DSF in areas beyond national jurisdiction (ABNJ), and established the Deep-sea Fisheries Technical Forum. It also held various workshops and symposia, including the Workshop on the Application of the Precautionary Approach to the Management of DSF stocks, the Symposium on Applying the Ecosystem Approach to Fisheries Management in ABNJ, workshops with the DSF industry, a global workshop on deepwater sharks, a workshop on cross-sectoral interactions with DSF, and a workshop on incorporating climate change in RFMO considerations. In addition, the DSF Project has advanced work on development of a shark identification key for the NPFC Convention Area, supporting and improving data-limited stock assessments, and mapping of DSF in the ABNJ. A notable activity was the holding of the NPFC/FAO workshop on the operationalization of the precautionary approach. Key messages from the workshop are that operationalizing the precautionary approach is most effective when taken on as a joint SC-Commission responsibility, a working group dedicated to the operationalization of the precautionary approach is highly effective in allowing informal scientist-manager exchanges and fostering common understanding, the DSF Project is available to provide support until the end of May 2027, and a guidance document, targeting primarily managers, is under development, with publication expected by September 2026. Looking ahead, the DSF Project will hold a workshop on developing guidance for RFMOs and a workshop on RFMO communication and outreach.

137. The Executive Secretary added that NPFC has been cooperating with FAO and its ABNJ project since the beginning of the Commission and has contributed as one of the project partners. Furthermore, the Project Steering Committee met at the NPFC headquarters in March 2026. The NPFC headquarters will also host an FAO/ICES workshop on data-limited stock assessments on 20–24 April 2026. In addition, the NPFC and FIRMS signed a Partnership Arrangement in 2023 and the Secretariat has provided the necessary information for the FIRMS databases on stocks and fisheries and will continue to update it annually.

10d. WCPFC

10e. ISC

138. The Executive Secretary highlighted the ongoing collaboration between the NPFC and WCPFC Secretariats and his own virtual attendance of the WCPFC Regular Commission Meeting.

10f. IATTC

139. The Executive Secretary presented the draft Memorandum of Understanding (MoU) between the NPFC and the Inter-American Tropical Tuna Commission (IATTC; NPFC-2026-COM10-WP10). He explained that the draft MoU has been reviewed by IATTC and Members and that the current draft incorporates comments from both.

140. The Commission reviewed and endorsed the draft MoU. The Commission tasked the Secretariat to forward the draft MoU to IATTC for its further consideration (Annex Y).

10g. SPRFMO

141. The Executive Secretary explained that NPFC and the South Pacific Regional Fisheries Management Organisation (SPRFMO) are similarly sized RFMOs and that their two Secretariats are in regular contact regarding best practices and approaches.

142. The Executive Secretary explained that the SPRFMO Commission has recently endorsed the renewal of its MoU with NPFC, which expires on 12 July 2026, and indicated its preference for maintaining the three-year review mechanism. He presented the proposed renewed MoU for the Commission's consideration (NPFC-2026-COM10-WP09).

143. The Commission agreed to renew its MoU with SPRFMO (Annex Z).

10h. IMCS Network

144. Ms. Kate Chung (IMCS Network) provided an update on IMCS Network activities and highlighted tools offered by the IMCS Network (NPFC-2026-COM10-OP08). The IMCS Network has launched the IUU Vessel List Hub, a secure, RFMO-restricted platform designed for RFMO secretariat staff for the management of IUU vessel lists and sharing of information. It has also launched the Combined Regional Authorized Vessel Tool (CRAVT), a publicly available tool for searching for specific vessels, as well as vessel companies, owners, and operators, and compare records for the same vessel on different RFMO registries. In addition, the Pan-Pacific Fisheries Compliance Network (PPFCN) is a network hosted by the IMCS Network for those responsible for compliance in the RFMO secretariats and the NPFC has been part of the PPFCN since its inception. In March 2027, the IMCS Network will hold the

8th Global Fisheries Enforcement Training Workshop (GFETW 8) in Bali, Indonesia. The IMCS Network also hosts Wavemakers, a nine-month professional development programme.

145. The Executive Secretary added that the Secretariat work plan includes plans for the incoming Compliance Manager to attend GFETW 8.

10i. UN BBNJ

146. The Executive Secretary explained that the Secretariat has not attended BBNJ sessions other than following virtually. He also noted that the PICES BECI Project has been identified as having a potential role in a future clearing house mechanism.

147. The EU presented a discussion paper on interaction between RFMOs and the BBNJ Agreement (NPFC-2026-COM10-IP02). The EU pointed out that the BBNJ Agreement recognizes the role of RFMOs and should be interpreted and applied in a way that does not undermine RFMOs, but rather promotes coherence and coordination with these frameworks. The EU highlighted four key lines of questioning that the NPFC should consider so as to proactively prepare itself for potential future interactions with the BBNJ Agreement: Are the relevant timelines and procedures applicable in the NPFC sufficiently well known by the negotiators who are finalizing the procedures for the functioning of the BBNJ Agreement? Does NPFC have a clear and comprehensive overview of its activities and achievements? Should NPFC work with other RFMOs to ensure coherence in any potential contributions or information flowing between RFMOs? Is NPFC sufficiently prepared and equipped to deal with future requests for consultation or cooperation from BBNJ?

148. The Commission tasked the Executive Secretary to attend the Regional Fishery Body Secretariats' Network (RSN) in September, collect and share information with other RFMOs about how they are preparing for interactions with the BBNJ, and submit a paper summarizing his findings to COM11.

149. The Commission agreed to hold further discussions on potential interactions with the BBNJ Agreement at COM11 based on the paper from the Executive Secretary. The Commission welcomed any other proposals or papers from Members on this matter.

150. The Commission encouraged Members to send their fisheries officials to attend BBNJ-related meetings so as to share perspectives from fisheries bodies and support their incorporation into the BBNJ process.

151. The DSCC, NRDC, and Pew expressed support for the EU proposal to urge the Commission to proactively consider engagement in the implementation of the BBNJ Agreement and

believed that the NPFC should examine whether it is sufficiently prepared and equipped to deal with future requests for consultation or cooperation from BBNJ and determine if there are processes that need to be reinforced, for example, in the assessment of environmental impacts. They also highlighted the valuable contributions of accredited observers and the importance of their participation in such discussions, as well as the importance of Members playing a more active role in helping facilitate information-sharing between the NPFC and the BBNJ Agreement.

10j. Other Organizations

152. The Executive Secretary noted the upcoming Agreement on Port State Measures (PSMA) Technical Working Group on Information Exchange to be held on 8–12 June 2026 in Korea. He explained that due to the transition of Compliance Managers, no members of the Secretariat are planning to attend. He requested Members who are attending to share information from the meeting with the Commission.

Agenda Item 11. Other matters

11a. Secondment and Intern for 2026

153. The Commission endorsed the FAC's recommendation and agreed to accept the secondment application from Ms. Yume Kawai (Japan) for a 12-month period commencing in June 2026.

154. The Commission noted that there were no candidates for internship positions this year.

11b. Other business

155. No other business was raised.

11c. Press Release

156. The Commission noted that it is not a common practice among RFMOs to issue press releases of the outcomes of their annual meetings. The Commission agreed to not issue such press releases going forward.

Agenda Item 12. Date and Place of next meeting of the Commission and its Committees

157. The Executive Secretary presented a document with information on the potential timing and location of meetings of the Commission and its subsidiary bodies in 2027 and 2028 (NPFC-2026-COM10-WP11).

158. The Commission agreed to hold the next meetings of the TCC, the FAC, and the Commission in Fukuoka, Japan, on the following dates:
    (a) TCC10: 6–9 April 2027

(b) FAC09: 10 April 2027
(c) COM11:12–15 April 2027

159. The Commission tentatively agreed to hold the 2028 meetings of the TCC, the FAC, and the Commission, in Hiroshima, Japan, on the following dates:
(a) TCC11: 5–8 April 2028
(b) FAC10: 9 April 2028
(c) COM12: 11–14 April 2028

160. The Commission agreed to hold the next meetings of the SC and related SSC/TWG meetings in Kobe, Japan, on the following dates:
(a) TWG CMSA13: 11–14 January 2027
(b) SSC BFME07: 15–17 January 2027
(c) SSC PS18: 19–22 January 2027
(d) SC11: 23–26 January 2027

161. The Commission tentatively agreed to hold the 2027–2028 meetings of the SC and related SSC/TWG meetings on the following dates, with SSC BFME potentially being hosted in Canada with the rest envisioned to be held in Japan:
(a) SSC BFME: December 2027 (ending before December 18)
(b) SSC PS: 10–13 January 2028
(c) TWG CMSA: 13–16 January 2028
(d) SC12: 18–20 January 2028

162. The Commission tentatively agreed to hold the next meetings of the SWG MSE PS in a virtual format:
(a) SWG MSE PS08: 8–10 October 2026
(b) SWG MSE PS09: 22–24 February 2027

Agenda Item 13 Adoption of the report

163. The report was adopted by consensus.

Agenda Item 14. Close of the Meeting

164. The meeting closed at 18:40 on 17 April 2026, Osaka time.

List of Annexes to COM10 Report

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Annex C	Agenda
Annex D	List of Documents
Annex E	List of Participants
Annex F	SC Updated Terms of Reference
Annex G	NPFC SC10 Final Report
Annex H	NPFC 2026 IUU Vessel List
Annex I	2026 Compliance Report
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Annex L	TCC 2026 Workplan
Annex M	2026/2027 Budget and Assessed Contributions
Annex N	2027/2028 Budget and Assessed Contributions
Annex O	NPFC FAC08 Final Report
Annex P	CMM 2026-07 Chub Mackerel
Annex Q	CMM 2026-08 Pacific Saury
Annex R	CMM 2026-18 Japanese Sardine (New CMM for separated species)
Annex S	CMM 2026-11 Neon Flying Squid and Japanese Flying Squid
Annex T	CMM 2026-02 IUU Fishing Vessel List
Annex U	CMM 2026-01 Vessel Registration
Annex V	CMM 2026-19 Data standards (new CMM)
Annex W	CMM 2026-20 Port State Measures (new CMM)
Annex X	NPFC SWG MSE PS07 Final Report
Annex Y	MOU with IATTC
Annex Z	MOU with SPRFMO

Chair's opening remarks to COM10

Good morning, Ladies and gentlemen.

1. In opening the 10th annual meeting of the North Pacific Fisheries Commission, I would like to make a few remarks.

2. Let me first express my sincere appreciation to the Secretariat for organizing a series of meetings. Let me also welcome all of you in Osaka again. Some of you remember that we had the 8th annual meeting at this conference center two years ago.

3. The BBNJ agreement entered into force last January. In anticipation of this event, I made a presentation on the relationship between BBNJ and NPFC two years agon. I still believe that if the NPFC does not establish appropriate CMMs for fisheries resources as well as protection of marine ecosystems, the BBNJ is likely to take or try to take decisions on the establishment of MPAs for the protection of the entire ecosystem in the North Pacific. Alternatively, the BBNJ may make recommendations to Parties to the NPFC to promote the adoption of relevant measures for that purpose. NPFC Members should have this in mind when discussing CMMs, particularly on bottom fish.

4. The Commission adopted the harvest control rules or HCRs for Pacific saury two years ago. This enabled the Commission to agree to the TAC relatively easily last year. However, the situation is quite different this year because the Scientific Committee could not agree to the stock assessment of this species, which is a fundamental basis for the implementation of the HCRs. This is a kind of exceptional circumstance as the current HCRs do not assume such a situation. To avoid such trouble, the Commission should complete the MSE as soon as possible to establish a management procedure, which includes an exceptional circumstances protocol. Until establishment of a management procedure, the Commission should consider how to deal with such exceptional circumstances if we are to avoid any trouble in the future.

5. The Commission needs to make further progress on other pelagic species. Several proposals have been submitted to this meeting, and I hope that there will be consensus on the improvement of the CMMs on those species.

6. The Commission agreed to the regional observer program last year, which will start this month. This will greatly enhance the Commission's capacity for monitoring, control and surveillance along with VMS, vessel registration and high seas boarding and inspection. Since this is the first year of the observer program, we

may encounter various problems, but the Commission should be able to find solutions.

7. We have only four days. I sincerely hope that with your cooperation, assistance and flexibility, the Commission will be able to achieve many things at this annual meeting.

Thank you very much.

Opening Statement of the Chinese Delegation at COM10

Qiao Ruojin, Head of the Chinese Delegation

14 April 2026, Osaka, Japan

Thank you, Mr. Chair.

This is my first time attending NPFC meeting, and I would like to make a brief statement. On behalf of the Chinese delegation, I wish to extend our sincere gratitude to the Chair and the Secretariat for the thoughtful preparations for the 10th Commission Meeting of NPFC.

In the coming days, the Commission will take key decisions across a range of issues. It is our sincere hope that members will take full account of the following considerations, particularly when determining the total allowable catch (TAC) for fish stocks under NPFC management:

First and foremost, the fishing industry in NPFC convention area has demonstrated an extraordinary level of cooperation. Within a very tight timeframe, it contributed a total of **2.8 million US dollars** to support the Regional Observer Programme (ROP) on carrier vessels. Chinese fishing vessels operating in NPFC area each contributed more than **20,000 US dollars**. As far as I know, the first NPFC regional observer will set be deployed to set sail. Against this substantial contribution, it would be very difficult for us to explain to our stakeholders a proposed reduction in

fishing opportunities of **66% for chub mackerel, 30% for sardine, and a further 10% for Pacific saury** in 2026. Such a scale of reduction is simply not justifiable to our industry.

Secondly, the current high oil prices have placed severe operational pressure on fishing and related enterprises in NPFC convention area. At this challenging juncture, authorities of NPFC members are actively seeking measures to ease the impact. NPFC, as a RFMO, should also incorporate this reality into its decision-making and adopt appropriate measures to mitigate the economic burden on the fishing sector.

Thirdly, NPFC management decisions should be firmly science-based. The Commission should take full account of actual catch levels in recent years and set appropriate TACs for the key fish stocks managed by NPFC.

Mr. Chair,

The Chinese delegation will put forward a number of constructive ideas and views on the items to be discussed at this meeting. We stand ready to engage with other NPFC members through various formats, including any small working groups, if established.

China highly values the development of NPFC. We will continue to provide voluntary financial contributions to the Commission in 2026 at the same level as in 2025. Notably, NPFC has received the **highest level**

of voluntary contributions from China among all the RFMOs that China has joined.

Mr. Chair,

Under your able leadership, I am confident that the 10th Commission Meeting will achieve fruitful outcomes and full success.

Thank You.

North Pacific Fisheries Commission

North Pacific Fisheries Commission
10th Commission Meeting
14-17 April 2026
Osaka, Japan (hybrid)

Agenda

1. Opening of the Meeting
    a. Welcome Address
    b. Appointment of Rapporteur
    c. Adoption of Agenda
    d. Meeting Arrangements

2. Membership of the Commission
    a. Status of the Membership
    b. CNCP applications

3. Report from the Secretariat

4. Performance Review of the Commission – overview of progress

5. Report of the 10th Scientific Committee meeting
    a. Review of SC10 Report and response to COM09 taskings
    b. Adoption of revised SC Terms of Reference
    c. Selection of SC Chair and Vice-Chair
    d. Adoption of SC10 Report and Recommendations
    e. Consideration of other SC issues identified during SC10 or by COM10 meeting

6. Report of the 9th Technical and Compliance Committee meeting
    a. Review of TCC09 Report and response to COM09 taskings
    b. Adoption of IUU Vessel List for 2026
    c. Adoption of Final Compliance Monitoring Report
    d. Adoption of TCC09 Report and Recommendations
    e. Consideration of other TCC issues identified during TCC09 or by COM10 meeting

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7. Report of the 8th Finance and Administration Committee meeting
    a. Review of FAC Report
    b. Adoption of the proposed budget for 2026/2027 and 2027/2028
    c. Adoption of the FAC08 Report and Recommendations
    d. Consideration of other FAC issues identified during FAC08 or by COM10 meeting

8. Conservation and Management Measures and Resolutions
    a. Review of the amendments to existing CMM's and any new CMMs
    b. Review of measures with specified review provisions
    c. Review of existing resolutions and any new Resolutions

9. Report of the 7th Meeting of the joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS)

10. Cooperation with Other Organizations
    a. PICES
    b. NPAFC
    c. FAO: Deep Sea Fisheries project and FIRMS
    d. WCPFC
    e. ISC
    f. IATTC
    g. SPRFMO
    h. IMCS Network
    i. UN BBNJ
    j. Other Organizations

11. Other matters
    a. Secondment and Intern for 2026
    b. Other business
    c. Press Release

12. Date and Place of next meeting of the Commission and its Committees

13. Adoption of the report

14. Close of the Meeting

LIST OF COM10 DOCUMENTS

MEETING INFORMATION PAPERS

Number	Title
NPFC-2026-COM10/TCC09/FAC08-MIP01	Meeting Information
NPFC-2026-COM10-MIP02	Provisional Agenda
NPFC-2026-COM10-MIP03 Rev.4	Annotated Indicative Schedule

WORKING PAPERS

Number	Title
NPFC-2026-COM10-WP01 Rev.1	Proposed revisions to CMM 2025-05 for Bottom Fisheries and Protection of Vulnerable Marine Ecosystems in the Northwestern Pacific Ocean
NPFC-2026-COM10-WP02 Rev.4	Proposed revisions to CMM 2025-07 for Chub Mackerel
NPFC-2026-COM10-WP03 Rev.2	Proposed revisions to CMM 2025-08 for Pacific Saury
NPFC-2026-COM10-WP04 Rev.2	CMM 2025-11 for Japanese sardine
NPFC-2026-COM10-WP05	Proposed revisions to CMM 2025-08 for Pacific Saury
NPFC-2026-COM10-WP06	Proposal to amend CMM 2025-08 for Pacific Saury
NPFC-2026-COM10-WP07 Rev.3	Proposal to amend the Conservation and Management Measure for Chub Mackerel
NPFC-2026-COM10-WP08 Rev.3	Introduction of Bycatch Exclusion Strategies in NPFC Pelagic Trawl Fisheries (CMM 2025-07 for Chub Mackerel, 2025-08 for Pacific Saury and 2025-11 for Japanese Sardine, Neon Flying Squid and Japanese Squid)
NPFC-2026-COM10-WP09	Review of MOU with the South Pacific Regional Fisheries Management Organization (SPRFMO)
NPFC-2026-COM10-WP10	Review of draft MOU with IATTC
NPFC-2026-COM10-WP11	Timing and Location of the Commission and its Subsidiary Bodies meetings in 2027 and 2028
NPFC-2026-COM10-WP12 Rev.1	Proposed revisions to CMM 2025-05 for Bottom Fisheries and Protection of Vulnerable Marine Ecosystems in the Northwestern Pacific Ocean
NPFC-2026-COM10-WP13	Press Release
NPFC-2026-COM10-WP14 Rev.1	Proposed revisions to CMM 2025-11 for Neon Flying Squid and Japanese Flying Squid

WORKING PAPERS FROM TCC09

Number	Title
NPFC-2026-TCC09-WP04 Rev.3	Proposal for a new CMM on Scientific Research Activities
NPFC-2026-TCC09-WP05 Rev.2	Proposal for revisions to CMM 2024-02 (IUU)
NPFC-2026-TCC09-WP06 Rev.5	Proposal for a new Conservation and Management Measure for minimum standards for the collection, reporting, verification and exchange of data in NPFC
NPFC-2026-TCC09-WP07	Amendment to CMM 2023-01 on Information Requirements for Vessel Registration
NPFC-2026-TCC09-WP08 Rev.4	Proposal to establish a CMM on Minimum Standards for Port State Measures
NPFC-2026-TCC09-WP10 Rev.4	TCC Workplan 2026-2027

INFORMATION PAPERS

Number	Title
NPFC-2026-COM10-IP01	Status of the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean
NPFC-2026-COM10-IP02	Discussion Paper on the Interaction between RFMOs and the Agreement under the United Nations Convention on the Law of the Sea on the Conservation and Sustainable Use of Marine Biological Diversity of Areas Beyond National Jurisdiction
NPFC-2026-COM10-IP03	Japan Blue Mackerel Stock Assessment
NPFC-2026-COM10-IP04	Japan Chub Mackerel Stock Assessment
NPFC-2026-COM10-IP05	Japanese Flying Squid Stock Assessment
NPFC-2026-COM10-IP06	Japanese Sardine Stock Assessment
NPFC-2026-COM10-IP07	SC-TWG CMSA Response to Tasks from COM9
NPFC-2026-COM10-IP08	Cooperation with Other Organizations
NPFC-2026-COM10-IP09	Performance review template updated with comments
NPFC-2026-COM10-IP10	NPFC 2026/2027 List of Chairs and appointment duration
NPFC-2026-COM10-IP11	CMM Review Provisions
NPFC-2026-COM10-IP12 Rev.1	NPFC-2025-SC10-Final Report Presentation

NPFC-2026-COM10-IP13	China's direction to improve catch records of mixed catches of Japanese sardine and small chub mackerel in its purse seine fishery
NPFC-2026-COM10-IP14	Historic Existing Level (Japan)
NPFC-2026-COM10-IP15	Submission for Historic Existing Level Exercise (Russia)
INFORMATION PAPERS FROM TCC 09	
NPFC-2026-TCC09-IP10 Rev.1	List of Obligations in Annex 2 of CMM 2025-13
NPFC-2026-TCC09-IP11	TCC – SWG Ops – Historic Existing Level
NPFC-2026-TCC09-IP11 Supp Doc	HEL – Attachment – Member Authorizations

OBSERVER PAPERS

Number	Title
NPFC-2026-COM10-OP01	NRDC Statement to the 10th Annual Session of the North Pacific Fisheries Commission
NPFC-2026-COM10-OP02	Joint Scientists' Letter to NPFC Members Regarding the Emperor Seamount Chain
NPFC-2026-COM10-OP03	Recommendations to the 10th Meeting of the North Pacific Fisheries Commission on Updating and Reviewing Bottom Fisheries Impact Assessments
NPFC-2026-COM10-OP04	NPFC annual meeting to a lunchtime side event on April 15th in the main meeting room
NPFC-2026-COM10-OP05	Report on Joint NPFC-PICES activities
NPFC-2026-COM10-OP06	FAO Deep-Sea Fisheries (DSF) Project: Overview of Activities 2022-2026
NPFC-2026-COM10-OP07	PEW Opening Statement to COM10
NPFC-2026-COM10-OP08	IMCS Update to NPFC
NPFC-2026-COM10-OP09	WWF Position for COM10
NPFC-2026-COM10-OP10	NPAFC Update

REPORTS

Number	Title
NPFC-2026-SR	Secretariat Report for 2025/2026 and Work Plan for 2026/2027
NPFC-2026-SC10-Final Report	Report of 10th Meeting of the Scientific Committee
NPFC-2026-TCC09-Adopted Report	9th Meeting of the Technical and Compliance Committee - Adopted Report
NPFC -2026 – Provisional IUU Vessel List	NPFC 2026 Provisional IUU Vessel List
NPFC -2026 – Current IUU Vessel List	NPFC 2026 Current IUU Vessel List
NPFC-2026-TCC09 Provisional CR	NPFC-2026-TCC09 Provisional Compliance Report
NPFC-2026-TCC09 Provisional CR- Executive Summary	NPFC-2026-TCC09 Provisional CR- Executive Summary
NPFC-2026-TCC09 Provisional CR- Supp Doc	NPFC-2026-TCC09 Provisional CR- Supplementary Document – Letter from Vanuatu
NPFC-2026-TCC09 Final CR	NPFC-2026-TCC09 Final Compliance Report
NPFC-2026-COM10-MSE PS07 – Final Report	Report of 7th meeting of the Joint SC-TCC-COM Small Working group on the Management Strategy Evaluation for Pacific Saury (SWG MSE PS)

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SC Updated Terms of Reference
April 2026

NORTH PACIFIC FISHERIES COMMISSION
SCIENTIFIC COMMITTEE
TERMS OF REFERENCE

Context

Article 7(3b) of the Convention states that the Commission shall "adopt a plan of work and terms of reference for the Scientific Committee, for the Technical and Compliance Committee and, as necessary, for other subsidiary bodies."

Article 10(1) of the Convention states that "the Scientific Committee shall provide scientific advice and recommendations in accordance with the terms of reference for the Committee to be adopted at the first regular meeting of the Commission and as may be amended from time to time."

Purpose

The Scientific Committee should provide a forum for consultation and cooperation among Contracting Parties and Fishing Entities (Members) with respect to the evaluation and exchange of scientific information relating to the fisheries of the Convention Area, and to encourage and promote cooperation among the members in scientific research designed to fill gaps in knowledge pertaining to these matters.

Functions

In accordance with Article 10(4) of the Convention, the functions of the Scientific Committee shall be to:

(a) Develop and maintain a research plan that would be presented to the Commission, including specific issues and items to be addressed by the scientific experts or by other organizations or individuals, as appropriate, and identify data needs and coordinate activities that meet those needs;

(b) regularly plan, conduct and review the scientific assessments of the status of fisheries resources in the Convention Area, identify actions required for their conservation and management, and provide advice and recommendations to the Commission;

(c) collect, analyze and disseminate relevant information;

(d) assess the impacts of fishing activities on fisheries resources and species belonging to the same ecosystem or dependent upon or associated with the target stocks;

(e) develop a process to identify vulnerable marine ecosystems, including relevant criteria for doing so, and identify, based on the best scientific information available, areas or features where these ecosystems are known to occur, or are likely to occur, and the location of bottom fisheries in relation to these areas or features, taking due account of the need to protect confidential information;

(f) identify and advise the Commission on additional indicator species for vulnerable marine ecosystems for which directed fishing shall be prohibited;

(g) establish science-based standards and criteria to determine if bottom fishing activities are likely to produce significant adverse impacts on vulnerable marine ecosystems or marine species in a given area based on international standards such as the FAO International Guidelines and make recommendation for measures to avoid such impacts;

(h) review any assessments, determinations and management measures and make any necessary recommendation in order to attain the objective of this Convention;

(i) develop rules and standards, for adoption by the Commission, for the collection, verification, reporting, and the security of, exchange of, access to and dissemination of data on fisheries resources, species belonging to the same ecosystem, or dependent upon or associated with the target stocks and fishing activities in the Convention Area;

(j) to the extent practicable, provide analysis to the Commission of alternative conservation and management measures that estimates the extent to which each alternative would achieve the objectives of any management strategy adopted or under consideration by the Commission; and

(k) provide such other scientific advice to the Commission as it considers appropriate or as may be required by the Commission.

Consistent with Article 7(3c), the Commission shall refer to the Scientific Committee any question pertaining to the scientific basis for the decisions the Commission may need to take

concerning conserving and managing fisheries resources and species belonging to the same ecosystem or dependent upon or associated with the target stocks and assessing and addressing the impacts of fishing activities on vulnerable marine ecosystems.

In accordance with Article 10(6), the Scientific Committee "shall not duplicate the activities of other scientific organizations and arrangements that cover the Convention Area." Further, consistent with Article 21, the Committee shall seek, with the approval of the Commission, to develop cooperative working relationships with other intergovernmental organizations that can contribute to its work.

Structure

1. Membership

The Scientific Committee shall be composed of Members of the Commission. Members are encouraged to identify a focal point to facilitate the operations of the Committee. Scientific Committee participants would have a science background. Invitation and participation of non-members in the meetings and other activities of the Committee are subject to relevant provisions in Rule 9 of the Commission's Rules of Procedure.

2. Chair and Vice-Chair

i. Selection and Term

The Chair and Vice-Chair of the SC will be selected by consensus by SC Members, subject to approval by the Commission, in accordance with relevant provisions of the Convention and the Rules of Procedure of the Commission, unless the Commission decides otherwise.

The SC Chair shall be elected for a period of two years and shall be eligible for reelection for two additional terms of two years. The SC Chair's term shall continue until the Commission approves the elected Chair. The Chair's term shall begin after the approval by the Commission. In the case that the Chair is unable or unwilling to serve a full term, the Vice-Chair will assume the Chair's position in accordance with the Rules of Procedure. The Vice-Chair would succeed the Chair after the Chair's term expires and a new Vice- Chair would be identified.

The Chairs of the SC subsidiary bodies will be selected by Members of these subsidiary bodies, and the selection becomes effective immediately afterwards. They may serve more than two consecutive terms, recognizing the specialized nature of the subjects and tasks that its subsidiary

bodies deal with, and noting the need to provide greater consistency and continuity of expertise to its subsidiary bodies.

ii. *Duties of the Chair*

- Coordinate the meeting schedule and agenda preparation;
- Chair Committee meetings as well as prepare reports of the meetings;
- Foster constructive and active dialogue at Committee meetings;
- Coordinate the development of specific deliverables identified in the Committee's functions, as per Article 10 in the Convention;
- Liaise with the Commission Chair, TCC Chair, and other relevant international organizations as appropriate to enhance the quality of activities;
- Represent or designate a competent person to represent the Committee to participate, as appropriate, in various regional and international meetings and fora; and,
- Invite, as appropriate, non-members to contribute to the Committee's meeting agendas and activities.

3. Meetings

Consistent with Article 10 in the Convention, the Scientific Committee shall meet, unless the Commission otherwise decides, at least once every two years, and prior to the regular meeting of the Commission.

4. Sub-Committees or Working Groups

Consistent with Article 6 in the Convention, the Committee may establish working groups and may seek external advice in accordance with any guidance provided by the Commission.

Agendas and Meeting Conduct

The Scientific Committee will endeavor to develop agendas and conduct its meetings in a manner that is consistent with Rule 5 in the Commission's Rules of Procedure.

Decisions

Decisions will be adopted in a manner that is consistent with Article 8 of the Convention and Rule 2 in the NPFC Rules of Procedure. Consistent with Article 8, as a general rule, the Committee shall strive to make its decisions by consensus.

Language

In accordance with Rule 7 in the Rules of Procedure, English shall be the working language of the Committee. Any other language may be used on condition that persons doing so will provide interpreters.

Records and Reports

In accordance with Article 6(2) in the Convention, after each meeting, the Committee will provide a report on its work to the Commission that includes, where appropriate, advice and recommendations to the Commission.

As per Article 10(3) in the Convention, the Committee shall make every effort to adopt its reports by consensus. If every effort to achieve consensus has failed, the report shall indicate the majority and minority views and may include the differing views of the representatives of the members on all or any part of the report.

These Terms of Reference are subject to approval by the Commission. They may be revised by the Committee based on consensus and subsequent approval by the Commission.

10th Meeting of the Scientific Committee
REPORT

16–19 December 2025

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North Pacific Fisheries Commission
10th Meeting of the Scientific Committee

16–19 December 2025
Nagoya, Japan

REPORT

Agenda Item 1. Opening of the Meeting

1.1 Welcome address and introductions

1. The 10th Meeting of the Scientific Committee (SC) was held in a hybrid format, with participants attending in-person in Nagoya, Japan, or online via WebEx, on 16–19 December 2025. The meeting was attended by Members from Canada, China, the European Union (EU), Japan, the Republic of Korea, the Russian Federation, Chinese Taipei, the United States of America, and the Republic of Vanuatu. The Deep Sea Conservation Coalition (DSCC), the United Nations Food and Agriculture Organization (FAO), the Marine Stewardship Council, the North Pacific Anadromous Fish Commission (NPAFC), the Ocean Governance Institute, the Pew Charitable Trusts (Pew), the North Pacific Marine Science Organization (PICES), and the World Wide Fund for Nature (WWF) attended as observers.

2. The meeting was opened by Dr. Janelle Curtis (Canada), who served as the SC Chair. She reflected on her time as the SC Chair and the nature of the collaboration and partnership at the SC. She expressed her special thanks to the Chairs of the SC's subsidiary bodies and members of the Secretariat for their support and expressed her appreciation to Members and observers for their contributions. The Chair emphasized that science forms the basis of sound fisheries management and expressed her confidence that the SC and its subsidiary bodies will continue to make progress towards the NPFC's objective of ensuring the long-term conservation and sustainable use of fisheries resources in the Convention Area.

3. Dr. Hiroshi Nishida, Director General of the Fisheries Resources Institute, Japan Fisheries Research and Education Agency, welcomed the participants to Nagoya and expressed his appreciation to the SC Chair and the Secretariat for organizing the meeting. He noted that the meeting would provide an invaluable opportunity for participants to share their visions for promoting the optimal utilization and long-term sustainability of resources in the Convention Area by engaging in forward-looking discussions and sharing their expertise, particularly in light of the changing marine environment in the Pacific Ocean in recent years. Lastly, Dr. Nishida expressed his hope for fruitful discussions and wished the participants a memorable stay in Nagoya.

1.2 Appointment of Rapporteur

4. Mr. Alex Meyer was selected as rapporteur.

1.3 Meeting arrangements

5. The Science Manager, Dr. Aleksandr Zavolokin, outlined the meeting procedures and logistics.

Agenda Item 2. Adoption of Agenda

6. The SC agreed to add two agenda items: "6.3.5 Draft Terms of Reference for a Small Scientific Committee on Japanese Sardine" and "6.4 Review of tasks for SWG JFS, SWG BM, and SWG JS (or SSC JS)."

7. The agenda was adopted as revised (Annex A). The List of Documents and List of Participants are attached (Annexes B, C).

Agenda Item 3. Provision of advice to the Commission

3.1 Structure and content of the SC reports

8. The SC discussed ways in which to improve the structure and content of the SC reports so as to provide clearer advice from the SC to the Commission.

9. The SC noted that in the past, recommendations from the SC's subsidiary bodies have been described twice in SC reports, with the SC endorsing each recommendation from these bodies individually and then repeating them in its own recommendations to the Commission. The SC agreed to simplify this by endorsing each subsidiary body's meeting report as a whole and then to only describe a combination of the SC's recommendations and those of the subsidiary bodies to the Commission once in the SC report.

10. The SC agreed to add a table of activities and timeline to meeting reports of SC subsidiary bodies to more clearly convey the subsidiary body's progress and planned work. The SC also requested the Secretariat to make these tables of activities and timelines available on the NPFC website.

11. The SC also discussed the presentation of summaries of stock assessments, the development of species status templates, and the treatment of species summary documents in agenda items 3.1.1–3.1.3 below.

3.1.1 Summary of stock assessments

12. The SC agreed that SC reports should have independent sections for summarizing SC subsidiary bodies' stock assessments, separate from the sections summarizing SC subsidiary bodies' other activities. The SC agreed that for species for which an NPFC stock assessment

has yet to be conducted, this section would summarize activities that could eventually contribute to conducting a stock assessment.

3.1.2 Species status templates

13. The Chair recalled that the Commission has requested that the SC consider standardizing how stock status is presented across species to enhance consistencies as much as possible.

14. Canada presented a proposal for developing a standardized template for presenting species statuses. The goals of the template would be to convey necessary information on stock status for priority species to the Commission via the SC report in an efficient manner, while still containing the key basic information. The template should also be able to convey information on priority species without an assessment. Consideration should be given to making it easy to update the document, for example with code for automation.

15. The SC agreed that it would be valuable to work towards standardizing the way in which stock status information is presented, while recognizing the need to maintain a degree of flexibility across species.

16. The SC considered examples from other organizations. Some Members expressed initial support for developing a modified version of the International Council for the Exploration of the Sea (ICES) stock assessment executive summary. The usefulness of the stock status table presented at the start of the Indian Ocean Tuna Commission's (IOTC's) stock status executive summaries was also noted.

17. The SC agreed to reinstate the Small Working Group (SWG) Milestones, to select Dr. Chris Rooper (Canada) as its Lead, and to request the SWG Milestones Lead to progress the work to develop a standardized template for presenting species status in coordination with the Chairs of the SC and its subsidiary bodies.

18. The SC agreed that in the interim, the SC Chair could work with the Chairs and Leads of the SC subsidiary bodies to develop simple status summary PowerPoint slides for presentation to the Commission and the SC Chair requested that drafts be submitted to her by 15 February 2026.

3.1.3 Species summary documents

19. The SC noted that if the SC develops a species status template, there would be some overlap between information in the species status document and the species summary document for species with an NPFC stock assessment. The SC noted that the species status document could potentially replace the species summary document. The SC noted, however, that species

summary documents also contain biological and fisheries information that would not be contained in the species status document. The SC noted that unlike stock status information, biological and fisheries information is not regularly updated and could perhaps be given dedicated pages on the NPFC website. The species summary document or species status document could then simply contain a link to the relevant page on the NPFC website.

20. The Deep-sea Fisheries (DSF) Project (FAO) pointed out that species summary documents are also of interest to the public and encouraged the NPFC to use language that is accessible not only to scientists and managers but also the general public.

3.2 SC workflow and meetings

3.2.1 Review of SC workflow

21. The Science Manager presented a review of the SC structure and workflow that have been developed over the past ten years, including potential issues and proposals for improvement (NPFC-2025-SC10-WP07 (Rev. 1)). The substantial increase of the SC workload and growing budgetary pressure, including the number of meetings, projects and additional tasks/requests from the Commission, may require further revision of the SC procedures and workflow.

22. The SC reviewed and revised the proposed amendment to the SC structure and workflow (Annex D).

23. The SC agreed to task the SWG Milestones to discuss the future structure of SC subsidiary groups around stock assessment and report progress in a working paper to SC11.

3.2.2 Meeting schedule for SC and its subsidiary groups

24. The Science Manager presented draft options for the meeting schedule for the SC and its subsidiary groups in the 2026 operational year (NPFC-2025-SC10-WP01 (Rev. 2)).

25. The SC reviewed and revised the draft options and recommended that the Commission endorse the meeting schedule described in Annex E.

3.2.3 Review of guidelines for SC SWGs

26. The Chair presented proposed revisions to the Guidelines for the SC's SWGs (NPFC-2025-SC10-WP08).

27. The SC reviewed the proposal and made further revisions (NPFC-2025-SC10-WP08 (Rev. 1)). The SC adopted the revised Guidelines for the SC's SWGs (Annex F).

3.3 Standards of 'best available science' (PR Recommendation 3.4.1)

28. China presented a proposal for the adoption of an NPFC Resolution on the Best Available Science (NPFC-2025-SC10-WP16).

29. The SC expressed its appreciation to China for preparing the proposal and offered initial feedback. The SC encouraged Members to share any additional feedback they have with China in the intersessional period and encouraged China to present an updated proposal to the Commission.

30. The DSCC and Pew thanked China for its proposal and drew the SC's attention to discussions at the 18th session of the Informal Consultations of States Parties of the United Nations Fish Stocks Agreement (UNFSA), which highlighted that peer-reviewed science can complement regional fisheries management organization (RFMO) scientific processes by enhancing transparency, credibility, and accessibility of scientific information. Furthermore, its value extends beyond traditional stock assessments and can cost-effectively support understanding of broader ecosystem considerations. It can also contribute to frameworks and methodologies to identify vulnerable marine ecosystems and prevent significant adverse impacts.

3.4 Frequency of benchmark and annual stock assessments

31. The SC considered the frequency of benchmark and data update stock assessments for priority species.

32. For Pacific saury, the SC recommended that the data update stock assessment be conducted annually because of their short lifespan. Regarding the frequency of benchmark stock assessments, the SC recommended that this be determined at a future date as the work to develop a new age-structured model is still ongoing.

33. For chub mackerel, the SC recommended that the benchmark stock assessment be conducted every 3 years, again because of its relatively short lifespan, with the next benchmark stock assessment to be conducted in 2028, and that the data update stock assessment be conducted annually.

34. For neon flying squid (NFS), the SC recommended that the benchmark stock assessment be conducted every 3–5 years and that the data update stock assessment be conducted annually.

35. The SC recommended that in general, benchmark stock assessments should be conducted every 3–5 years and that the data update stock assessments should be conducted annually.

3.5 Fisheries-dependent and fisheries-independent indicators of trend for stocks without NPFC stock assessments

36. The SC discussed fisheries-dependent and fisheries-independent indicators of trend for stocks without NPFC stock assessments.

37. The SC recommended the following indicators of trend for North Pacific armorhead (NPA):
    (a) Fisheries-dependent indicators:
        i. Catch
        ii. Depletion analysis estimates
    (b) Fisheries-independent indicators:
        i. Monitoring survey catch per unit effort (CPUE)
        ii. Monitoring survey fatness index

38. The SC recommended the following indicators of trend for splendid alfonsino (SA):
    (a) Fisheries-dependent indicators:
        i. Trawl and gillnet CPUE (standardization in progress)

39. The SC recommended the following indicators of trend for NFS:
    (a) Fisheries-dependent indicators:
        i. Standardized CPUE
        ii. Mean size at catch
        iii. Total catch
    (b) Fisheries-independent indicators:
        i. Abundance index
        ii. Size composition
        iii. Driftnet survey during summer

40. The SC recommended the following indicators of trend for Japanese flying squid (JFS):
    (a) Fisheries-dependent indicators:
        i. Standardized CPUE from the coastal squid jigging fisheries (Jul-Dec)

41. The SC recommended the following indicators of trend for blue mackerel (BM):
    (a) Fisheries-dependent indicators:
        i. Standardized CPUE from Stick-held dip net in Shizuoka prefecture
        ii. Total catch
        iii. Nominal CPUE
    (b) Fisheries-independent indicators:
        i. Egg abundance in East of Miyazaki prefecture

42. The SC recommended the following indicators of trend for Japanese sardine (JS):
    (a) Fisheries-independent indicators:
        i. Egg abundance in East Japan
        ii. Acoustic survey in autumn (Sep-Oct) (abundance of age 0 fish)
        iii. Trawling survey in summer (Jun-Jul) (abundance of age 0 fish)
        iv. Trawling survey in summer (Jun-Jul) (abundance of age 1 fish)
        v. Standardized CPUE from China's summer survey

43. The SC recommended the following indicators of trend for sablefish:
    (a) Fisheries-dependent indicators:
        i. CPUE from longline traps

3.6 Process for selection of external experts and contract renewal

44. The Chair presented a proposed policy for the selection and extension of invited experts for supporting the SC and its subsidiary bodies (NPFC-2025-SC10-WP05 (Rev. 1)).

45. The SC reviewed and revised the proposal (NPFC-2025-SC10-WP05 (Rev. 2)). The SC adopted the policy for the selection and extension of invited experts for supporting the Scientific Committee and its expert groups (Annex G).

3.7 Independent reviews of scientific advice (PR Recommendation 3.4.2.)

46. China presented a proposal to establish a formal peer-review process for stock assessments (NPFC-2025-SC10-WP17) and a proposed Terms of Reference (TOR) for the external peer review process (NPFC-2025-SC10-WP18). Noting the request from the Commission to explore the potential benefits of a peer review system and the high-priority recommendation from the 2022 Performance Review Panel to establish a peer review process, China urged the SC to initiate such a process.

47. The SC thanked China for the proposal and expressed general support for moving towards the establishment of a formal peer-review process for stock assessments.

48. The SC requested China to work intersessionally with other interested Members through the SWG Milestones to develop the proposal further with a detailed description of the proposed process for NPFC, and the potential cost implications, and to present an updated proposal to SC11.

49. The SC requested the EU to work intersessionally with other interested Members through the SWG Milestones to conduct a review of best practices from other organizations for implementing peer-reviews for stock assessments to support the development of the NPFC's

own peer-review process.

50. The SC also tasked coordination of external peer-reviews to its subsidiary bodies, noting the limited capacity within the Secretariat to coordinate an external review process.

3.8 Advice on science-based management options for operationalizing the precautionary approach (PR Recommendation 4.1.2)

3.8.1 Summary of NPFC workshop on "Science-based management options available for operationalizing the precautionary approach as outlined in the Convention for NPFC priority species"

51. The Chair presented a brief summary of the NPFC workshop on *Science-based management options available for operationalizing the precautionary approach as outlined in the Convention for NPFC priority species* (NPFC-2025-SC10-RP04).

3.8.2 Science-based management options for NPFC

52. The SC Vice-Chair, Dr. Jie Cao (China), led the discussion on science-based management options for NPFC.

53. For operationalizing the precautionary approach (PA) where stock assessments are not available according to the NPFC Performance Review, the SC reminds the Commission that it can take action according to the best available science (for example, using catch and effort data, peer-reviewed literature or domestic stock assessments).

54. The SC recommends that as a longer-term goal, the Commission should develop a general framework for the application of the PA. The SC recommends that this work be conducted by a small working group established under the Commission. The SC recommends that this small working group be composed of managers and scientists and that it be led by managers.

55. The EU highlighted the need to develop a general framework for the application of the PA as promptly as possible in light of the condition of several NPFC priority stocks.

56. The SC agreed, as an interim measure, to task its subsidiary bodies that do not have stock assessments in place to provide science-based options for operationalizing the PA. The SC agreed that subsidiary bodies could provide multiple options and that these do not necessarily need to be consensus options, but they should be accompanied by clear descriptions of the scientific rationale to facilitate the Commission's decision-making. The SC agreed to review these options and present them to the Commission.

57. Pew expressed its support for the NPFC's ongoing management strategy evaluation (MSE) efforts, noting that MSE is designed to work under uncertainty, especially in circumstances where stock assessments are uncertain or unreliable. Pew suggested that the NPFC consider engaging in broader coordination for applying the PA, including MSE, across species and provide funding for that work.

58. WWF suggested that for stocks that are in decline, in the absence of an agreed stock assessment, the PA calls for the implementation of measures based on the best available science to avoid the collapse of the stock.

59. The DSCC pointed out that the PA applies not only to fish stocks but also to the protection of vulnerable marine ecosystems (VMEs). The DSCC pointed out that there are published scientific papers indicating that significant adverse impacts have occurred and are likely to continue to occur on VMEs in the Convention Area.

Agenda Item 4. Review of stock assessments, reports, and recommendations from the Technical Working Group on Chub Mackerel Stock Assessment (TWG CMSA) and the Small Scientific Committees (SSC BF-ME, SSC NFS, and SSC PS)

4.1 Technical Working Group on Chub Mackerel Stock Assessment

4.1.1 Summary of TWG CMSA activities, tasks, and recommendations

60. The TWG CMSA Chair, Dr. Kazuhiro Oshima (Japan), summarized the outcomes and recommendations of the 10th and 11th TWG CMSA meetings (NPFC-2025-TWG CMSA10-Final Report & NPFC-2025-TWG CMSA11-Final Report).

61. The SC endorsed the reports of the 10th and 11th TWG CMSA meetings.

62. The TWG CMSA Chair presented a summary of the TWG CMSA's responses to the taskings from the 9th Commission Meeting (NPFC-2025-SC10-WP22 (Rev. 2)). The tasks are 1. Provision and analysis of gear specific data to explore whether there is a need to protect the immature portion of the stock and advice on options for achieving that, as appropriate, 2. Clarification of the correspondence of fishing days and the level of catch in relevant fleets, such as the purse seine fleet, and 3. Based on the next stock assessment, provide projections and associated probabilities, based on constant catch scenarios (e.g. increments of 5000 MT) or constant F scenarios, aiming at reaching an appropriate MSY proxy (SSB and F) within 5 to 10 years (with a probability higher than 50%).
    (a) For Task 1, the TWG CMSA examined various model outputs available from the SAM assessment model in an attempt to address the issue of whether more protections were needed for the immature portions of the stock. However, after extensive discussion and preliminary analyses, it was determined that none of the model outputs were alone

sufficient to address this issue. In order to respond to this Task thoroughly, the TWG CMSA needs gear specific catch-at-age / catch-at-length data by all Members, which is currently not submitted through the data submission requirement. Should the Commission wish this Task to be completed, the TWG CMSA and SC recommend that the Commission require the Members to submit such data including accessory devices used for fishing purposes for both the Convention Area and exclusive economic zones (EEZs).

(b) For Task 2, as a first step, the TWG CMSA prepared a description of how each Member defines and calculates "fishing day" and presented this information to SC10, and, in the longer-term, agreed to work towards a common methodology for defining and calculating "fishing day."

(c) For Task 3, the TWG CMSA has addressed this through the future projections as part of the 2025 chub mackerel stock assessment. For the projections and associated probabilities, based on constant catch scenarios, the TWG CMSA considered the appropriate increment levels and agreed to use increments of 10,000 MT.

4.1.2 Summary of CM stock assessment

63. The TWG CMSA Chair presented the chub mackerel stock assessment report (NPFC-2025-SC10-WP10).

64. The TWG CMSA Chair explained that when Japan conducted its domestic stock assessment meeting for chub mackerel, it identified a calculation error in the input catch-at-age data used for the 2025 domestic stock assessment. Unfortunately, the same error was also included in the input data for the 2025 NPFC chub mackerel stock assessment. The input data for Japan's 2025 domestic stock assessment were constructed based on the data used for the NPFC stock assessment this year. Japan conducted the necessary data corrections and re-ran the SAM using the revised data. The updated results indicate that although the catch-at-age data for the 2014–2017 fishing years were substantially revised, the estimated biomass, spawning stock biomass (SSB), and recruitment did not change substantially. This correction does not affect the management-related reference points or the overall conclusions of the 2025 stock assessment.

65. The SC reviewed and endorsed the chub mackerel stock assessment report (Annex H).

66. The SC noted that given the uncertainty in biological parameters in future, which has a large impact on the projection results, it is not appropriate to provide long-term harvesting recommendations at this time. However, in response to the request from COM09, 10 year projection was undertaken to assess the effects of varying catch and F levels based on the most recent eight years' biological data (Figures E-10 and E-11, Tables E-2 to E-5, Annex H). Projections indicate that current fishing mortality is unsustainable, and probabilities of

achieving various reference levels under catch-constant as well as F-constant scenarios are provided in Tables E-2 and E-3 of Annex H. It is recommended to reduce fishing mortality to recover SSB to the reference levels.

67. The SC noted that the TWG CMSA recommended 50th percentile of the estimated historical SSB (1970–2023) and 70th percentile of the estimated historical SSB (1970–2023) as reference levels and the 25th percentile of estimated historical SSB as a limit reference point. The SC recommended that in light of uncertainties around the biological parameters, these reference levels and limit reference point should be treated as interim. The SC noted that Members have differing views on which of the reference levels should be treated as the target.

68. The SC noted that effort is currently not comparable among Members fishing for chub mackerel, as each Member defines "fishing days" differently and Japan has shared data for its purse seine fishery, which is its main fishery, and its bottom trawl fishery. The SC noted Japan's explanation that its other chub mackerel fisheries operate in its EEZ, that many of these fisheries are artisanal and multi-species in nature, and that it would be very difficult to develop a meaningful indicator of chub mackerel effort for the NPFC from these fisheries. The SC tasked the TWG CMSA to hold further discussions on how best to measure and compare chub mackerel fishing effort among Members.

4.2 Small Scientific Committee on Bottom Fish and Marine Ecosystems

4.2.1 Summary of SSC BF-ME activities, tasks, and recommendations

69. The Chair of the SSC on Bottom Fish and Marine Ecosystems (SSC BF-ME), Dr. Chris Rooper (Canada), summarized the outcomes and recommendations of the 6th SSC BF-ME meeting (NPFC-2025-SSC BFME06-Final Report).

70. The SC endorsed the report of the 6th SSC BF-ME meeting.

4.2.2 Summary of stock assessments for bottom fish

71. For NPA, the SC noted that no strong recruitment has been detected in recent years (since 2013), stock status remains low, and harvest rate is likely to be high. Potential caveats include the possible effect of a target shift, uncertainty in the estimation of the recruitment season, estimates of harvest rate (>1) in some years and seamounts, and potential bias caused by the removal of zero-catch operations. The SSC BF-ME recommended to keep monitoring possible recruitment events and avoid high harvest rates for recruited fish as specified in CMM 2025-05. Furthermore, since recruitment has been weak, the SSC BF-ME recommended reducing the harvest rates as much as possible. The SSC BF-ME also recognized the effort of Japanese fishers to avoid harvest of NPA since 2019.

72. For SA, the SC noted that there has been no new stock status advice, that there is a high likelihood that growth overfishing is occurring (harvest before the size that maximizes yield-per-recruit (YPR)), and that SA are being captured before they are mature, likely reducing the spawning potential. A potential caveat is that the trawl fishery has dome shaped selectivity, which may make the analyses pessimistic about the status of the stock. The SC noted that the SSC BF-ME is aiming to conduct a preliminary stock assessment of SA in 2026.

73. For sablefish, the SC noted that domestic stock assessments conducted in three regions (Alaska, Canada, and US West Coast) all indicate that the sablefish stock is healthy and not subject to overfishing. The SC noted that Canada has not fished for sablefish since 2020 as the fishery has not been economically profitable, and that there will likely be some fishing in 2026.

74. For skilfish, the SC noted that there are currently no assessments available and that conducting an assessment for this species is a low priority as fishing is not consistent and data are limited.

75. The DSCC and Pew urged the SC to recommend the suspension of the NPA and SA fisheries until formal stock assessments are completed, a recovery plan is established, the stocks are firmly on the path to being rebuilt, and comprehensive impact assessments consistent with United Nations General Assembly (UNGA) resolutions and relevant provisions of international law have been conducted and confirm that continuous bottom fishing on the Emperor Seamount Chain is not causing significant adverse impacts to VMEs.

4.3 Small Scientific Committee on Neon Flying Squid

4.3.1 Summary of SSC NFS activities, tasks, and recommendations

76. The Chair of the SSC on Neon Flying Squid (SSC NFS), Dr. Luoliang Xu (China), summarized the outcomes and recommendations of the 2nd SSC NFS meeting (NPFC-2025-SSC NFS02-Final Report).

77. The SC endorsed the report of the 2nd SSC NFS meeting.

4.3.2 Summary of NFS stock assessment

78. The SC noted that China and Japan have conducted preliminary stock assessments of NFS using Just Another Bayesian Biomass Assessment (JABBA) and the stochastic surplus production model in continuous time (SPiCT), respectively. The SC noted that the SSC NFS intends to conduct a preliminary stock assessment of NFS using Members' standardized CPUEs in 2026.

4.4 Small Scientific Committee on Pacific Saury

4.4.1 Summary of SSC PS activities, tasks, and recommendations

79. The Chair of the SSC on Pacific Saury (SSC PS), Dr. Toshihide Kitakado (Japan), summarized the outcomes and recommendations of the 15th and 16th SSC PS meetings (NPFC-2025-SSC PS15-Final Report, NPFC-2025-SSC PS16-Final Report).

80. The SC endorsed the reports of the 15th and 16th SSC PS meetings.

4.4.2 Summary of PS stock assessment

81. The SC noted that the SSC PS reviewed the stock assessments conducted by Members and could not reach consensus on the treatment of the results.

82. The SC noted that China expressed concerns that the current Bayesian State-Space Production Model (BSSPM) used for the Pacific saury stock assessment exhibits instability and considerable uncertainty in key parameter estimates and that it does not adequately capture non-stationary population dynamics. China noted that an increasing body of scientific evidence indicates that key biological processes of Pacific saury, including growth, survival, and maturation, are closely linked to environmental variability. China is therefore concerned that the assumption of stationary stock productivity is not appropriate for this small pelagic species and is inconsistent with current scientific understanding. In light of these concerns, China considers that the model specification should be improved by incorporating non-stationary formulations for key population parameters, such as the intrinsic growth rate (r) and carrying capacity (K), and that the assumption of hyperstability should be further evaluated.

83. The SC noted that China also expressed concern regarding the scaling uncertainty in the current BSSPM stock assessments for Pacific saury. China noted that the scales of some key assessment outputs such as estimated biomass, biological reference points, and stock status fluctuate across assessment years as newly updated input data are incorporated into the model. Such instability hampers the ability to consistently evaluate management effectiveness and obscures a clear understanding of the true stock status. China noted that until these concerns and limitations are adequately addressed, and to minimize the risk of inappropriate management decisions, China considers that the current assessment results are not sufficiently robust to serve as the basis for developing management advice.

84. The SC noted that other Members noted China's reservations and recognized that there continue to be some uncertainties in the stock assessment. However, they considered the stock assessment to be the best scientific information available and believed it would be appropriate to aggregate the results, recognizing the agreement in trends among them. They also noted that, even though Pacific saury stock has been recovering in recent years, the stock has yet to

reach past abundance levels and a precautionary approach as incorporated in the interim harvest control rule (HCR) is warranted given the uncertainty of the stock assessment.

85. The SC noted that to provide the calculations requested by CMM 2025-08 For Pacific Saury, input values from Japan and Chinese Taipei's stock assessments were used rather than assessment results from all contributing SSC PS Members.

86. The SC noted that the interim HCR for Pacific saury under CMM 2025-08 was used to calculate the annual catch level in the 2026 fishing year, while noting the lack of endorsement from China. Based on assessment inputs from Japan and Chinese Taipei, the unconstrained annual catch level for 2026 = (B_{2025}*F_{MSY}*(B_{2025}/B_{MSY}) = 91,180 MT. Based on the adopted HCR, the constrained 2026 catch level would be 0.9 x 202,500 = 182,250 MT.

87. The SC noted that in the SSC PS16 report, Chinese Taipei stated that based on thorough comparisons of recent stock assessment results across years and alternative model scenarios, contributing Members' assessments indicate substantial uncertainties in the estimation of key stock status indicators, including biomass, fishing mortality, and reference points F_{MSY} and B_{MSY}. In this regard, the estimated annual catch level derived from the interim HCR is subject to considerable uncertainty and potential error. While the HCR provides a consistent framework for translating stock status into management advice, the resulting calculated annual catch level should be interpreted with caution.

88. The SC discussed future work on the Pacific saury stock assessment. The SC noted that the SSC PS should continue working both to improve the BSSPM and to develop new age-structured models, but noted that a new age-structured model would not be guaranteed to perform perfectly. It should be noted that the age-structure models can be used in the future as a basis for operating models in the MSE framework. In addition, a simpler assessment model such as the BSSPM might be used as an internal assessment method when developing model-based management procedures, as has been used in other RFMOs.

89. The WWF expressed appreciation for the hard work of the SSC PS but expressed deep concern about the future of the Pacific saury stock as the SSC PS could not reach consensus on a Pacific saury stock assessment. The WWF stated that, generally, when the uncertainty is high, it is necessary to reduce total allowable catch (TAC) in accordance with the precautionary principle. The WWF noted that the current HCR requires a 10% reduction in TAC, but suggested that the SC recommend a TAC reduction of greater than 10% and that, if possible, the SSC PS should hold additional meetings to reach consensus on stock assessment results next year.

Agenda Item 5. Update from the Joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS)

90. The co-Chair of the joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific saury (SWG MSE PS), Dr. Toshihide Kitakado (Japan), informed participants about progress of the SWG MSE PS including the outcomes and recommendations of its 6th meeting (NPFC-2025-SWG MSE PS06-Final Report).

Agenda Item 6. Summary of progress on the remaining three priority species

91. The Leads of the Small Working Groups (SWGs) on Japanese sardine (JS), Japanese flying squid (JFS), and blue mackerel (BM) reported on the SWGs' intersessional activities, including the relevant outcomes of the 1st and 2nd joint virtual meetings of these SWGs in 2025, in the respective sections below (6.1–6.3). Detailed summaries of the joint SWG meetings are available in NPFC-2025-SC10-RP01 (1st meeting) and NPFC-2025-SC10-RP02 (2nd meeting).

6.1 Blue mackerel (BM)

6.1.1 Review of tasks and recommendations

92. The SWG BM Lead, Dr. Kazunari Higashiguchi (Japan), reported on the SWG BM's intersessional activities (NPFC-2025-SC10-IP05). The SWG BM has met twice intersessionally (as part of the joint meetings of the SWGs on JFS, JS, and BM). It updated Members' estimated catch and effort, updated BM length-weight relationship and catch-at-length data, updated the ratio of BM in the total mackerel catch by China and Japan, reviewed China's fishery data and research activities, and updated the species summary.

6.1.2 Observation of domestic stock assessment

93. Japan presented its 2023 domestic stock assessment of BM (NPFC-2025-SC10-IP06). The assessment is conducted using tuned Virtual Population Analysis (VPA) with two abundance indices. The MSY-based reference points were estimated from the stochastic simulation from the Ricker stock-recruitment relationship. Total biomass and SSB have been decreasing since the 2010s. Fishing mortality and exploitation rate are decreasing. SSB was lower than SSB_{MSY} and F was lower than F_{MSY} in 2023.

94. Japan informed the SC that its 2024 domestic stock assessment of BM is currently being finalized.

6.1.3 Review of species summary

95. The SC reviewed the updated species summary document for BM (NPFC-2025-SC10-WP21). The SC endorsed the updated species summary document for BM (https://www.npfc.int/species-summaries).

6.2 Japanese flying squid (JFS)

6.2.1 Review of tasks and recommendations

96. The SWG JFS Lead, Dr. Hajime Matsui (Japan), reported on the SWG JFS' intersessional activities (NPFC-2025-SC10-IP04). The SWG JFS has met twice intersessionally (as part of the joint meetings of the SWGs on JFS, JS, and BM). It updated Members' catch and effort data; evaluated the influence of environmental variables on the life history, biology, and population dynamics of JFS; and updated the species summary.

6.2.2 Observation of domestic stock assessment

97. Japan presented its 2024 domestic stock assessment of JFS (NPFC-2025-COM09-IP05). The estimated total biomass of the winter spawning stock decreased largely from 2015 to 2016 and has remained at a low level since then. The MSY-based reference points were estimated by a stochastic simulation with the Beverton-Holt stock-recruitment relationship. In 2024, the estimated total biomass was 135,000 MT and the estimate of SSB was 57,000 MT. SSB was below SSB_{MSY} and F was below F_{MSY} in 2023.

6.2.3 Review of species summary

98. The SC reviewed the updated species summary document for JFS (NPFC-2025-SC10-WP14). The SC endorsed the updated species summary document for JFS (https://www.npfc.int/species-summaries).

6.3 Japanese sardine (JS)

6.3.1 Review of tasks and recommendations

99. The SWG JS Lead, Dr. Shuya Nakatsuka (Japan), reported on the intersessional activities of the SWG JS. The SWG JS has met twice intersessionally (as part of the joint meetings of the SWGs on JFS, JS, and BM). The SWG JS updated Members' catch and effort data; reviewed China's JS fishery data and research activities; reviewed Japan's domestic stock assessment methodology; discussed approaches for the development of one or more collaborative stock assessment models; evaluated the influence of environmental variables on the life history, biology, and population dynamics of JS; reviewed a draft TOR for a new Small Scientific Committee on Japanese Sardine (SSC JS); and updated the species summary.

100. Dr. Chris Rooper (Canada) informed the SC that he presented a literature review of studies relating environmental conditions to JS in the North Pacific Ocean at the PICES-2025 Annual Meeting. The paper is available as NPFC-2025-SC10-WP11.

6.3.2 Observation of domestic stock assessment

101. Japan presented its domestic stock assessment of JS (NPFC-2025-SC10-IP07). The assessment is conducted using a tuned VPA with ridge penalty. The MSY-based reference points were estimated from a stochastic simulation from the normal-regime stock-recruitment relationship of the hockey stick function. In 2024, estimated total biomass was 4.0 million MT and SSB was 2.7 million MT. SSB in 2024 exceeded SSB_{MSY}. F in 2024 exceeded F_{MSY}.

6.3.3 Review of species summary

102. The SC reviewed the updated species summary document for JS (NPFC-2025-SC10-WP23). The SC endorsed the updated species summary document for JS (https://www.npfc.int/species-summaries).

6.3.4 Potential establishment of a new formal SC subsidiary body to focus on collaborative NPFC stock assessment of JS

103. The SC agreed to establish a new formal SC subsidiary body, SSC JS, to focus on collaborative NPFC stock assessment of JS and that this new SSC JS would supersede the SWG JS.

6.3.5 Draft Terms of Reference for a Small Scientific Committee on Japanese Sardine

104. The SWG JS Lead presented the draft ToR for the established SSC JS (NPFC-2025-SC10-WP09). The SC reviewed and endorsed the ToR (Annex I).

105. The SC agreed to select Dr. Shuya Nakatsuka (Japan) to serve as the Chair of the SSC JS and Dr. Libin Dai (China) to serve as its Vice-Chair.

106. The SC recommended the hiring of an invited expert to support the work by SSC JS to conduct an NPFC stock assessment of JS.

107. The SC requested Members to share relevant data for the conducting of a JS stock assessment using the data templates developed by SWG Data in advance of the first meeting of the SSC JS.

6.4 Review of tasks for SWG JFS, SWG BM, and SWG JS (or SSC JS)

108. The SC developed a table of future tasks for the SWG BM, SWG JFS, and the SSC JS (Annex J).

Agenda Item 7. Climate change effects on NPFC's priority species and associated ecosystems

7.1 Tools for incorporating climate change considerations into scientific advice

109. Pew presented a review of recent progress by selected RFMOs towards climate-informed

governance (NPFC-2025-SC10-OP03). Based on its review, Pew suggested that the NPFC develop a dedicated and more detailed work plan, indicative of timelines, to integrate climate change considerations in NPFC scientific processes and develop climate-informed management approaches for NPFC species; evaluate data requirements for climate-related monitoring as part of ecosystem-based fisheries management (EBFM) implementation; and cooperate with other relevant RFMOs in the Pacific Ocean and intergovernmental scientific organizations regarding climate-ready management approaches, research, and advice for transboundary species whose distribution or migrations are likely to be affected by climate change.

110. The Chair expressed her appreciation for the information presented and suggestions for the NPFC.

7.2 Current knowledge

111. No new information was presented.

7.3 Ongoing research activities

7.3.1 PICES' Basin-scale Events to Coastal Impacts (BECI) project

112. The Science Director of the Basin-scale Events to Coastal Impacts (BECI) project, Dr. Kathryn Berry, provided an overview and an update on the project (NPFC-2025-SC10-OP05). The BECI project is intended to serve as a North Pacific Ocean knowledge network that identifies and collates existing data, research, monitoring, management efforts, and operational tools across the North Pacific, and synthesizes this information into accessible products, such as interactive maps, dynamic dashboards, and collaboration platforms, to support climate-resilient fisheries and conservation decisions. The BECI project can support the NPFC by enhancing access to environmental information, facilitating NPFC's coordination with other RFMOs, providing comprehensive environmental information about migratory species, and support the NPFC with developing and implementing its climate workplan.

113. The SC thanked Dr. Berry for the update on the BECI project and noted the significant progress made to date. The SC noted the potential value of the BECI project for informing the SC's analyses, including those related to climate change, and looked forward to the project's continued development.

114. The Chair encouraged Members, especially the Chairs and Leads of SC's subsidiary bodies, to review the information in the BECI species cards, including with regard to climate change-related impacts, and consider how some of this information could be incorporated into the NPFC's species summaries. She also encouraged Members to explore the BECI website and

consider how its resources could benefit their own work and analyses.

7.4 Detailed work plan to produce climate-resilient scientific advice

115. The SC encouraged the SC subsidiary bodies to incorporate more detailed climate and climate change-related tasks into their work plans. Specifically, the SC tasked the SC subsidiary bodies with considering including in the workplans identification of possible key vulnerabilities and management implications of changing oceanographic conditions resulting from climate change on NPFC fisheries resources (e.g., through meta-analysis and/or review of published papers; analysis of the relationship between key vulnerabilities and changing environmental conditions (e.g., by drawing on BECI data); if feasible, integration of information about how a changing climate affects biological or fisheries-related parameters into analyses used for stock assessments; and recommendation of ways to help adapt to climate change and promote resilience in NPFC fisheries.

116. The SC agreed that as part of its workplan it would consider possible key vulnerabilities and management implications of changing oceanographic conditions resulting from climate change on species belonging to the same ecosystem or dependent upon or associated with target stocks, as well as make recommendations to help adapt to climate change and promote resilience in NPFC fisheries.

7.5 Research priorities and potential scientific projects

117. There were no proposals for additional research priorities or scientific projects.

Agenda Item 8. Data Collection and Management

8.1 Data Management System

8.1.1 Update for NPFC

118. The Data Coordinator, Mr. Sungkuk Kang, reported on the progress in the development of the SC-related data management system (NPFC-2025-SC10-IP01). The Data Coordinator explained updates to the Members Home, Significant dates/Events, Pacific Saury Weekly Report, Chub Mackerel Monthly/Weekly Report, GIS Maps, Collaboration Site, and Annual Reports sections. In addition, the Data Coordinator reported on the ongoing development of an NFS Map for NFS catch and effort data and progress on the Scientific Data Management System Development project.

119. The SC expressed its appreciation to the Secretariat for continuing to update and enhance the NPFC data management system.

120. The SC suggested that the Secretariat explore the possibility to add a layer to the Bottom

Fishing Map to visualize areas closed to bottom fishing and fished areas in the Emperor Seamounts and Cobb Seamount Chain under NPFC CMM 2025-05 and CMM 2025-06, or alternatively, to consider a separate map visualization if integration into the existing map is not feasible.

8.1.2 Data inventory update

121. The Data Coordinator presented an updated data inventory table summarizing information about data submitted by Members (NPFC-2025-SC10-IP03). The Data Coordinator requested Members to review the updated inventory and provide feedback or corrections to the Secretariat for further improvement.

8.1.3 Data submission deadlines for stock assessment analyses

122. The Chair proposed a template prepared by the SWG Data Lead, Ms. Karolina Molla Gazi, for making regular, centralized SC data calls (NPFC-2025-SC10-WP15). A data call is essential to ensure that the SC and its subsidiary bodies have access to the most complete, consistent, and up-to-date information needed to conduct robust stock assessments and provide sound scientific advice to the Commission. Regular and standardized data submissions allow the SC subsidiary bodies to integrate fishery-dependent and fishery-independent information from all Members and CNCPs, assess trends across the Convention Area, and evaluate stock status against agreed reference points. This process not only supports transparency and comparability among datasets but also fulfils Members' data-provision obligations under the relevant NPFC CMMs. A centralized request for data ensures coherence, transparency, and equity in how Members and CNCPs are asked to contribute information. It provides all parties with the same guidance, deadlines, and specifications, reducing the risk of inconsistent interpretations or selective participation. It also helps align the timing of submissions with the scientific and management calendar, ensuring that the SC subsidiary bodies have the necessary inputs well in advance of analyses and meetings.

123. The SC reviewed and adopted the template for SC data calls (Annex K).

124. The SC agreed to work towards operationalizing the use of the template for SC data calls in 2027. The SC tasked each of its subsidiary bodies to identify appropriate data requirements and deadlines, the Chairs of the subsidiary bodies to communicate these data requirements and deadlines to the Secretariat by SC11, and the Secretariat to compile a document with the data requirements and deadlines for all subsidiary bodies and circulate this to Members. The SC agreed to discuss the timing and frequency of data calls as necessary. The SC agreed that the use of the template for SC data calls would not prevent the SC and its subsidiary bodies from conducting more frequent, ad hoc data calls, such as for exploratory analyses.

8.1.4 SWG Data

125. The SWG Data Lead presented the report of SWG Data (NPFC-2025-SC10-WP12). SWG Data met four times in 2025 via WebEx. It advanced the development of the NPFC SC database, including database architecture, user roles, confidentiality provisions, and harmonized templates. The SWG also reviewed the draft CMM on Minimum Data Standards, consolidating feedback from Members. It achieved significant progress on defining data types, developing reference code lists, and outlining implementation steps.

126. The SC endorsed the SWG Data report (Annex L).

127. The SC agreed to adopt the common terminology discussed by the group regarding effort and the definitions of live and gutted weight.

128. The SC agreed to share information regarding the maturity scales and corresponding stages used at a national scale in order to develop the reference code list.

129. The Executive Secretary, Dr. Robert Day, informed the SC that the Secretariat has been updating its data records to ensure the standardized use of the FAO 3-alpha species codes, as was recommended by SWG Data.

130. The SC noted that there is currently no FAO 3-alpha species code for Japanese sardine (*Sardinops melanostictus*) and that the Secretariat has had to classify Japanese sardine under the FAO code for Pacific sardine (*Sardinops sagax*, CHP). The SC agreed that Japanese sardine should have its own FAO 3-alpha species code. The SC requested that the Chair make a formal request to the FAO to assign a species code to Japanese sardine. The SC suggested that the Chair could cite https://doi.org/10.1111/mec.17561, among other studies, as part of the rationale.

8.1.4.1 Establishment of a new database to manage and archive scientific data

131. The SC noted the progress made by SWG Data on establishing a new database to manage and archive scientific data. The SC endorsed the holding of a 4-hour training workshop in January 2026 on the use of the database. The SC noted that, based on the outcomes of the workshop, the next steps would be to develop a full manual on the use of the database and hold a further training workshop.

132. The SC thanked the EU for providing a voluntary contribution to support the development of the SC database.

8.1.4.2 Review of the proposed CMM on Minimum Standards for NPFC Data

133. The SC noted that SWG Data has reviewed the proposed CMM on Minimum Standards for NPFC Data and consolidated feedback from Members (Annex L).

8.1.4.3 Potential renewal of term for SWG Data

134. The SC agreed to extend the SWG Data's term for one more year to finalize the development of the SC database.

8.2 NPFC Data Sharing and Data Security Protocol

135. Japan presented a proposal on the re-publication of catch and fishing effort information in the Annual Summary Footprints on the public domain of the NPFC website (NPFC-2025-SC10-WP13). Japan explained that although all Members submit annual information on catch and fishing effort to the NPFC, these data are currently not publicly available due to restrictions in the NPFC Data Sharing and Data Security Protocol. Japan proposed that annual catch and effort information presented in the Annual Summary Footprint, including annual catch, annual number of vessels, and annual number of fishing days, by Member, species, area, and gear type, be re-published, with values derived from fewer than three vessels masked to ensure compliance with the Protocol. Japan explained that it annually conducts domestic stock assessments for JS and BM and that being able to access and include the annual catch amounts of these two species by Member as input data for the assessments would enhance scientific reliability and reduce uncertainty in total catch information. Furthermore, making annual catch and effort data by species and by Member publicly available is a fundamental element of transparency in RFMOs.

136. The SC agreed that it would be preferable if there were greater transparency around Members' catch and effort data, even if these data are from fewer than three vessels, as this would help facilitate the SC's scientific work, while recognizing that there are legal and other restrictions that may make this difficult.

137. The SC noted that in accordance with the NPFC Data Sharing and Data Security Protocol, catch and effort data made up of observations from fewer than three vessels can be made public at the decision of the data owner. The SC noted that this has enabled the sharing of data for conducting NPFC analyses, including as part of the SSC BF-ME's work.

138. The SC seeks guidance from the Commission on making these data publicly available to enhance its transparency and make the data more accessible for domestic stock assessments.

8.2.1 Revision of Regulations for Management of Scientific Data and Information

139. There were no proposed revisions to the Regulations for Management of Scientific Data and Information.

8.3 Data needs, data gaps and strategies to fill gaps

8.3.1 Information about species belonging to same ecosystem or dependent/associated with target stocks

140. Pew presented a rapid literature review on where operational ecological objectives exist in fisheries policies (NPFC-2025-SC10-OP04). Pew found that the importance of the ecosystem approach to fisheries management (EAFM) and ecosystem-based management (EBM) has been recognized but implementation is highly diverse and plans often lack clear means of operationalization. Conversely, operational measures to tackle biodiversity impacts are often outside a single action-oriented EAFM policy. It is necessary to incorporate ecosystem considerations directly into stock management. For the NPFC, Pew suggested that it review existing CMMs and align them with the FAO EAFM monitoring tool; consider how a process of ecological objective setting could be developed; focus on small pelagic target species, endangered, threatened and protected (ETP) species, and ecosystem structure/function; and explore ways to operationalize ecological objectives.

141. China presented an overview of the 2025 survey by the Chinese fishery research vessel Song Hang in the NPFC Convention Area (NPFC-2025-SC10-WP20). The improved survey program in 2025 continues to cover fisheries resources, larval and juvenile stages of marine species, plankton, and environmental surveys, consistent with previous years. Based on the five-year survey, China is conducting a series of research studies to support the NPFC's stock assessment and management of CM, BM, JS, and NFS. Research areas include biological parameters (such as growth and mortality), standardization of abundance indices, biodiversity, and ecosystem modeling. China will submit the resulting outputs to the specific SWG, TWG, or SSC of each priority species.

142. The SC thanked China for the presentation and encouraged it to continue to conduct this survey in the future. The SC noted that the data collected from the survey and resulting analyses could be very valuable for supporting the SC's scientific work.

143. The SC requested that China present more detailed information about the specifications of the gear used in its survey at the next SC meeting.

Agenda Item 9. Potential roles of a regional observer program

9.1 Scientific objectives of an observer program

144. The SC agreed that, in accordance with the NPFC Convention, Article 10, paragraph 4(b), one of the scientific objectives of an observer program could be to collect more data to support the stock assessments of NPFC's priority species.

9.2 Review and revision of SC responses to five TCC Chair's questions

145. The SC Chair presented the draft responses from the SC to five questions from the TCC Chair regarding the scientific aspects of an NPFC regional observer programme (ROP; NPFC-2025-SC10-WP03). The initial responses were prepared by the Small Working Group on Observer Program (SWG OP) and a summary of the intersessional meeting of the SWG OP is available in NPFC-2025-SC10-RP01. NPFC-2025-SC10-WP03 was drafted intersessionally and the SC reviewed and revised its responses to the questions as well as data types that could be collected as part of an ROP to help improve its stock assessments of priority species (one of the six TCC Chair's questions regarding the scientific aspects of an ROP posed to the SC in 2024).

146. The SC reviewed and revised the draft responses (NPFC-2025-SC10-WP03 (Rev. 2)). The SC requested that the SC Chair forward the responses to the TCC Chair.

147. The FAO noted that many RFMOs do not consistently collect data regarding the discard of bycatch and suggested that this could be improved with an ROP.

148. Japan noted that CMM 2025-05 and CMM 2025-06 For Bottom Fisheries and Protection of VMEs in the NW Pacific Ocean and the NE Pacific Ocean require 100% observer coverage for bottom fisheries, which should provide high confidence that rare events could be detected in these fisheries.

149. Canada suggested that the Commission could provide a requirement in CMMs to report bycatch data to the SC.

150. Pew noted that the current Shark CMM 2024-14 does not obligate fishing vessels to record shark catches at the species level and suggested that the SC should consider what level or granularity of data (i.e., species level reporting) would be useful for ETP species, particularly sharks found in the Convention Area that are also noted in other international agreements such as the Convention on International Trade in Endangered Species of Wild Fauna and Flora and the Convention on Highly Migratory Species.

151. The WWF suggested that the SC should encourage managers to implement e-monitoring (EM) and e-reporting (ER) to collect updated information more promptly for stock assessments and understanding of ecosystem impacts. The WWF noted that observer coverage in the NPFC is lower than in many other RFMOs, particularly tuna RFMOs. The WWF suggested that if it is

difficult for the NPFC to increase human monitoring coverage, it should consider the use of EM and ER, which has been implemented successfully in many tuna RFMOs. The WWF also noted that this would also assist with the collection and reporting of data on bycatch, which occurs frequently in many NPFC fisheries.

152. The EU acknowledged that, depending on the stock assessment model, EM could perhaps collect some information useful for stock assessment, but pointed out that many types of data would still need to be collected by human observers. The EU agreed that EM could be used for collecting information on rare events and ETP species.

153. Chinese Taipei acknowledged the usefulness of EM and ER but pointed out that, other than for bottom fisheries, the NPFC has not established a human ROP so it would be premature to discuss the establishment of EM. Chinese Taipei pointed out that EM is supposed to supplement a human observer programme by collecting data that human observers could not, but the NPFC has not yet agreed on what data human observers could collect.

154. Canada pointed out that while it may not be possible to collect age-structure data with EM alone, Canada has been able to collect such data by combining EM with port sampling. Canada suggested that the NPFC should be open to using EM for the collection of some types of data if it would be faster to implement EM than to establish a human ROP.

155. The United States echoed the comments by Canada and added that although EM has often been used as a tool to replace existing human observer programmes in the past, the NPFC should be open to developing both in parallel and that human observer programmes and EM could be complementary.

156. Pew suggested that when considering the implementation of EM, the SC could first identify the minimum data requirements for its stock assessments and then identify whether human observers or EM would be the best means of collecting those data, taking into account factors such as cost, accuracy, capacity, etc.

157. The DSF Project informed the SC that it is planning to potentially conduct a review of the state of the implementation of EM at other RFMOs, which could inform the SC's discussions on this topic.

9.3 Tool for observers/fishers to distinguish between CM and BM

158. The SC noted that the SWG BM has been tasked with the development of a tool for observers/fishers to distinguish between CM and BM.

9.4 Future intersessional work of SWG Observer Program (SWG OP)

159. The SC noted that there is no future work planned for SWG OP and agreed to disband SWG OP.

Agenda Item 10. Scientific projects for 2026 and 2027

10.1 Ongoing/planned projects

10.2 New projects

10.2.1 Potential project(s) for NPFC priority species

10.2.2 Independent review of stock assessments

10.2.3 Other potential projects – capacity building, cooperation with other organizations

10.3 Review, prioritization and funding of projects

160. The Science Manager presented a draft list of scientific activities and projects that were discussed during the meetings of the SC and its subsidiary bodies (NPFC-2025-SC10-WP04 (Rev. 1)).

161. The SC reviewed and finalized the list of proposed scientific activities and projects (NPFC-2025-SC10-WP04 (Rev. 3)). The SC prioritized and endorsed the list of scientific activities and projects for consideration by the Commission (Annex M).

162. The SC noted that while the SC's increased workload and planned projects have resulted in increased funding requests, the SC has sought to offset these increases through measures such as adopting a new structure and workflow that would make data preparatory meetings virtual and informal by default.

163. The SC acknowledged that holding meetings at the Tokyo University of Marine Science and Technology, where the NPFC headquarters are located, would result in potential cost savings, but noted that this is not always feasible given limited availability for meeting spaces. The SC reiterated its call for Members to consider hosting meetings.

Agenda Item 11. Cooperation with other organizations

11.1 Reports on the joint NPFC-PICES activities since the SC09 meeting, including a report from the PICES Secretariat

164. The Executive Secretary of the North Pacific Marine Science Organization (PICES), Dr. Sonia Batten, reported on recent and upcoming planned joint activities between PICES and NPFC (NPFC-2025-SC10-OP06). Dr. Batten highlighted the development of the second NPFC–PICES Framework for Enhanced Scientific Collaboration in the North Pacific (2025–2029), which retains the three priority areas of the previous framework (support for stock assessment

of priority species, VMEs, ecosystem approach to fisheries), and adds consideration of climate change impacts across priority areas. Recent joint activities include NPFC representation in the PICES-ICES joint Working Group on Small Pelagic Fish (WG43) and its successor-WG on Sustainable Pelagic Forage Communities (WG53), NPFC support for Small Pelagic Fish Symposium (SPF)-2022 Symposium and next years' SPF-2026, involvement and co-Chairing of WG47 on the Ecology of Seamounts by NPFC scientists, establishment of a new WG56 to focus on deep-sea connectivity among seamounts, NPFC endorsement for the BECI project, and NPFC and PICES representation at each other's annual meetings. In addition, PICES underwent an External Review in 2023/24 and has established a new Mission Statement, which it will deliver by engaging with NPFC and other RFMOs.

11.2 SC representation at scientific meetings

11.2.1 Yang Zi SC representation at PICES 2025

165. The Chair explained that the SC had originally selected Ms. Yang Zi (China) to represent the SC at PICES 2025 but that she was not able to travel to attend the meeting due to logistics challenges. Because most sessions were not hybrid, she was not able to participate in them. However, she was able to give her presentation on preliminary projection of distribution shift for Pacific saury in the Northwest Pacific Ocean under climate change, via a recording to Session 4: Responses of Small Pelagic Fish Communities to Recent Climate Regime Shifts and Climate Extremes.

11.2.2 Chris Rooper representation at PICES 2025

166. The Chair explained that as Ms. Yang Zi was unable to attend PICES 2025, Dr. Chris Rooper was selected as an alternative representative of the SC to attend in her place.

167. Dr. Chris Rooper reported on his attendance of the PICES 2025 Annual Meeting. Dr. Rooper highlighted several sessions of relevance to the NPFC, focusing on Session 4: Responses of Small Pelagic Fish Communities to Recent Climate Regime Shifts and Climate Extremes, which he co-convened. During Session 4, in addition to the presentation by Yang Zi, Dr. Rooper also gave his own presentation on a literature review of studies relating environmental conditions to JS in the North Pacific Ocean. Both presentations were the result of joint work conducted by Members at NPFC. Dr. Rooper also highlighted the work of the Joint PICES/ICES WG on Sustainable Pelagic Forage Communities (WG53), which he co-chairs and which Dr. Toshihide Kitakado and Dr. Kazuhiro Oshima, the Chairs of the SSC PS and TWG CMSA, respectively, participate in. Many of WG53's activities are of relevance to the NPFC, particularly work related to changing species distribution, stock assessment and environment, MSE, and economic impacts of climate/environment/fisheries.

11.3 Report on cooperation between NPFC and NPAFC

168. The NPAFC Executive Director, Mr. Yoshikiyo Kondo, reported the updates in the implementation of the NPAFC/NPFC Five-year Work Plan (NPFC-2025-SC10-OP07). The NPAFC and the NPFC have been making progress on core aspects of the Five-year Work Plan. On the exchange of data and information, the two organizations have agreed on a ToR for an NPAFC/NPFC SharePoint in 2025. For the coordination of research activities for enhanced scientific cooperation in the North Pacific Ocean, the NPAFC will contribute to BECI activities with scientific research on salmon. For expanding cooperation to collect and share information relating to species of special interest for each Commission, the NPAFC will hold a Workshop on Interactions between Fisheries and Anadromous Fish in the North Pacific High Seas and a Workshop on Interactions Between Salmon, Ecosystems, and Climate: From Mechanisms to Predictive Models in May 2026, and issue an invitation to the NPFC for the former.

11.4 FAO ABNJ Deep-sea fisheries project

169. Dr. Tony Thompson, the DSF Project (FAO), presented an update on its activities (NPFC-2025-SC10-OP01). Highlights in 2025 include the holding of an EAFM symposium, conservation of deepwater sharks, mapping of deep-sea fisheries, data-limited stock assessments, climate change consultancies, and workshops on the precautionary approach. Planned activities in 2026 include a VME identification methods publication; a precautionary approach publication; an in-person workshop on EAFM, climate change, and the precautionary approach; and the development of data-limited assessment methods. The DSF Project seeks continued support from NPFC to contribute to and review the publication on VME identification by commercial vessels; contribute to and review the publication on the precautionary approach; participate in person at the workshop on EAFM, climate change and the precautionary approach in mid- to late-2026; participate in the data-limited stock assessments methods development; support the deepwater shark work, including guidance on an NPFC Convention Area digital identification key; and support the work on mapping deepwater fisheries.

170. The DSF Project (FAO) discussed the acquisition of spatial data from NPFC to map bottom fisheries in a new format that is compatible with that provided by other RFMOs. The DSF Project (FAO) will draft a letter detailing the new request and forward it to the Executive Secretary for distribution to NPFC Commission Heads of Delegation.

171. The SC welcomed the offer from the DSF Project (FAO) to develop a digital deepwater shark identification guide for the NPFC Convention Area. The SC encouraged the DSF Project (FAO) to give consideration to translating the guide into Members' languages.

11.4.1 Report from the NPFC Representative at the FAO Workshop on Cross-Sectoral Interactions with Deep-Sea Fisheries

172. The Chair reported on her participation at the Common Oceans Program DSF Project Workshop on Cross-Sectoral Interactions with Deep-Sea Fisheries in Areas Beyond National Jurisdiction. The key topics of discussion were the meaning of the Agreement on Marine Biological Diversity of Areas Beyond National Jurisdiction (BBNJ Agreement) "not undermining the effectiveness and objectives" of RFMOs and potential interactions between deep-sea mining and deep-sea fishing. As a representative of the NPFC, the Chair emphasized the importance of coordination with NPFC and the value of applying spatial-optimization software for identifying key areas to protect biodiversity while allowing deep-sea fisheries and potentially deep-seas mining in the NPFC Convention Area.

173. Pew noted that the new BBNJ Agreement encourages stronger coordination between fisheries bodies and other relevant sectors. As such, several tuna and general RFMO Secretariats attended the second Preparatory Commission of the BBNJ Agreement to provide additional context of their Conventional mandates, CMMs, and existing ABNJ datasets with respect to marine biodiversity. Pew suggested that the NPFC consider increased engagement with the BBNJ Agreement and contribute submissions, particularly those invited by United Nations Division for Ocean Affairs and the Law of the Sea who is serving as the interim Secretariat.

11.5 Partnership with the Fisheries and Resources Monitoring System of FAO (FIRMS)

174. Dr. Rishi Sharma and Mr. Aureliano Gentile (FAO) provided an update on the partnership between the Fisheries Resources Monitoring System (FIRMS) and the NPFC (NPFC-2025-SC10-OP08). The 14th Session of the FIRMS Steering Committee was held and key outcomes include continued strategic expansion of FIRMS, review of the State of Stocks Index (SoSI), continued progress on the development of the Global Record of Stocks and Fisheries (GRSF) and the Global Tuna Atlas (GTA), standardization of reference points, plans to establish a Working Group to develop guidelines for the responsible use of artificial intelligence within FIRMS, and governance matters. NPFC has updated its stocks and fisheries inventory on FIRMS, and has published 10 stock fact sheets and 8 fisheries fact sheets. The NPFC is requested to continue to support the FAO State of World Fisheries and Aquaculture (SOFIA) State of Stocks Index (SoSI) biennial updates using the improved methodology and data flow. The FAO has also published an updated review of the state of world marine fishery resources and is conducting periodic collation of stock-by-stock status.

11.6 Partnership with WCPFC, SPRFMO and ISC

175. No updates were provided.

11.7 Cooperation with other organizations

176. There was no discussion of cooperation with any other organizations.

Agenda Item 12. SC Terms of Reference (TOR) and 2025-2029 Research Plan and Work Plan

12.1 Review of the Scientific Committee TOR

177. The Chair presented a proposal to revise the SC ToR to clarify the process for the selection of the SC Chair and Chairs of SC's subsidiary groups (NPFC-2025-SC10-WP02).

178. The SC reviewed and revised the proposal (NPFC-2025-SC10-WP02 (Rev. 1)). The SC recommended that the Commission adopt the revised SC ToR (Annex N).

12.2 Five-year Research Plan

12.3 Five-year Work Plan

179. The SC reviewed its 2025-2029 Five-Year Rolling Research Plan (NPFC-2025-SC10-WP19) and Work Plan (NPFC-2025-SC10-WP06). The Research Plan and the Work Plan of the SC and its subsidiary bodies are attached as Annex O.

180. Members agreed to share data for scientific activities in accordance with the agreed SC Research Plan and SC Work Plan. The SC tasked the Secretariat to send an official call for data to Members.

12.4 Progress on addressing NPFC PR recommendations for SC

181. The SC noted that it has continued to make progress on addressing the NPFC Performance Review Panel's recommendations.

182. The Executive Secretary reminded the SC that the Commission is exchanging perspectives on the NPFC's progress on addressing the NPFC Performance Review Panel's recommendations through intersessional correspondence and will hold further discussion at the next Commission meeting. He explained that the Commission may provide the SC with a more specific tasking based on those discussions. The Executive Secretary also reported that the Secretariat's analyses indicate that the NPFC is generally making good progress on addressing the recommendations.

Agenda Item 13. Other matters

13.1 Coordination between SC and TCC

183. The Compliance Manager, Ms. Judy Dwyer, provided an update on coordination between the TCC and the SC (NPFC-2025-SC10-IP02). The TCC has been developing a draft port inspection measure and working with the FAO Global Information Exchange System (GIES)

team on data transfer options, discussing the definition and process to establish "historic existing level," preparing for mandatory entry/exit notifications within the NPFC Vessel Monitoring System, processing transshipment data and preparing for the transition away from emailed data forms, having initial discussions toward the development of an ROP, preparing to discuss the TCC-related aspects of the establishment of NPFC data standards, and correcting data collected for several species using incorrect FAO 3-alpha codes.

184. As matters for coordination between the SC and the TCC, the SC requested that the SC Chair/Secretariat forward to the TCC the SC responses to the questions from the TCC Chair about SC's data needs to inform COM decisions on the development of an ROP (NPFC-2025-SC10-WP03 (Rev. 2)).

185. The SC requested Members to present information about their sampling programs for transshipped catch at the relevant SC subsidiary body meetings.

13.2 Other issues

186. During SC discussions there were differing opinions on whether the SC provided "advice" or "information" to the Commission on the status of stocks. In particular this issue was relevant to the 2025 Pacific Saury Stock Assessment, where there was no consensus on the suitability of the existing BSSPM model. The Pacific Saury CMM 2025-08 requests the SSC PS to calculate the annual catch level and apply the interim HCR specified in the CMM. This was done, but it was not clear whether the lack of consensus meant that the application of the interim HCR constituted "advice" or "information." Some Members of the SC request clarity from the Commission on whether the SC can provide "advice" while capturing the majority and minority views of Members consistent with Article 10 (3) of the NPFC Convention.

Agenda Item 14. Advice and recommendations to the Commission

187. Based on the recommendations from its SSCs, the TWG CMSA, and its SWGs, the SC recommends that the Commission:
    (a) Endorse the revised Scientific Committee Terms of Reference (Annex N).
    (b) Endorse the SC's 5-Year Rolling Research and Work Plans (Annex O).
    (c) Endorse the proposed scientific activities and projects (Annex M).
    (d) Endorse Dr. Jie Cao (China) as SC Chair.
    (e) Consider the species summary documents (https://www.npfc.int/species-summaries) and stock status summaries as reference information when taking decisions on the management of the NPFC priority species.
    (f) Consider the scientific meetings schedule for 2026–2027 as described in Annex E.

    SC Structure and Workflow

    (g) Endorse the streamlined SC workflow to respond to the substantial increase of the SC

workload and growing budgetary pressure as described in Annex D.

Frequency of Benchmark and Annual Stock Assessments

(h) In general, conduct benchmark stock assessments every 3–5 years and conduct the data update stock assessments annually (see paragraphs 32–35 for details).

Precautionary Approach

(i) Develop a general framework for the application of the PA and conduct this work through a small working group that is established under the Commission, is composed of managers and scientists, and is led by managers.

Chub Mackerel

(j) Endorse the stock assessment report for chub mackerel (Annex H).

(k) Consider the following interim reference levels:

i. 50th percentile of the estimated historical SSB (1970–2023 fishing years)

ii. 70th percentile of the estimated historical SSB (1970–2023 fishing years)

(l) Consider the 25th percentile of estimated historical SSB as an interim limit reference point.

(m) Reduce fishing mortality to recover SSB to the reference levels.

(n) Continue to hire an invited expert to support the TWG CMSA in 2026.

Taskings from the 9th Commission Meeting to the TWG CMSA

(o) Should the Commission wish Task 1 from the Commission to TWG CMSA to be completed, require Members to submit gear specific catch-at-age / catch-at-length data by all Members including accessory devices used for fishing purposes for both the Convention Area and EEZs.

(p) Note that the SC has reviewed the TWG CMSA's responses to the taskings from the Commission and Dr. Kazuhiro Oshima, Chair of TWG CMSA, will submit a working paper to the 10th Commission meeting.

Bottom Fish and Marine Ecosystems

(q) Continue to hire an invited expert to support the work of the SWG NPA-SA.

(r) Endorse the following indicators of trend for NPA:

i. Fisheries-dependent indicators:
   a. Catch
   b. Depletion analysis estimates

ii. Fisheries-independent indicators:
   a. Monitoring survey CPUE
   b. Monitoring survey fatness index

(s) Endorse the following indicators of trend for SA:

i. Fisheries-dependent indicators:
   a. Trawl and gillnet CPUE (standardization in progress)
   b. Depletion analysis estimates

(t) Endorse the following indicators of trend for sablefish:

i. Fisheries-dependent indicators:
    a. CPUE from longline traps

(u) Note that for SA there continues to be a high likelihood that growth overfishing is occurring (harvest before the size that maximizes yield-per-recruit), and that SA are being captured before they are mature, likely reducing the spawning potential.

(v) Note that for NPA, no strong recruitment has been detected in recent years (since 2013), stock status remains low, and harvest rate is likely to be high. Since NPA recruitment has been weak, the SC recommends reducing the harvest rates as much as possible, but the SC recognizes the effort of Japanese fishers to avoid harvest of NPA since 2019.

(w) Note that domestic stock assessments conducted in three regions (Alaska, Canada, and US West Coast) all indicate that the sablefish stock is healthy and not subject to overfishing.

(x) Note that for skilfish, there are currently no assessments available and no current or planned fishing.

Neon Flying Squid

(y) Continue to hire an invited expert in 2026 to support the SSC NFS during its meetings and conduct other work to support the SSC NFS as appropriate.

(z) Endorse the following indicators of trend for NFS:

i. Fisheries-dependent indicators:
    a. Standardized CPUE
    b. Mean size at catch
    c. Total catch
ii. Fisheries-independent indicators:
    a. Abundance index
    b. Size composition
    c. Driftnet survey during summer

Pacific Saury

(aa) Consider the stock assessment report, while noting that one Member did not endorse the stock assessment results (Annex P), and the SC's discussions in summary of Pacific saury stock assessment (paragraphs 81–88).

(bb) Continue to hire an invited expert to support the work of the SSC PS and SWG NSAM by conducting the tasks described in Annex G, NPFC-2025-SSC PS16-Final Report.

Other Priority Species

(cc) Endorse the following indicators of trend for JFS:

i. Fisheries-dependent indicators:
    a. Standardized CPUE from the coastal squid jigging fisheries (Jul-Dec)

(dd) Endorse the following indicators of trend for BM:

i. Fisheries-dependent indicators:
    a. Standardized CPUE from stick-held dip net in Shizuoka prefecture

b. Total catch
c. Nominal CPUE

ii. Fisheries-independent indicators:
a. Egg abundance in East of Miyazaki prefecture

(ee) Endorse the following indicators of trend for JS:

i. Fisheries-independent indicators:
a. Egg abundance in East Japan
b. Acoustic survey in autumn (Sep-Oct) (abundance of age 0 fish)
c. Trawling survey in summer (Jun-Jul) (abundance of age 0 fish)
d. Trawling survey in summer (Jun-Jul) (abundance of age 1 fish)
e. Standardized CPUE from China's summer survey

(ff) Hire an invited expert to support the work by SSC JS to conduct an NPFC stock assessment of JS.

Data Collection and Sharing

(gg) Update the data shared by the SC, TWG CMSA, SSC BF-ME, SSC PS, SSC NFS, and SSC JS in accordance with their Work Plans.

(hh) Further develop the draft CMM on Minimum Data Standards while taking into consideration SWG Data's review of the CMM and Members' consolidated feedback as summarized in the SWG Data report (Annex L).

188. In relation to other tasks for the SC specified in CMMs and the Convention, the SC informs the Commission of the following:

(a) The SC agreed to reinstate the Small Working Group on Milestones, to select Dr. Chris Rooper (Canada) as its Lead, and to request the SWG Milestones Lead to (1) progress the work to develop a standardized template for presenting species status in coordination with the Chairs of the SC and its subsidiary bodies; (2) support Members in further development of the proposal for a formal peer-review process with a detailed description of the process and the potential cost implications; (3) support Members in conducting a review of best practices from other organizations for implementing peer-reviews for stock assessments, and (4) discuss SC subsidiary groups' structure.

Precautionary Approach

(b) The SC agreed to task its subsidiary bodies that do not have stock assessments in place to provide science-based options for operationalizing the PA and agreed to review these options and present them to the Commission (paragraph 56).

Neon Flying Squid

(c) The SC endorsed the updated CPUE standardization protocol for NFS (Annex D, NPFC-2025-SSC NFS02-Final Report).

(d) The SC noted that the SSC NFS intends to conduct a preliminary stock assessment of NFS using Members' standardized CPUEs in 2026.

Pacific Saury

(e) The SC noted the plans of the SWG NSAM to continue developing the Stock Synthesis model.

Other Priority Species

(f) The SC agreed to establish a new SSC JS to supersede the SWG JS and to select Dr. Shuya Nakatsuka (Japan) as the SSC JS Chair and Dr. Libin Dai (China) as its Vice-Chair.

(g) The SC endorsed the Terms of Reference for the SSC JS (Annex I).

Data Collection and Sharing

(h) The SC agreed to adopt the common terminology discussed by the SWG Data regarding effort and the definitions of live and gutted weight.

(i) The SC agreed to share information regarding the maturity scales and corresponding stages used at a national scale in order to develop the reference code list.

(j) The SC endorsed the holding of a 4-hour training workshop in January 2026 on the use of the database.

(k) The SC agreed to extend the term of SWG Data for one more year to finalize the development of the SC database.

(l) The SC seeks guidance from the Commission on making catch and fishing effort information in the Annual Summary Footprints publicly available.

Selection and extension of invited experts

(m) The SC adopted the policy for the selection and extension of invited experts for supporting the Scientific Committee and its expert groups (Annex G).

Climate Change

(n) The SC noted the analyses on climate change effects conducted by Members and Observers.

Cooperation with Other Organizations

(o) The SC reaffirmed its support for the development and implementation of the BECI project, which will provide valuable information for the SC's analyses, including those related to climate change.

189. The SC recommends that the SWG MSE PS invite Dr. Quang Huynh as an invited expert to SWG MSE PS07.

Agenda Item 15. Next meetings of SC and its subsidiary bodies

15.1 Meeting schedule for 2026/2027

15.2 Meeting format and location

190. The SC agreed to forward to the Commission the provisional meeting schedule for the 2026 operational year described in Annex E, subject to further update before COM10.

Agenda Item 16. Selection of SC chairs, vice-chairs and leads

16.1 SC Chair and SC Vice-Chair

191. The SC selected Dr. Jie Cao (China) to serve as the next SC Chair.

192. There were no nominations for a new SC Vice-Chair.

16.2 Chairs, Vice-Chairs, and leads of SC subsidiary bodies

193. The Chairs, Vice-Chairs, and leads of the SC subsidiary bodies are as follows:

(a) SSC BF-ME
   i. Chair: Chris Rooper (Canada)
   ii. Vice-Chair: Kota Sawada (Japan)

(b) SSC PS
   i. Chair: Toshihide Kitakado (Japan)
   ii. Vice-Chair: Libin Dai (China)

(c) SSC JS
   i. Chair: Shuya Nakatsuka (Japan)
   ii. Vice-Chair: Libin Dai (China)

(d) SSC NFS
   i. Chair: Luoliang Xu (China)
   ii. Vice-Chair: Bungo Nishizawa (Japan)

(e) TWG CMSA
   i. Chair: Kazuhiro Oshima (Japan)
   ii. Vice-Chair: Qiuyun Ma (China)

(f) SWG BM
   i. Lead: Kazunari Higashiguchi (Japan)

(g) SWG JFS
   i. Lead: Hajime Matsui (Japan)

(h) SWG Data
   i. Lead: Karolina Molla Gazi (EU)

(i) SWG Milestones
   i. Lead: Chris Rooper (Canada)

Agenda Item 17. Press release

194. The SC endorsed the press release for publication on the NPFC website after the meeting (NPFC-2025-SC10-IP08 (Rev. 1)).

Agenda Item 18. Adoption of Meeting Report

195. The report was adopted by consensus.

Agenda Item 19. Close of the Meeting

196. The SC expressed its gratitude and appreciation to the outgoing Chair, Dr. Janelle Curtis, for her hard work, warm leadership, and many years of service to the NPFC.

197. The Chair extended her heartfelt thanks to Japan for hosting the meetings, the Secretariat for organizing the meetings, and the participants for their constructive contributions.

198. The meeting closed at 17:20 on 19 December 2025, Nagoya time.

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Annex E – Provisional meeting schedule for 2026-2027
Annex F – Guidelines for Scientific Committee's Small Working Groups
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Annex H – Stock assessment report for chub mackerel
Annex I – Terms of Reference for the Small Scientific Committee on Japanese Sardine (SSC JS)
Annex J – Tasks for the SSC JS, SWG JFS, and SWG BM the from SC10
Annex K – Template for SC data calls
Annex L – Report of the Small Working Group on Data (SWG Data)
Annex M – Scientific activities and projects in 2026
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Annex A:

Agenda

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- 1.2 Appointment of rapporteur
- 1.3 Meeting arrangements

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  - 3.1.1 Summary of stock assessments
  - 3.1.2 Species status templates
  - 3.1.3 Species summary documents
- 3.2 SC workflow and meetings
  - 3.2.1 Review of SC workflow
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  - 3.2.3 Review of guidelines for SC SWGs
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- 3.4 Frequency of benchmark and annual stock assessments
- 3.5 Fisheries-dependent and fisheries-independent indicators of trend for stocks without NPFC stock assessments
- 3.6 Process for selection of external experts and contract renewal
- 3.7 Independent reviews of scientific advice (PR Recommendation 3.4.2.)
- 3.8 Advice on science-based management options for operationalizing the precautionary approach (PR Recommendation 4.1.2)
  - 3.8.1 Summary of NPFC workshop on "Science-based management options available for operationalizing the precautionary approach as outlined in the Convention for NPFC priority species"
  - 3.8.2 Science-based management options for NPFC

Agenda Item 4. Review of stock assessments, reports, and recommendations from the Technical Working Group on Chub Mackerel Stock Assessment (TWG CMSA) and the Small Scientific Committees (SSC BF-ME, SSC NFS, and SSC PS)

- 4.1 Technical Working Group on Chub Mackerel Stock Assessment
  - 4.1.1 Summary of TWG CMSA activities, tasks, and recommendations
  - 4.1.2 Summary of CM stock assessment
- 4.2 Small Scientific Committee on Bottom Fish and Marine Ecosystems

4.2.1 Summary of SSC BF-ME activities, tasks, and recommendations
4.2.2 Summary of stock assessments for bottom fish
4.3 Small Scientific Committee on Neon Flying Squid
4.3.1 Summary of SSC NFS activities, tasks, and recommendations
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4.4.2 Summary of PS stock assessment

Agenda Item 5. Update from the Joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS)

Agenda Item 6. Summary of progress on the remaining three priority species
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6.1.1 Review of tasks and recommendations
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6.2 Japanese flying squid (JFS)
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6.2.2 Observation of domestic stock assessment
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6.3 Japanese sardine (JS)
6.3.1 Review of tasks and recommendations
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6.3.3 Review of species summary
6.3.4 Potential establishment of a new formal SC subsidiary body to focus on collaborative NPFC stock assessment of JS
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7.2 Current knowledge
7.3 Ongoing research activities
7.3.1 PICES' Basin-scale Events to Coastal Impacts (BECI) project
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Agenda Item 8. Data Collection and Management

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8.1.1 Update for NPFC
8.1.2 Data inventory update
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8.1.4 SWG Data
8.1.4.1 Establishment of a new database to manage and archive scientific data
8.1.4.2 Review of the proposed CMM on Minimum Standards for NPFC Data
8.1.4.3 Potential renewal of term for SWG Data
8.2 NPFC Data Sharing and Data Security Protocol
8.2.1 Revision of Regulations for Management of Scientific Data and Information
8.3 Data needs, data gaps and strategies to fill gaps
8.3.1 Information about species belonging to same ecosystem or dependent/associated with target stocks

Agenda Item 9. Potential roles of a regional observer program
9.1 Scientific objectives of an observer program
9.2 Review and revision of SC responses to five TCC questions
9.3 Tool for observers/fishers to distinguish between CM and BM
9.4 Future intersessional work of SWG Observer Program (SWG OP)

Agenda Item 10. Scientific projects for 2026 and 2027
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10.2.1 Potential project(s) for NPFC priority species
10.2.2 Independent review of stock assessments
10.2.3 Other potential projects – capacity building, cooperation with other organizations
10.3 Review, prioritization and funding of projects

Agenda Item 11. Cooperation with other organizations
11.1 Reports on the joint NPFC-PICES activities since the SC09 meeting, including a report from the PICES Secretariat
11.2 SC representation at scientific meetings
11.2.1 Yang Zi SC representation at PICES 2025
11.2.2 Chris Rooper representation at PICES 2025
11.3 Report on cooperation between NPFC and NPAFC
11.4 FAO ABNJ Deep-sea fisheries project
11.4.1 Report from the NPFC Representative at the FAO Workshop on Cross-Sectoral Interactions with Deep-Sea Fisheries

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List of documents

MEETING INFORMATION PAPERS

Number	Title
NPFC-2025-SC10-MIP01(Rev1)	Meeting Information
NPFC-2025-SC10-MIP02	Provisional Agenda
NPFC-2025-SC10-MIP03	Annotated Indicative Schedule

WORKING PAPERS

Number	Title
NPFC-2025-SC10-WP01 (Rev. 5)	SC meeting schedule 2026-2027
NPFC-2025-SC10-WP02 (Rev. 1)	Revised Terms of Reference for the Scientific Committee
NPFC-2025-SC10-WP03 (Rev. 2)	NPFC At-Sea Regional Observer Program: potential scientific components
NPFC-2025-SC10-WP04 (Rev. 2)	Scientific activities and projects in 2026
NPFC-2025-SC10-WP05 (Rev. 2)	Policy for the selection and extension of invited experts for supporting the Scientific Committee and its expert groups
NPFC-2025-SC10-WP06 (Rev. 1)	Five-Year Work Plan of the Scientific Committee
NPFC-2025-SC10-WP07 (Rev. 2)	Review of the Scientific Committee structure and workflow
NPFC-2025-SC10-WP08 (Rev. 1)	Guidelines for Scientific Committee's Small Working Groups
NPFC-2025-SC10-WP09	Terms of Reference for the Small Scientific Committee on Japanese Sardine (SSC JS)
NPFC-2025-SC10-WP10	Stock assessment report for chub mackerel
NPFC-2025-SC10-WP11	A literature review of studies relating environmental conditions to Japanese Sardine (*Sardinops melanosticta*) in the North Pacific Ocean
NPFC-2025-SC10-WP12	Final report of the Small Working Group on Data (SWG Data)
NPFC-2025-SC10-WP13	Proposal on Re-publication of Catch and Fishing Effort Information in the Annual Summary Footprints
NPFC-2025-SC10-WP14	Species summary for Japanese flying squid
NPFC-2025-SC10-WP15	Scientific Committee Data Call – 202X
NPFC-2025-SC10-WP16	China proposal for a resolution on the best available science
NPFC-2025-SC10-WP17	Proposal to Establish a Formal Peer-Review

	Process for Stock Assessments
NPFC-2025-SC10-WP18	Proposal for Terms of Reference for the external peer review of NPFC stock assessment
NPFC-2025-SC10-WP19	Scientific Committee 2025-2029 Research Plan
NPFC-2025-SC10-WP20	An overview of 2025 Chinese survey by fishery research vessel "Song Hang" in the NPFC convention area
NPFC-2025-SC10-WP21	Species summary for blue mackerel
NPFC-2025-SC10-WP22 (Rev. 2)	Response to Tasks from COM9 to TWG CMSA
NPFC-2025-SC10-WP23	Species summary for Japanese sardine

INFORMATION PAPERS

Number	Title
NPFC-2025-SC10-IP01	NPFC Data Management Systems: Progress and Operational Guidelines
NPFC-2025-SC10-IP02	TCC Update to SC10
NPFC-2025-SC10-IP03	Updated Data Inventory Table
NPFC-2025-SC10-IP04	Summary of progress on JFS
NPFC-2025-SC10-IP05	Summary of progress on BM
NPFC-2025-SC10-IP06	Observation of Domestic Stock Assessment of Blue Mackerel in Japan in 2023 FY (July-June)
NPFC-2025-SC10-IP07	Observation of Domestic Stock Assessment of Japanese Sardine in Japan in 2024 FY (January-December)
NPFC-2025-SC10-IP08 (Rev. 1)	SC10 Press Release
NPFC-2025-COM09-IP05	Japanese Flying Squid Stock Assessment

OBSERVER PAPERS

Number	Title
NPFC-2025-SC10-OP01 (Rev. 1)	FAO Deep-sea Fisheries (DSF) Project – Overview of activities 2025-2026
NPFC-2025-SC10-OP02	Review of the pelagic sharks known or likely to occur in the Convention Area of the North Pacific Fisheries Commission
NPFC-2025-SC10-OP03	An Overview of Recent Progress by Selected RFMOs Towards Climate-Informed Governance
NPFC-2025-SC10-OP04	Ecological Objectives in Fisheries Management
NPFC-2025-SSC BFME06-OP04, 05 & 06	Observer papers from the Deep Sea Conservation Coalition
NPFC-2025-SC10-OP05	Basin-Scale Events & Coastal Impacts Project - BECI North Pacific Ocean Knowledge Network
NPFC-2025-SC10-OP06	PICES-NPFC Cooperation

NPFC-2025-SC10-OP07	NPAFC-NPFC cooperation
NPFC-2025-SC10-OP08	Status of the NPFC – FIRMS partnership

REFERENCE DOCUMENTS

Number	Title
NPFC-2025-SC10-RP01	SWG Observer Program 2025-01 meeting summary
NPFC-2025-SC10-RP02	Summary of the 1st joint meeting of the Small Working Groups on JFS, JS, and BM
NPFC-2025-SC10-RP03	Summary of the 2nd joint meeting of the Small Working Groups on JFS, JS, and BM
NPFC-2025-SC10-RP04	Summary of NPFC workshop on “Science-based management options available for operationalizing the precautionary approach as outlined in the Convention for NPFC priority species”

REPORTS

Number	Title
NPFC-2025-TWG CMSA10-Final Report NPFC-2025-TWG CMSA11-Final Report	TWG CMSA10&11 meeting reports
NPFC-2025-SSC NFS02-Final Report	SSC NFS02 meeting report
NPFC-2025-SSC PS15-Final Report	SSC PS15 meeting report
NPFC-2025-SSC PS16-Final Report	SSC PS16 meeting report
NPFC-2025-SSC BFME06-Final Report	SSC BFME06 meeting report
NPFC-2025-SWG MSE PS06-Final Report	SWG MSE PS06 report
	Draft NPFC Performance Review template with comments from Members

Annex C:

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Annex D:
Streamlined workflow of the Scientific Committee

SC10 reviewed and streamlined the SC workflow to respond to the substantial increase of the workload and growing budgetary pressure (Table 1). See NPFC-2025-SC10-WP07 (Rev. 2) for details.

Table 1: SC workflow. Red text shows the changes in the workflow agreed at SC10

Stage of work	Preparation			Formalization	Formalization	
Area of work: (1) Assessments (stocks, VME and SAI)	Inputs: data, indices, biological information	Methods: SA models, other methods	Assessment, review of results, improvement	Final review Finalization: scientific advice, recommendations, SA reports, species summaries, revised CMMs/TOR/Protocols etc	SC review and endorsement: *scientific advice, projects and funding proposals to COM *directions to expert groups	COM: review and decision, directions to SC
(2) General / supplementary	Fisheries overview, research activities (new models/methods, climate change impact, etc)				SC policies, cooperation with other organizations, etc	
Responsible expert group/body	Relevant expert groups (SSC, TWG, SWG)			SSC, TWG	SC	COM
Meeting type	Informal, including data preparatory meetings			One formal "stock assessment" meeting to formalize recommendations	Formal	Formal
Funding	Not needed (or Members' voluntary/in-kind contributions)			From NPFC	From NPFC	From NPFC
Report and rapporteur	Meeting summary (for tracking progress); *Chair manages workflow *Members provide presentations and/or informal meeting papers *Secretariat drafts a meeting summary with support from the Chair and/or an invited expert			Meeting report; NPFC contracts a rapporteur (one meeting per year for each SSC/TWG)	Meeting report; NPFC contracts a rapporteur	
Meeting documents	*Informal meeting documents for Members only (and observers if authorized) *Meeting agenda and summary to be posted on the website; *For SWGs, ppt slides, meeting papers and data for exploratory analyses to be uploaded on the Collaboration site; For SSC/TWG, meeting documents shall be posted on the website *Document upload: 2 weeks before meeting *SC database for the submission and dissemination of data used for routine/recurring assessments			Meeting documents and reports are posted on the public domain of the website (except confidential/sensitive documents) *Document submission: 2 weeks before meeting for SSCs and TWGs	Meeting documents and reports are posted on the public domain of the website (except confidential/sensitive documents)	
Leadership	*Chair and vice-Chair are selected by expert group (SSC, TWG, SWG). Approval by SC/COM is not required *No limits on Chair's and vice-Chair's terms			*Chair and vice-Chair are selected by expert group (SSC, TWG). Approval by SC/COM is not required *No limits on Chair's and vice-Chair's terms	*Chair and vice-Chair selected by SC require approval by COM *Vice-Chair assumes Chair's position if Chair is unable to fulfil his/her functions *Chair serves not more than 3 terms	

1. Separate preparatory work from the formalization of recommendations and scientific advice by turning the status of data preparatory meetings from formal to informal.
2. Hold one formal meeting of each SSC and TWG per year for formalizing scientific advice.

3. Fund formal meetings including SC's annual session by the NPFC, unless Members volunteer to host and sponsor them. Informal meetings should be virtual by default but may be organized in a hybrid format if funded by Members (e.g. through their voluntary contributions (e.g. SWG NSAM hybrid meetings in 2024 and 2025)).
4. Task the Science Manager to draft meeting summaries for data preparatory meetings, subject to nonmonetary compensation in line with Staff Regulation 3.2*. The Secretariat shall continue to post on the NPFC website meeting documents submitted to SSCs/TWG's informal data preparatory meetings.
5. Task the Science Manager to post agendas and summaries of informal meetings on the website (available to Members, CNCP, invited experts and authorized observers only).
6. Use the new SC database for the submission and dissemination of data shared for routine/recurring assessments.
7. Shorten the deadline for document submission to meetings of SSCs, TWG and SWGs from one month to two weeks.

Table 2 differentiates formal and informal SC meetings.

Table 2: Two types of NPFC SC meetings

	Formal meeting	Informal meeting
Purpose	Formalize agreements, endorse assessments, make recommendations	Facilitate intersessional work, prepare for formal meetings
Approval by COM	Yes	No
Funding for meeting costs	NPFC (and maybe Host Member)	Not needed if virtual, Host Member if hybrid/in-person
Meeting format	In-person/hybrid by default (but maybe virtual)	Virtual by default (hybrid if funding from Members is available)
Agenda (draft/final)	90/60 days before meeting; Review by COM (NPFC Doc Policy)	30 days before meeting
Rapporteur	Contractor	Secretariat (with support from Chair and, if needed, invited expert)
Meeting records	Meeting report: Adopted during meeting, Reviewed by COM, Posted on public domain	Meeting summary: Drafted after meeting, Reviewed by Chair&participants, Posted on Members' domain after meeting and submitted to SSC/TWG as a Reference Paper
Meeting documents	1 month before SC meeting, 2 weeks before SSC/TWG meeting, Posted on the public domain (NPFC Document Policy)	2 weeks before meeting, SSC/TWG data preparation documents: posted on the public domain (NPFC Document Policy), SWG documents: uploaded on the Collaboration site (ppt slides and informal/draft meeting papers)

* remote work 50% of working days per month in line with the principle outlined in Staff Regulation 3.2.

Annex E:

Provisional meeting schedule for 2026-2027

Year	Date	Meeting	Format	# days	Location
2026	Apr 8-17	TCC09 / FAC08 / COM10	hybrid		Osaka, Japan
	Feb 3-4	SWG MSE PS07	virtual	2	
	Mar 4-6	SSC NFS03 (data preparation)	virtual	3	
	Jul 27-29 Mon-Wed	SSC JS01 (kick-off meeting)	hybrid	3	Tokyo, Japan
	Jul 30-Aug 1 Thu-Sat	SSC NFS04 (stock assessment)	hybrid	3	Tokyo, Japan
	Early Nov	TWG CMSA12 (data preparation)	virtual	2-3	
	Dec 15-17	SSC PS17 (data preparation)	virtual	3	
	Oct-Dec?	SSC JS02 *	virtual	3-4	
2027	Jan 11-14 Mon-Thu	TWG CMSA13 (stock assessment)	hybrid	4	TBD
	Jan 15-17 Fri-Sun	SSC BFME07 (stock assessment and VME)	hybrid	2.5	TBD
	Jan 18-21 Mon-Thu**	SSC PS18 (stock assessment)	hybrid	3.5	TBD
	Jan 22-25 Fri-Mon	SC11	hybrid	4	TBD
	Feb-Mar	SWG MSE PS08	virtual?	2	
	Apr 6-15	TCC10 / FAC09/ COM11	hybrid		Fukuoka, Japan

* If needed

** A day off may be added in case the Secretariat has to move meetings to another venue

Annex F:

Guidelines for Scientific Committee's Small Working Groups

(December 2025)

Context:

The Scientific Committee (SC) and its standing subsidiary bodies currently have 8 informal Small Working Groups (SWG) to intersessionally address specific tasks identified in the SC Work Plan and the List of Scientific Activities and Projects. All these SWGs hold periodic virtual meetings. NPFC regulations are silent about rules and procedures for such informal meetings. This document lays out the guidelines for SC's SWGs. It is a living document and will be revised, when necessary, by SWGs or their parent SSC/TWG and SC.

Purpose:

The purpose of SC SWGs is to facilitate intersessional work of the SC, SSCs and TWGs and support the SC in the implementation of its Work Plan.

Functions:

a) Providing a forum for the exchange of information and expertise and for collaboration on the development of agreed work plan deliverables;
b) Providing a forum to monitor and assess progress specific to work plan items;
c) Reporting to the SC/SSC/TWG the status of work plan deliverables, including advising on any possible recommendations.

Structure:

Membership in each of the SWGs is to include Commission Members and invited experts. Observers may generally participate in SC SWG meetings subject to Rule 9 of the Commission's Rules of Procedure. Participating observers may not disclose information from SC SWG meetings or associated documentation, as per Rule 9.7, including data and information as per the Regulations for Management of Scientific Data and Information. Should a Member object to an accredited observer's participation in a SC SWG meeting, that Member must submit a rationale to the Secretariat, to be distributed to Members, at least 14 days before the SWG meeting in question. A simple majority of Members must concur, through email correspondence, with the exclusion of an accredited observer from the SWG meeting at least 7 days prior to the meeting, otherwise the observer may attend.

Each SWG will be managed by a Lead. The Lead, supported by the Science Manager, will be responsible for developing meeting agendas, chairing meetings and liaising with its parent SC/SSC/TWG Chair when required.

The SWG Lead will:

- Develop the meeting agenda in consultation with Members;

- Lead SWG meetings and finalize summaries of the meetings;
- Foster constructive and active dialogue at SWG meetings;
- Coordinate the development of specific deliverables identified in the SC work plan and regularly report on their status to the parent SC/SSC/TWG Chair;
- Upload ppt slides used to facilitate the meeting and relevant documentation on the Collaboration site;
- Liaise with the parent SC/SSC/TWG Chair as appropriate to enhance the quality of SWG activities; and
- Report the outcomes of SWG's intersessional meetings to a parent SSC, TWG or SC.

The NPFC Science Manager will:

- Coordinate SWG meeting schedules;
- Schedule SWG meetings and participate in their proceedings;
- Compile, in consultation with Lead, Member input into the draft agenda and post it on the website;
- Support the preparation of meeting documents with the SWG Lead;
- Provide a rapporteur function at meetings, draft a meeting summary, distribute it to Members and upload it on the website;
- Provide technical advice, where appropriate, on scientific matters specific to deliverables;
- Monitor and document the status of all SWG deliverables;
- Ensure information is shared between the SWGs/TWG/SSCs/SC to support integrated planning and achievement of overall SC work plan objectives; and,
- Liaise and share information with relevant NPFC working bodies.

SWG Members will:

- Prepare for and participate in the meetings of the SWGs;
- Upload their ppt slides and/or meeting papers on the Collaboration site;
- Provide input into the content, design and preparations of SWG work plan deliverables; and,
- Liaise, where required, with other SWGs and NPFC subsidiary bodies in support of implementing the SC integrated work plan.

Meetings

SWGs will meet as determined by the SWG Lead. In the interest of accommodating participation in different time zones, SWG meetings will be held at a consistent time agreed upon by the SWG.

Recommendations

The SC SWGs are not expected to give formal recommendations to the SC or its standing subsidiary bodies. However, advice of the SWGs to the SC/SSC/TWG will be agreed by consensus as needed. Where consensus is not possible at the working level, differences in opinion will be reported to the SC/SSC/TWG.

Meeting records

After each SWG meeting, the Science Manager will draft a concise summary of the work of the SWG. Draft summaries will be circulated by the Science Manager to the SWG Members within one week of the SWG meeting. Members will have one week to review and comment on the draft meeting summary. Thereafter, the Science Manager, in consultation with the SWG Lead, will finalize the summary and circulate it to Members.

Meeting papers are treated as informal documents and shall not be released to the public website. The meeting summary will be posted after the meeting on the website, under Meeting, and shall be available to Members and accredited observers only. The meeting summary will then be submitted to a parent formal SSC/TWG/SC meeting as a reference paper posted on the public domain.

Work environment

Meeting papers and ppt presentations are to be posted on the Collaboration website. Intersessional discussions and scientific activities agreed upon at the SWG meetings may be done by email correspondence or through the Collaboration website, with designated groups. Access to each group on the Collaboration website is restricted to the Members of this group.

Annex G:

Policy for the selection and extension of invited experts for supporting the Scientific Committee and its subsidiary groups

(December 2025)

Background

Since the first years of the Commission, the NPFC has hired invited experts to support and facilitate scientific activities. Starting in 2018 with a consultant for SSC PS, this practice has expanded to TWG CMSA, SSC BF-ME, SSC NFS and SC. Invited experts take part in scientific meetings, contribute to stock assessments of the NPFC priority species, make overviews and reports, assist in the development of SC subsidiary groups' procedural documents and templates and, if requested, provide an expert opinion on stock status and management.

Contracting invited experts allows for enhanced capacity of SC's subsidiary groups and, to some extent, peer-review of stock assessment results. It has proved its efficiency and can be expected to be continued in future. This policy outlines the process currently in place for selection of invited experts hired by NPFC to support the Scientific Committee and its subsidiary groups and also proposes a procedure for the extension of expert's contract.

Selection of invited experts

The procedure for the selection of invited experts involves the following steps:

1. After the Commission endorses SC's recommendation to hire an invited expert, the Secretariat circulates a call for nominations to an SC subsidiary group (TWG, SSC or SC) for which the invited expert will be hired.
   Each Member may nominate one or several experts. The nomination shall include expert's name, affiliation, email address and CV or a weblink to his/her professional profile.
   Before submitting a nomination, Members are advised to ensure that the nominated expert(s) is available for and willing to work for the NPFC. In case that a nominated expert has different citizenship from a nominating Member, that Member is encouraged to coordinate with the SC's Head of Delegation (HOD) of the country/member of expert's citizenship.
2. The Secretariat collects nominations, compiles them and circulates them to SC's HODs for ranking.
3. The HODs rank nominated invited experts, from the most to the least preferred, and send their rankings to the Secretariat.
4. The Secretariat sums up rankings and provides a summary table to the HODs. Individual rankings from Members shall not be released.

5. The Secretariat reaches out to the most preferred expert with an offer for a consultancy. If the expert rejects it, the Secretariat offers consultancy to the next expert in the ranking and repeats this until the offer is accepted.
6. The Secretariat and SC subsidiary group Chair draft a consultancy agreement based on the roles and tasks for an invited expert identified by the expert group (for consultancy fee, see NPFC Policy on Support to Specialist Experts to the Secretariat or Commission adopted by COM03 in 2017).
7. The Secretariat informs the relevant SC subsidiary group members about the contracted expert, creates his/her NPFC account and adds him/her to the SC subsidiary group's Collaboration site and GitHub, if needed.
8. The SC subsidiary group Chair and Secretariat organize a kick-off meeting with the contracted expert.

Extension of invited experts

An invited expert is to be selected for up to one year and may be extended, subject to performance review of his/her work conducted by the SC in accordance with the following procedure:

1. Two months before an SC meeting, the Secretariat circulates a survey to SC's HODs for performance review of experts hired by the NPFC in the current year.
   The survey shall include the list of tasks assigned to the expert that will serve as the basis for evaluating his/her performance.
   The HODs will be asked if they are satisfied with the work of each invited expert, if they have any suggestions and/or concerns and if they support extension of the expert's consultancy if suggestions or concerns can be addressed before the next SC meeting or during the coming year.
2. The HODs fill in the survey by one month before an SC meeting.
3. The Secretariat compiles the surveys and provides a summary report to the HODs and Chairs of SC and its subsidiary groups two weeks before an SC meeting. Individual surveys conducted by each Member shall not be released.
4. At an SC meeting, the HODs+1 hold a closed session to discuss invited experts' performance and take decision to either extend incumbent experts for one more operational year or hire new experts.
5. Chairs of SC subsidiary groups communicate SC's HODs' suggestions and/or concerns, as collective, anonymized feedback, to the extended invited experts in a constructive and forward-looking way.

Annex H:

Stock assessment report for chub mackerel

EXECUTIVE SUMMARY

Background information

Chub mackerel (*Scomber japonicus*) in the Northwest Pacific Ocean (NWPO) are distributed from the coast of southern Japan to offshore waters of Kuril Islands. It is considered that both adults and juveniles are distributed as far east as the 170-degree East longitude line. The feeding migration of adults has expanded to the northeast recently, and since 2018 the distribution of adults during summer and fall has reached 47-degree North, 166-degree East, east offshore of Kuril Island. The spawning ground is known to be located within the range of the Japanese Exclusive Economic Zone (EEZ), with the main spawning ground located in Izu Island waters.

Chub mackerel are harvested by China, Japan and Russia (Figure E-1). Chinese light purse seine and pelagic trawl fisheries operate in the NPFC Convention Area, while Japanese chub mackerel fisheries consist mainly of purse seine and set net fisheries within the Japanese national waters. Russian chub mackerel fisheries mainly operate in the Russian national waters and consist of mid-water trawl and purse seine gears. Russian fisheries also operate bottom trawl gears in the Japanese national waters. The historical total landings have fluctuated largely and recently decreased from approximately 514,000 mt in 2018 to 135,000 mt in the most recent calendar year (CY) 2024. The Conservation and Management Measure for chub mackerel (CMM 2025-07) includes a catch limit of 66,740 mt set in the Convention Area for the 2025 fishing seasons.

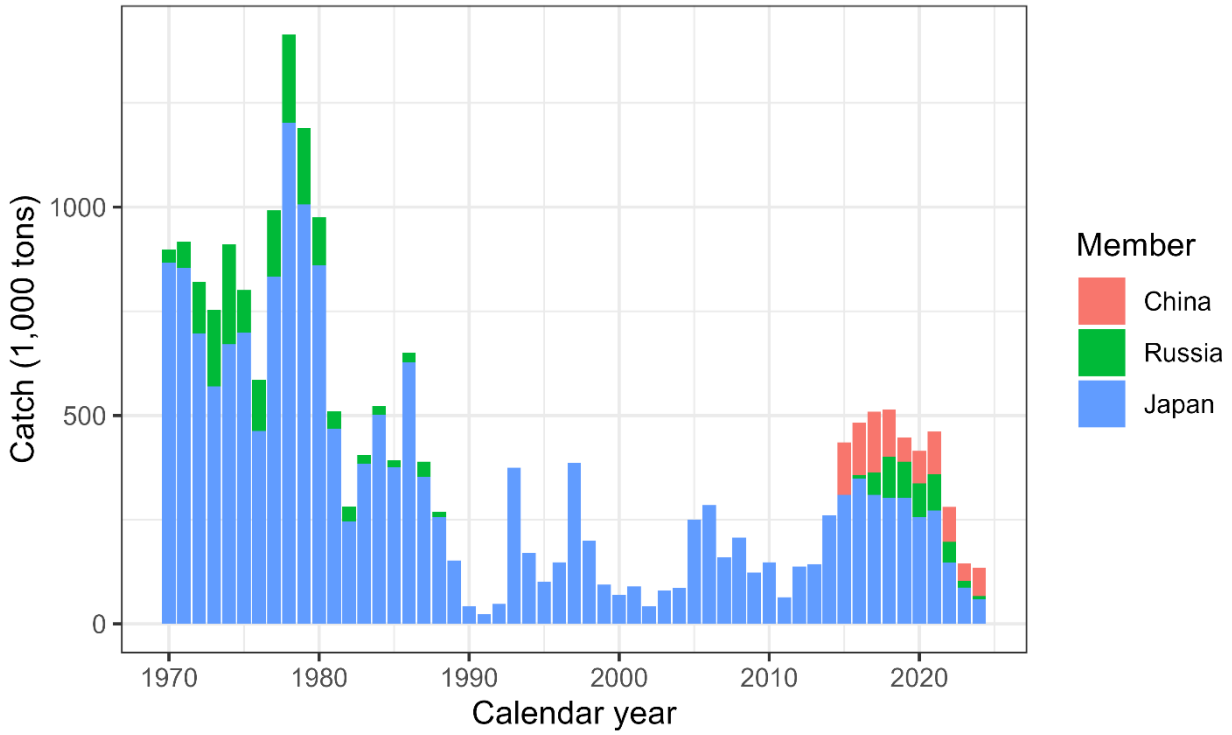


Figure E-1. Historical chub mackerel catch in weight by Member.

Stock assessment model

A state-space stock assessment model (SAM) was agreed to be used for the chub mackerel stock

assessment by the Technical Working Group on Chub Mackerel Stock Assessment (TWG CMSA). SAM accounts for observation errors in catch-at-age data and abundance indices. It uses age-specific data on catch numbers, stock weight, and maturity rate in each year. Recruitment was defined as numbers at age 0, and spawning stock biomass (SSB) was calculated through multiplication of numbers-at-age by maturity-at-age and weight-at-age. SAM consists of two subparts: a population dynamics model and an observation model.

Age-structured population dynamics for chub mackerel estimated by SAM are driven through survival processes such as natural and fishing mortalities, as well as process errors. Reproduction is calculated by a Beverton-Holt stock recruitment relationship. Fishing mortality coefficients by year and age group are assumed to follow a multivariate random walk, consequently allowing estimation of time-varying selectivity.

In the observation model of SAM, the catch-at-age is estimated though the fitting of the Baranov equation to the observed catch-at-age under a lognormal error distribution. SAM also fits to abundance indices with a lognormal error assumption. Non-linear relationships to population abundance estimates were estimated for the three abundance indices specific to ages 0 and 1, linear relationships were applied to the other abundance indices.

Data and biological parameters used in the assessment model

Data are included from the NPFC Convention Area and Members' EEZs.

A fishing year (FY) starting from July and ending in June of the following year was applied in the stock assessment of chub mackerel. The TWG CMSA agreed for the stock assessment period to be FY1970 to FY2023. Seven age groups of ages 0 to 5 and 6+ were defined in the stock assessment. The historical catch-at-age, which was constructed from the quarterly data from each Member, is shown in Figure E-2. Time series of mean weight-at-age are illustrated in Figure E-3. Annual maturity-at-age with decadal time-varying changes is shown in Figure E-4. These data were available up to FY2023.

Seven time series of the relative indices of abundance were used during model development (Figure E-5): relative number of age 0 fish from the summer survey by Japan; relative number of age 0 fish from the autumn survey by Japan; relative number of age 1 fish from the autumn survey by Japan; relative SSB from the egg survey by Japan; relative SSB from the dip-net fishery by Japan; relative vulnerable stock biomass from the light purse-seine fishery by China; and relative vulnerable stock biomass from the trawl fishery by Russia. The indices from Japan and Russia were available until FY2024 and until FY2023 for China.

An age-specific natural mortality (M), corresponding to 0.80 for age 0, 0.60 for age 1, 0.51 for age 2, 0.46 for age 3,0.43 for age 4, 0.41 for age 5, and 0.40 for age 6+, was applied for the stock assessment by the TWG CMSA.

Overall, the available data show 1) recent decreases in the relative abundance trends, 2) a shift to older average age at maturity, 3) changes in weight at age, and 4) declining catch trends.

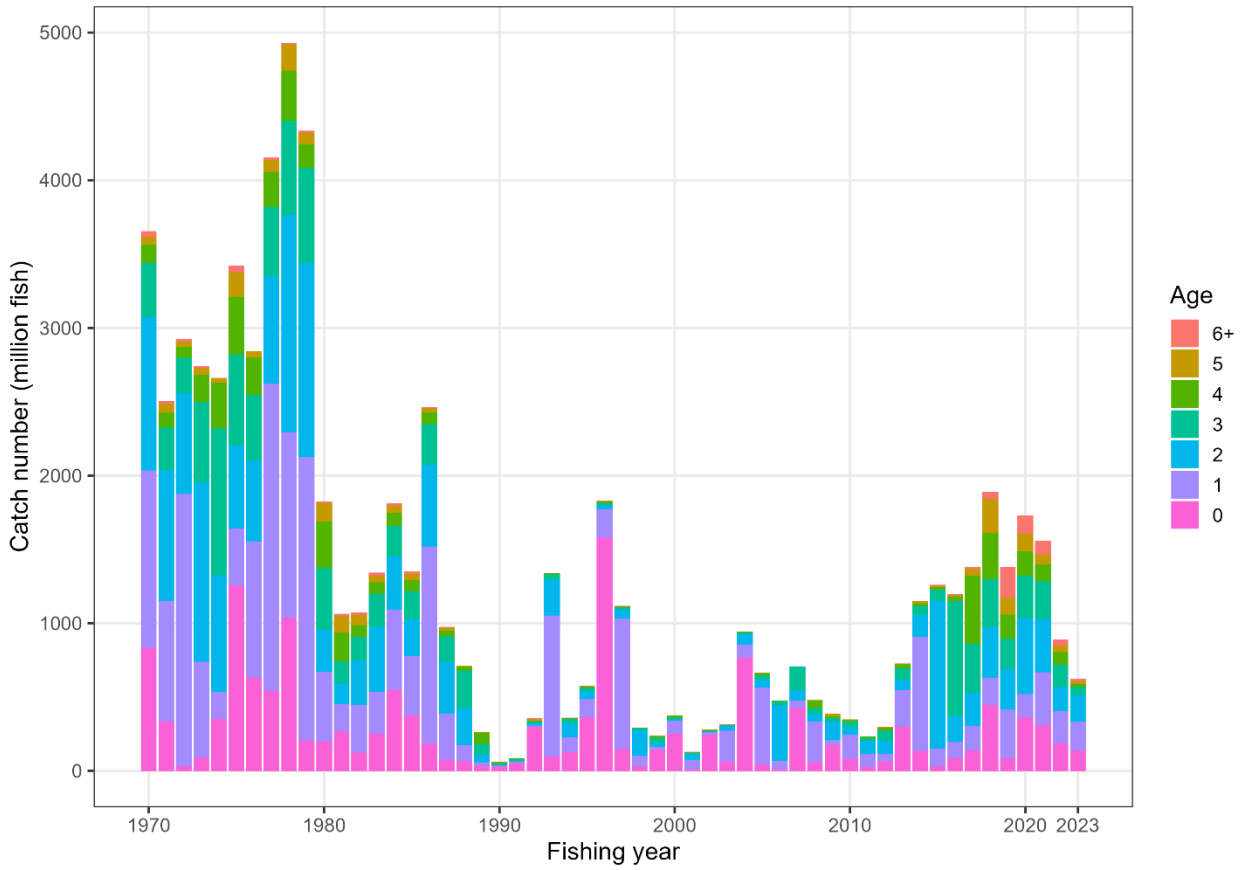


Figure E-2. Historical observed catch-at-age.

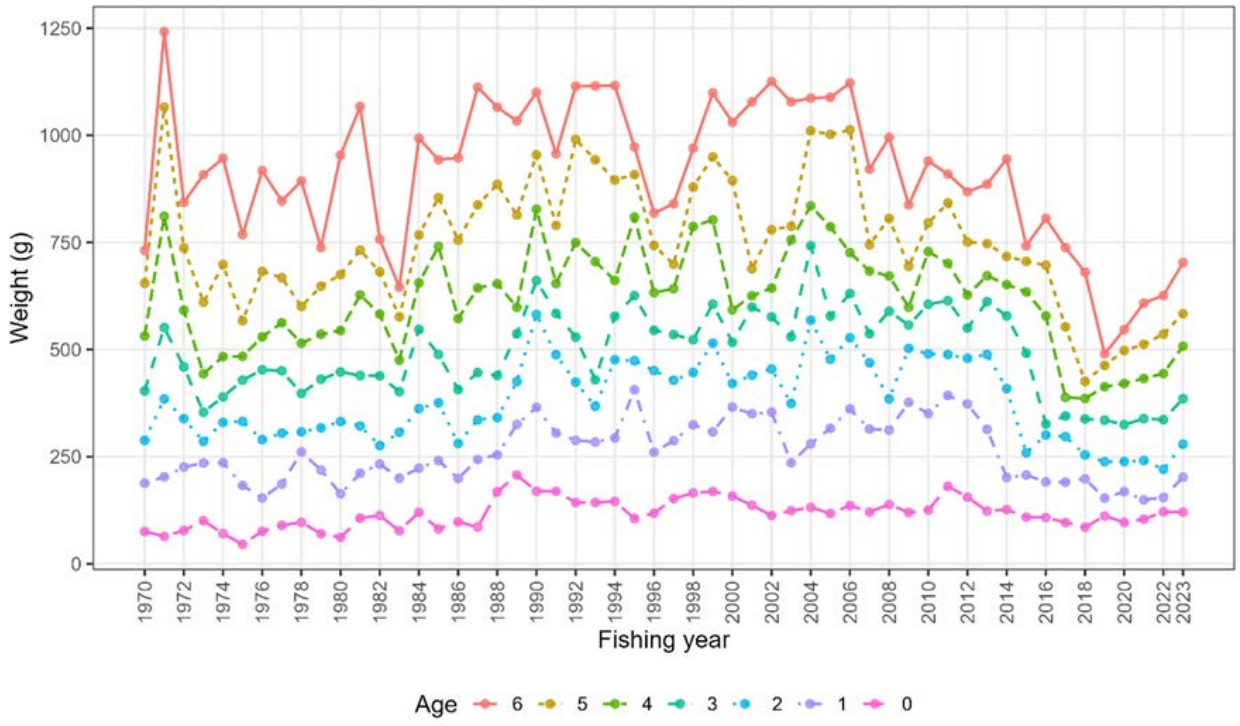


Figure E-3. Time series of weight-at-age.

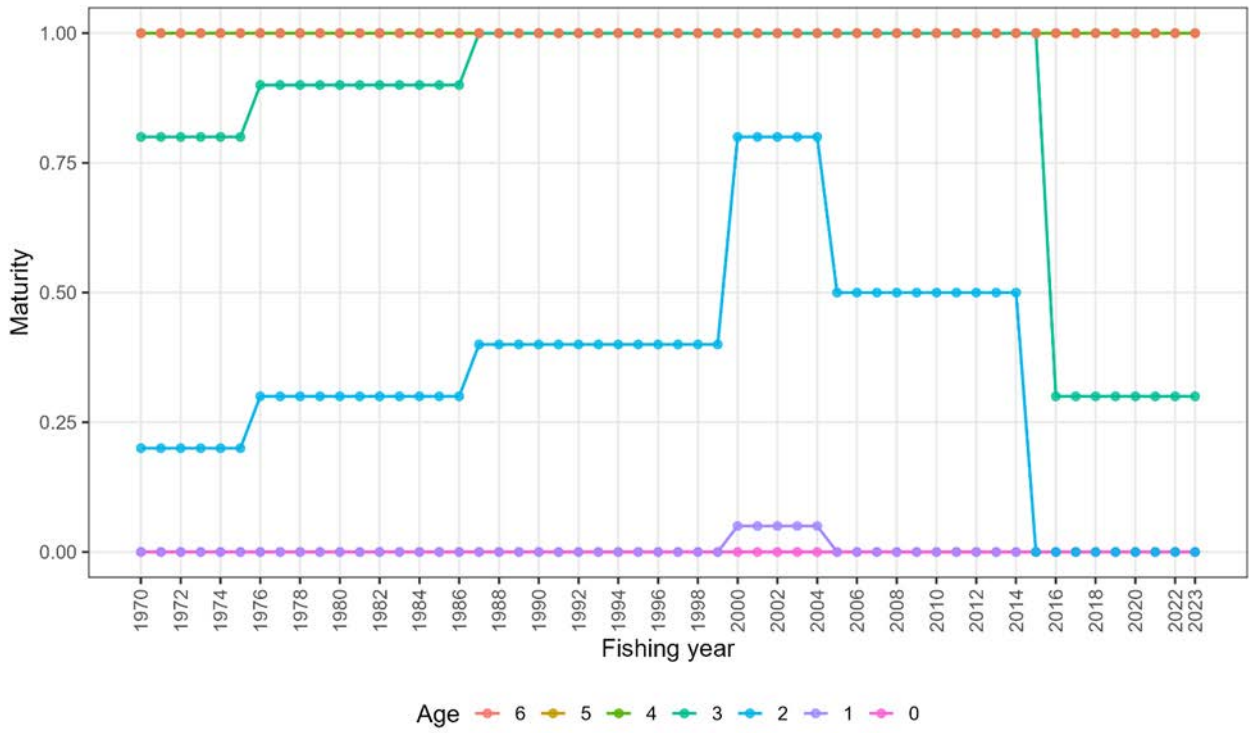


Figure E-4. Time series of maturity-at-age.



Figure E-5. Time series of abundance indices, note that the y- scales differ.

Main stock assessment scenarios

The TWG CMSA based this year's stock assessment on the previous assessment and included the following scenarios as candidate base cases:

- **S01-InitBase.** This scenario is based on the TWG CMSA 09 base case (S28-Proc Est), which excluded the latest abundance indices. Therefore, the abundance indices up to FY2023 were used as input in this scenario (FY2024 indices were excluded).

- **S02-Index24_1.** This scenario included the FY2024 abundance indices from Japanese and Russian fisheries and Japanese surveys. The weight and maturity at age for FY2024 were assumed to be their averages throughout FY2016–FY2023. The proportion of Russian catch out of the total catch was assumed to be its average over FY2021–FY2023. Although the catch in FY2024 is not available, stock status at the start of FY2024 is able to be calculated because stock status is determined before exploitation.

Seventeen other sensitivities were used to investigate the effect of alternative assumptions regarding the biological parameters in FY2024, Russian catch proportion in FY2024, nonlinearity for abundance indices, stock-recruit relationship, maturity processes and assumptions regarding process error in numbers at age. TWG CMSA agreed to select S02-Index24_1 as a base case scenario because of its robustness and better diagnostic performance.

F-based reference points

The TWG CMSA calculated these reference points along with commonly used biological reference points such as F%SPR (30%, 40%, 50%, 60% and 70%), F0.1, with mean biological parameters and selectivity of the current fishing mortality (F_{cur}, average in FY2021 to FY2023) (Table E-1). In particular, the biological parameters such as weight-at-age and maturity-at-age used for calculation of biological reference points are assumed as the average values during the most recent 8 years (FY2016 to FY2023), which represents the recent shift in biological parameters. As a comparable, the average of the biological parameters over the stock assessment period is used for the calculation of these reference points.

B-based reference points

While the F-based reference points are relatively robust to the time-varying biological parameters, commonly used B-based reference points such as SSB_{MSY} and SSB0 are found to be significantly affected by the changes of biological parameters in this stock as well as by the assumptions of stock recruitment relationships and model configurations. Owing to the uncertainty, the TWG CMSA explored some empirical reference points based on percentiles of historical SSB in FY1970–FY2023 (Figure E-6). The 25^{th} percentile of SSB could be regarded as the limit, being above the SSB levels when the stock has been severely depleted during the 1990's and early 2000's. The remaining two reference points ($SSB_{REFERENCE_A}$ and $SSB_{REFERENCE_B}$) are the 50^{th} and 70^{th} percentiles of historical estimated SSB.

Although these levels of SSB are significantly lower than the theoretically calculated SSB_{MSY} under the assumption of Beverton-Holt type SR relationship without considering the time-varying nature of biological parameters, the two SSB reference points are about 20% of $SSB_{F=0_RECENT}$ and about 40% of $SSB_{F=0_RECENT}$, respectively, which is calculated as the multiplier between average lifetime contribution to the spawning stock biomass per fish assuming no fishing (SPR0) and average number of recruitment during the most recent 8 years. The quantity roughly approximates the level of SSB that could have been attained on average over the last decade if there had been no fishing.

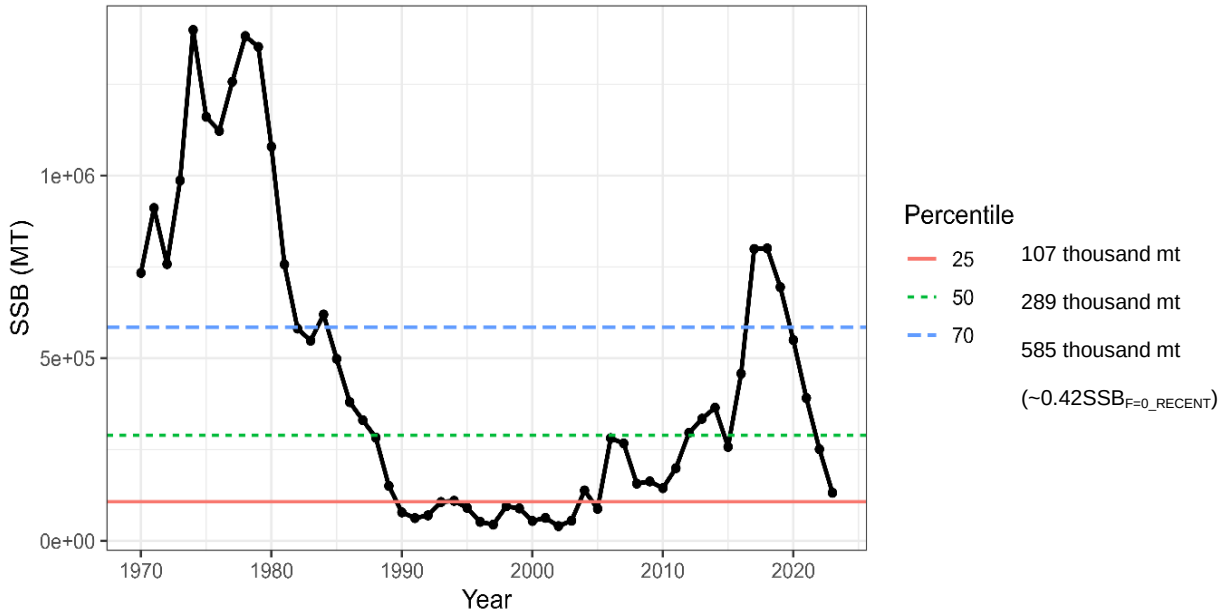


Figure E-6. Estimated spawning stock biomass and its 25th, 50th and 70th percentiles.

Description of specification of future projections

The population dynamics model for stochastic future projections is the same as is used in SAM. Future projections were conducted assuming a constant catch a fixed amount (ranging from 0 to 200 thousand mt in increments of 10 thousand mt) each year from FY2026 to FY2036. Constant F projections were also conducted under F_{cur} and Constant-F scenarios where the catch was calculated by a fixed fishing mortality (ranging from F30%SPR to F70%SPR in increments of 5%SPR) each year since FY2026. For all scenarios the catch in FY2024 and FY2025 is based on the assumption that the fishing mortality in FY2024 and FY2025 would be the same as the FY2023 fishing mortality estimated by SAM.

Two assumptions regarding biological parameters were used for the calculation of reference points, one where the future biological parameters are assumed to equal the average of the recent eight (FY 2016–FY2023) years, and another where the mean biological parameters for the entire model time period (FY1970–FY2023) are used to calculate the reference points. The TWG CMSA recommends the use of the recent average based on the assumption that the prevailing conditions will likely persist for the near future.

Stock status overview

Total biomass, Spawning Stock Biomass

The time series of estimated chub mackerel total biomass and SSB generally declined from the 1970s through the 1990s (Figure E-8). The stock began to recover in the early 2000s, peaking in FY2018, then SSB has declined to 16% of that peak in 2023. The spawning stock biomass in 2023 is slightly higher than SSB_{LIM} (SSB_{2023}/SSB_{LIM}=1.23) but lower than $SSB_{REFERENCE_A}$ and $SSB_{REFERENCE_B}$ (Table E-1).

Recruitment

The level of recruitment in the 1970s was estimated to be high (~15 billion individuals on average) and reached a low period between the 1990s and the 2010s (Figure E-8). Recruitment in the most recent decade (FY2014–FY2023) was also high on average (~7.4 billion), but not as high as in the 1970s and had a decreasing trend since the last peak in 2018. The estimated Beverton-Holt stock

recruitment relationship was slightly concave (Figure E-9), suggesting that the density-dependent effect in recruitment is not strong.

Exploitation status

Estimated exploitation rate generally fluctuated between 10% and 35%, with over 40% and below 10% in several years, following the estimated F dynamics. No clear temporal trend was observed (Figure E-8). The current fishing mortality (F_{cur}) corresponds to 16% SPR, and higher than the commonly used F-based reference points such as F0.1 and F30–70%SPR (Table E-1). Fishing mortality related reference points indicate that the stock is at approximately 16% SPR, indicating that current fishing mortality are also reported for percent FSPR values, in relation to the current F (F_{cur}, average FY2021–FY2023) for FSPR from the recent period (FY2016–FY2023) as well as over the entire time period (FY1970–FY2023; Table E-1).

Conclusions and recommendations

The chub mackerel stock in the NWPO has experienced large changes in biological parameters over the time period of the model. The main temporal changes are a recent decrease in maturity at age, along with a recent change in the weight at age, both of which were observed to impact the model time period to cause temporal impacts on biological reference points. MSY-based reference points are highly variable over the time series of the assessment because the weight- and maturity- at age of chub mackerel have varied widely (Figures E-3 and E-4), which impacts the productivity of the stock. Unfished spawning biomass per recruit (SPR0) has varied remarkably over time (Figure E-7).

Besides such uncertainty, the current fishing mortality (average FY2021–FY2023) is higher than the commonly used reference points such as F%30–60%, and SSB in FY2024 is lower than the reference levels of median and 70th percentiles ($SSB_{REFERENCE_A}$ & $SSB_{REFERENCE_B}$, respectively), but slightly above the SSB_{LIM}.

Harvest Recommendations

Given the uncertainty in biological parameters in future, which has a large impact on the projection results, the TWG CMSA considers it is not appropriate to provide long-term harvesting recommendations at this time. However, in response to the request from COM09, 10 year projection was undertaken to assess the effects of varying catch and F levels based on the most recent eight years' biological data (Figures E-10 and E-11, Tables E-2 to E-5). Projections indicate that current fishing mortality is unsustainable, and probabilities of achieving various reference levels under catch-constant as well as F-constant scenarios are provided in Tables E-2 and E-3. It is recommended to reduce fishing mortality to recover SSB to the reference levels.

Data and Research needs

The assessment results, including projections, are dependent on biological parameters and processes which are uncertain. Therefore, future studies should be focused on collecting and analyzing biological information, e.g., maturity-at-age and weight-at-age, which would improve the assessment. Fisheries-dependent data, such as fleet-specific catch-at-age, are also critical to develop Member-specific fishing fleet and age-specific abundance indices. It is also important to explore the factors that contributed to the lower-than-expected presence of the 2018 year class in catch-at-age data, despite strong signals in survey indices.

A critically important recommendation that should be carried out in 2-3 years is to develop a harvest control rule (HCR) specific to this stock via a Management Strategy Evaluation (MSE) process. This HCR should be dynamic and able to adjust annual total catches depending on the stock abundance as well as the target and limit reference points. During the process of the development

of MSE, uncertainties in parameter estimates, time-varying or density-dependent biological parameters, stock-recruitment assumptions, process errors, and selectivity should be considered.

Timely collection of biological information and further research on biological parameters and processes, including the effect of environment and climate change, are critically important to facilitate the accurate estimation of reference points.

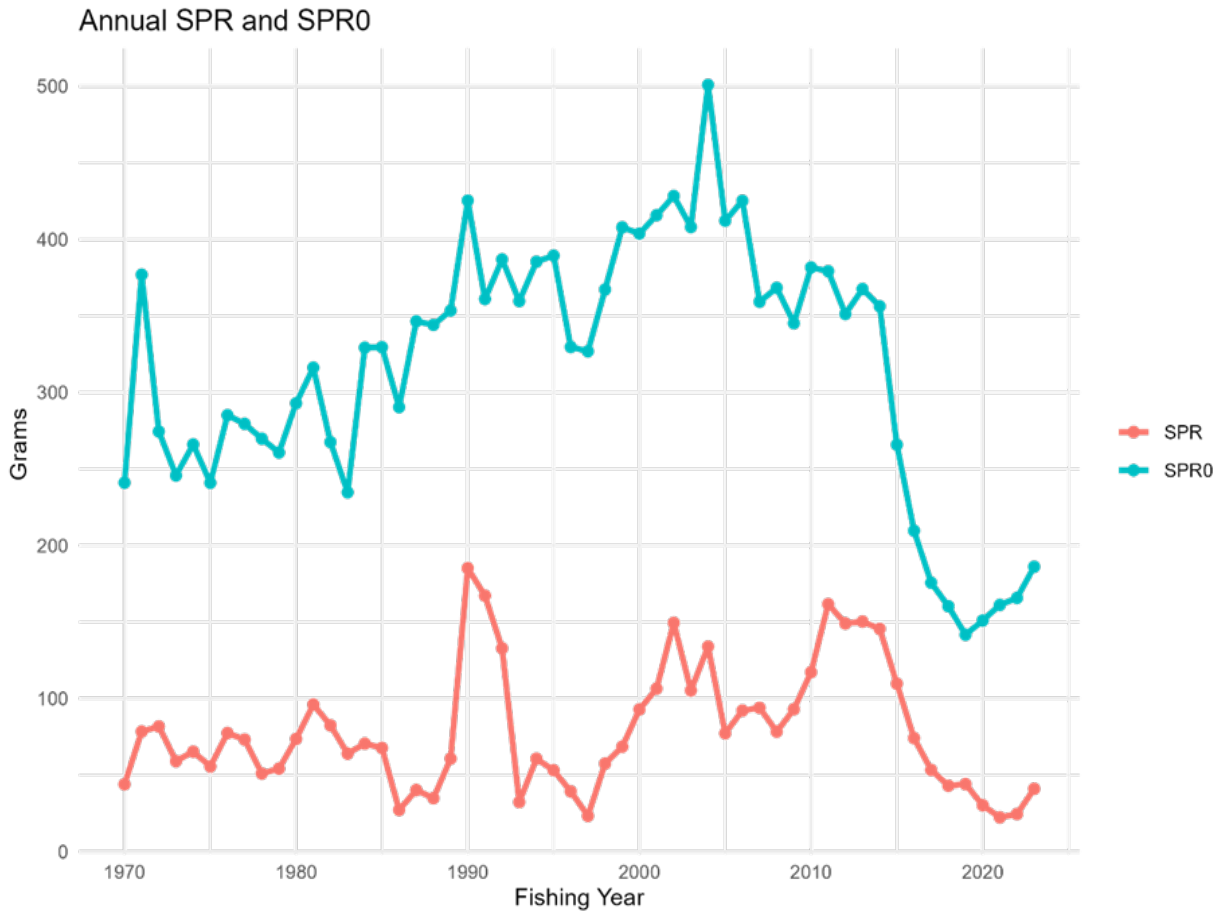


Figure E-7. Trajectories of spawners per recruit with (SPR) and without fishing (SPR0).

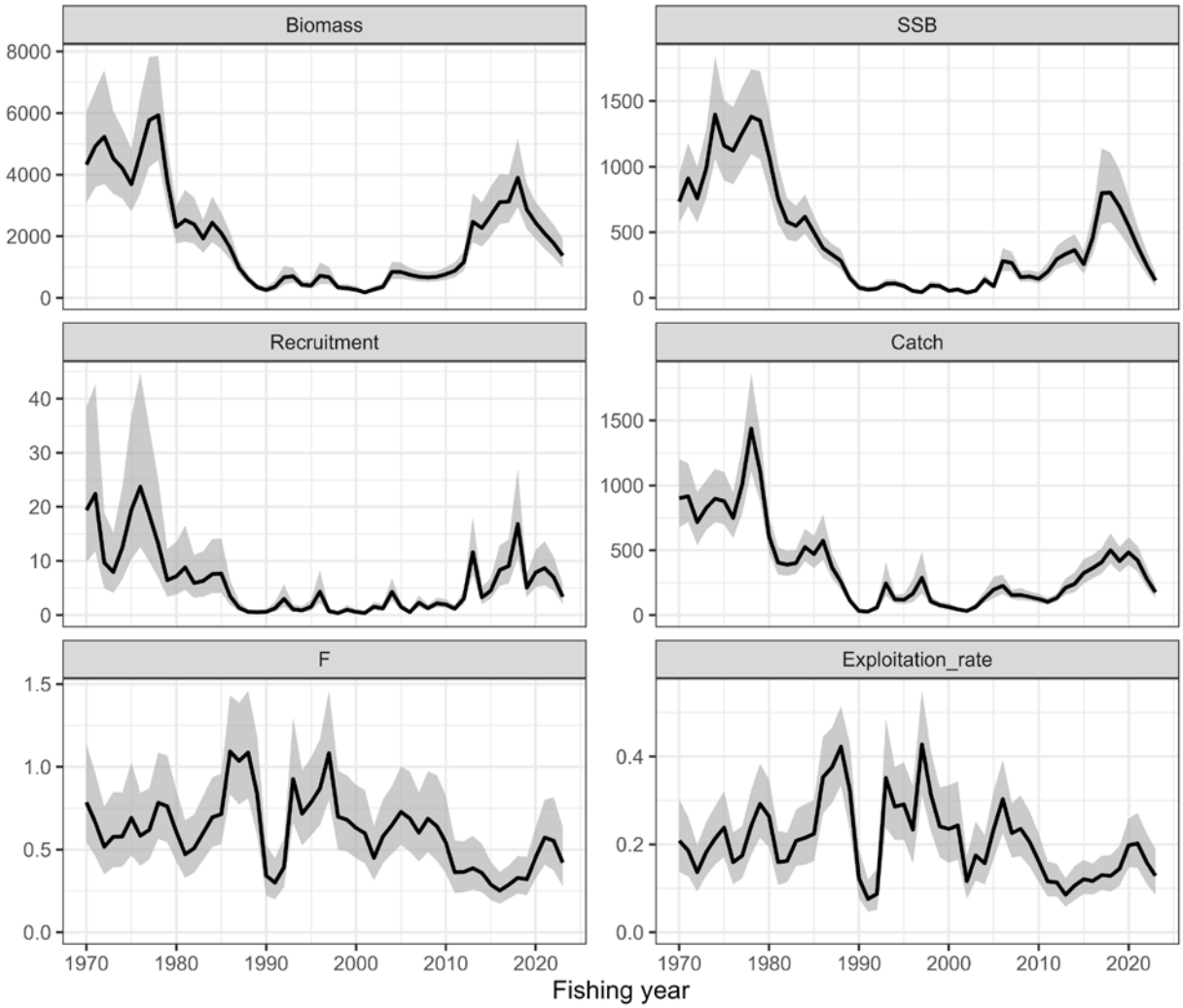


Figure E-8. Time series of estimates of total biomass (thousand mt), SSB (thousand mt), recruitment (billion fish), catch (thousand mt), mean fishing mortality (F) and exploitation rate (catch divided by total biomass) from the base case (S02-Index24_1).

Table E-1. Reference points for the base case scenario (S02-Index24_1). F-based reference point values that are dependent on time varying parameters are calculated by holding F_{cur} the same for all calculations, but by varying the time period (either FY2016–FY2023 or FY1970–FY2023) over which the biological parameters are estimated. Refer to Glossary in the stock assessment report for the definitions.

Reference Points	**Biological parameters**	
	FY2016–FY2023	FY1970–FY2023
F-based reference points		
Current%SPR	**16.2**	27.8
$F0.1/F_{cur}$	**0.838**	0.838
$FpSPR.30.SPR/F_{cur}$	**0.580**	0.911
$FpSPR.40.SPR/F_{cur}$	**0.412**	0.609
$FpSPR.50.SPR/F_{cur}$	**0.295**	0.416
$FpSPR.60.SPR/F_{cur}$	**0.207**	0.282
$FpSPR.70.SPR/F_{cur}$	**0.139**	0.184
Biomass-based reference points		
$SSB_{F=0_RECENT}$	**1399**	–
25th Percentile Historical SSB (SSB_{LIM}) (thousand mt)	**107**	
50th Percentile Historical SSB ($SSB_{REFERENCE_A}$) (thousand mt)	**289**	
70th Percentile Historical SSB ($SSB_{REFERENCE_B}$) (thousand mt)	**585**	
SSB_{2023}/ SSB_{LIM}	**1.23**	
SSB_{2023}/ $SSB_{REFERENCE_A}$	**0.46**	
SSB_{2023}/ $SSB_{REFERENCE_B}$	**0.23**	
SSB_{LIM} / $SSB_{F=0_RECENT}$	**0.08**	–
$SSB_{REFERENCE_A}$ / $SSB_{F=0_RECENT}$	**0.21**	–
$SSB_{REFERENCE_B}$ / $SSB_{F=0_RECENT}$	**0.42**	–

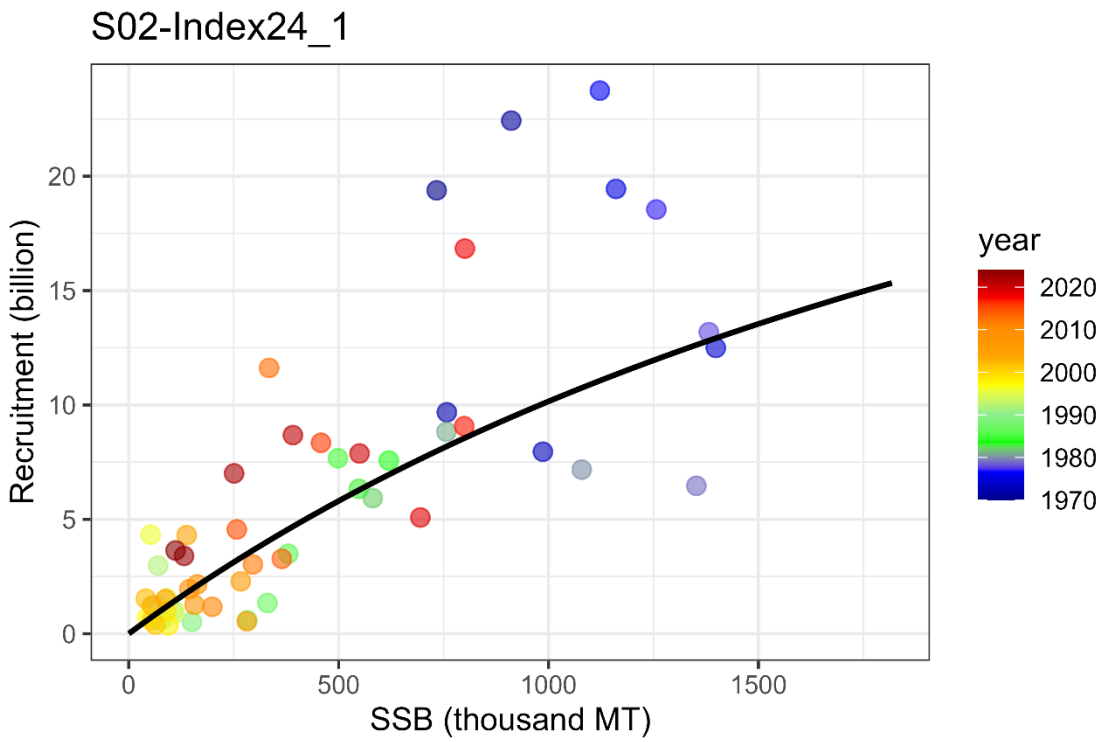


Figure E-9. Estimated stock-recruitment curve (black line) and estimated SSB and number of recruits (circles colored by decade), from the selected base case (S02_Index24_1).

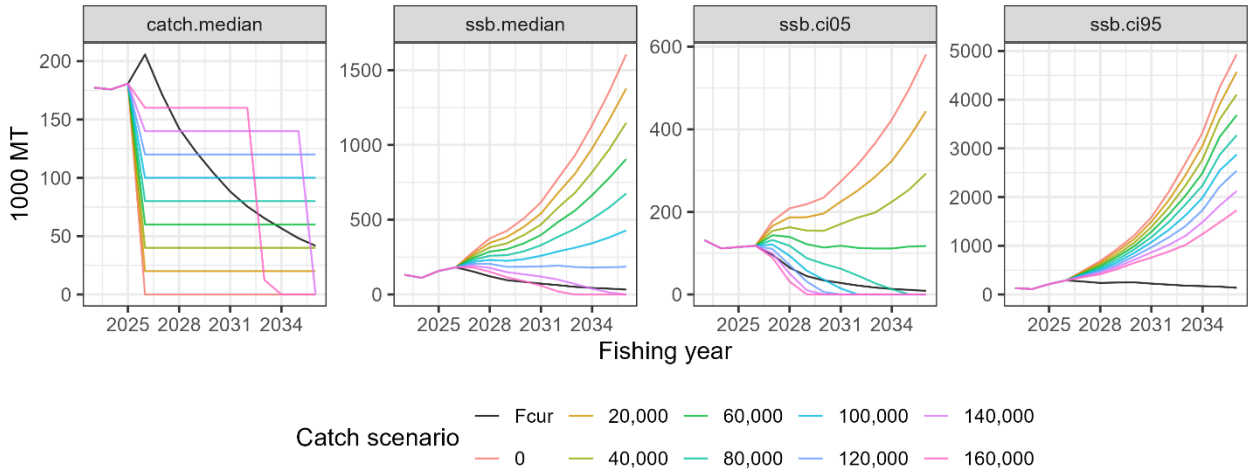


Figure E-10. Future trajectories of median catch (left), median SSB (second from left), 5% lower limit of predictive interval for SSB (third from left) and 95% SSB (right) with mean biological parameters in recent 8 years. Numbers and "F_{cur}" in "Catch scenarios" indicate total amount of catches (mt) in constant catch scenarios of 0 to 160 thousand mt in increments of 20 thousand mt and current fishing morality, respectively.

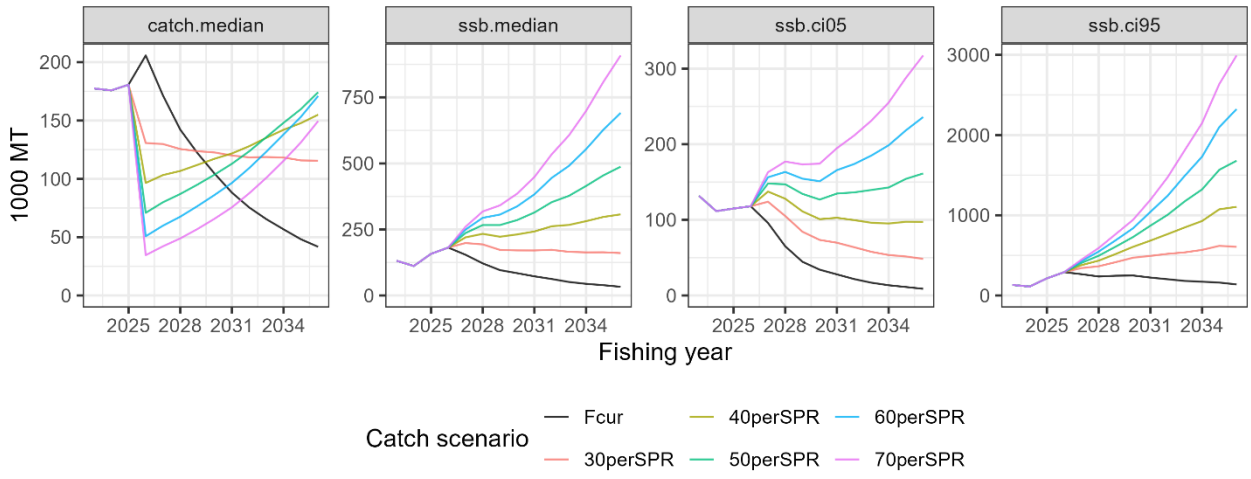


Figure E-11. Future trajectories median catch (left), median SSB (second from left), 5% lower limit of predictive interval for SSB (third from left) and 95% SSB (right) with mean biological parameters for the entire time series. 30–70%SPR and "F_{cur}" in "Catch scenarios" indicate total amount of catches (mt) in constant fishing mortality scenarios of F30–70%SPR in increments of 10% and current fishing morality, respectively.

Table E-2. Probability that future SSB on July 1, at the beginning of the fishing year, is above $SSB_{REFERENCE_B}$, $SSB_{REFERENCE_A}$, and SSB_{LIMIT} (70^{th} percentile, 50^{th} percentile and 25^{th} percentile, respectively) under constant catch projections for the base case scenario. The projection towards FY2036 is shown below.

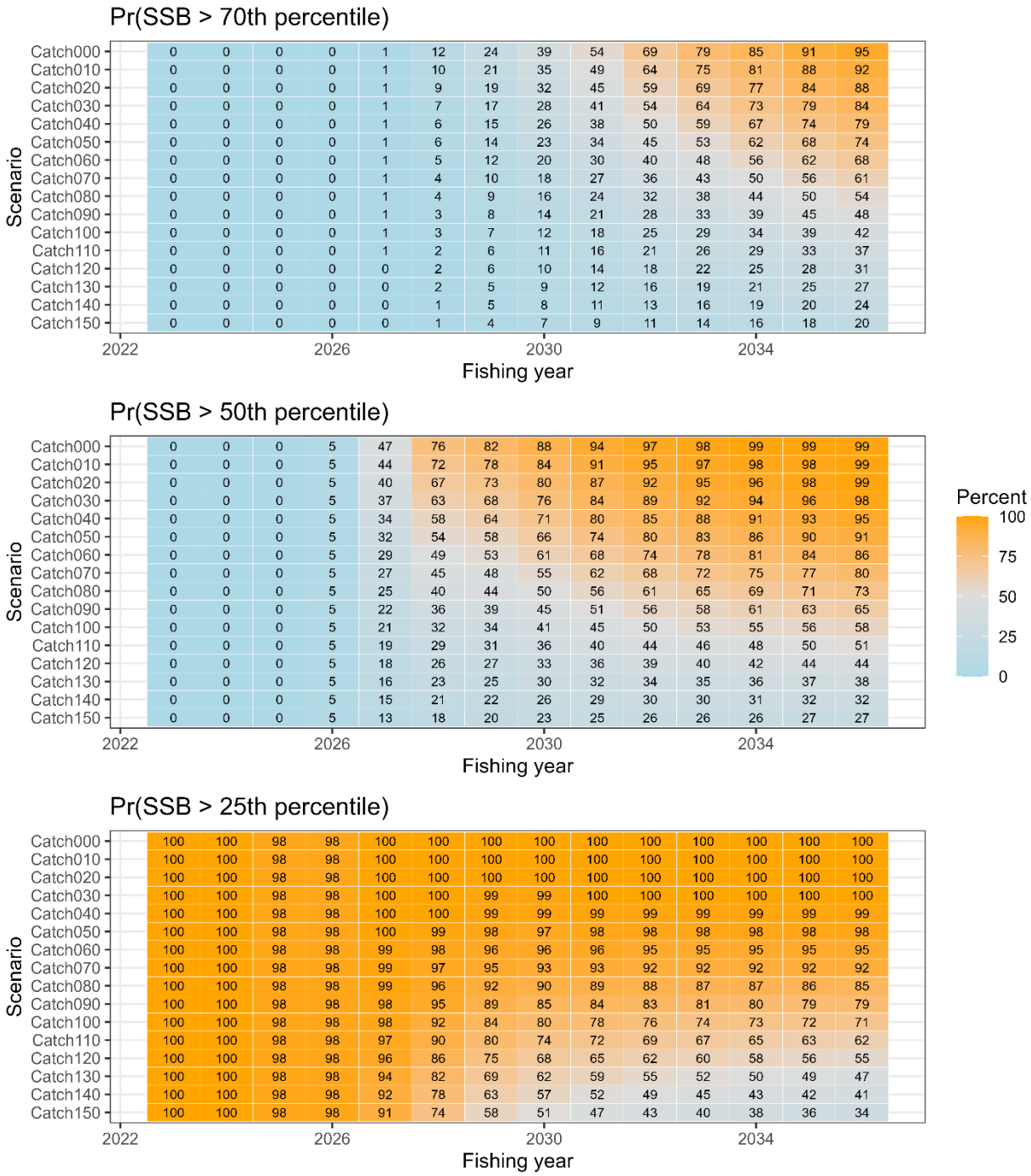


Table E-3. Probability that future SSB on July 1, at the beginning of the fishing year, is above $SSB_{REFERENCE_B}$, $SSB_{REFERENCE_A}$, and SSB_{LIMIT} (70^{th} percentile, 50^{th} percentile and 25^{th} percentile, respectively) under constant fishing mortality projections for the base case scenario. The projection towards FY2036 is shown below.

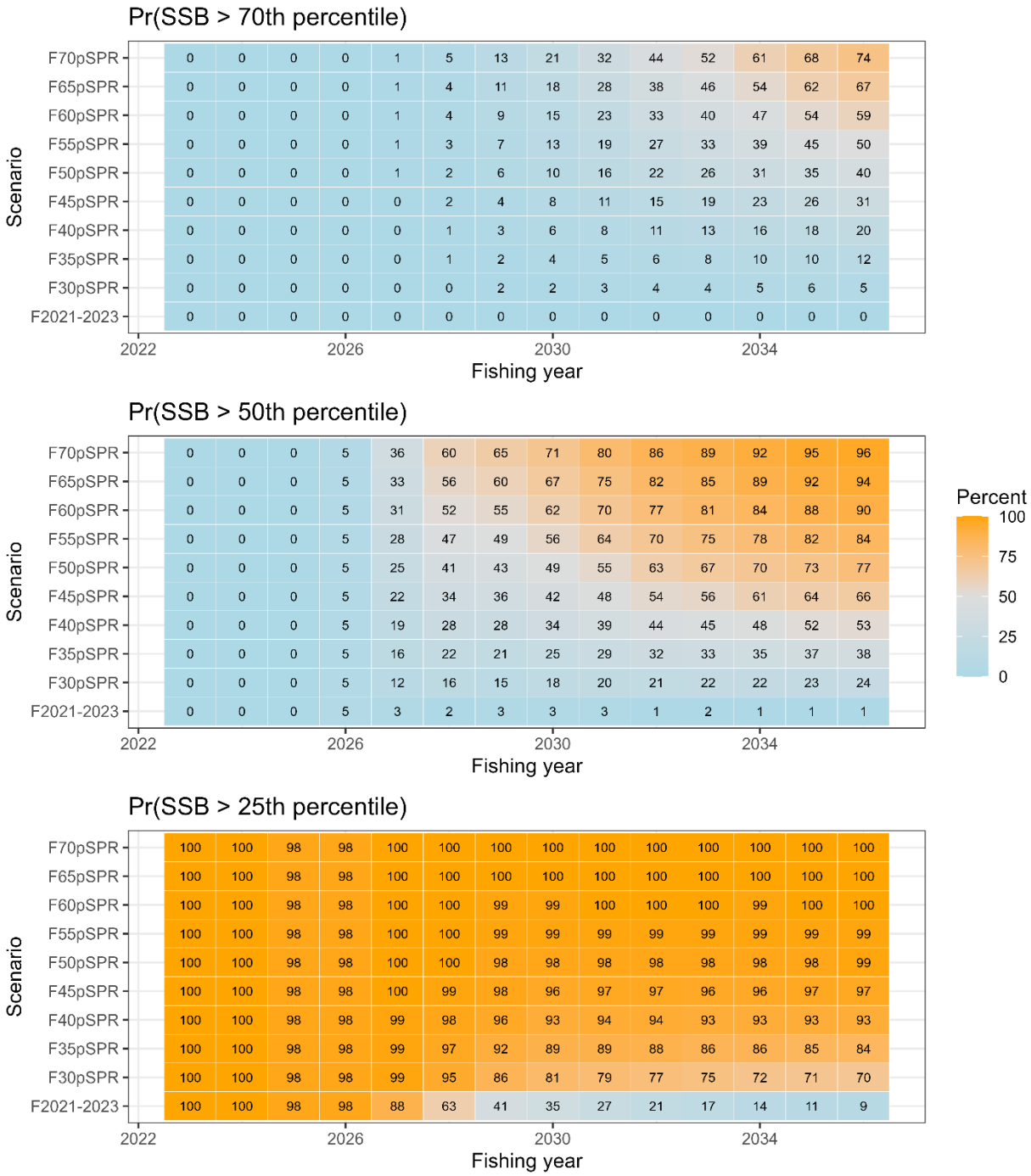
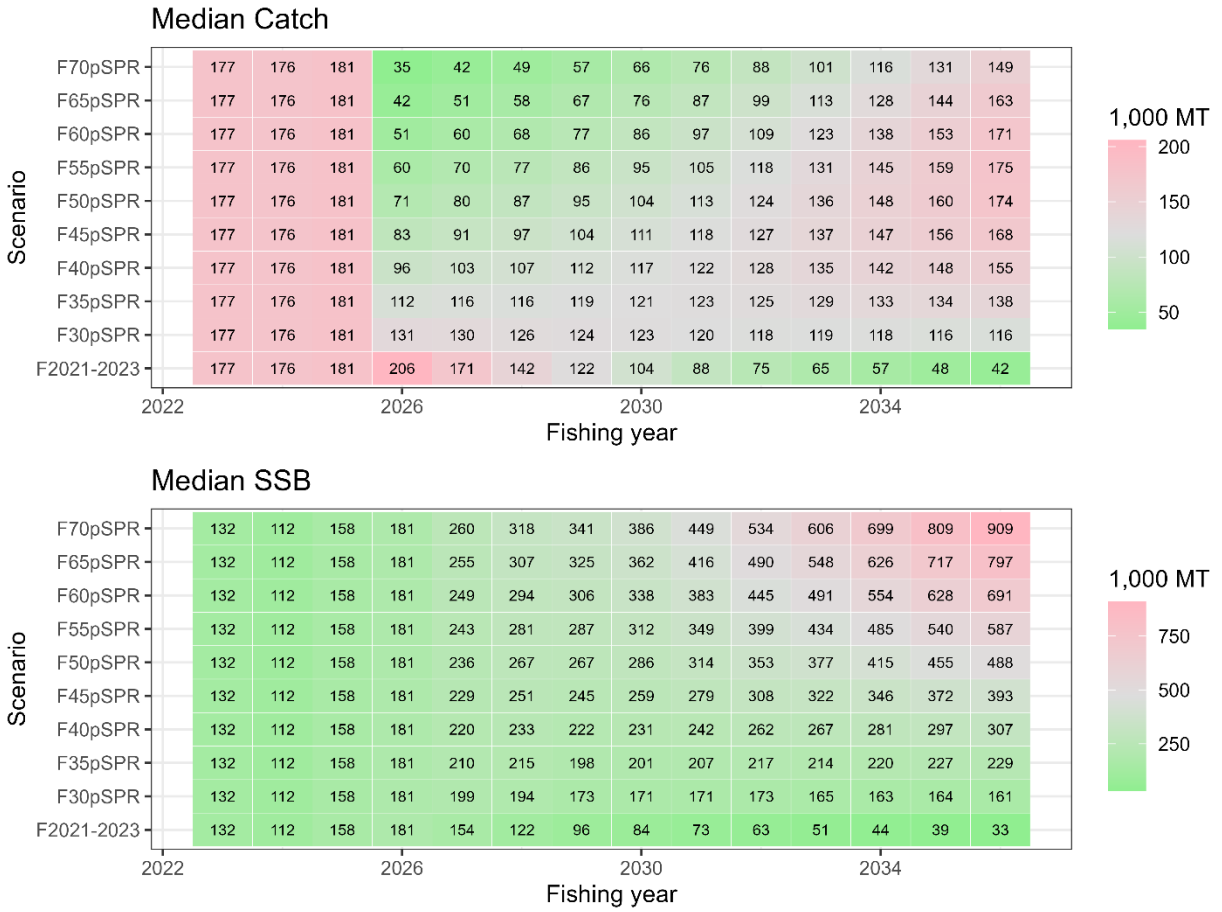


Table E-4. Median catch and median SSB based on constant-catch scenarios (ranging from 0 mt to 150 thousand mt).



Table E-5. Median catch and median SSB based on projections using constant F scenarios.



INTRODUCTION

1.1 Distribution and population structure

Chub mackerel (*Scomber japonicus*) is widely distributed throughout in the northwest Pacific, including in the waters of Japan, Korea, China, and Russia. The species exhibits highly migratory behavior, with distinct spawning, feeding, and wintering grounds. Spawning occurs primarily from spring to early summer in the subtropical waters, and the larvae and juveniles are often carried by ocean currents to feeding grounds further north. This migration pattern leads to a dynamic population structure that varies seasonally and spatially, reflecting the species' adaptation to environmental conditions.

In the northwest Pacific, two stocks of chub mackerel are recognized. Although there are no clear genetic differences between the two stocks, they are treated as different stocks due to their biological differences, distribution and spawning grounds. The first is the Tsushima Warm Current stock, which is distributed in the East China Sea and the Sea of Japan, and the latter is the Pacific stock, which can be defined as a straddling stock and is harvested in both national waters of Japan and Russia and the NPFC Convention Area. The Pacific stock, hereafter called chub mackerel in this report, is distributed from the coast of southern Japan to offshore waters of Kuril Islands (Figure 1). It is considered that both adults and juveniles are distributed as far east as 170°E longitude in periods of high abundance. During the low abundance period of 1990s-2000s, juvenile distributes from Japan to around 170°E, but adults were only found to 150°E due to the possible contraction of the feeding ground. The feeding migration of adult extends northeast, with the recent (since 2010) increase of stock abundance, the distribution of adult during the summer to fall season has expanded to 47° N, 166° E, east offshore of Kuril Island, after 2018. Adult fish spawn in Izu Islands waters in spring and then engage northward feeding migration to waters of Sanriku to east Hokkaido from summer to autumn.

1.2 Migration

Adults move to north (March to June) after spawning at Izu Islands area, which is the main spawning ground, and migrate to offshore area of Northeast of Japan (Sanriku and Hokkaido) from summer to fall for feeding (Meguro et al., 2002) (Figs. 1 & 2). Larvae distribute broadly from the Pacific side of southern Japan to Kuroshio extension and Kuroshio-Oyashio transition area in spring. Larvae occurred at Kuroshio-Oyashio transition area and move to offshore of Kuril Island in summer and subadults migrate down south in fall to offshore of Chiba and Ibaraki prefecture for wintering (Kawasaki, 1968; Iizuka, 2002; Nishida et al., 2001; Kawabata et al., 2006). Portion of adult and subadult migrate to Kii strait, Bungo strait and Seto inland sea, while the main spawning adults migrate to waters around Izu Islands area. Because of the occurrence of larvae originated upstream of Kuroshio current at the spawning ground of Izu Islands (Koizumi, 1992), spawning ground extended from offshore of southern Japan to northern Japan (Kuroda, 1992).

1.3 Reproduction

Chub mackerel mature at about age 2 or 3 and all fish at age 4 and above are supposed to be fully matured (Watanabe and Yatsu, 2006). One functional matured female produces 30–90 thousand eggs several times during a spawning season (Murayama et al., 1995; Watanabe et al., 1999; Yamada et al., 1999). The main spawning grounds are in the Japanese Exclusive Economic Zone (EEZ), in waters around the Izu Islands but also in areas off the Pacific coast of southern Japan, including the Kinan area, Cape Muroto and Cape Ashizuri (Fig. 1). The waters around the Izu Islands are considered the main spawning ground (Watanabe, 1970; Usami, 1973). Although spawning occurs from offshore of southern Japan to northern Japan (Kuroda, 1992) and it has also been observed in the Tohoku waters (Kanamori et al., 2019).

The spawning season for chub mackerel is from January to June. In the main spawning ground of Izu Islands, spawning occurs in March and April, which historically are the peak spawning months (Fig. 2). In the 2000s, the peak spawning timing has shifted to May and June because of the high fraction of younger adults, which tend to spawn eggs at later season (Watanabe, 2010). Additionally, the spawning ground is reported to exhibit northward shifting with extended spawning period associated with climate change (Kanamori et al., 2019).

1.4 Prey and predators

Larvae feed on the eggs of copepods and nauplii, whereas juvenile prey on small zooplankton such as small copepods, noctilucines, cercariae, and salpae (Kato and Watanabe, 2002). The feeding behaviors of immature and adult fish differ depending on the waters and lifecycle, but they mainly prey on other fishes (e.g., anchovies and lantern fish), crustaceans (e.g., krill and copepods) and salpae. In the Sanriku waters, the main prey are mysid shrimp and anchovies.

Before the 1980s, when stock abundances were high, chub mackerel were often observed to be eaten by large fishes such as the mackerel shark, blue shark, pomfret, albacore, and skipjack tuna (Kawasaki, 1965; Nagasawa, 1999), as well as the minke whale (Kasamatsu and Tanaka, 1992). In the 1990s, the lower abundance period, predation of minke whales was not reported (Tamura et al., 1998). From the research report of baleen whale predations, composition of anchovy decreased in the stomach contents after 2012, but mackerels and sardine increased. Especially in the case of sei whale, the main prey item shifted from anchovy in early 2000s to mackerel and sardine in late 2000s and after 2010 (Tamura et al., 2016; Konishi et al., 2016). When the abundance of mackerels is high, they appear to be main prey items for whales.

1.5 Age and growth

Longevity of chub mackerel is estimated to be approximately 8 years, based on age determination of sampled catch, and maximum age was recorded at 11year-old (Iizuka, 2002). Fish at age 6 and

above are very rare in the catches in recent years. There is no significant difference in growth between sex. Growth of chub mackerel is density dependent, and the parameters of growth function are variable among the year classes. According to Kamimura et al. (2021), the asymptotic body length *Linf* and growth coefficient *k* of von Bertalanffy growth function varied between 339.9 to 440.5 mm and 0.25 to 0.55 (/year), respectively, for each year class of 2006-2016.

Average size (fork length) and weight of catch in 2018 are shown in Fig. 3, with comparison of those at 2011-2014 which did not show any slow growth. Average weight of 2018 was low comparing with those of 2011-2014 and 1970s, especially for age 5 (extremely high recruitment in the 2013 year class). It is considered that density dependence may be the cause for this change. (Kamimura et al., 2021). However, slower growth has been observed at periods of high abundance, this may be due to poor environmental conditions (i.e. lower temperatures due to range expansion), or feeding competition with Japanese sardine, or other factors (Kamimura et al., 2021).

The growth of chub mackerel is density dependent, and may also be influenced by changes in the ocean environment and recent recruitment (Watanabe and Yatsu, 2004). Maturity at age has changed depending on changes in growth (Watanabe and Yatsu, 2006). The maturity at age for chub mackerel has changed over time, for example the maturity rate of age 3 fish has decreased from 100% to 30% since 2015 (Fig. 4).

FISHERIES AND SCIENTIFIC SURVEYS

2.1 Overview of fisheries

Chub mackerel are harvested by China, Japan and Russia (Figs. 5 & 6). Chinese light purse seine and pelagic trawl fisheries are operated in the NPFC Convention Area. Japanese chub mackerel fisheries consist mainly of purse seine and set net fisheries within the Japanese national waters. The Russian chub mackerel fisheries consist of mid-water trawl, purse seine and bottom trawl gears. They operate in the Russian national waters and the NPFC Convention Area. Some of these fisheries occur in the Japanese national waters. The historical total landings have largely fluctuated. In last decade, the total catch was stable at higher level and subsequently decreased from 516 thousand mt in 2018 to 129 thousand mt in the most recent calendar year (CY) 2024. The Conservation and Management Measure for chub mackerel (CMM 2025-07) includes a catch limit of 66,740 mt set in the Convention Area for the 2025 fishing season (1 June to 31 May).

China harvests this species dominantly by the light purse seine fishery in the NPFC Convention Area. A smaller component of the catch is taken by pelagic trawl. Chinese catch statistics on mackerels in the NPFC Convention Area are available since 2015. The Chinese mackerel fisheries in the NPFC Convention Area initiated in 2014 and mainly caught chub mackerel, blue mackerel, and Japanese sardine (Zhang et al., 2023). The fishing season of Chinese fleet is from April to

December.

The major Japanese fisheries for chub mackerel are purse seine, set net, dip-net fishing, and stick-held dip-net fishing. Large-scale purse seiners, historically the primary source to the total catch in Japan, operate all the year over during the main fishing season from September to February in the offshore waters off Joban and Sanriku coasts on the Pacific side of Japanese main island. Small-scale purse seiners operate year-round in the coastal waters south of Chiba Prefecture. Set net fisheries are deployed extensively along the Japanese coast and yield a large catch from Sanriku coast. Dip-net and stick-held dip-net fisheries which target adult fish in spawning season (age 2 to 4 fish) are mainly operated from January to June in the Izu Islands waters, which is the major spawning ground. Chub mackerel is also caught by angling all over Japan.

Russian fisheries targeting mackerel species and sardine operate in the NW area of the NPFC Convention Area and operate both purse seine vessels and pelagic trawl vessels. Russian fisheries first exploited mackerel in the Far East in the early 1960s and harvested it until the late 1980s, when its stocks in areas accessible to the domestic fleet were completely depleted (Baryshko, 2009, Pozdnyakov and Vasilenko 1994, Pyrkov et al. 2015). Out of 26 years of mackerel fishery for 13 years more than 50 thousand tonnes per year was harvested, including 9 years when the catch was more than 100 thousand mt. Commercial fishing of mackerel in the North-West Pacific Ocean by vessels under the Russian (Soviet) flag began in 1968 (Vasilenko 1990). Since the second half of the 1980s, due to a sharp decline in mackerel abundance, its commercial fishing for mackerel in the Russian EEZ has been rare. Until recently, there has been no target fishing for mackerel by Russia in the Northwest Pacific. Russian fisheries resumed fishing in 2015. In 2021, the chub mackerel catch by the Russian fleet totaled to 87 thousand mt.

2.2 Overview of scientific surveys

China has been conducting a scientific survey program using its fishery research vessel "Song Hang" in the NPFC convention area since 2021 (Ma et al., 2023). The survey is conducted during June-August, with methods of mid-trawling, acoustic and squid jigging, covering about 70 stations per year. The results indicated that Chub mackerel is one of the dominant species in the four years survey.

In Japan, monthly egg surveys have been intensively conducted off the Pacific coast of Japan in the western North Pacific since 1978 by a historical cooperative system among many national and regional fisheries research bodies (Nishijima et al., 2025a). The survey protocol can be found at Oozeki et al. (2007). The objective of this egg survey is to monitor egg abundance of major small pelagic fish species such as Japanese sardine, Japanese anchovy, chub mackerel, etc. The survey area roughly covered the major spawning grounds of small pelagic fish off the Pacific coast, mainly inshore waters but also offshore waters related to the warm Kuroshio and cold Oyashio currents. In

addition, Japan has conducted the surface trawl net surveys in summer (June to July) and autumn (September to October) to monitor abundance of ages 0 and 1 (Nishijima et al., 2025b; 2025c; Yukami et al., 2024). The summer survey has been initiated in 2001 and annually carried out, covering the waters approximately from 141.5º E to 170.0º W and from 32.0º to 45.0º N. It provides information on abundance of age 0 fish. The autumn survey was started in 2005 and has been conducted annually, covering the area approximately of 141.5º–175º E and 37.0º–50.0º N. This survey provides abundance information on ages 0 and 1.

Russia has conducted a summertime acoustic-trawl survey since 2010 that examines mid-water and upper epipelagic species including chub mackerel. This survey completes 60-80 stations per year and aims to assess changes in abundance and migration patterns. Data collected include catch and effort, catch at length, and data for ageing.

DATA

3.1 Data preparation for stock assessment model

The Technical Working Group on Chub Mackerel Stock Assessment (TWG CMSA) agreed to apply a State-space Stock Assessment Model (SAM; Nielsen and Berg, 2014) for its stock assessment (TWG CMSA, 2023). It requires age-specific input data such as catch-at-age, maturity-at-age and weigh-at-age and abundance indices. A fishing year (FY) starting from July and ending in June of the following year was applied in the stock assessment of chub mackerel. The TWG CMSA agreed for the stock assessment period to be FY1970 (CY1970/quarter 3 (Q3)) to FY2023 (CY2024/Q2) (TWG CMSA, 2024). Seven age groups of ages 0 to 5 and 6+ were defined in the stock assessment. The Members submitted their data on quarter basis and then, they were compiled for construction the input data based on the fishing year. Manabe et al. (2025) comprehended the age-specific input data.

China has collected length frequency data of commercial catch through onboard and port samplings since CY2016, and aging of the samples has been started since CY2017. Japan also collects length, weight, maturity and age data from the survey and fishery to support their stock assessment. Russian length frequency and aging data of commercial catch are available since CY2016. The length frequency data obtained through research surveys are available since CY2010.

3.2 Catch-at-age

The catch-at-age is prepared for each Member on quarterly-basis for China and Russia. Japanese catch-at-age is prepared for Eastern Japan and Western Japan due to its difference in catch, size, and season in which the border of two regions is located at Mie-Shizuoka prefectural border.

The Members provided their quarterly catch-at-length data on calendar year basis as follows:

1) China, CY2016 to CY2024/Q2 ;
2) Eastern and Western Japan, CY2014 to CY2024/Q2;
3) Russia, CY2016/Q3 to CY2024/Q2.

The Members provided their quarterly age-length key (ALK) on calendar year basis as follows:

1) China, CY2018 to CY2024/Q2;
2) Eastern and Western Japan, CY2014 to CY2024/Q2.

For the catch-at-age prior to CY2014, Japan provided fishing year-based catch-at-age data for FY1970-FY2013 from the Japanese domestic stock assessment (Yukami et al. 2024). The data contains Russian catch in FY1967-1988 however due to the difficulty of separation into two Members, the catch is incorporated as Japanese catch. For the period of CY2014-2023/Q2, the TWG CMSA has agreed to calculate catch-at-age based on the catch-at-length data and corresponding ALK data of each quarter and region, which the detailed procedures are described in Manabe et al. (2024). The ALK of Russia is substituted by the Eastern Japanese ALK due to the similarity in the area of catch.

For the period with missing catch-at-length, the procedures to supplement the data are as follows:

1) For China CY2015, use mean catch-at-length of China of CY2016-2018 for equivalent quarter;
2) For Russia CY2014-2015, use mean catch-at-length of Russia of CY2016-2018 for equivalent quarter;
3) For Russia CY2022-2023/Q2, use Eastern Japanese catch-at-length of the equivalent quarter/year.

For the period with missing ALK, Eastern Japanese ALK of the equivalent quarter/year is applied to calculate catch-at-length. The calculated catch-at-length from each quarter is converted to fishing year basis by setting the data of age incrementation as July 1st. Ages are subtracted by 1 for the first and second quarters and early caught age 0 fish in those quarters, which are calculated as age -1, are incorporated into the third quarter as age 0. The detailed procedures are described in Manabe et al. (2024, 2025).

Through the procedures described above, catch-at-age data had been prepared for the stock assessment (Figure 4a). Chub mackerel catch was historically composed mainly of fish younger than age 3. In the periods of FY1970s, FY1980s and late-FY2010s to beginning of FY2020s, the catch of fish older than age 3 was prominent. There were differences in age compositions in catch by year and by member from FY2014 to FY2023 (Fig. 6). Catches of ages 1 to 3 were prominent in FY2014 to FY2016, respectively. In addition, dominant age classes of catch were different among China and Japan.

3.3 Weight-at-age

The Members provided their quarterly weight-at-age data on calendar year basis as follows:

1) China, CY2018 to CY2023/Q2;

2) Eastern and Western Japan, CY2014 to CY2023/Q2;
3) Russia, CY2016 to CY2022.

The TWG CMSA has agreed to calculate a single weight value for each age to convert stock number into biomass (TWG CMSA, 2024). The single weight-at-age were calculated through the following procedure, as described in Manabe et al. (2024, 2025). The proportion of catch number for each quarter is calculated for four regions: China, Eastern Japan, Western Japan, and Russia, using the following equation, where *P* is proportion of catch number, *Na,t,r* represents the catch number of age *a* at year *t*, and region *r*.

$$P_{a,t,r} = \frac{N_{a,t,r}}{\sum N_{a,t,r}} \quad (1)$$

The yearly catch number ratio for each region is then averaged between FY2014-2023 to calculate the constant ratio of catch number across the members.

$$P_{a,r} = \frac{\sum_{t=2014}^{2023} P_{a,t,r}}{10} \quad (2)$$

The weighted mean of weight *W* at age *a* at quarter *q* of year *t* is then calculated as:

$$W_{a,q,t} = P_{china} W_{a,q,t,china} + P_{japan} W_{a,q,t,japan} + P_{russia} W_{a,q,t,russia} \quad (3)$$

The quarterly weight-at-age within a single fishing year is taken an arithmetic mean to calculate the annual weight-at-age, which is used for the stock assessment.

$$W_{a,t} = \frac{\sum W_{a,q,t}}{4} \quad (4)$$

Through this procedure, annual weight-at-age were calculated for FY2014 to FY2023 (Fig. 4b). Since the weight-at-age prior to FY2014 was not reported by other members, the weight-at-age of CM in FY1970 to FY2013 was sourced from the Japanese domestic stock assessment of the Pacific stock of chub mackerel. Historical weight-at-age showed time-varying attributes and decreased obviously in last decade in age groups older than age 0.

3.4 Maturity-at-age

The TWG CMSA has agreed to use the annual maturity-at-age data from Japanese domestic stock assessment (TWG CMSA, 2024) (Fig. 4c). The Japanese maturity-at-age data is derived from the observation of catch from the spawning area, and based on previous studies (Watanabe and Yatsu, 2006; Watanabe, 2010). Chinese maturity-at-age data submitted on a quarterly basis were not included in the base-case maturity-at-age however the alternative maturity-at-age data are prepared for the sensitivity analysis, which the data preparation and data are described in NPFC-2024-TWG CMSA9-WP02.

Annual maturity-at-age used for base case showed decadal time-varying changes from FY1970 to FY2023 (Fig. 4c). The maturity rate of age 2 and 3 fish is expected to be lower after FY2015 than in the period before FY2014, due to the slow growth of the 2013-year class. In the recent years, maturity rate of age 2 is zero, and that of age 3 is 0.3 in the Japanese national waters.

3.5 Natural mortality

Initially the assessment investigated set two cases of natural mortality (TWG CMSA, 2024). One is M = 0.5 for all age classes while the other is age-specific M (0.80 for age 0, 0.60 for age 1, 0.51 for age 2, 0.46 for age 3,0.43 for age 4, 0.41 for age 5, and 0.40 for age 6+) (Fig. 7). These natural mortality coefficients have been determined according to different natural mortality estimators with biological parameters from various samples (Nishijima et al., 2021). It is assumed that the natural mortalities are time-invariant throughout all years. The TWG CMSA agreed to use the age specific natural mortality estimates for all models at its 9th meeting.

3.6 Abundance indices

The inventory of abundance indices time series shown in Fig. 4d was as follows.

1) Relative number of age 0 fish from the summer survey by Japan from FY2002 to FY2024 (Nishijima et al., 2025a (NPFC-2025-TWG CMSA10-WP08))
2) Relative number of age 0 fish from the autumn survey by Japan from FY2005 to FY 2024 (Higashiguchi et al., 2025 (NPFC-2025-TWG CMSA10-WP05))
3) Relative number of age 1 fish from the autumn survey by Japan from FY2005 to FY 2024 (Higashiguchi et al., 2025 (NPFC-2025-TWG CMSA10-WP05))
4) Relative spawning stock biomass (SSB) from the egg survey by Japan from FY2005 to FY2024 (Nishijima et al., 2025b (NPFC-2024-TWG CMSA10-WP07 (Rev.1)))
5) Relative SSB from the dip-net fishery by Japan from FY2003 to FY2024 (Nishijima et al. 2025c (NPFC-2025-TWG CMSA10-WP06))
6) Relative vulnerable stock biomass from the light purse seine fishery by China from FY2014 to FY2022 (Shi et al., 2025 (NPFC-2025-TWG CMSA10-WP09))
7) Relative vulnerable stock biomass from the trawl fishery by Russia from FY2016 to FY2024 (Chernienko and Chernienko, 2025 (NPFC-2025-TWG CMSA11-WP15))

The seven time series were used during model development and applied for the base case. The abundance indices from Japan and Russia were available until FY2024 and until FY2023 for China.

SPECIFICATION OF STOCK ASSESSMENT

4.1 State-space Stock Assessment Model (SAM)

SAM is a statistical catch-at-age model that accounts for observation errors in catch at age, which was originally developed by Nielsen and Berg (2014). Furthermore, in order to match the nature of data of this stock, improvements have been made to allow more flexible settings (Nishijima and Ichinokawa, 2023), and this assessment used the modified version. The detailed settings are described as follows. SAM consists of two subparts: population dynamics model and observation model.

4.1.1 Population dynamics model

The population dynamics of chub mackerel in SAM basically follows an age-structured model:

$$\log(N_{0,y}) = \log[f(SSB_y)] + \eta_{0,y}, \qquad a = 0 \qquad (5)$$

$$\log(N_{a,y}) = \log(N_{a-1,y-1}) - F_{a-1,y-1} - M_{a-1,y-1} + \eta_{a,y}, \qquad 1 \le a \le 5 \qquad (6)$$

$$\log(N_{6+,y}) = \log(N_{5,y-1}e^{-F_{5,y-1}-M_{5,y-1}} + N_{6+,y-1}e^{-F_{6+,y-1}-M_{6+,y-1}}) + \eta_{6+,y}, \qquad a = 6+ \qquad (7)$$

where $\eta_{a,y}$ is the process error at age a in year y following $\eta_{a,y} \sim N(0, \omega_a^2)$. The recruitment of chub mackerel occurs at age 0, described by a function of SSB and process errors (Eqn. 1). We use a Beverton-Holt stock-recruitment relationship (Beverton and Holt, 1957):

$$f(SSB_y) = \frac{\alpha \times SSB_y}{1 + \beta \times SSB_y}, \qquad (8)$$

where SSB_y is the sum-product of number (N), weight (w), and maturity (g) at age:

$$SSB_y = \sum_{a=0}^{6+} g_{a,y} w_{a,y} N_{a,y}\,. \qquad (9)$$

For fish older than age 0, the number of each cohort decreases by fishing mortality coefficient ($F_{a,y}$) and natural mortality coefficient ($M_{a,y}$) from the previous year and also be affected by process errors $\eta_{a,y}$ (Eqn. 2). For the plus-age group (6+), the number is described as the sum of surviving numbers of age 5 and age 6+ from the previous year (Eqn. 3).

In SAM, fishing mortality coefficients are assumed to follow a multivariate random walk:

$$\log(\boldsymbol{F_y}) = \log(\boldsymbol{F_{y-1}}) + \boldsymbol{\xi}_y\,, \qquad (10)$$

where $\boldsymbol{F_y} = (F_{1,y}, \ldots, F_{A+,y})^T$, $\boldsymbol{\xi_y} \sim \mathrm{MVN}(0, \boldsymbol{\Sigma})$, and $\boldsymbol{\Sigma}$ is the variance-covariance matrix of multivariate normal distribution (MVN). The diagonal elements of matrix $\boldsymbol{\Sigma}$ were σ_a^2, while off-diagonal elements represent covariance of F process errors between age classes. This assumption of F random walk allows us to estimate time-varying selectivity (Nielsen and Berg 2014). For the covariance of MVN, we assume that the correlation coefficient of F between ages a and a' decreases along with their age differences: $\rho^{|a-a'|}\sigma_a\sigma_{a'}$ ($a \neq a'$).

4.1.2 Observation model

SAM is fitted to the data of catch-at-age and abundance indices. SAM uses the Baranov equation for estimates in catch-at-age:

$$\hat{C}_{a,y} = \frac{F_{a,y}}{F_{a,y} + M_{a,y}}\left(1 - \exp(-F_{a,y} - M_{a,y})\right)N_{a,y}\,. \qquad (11)$$

In this equation, $F_{a,y}$ and $\underline{N_{a,y}}$ are estimated parameters by random effects, while $\underline{M_{a,y}}$ is the natural mortality coefficient. That is, the predicted catch at age in number ($\hat{C}_{a,y}$) is a derived parameter. SAM then fit to observed catch-at-age in a lognormal assumption:

$$\log(C_{a,y}) = \log(\hat{C}_{a,y}) + \varepsilon_{a,y}\,, \quad (12)$$

where $\varepsilon_{a,y} \sim \mathrm{N}(0, \tau_a^2)$.

We have agreed to use seven abundance indices (Fig. 5d) which represent, respectively,

1. Relative number of age 0 fish from the summer survey by Japan,
2. Relative number of age 0 fish from the autumn survey by Japan,
3. Relative number of age 1 fish from the autumn survey by Japan,
4. Relative spawning stock biomass (SSB) from the egg survey by Japan,
5. Relative SSB from the dip-net fishery by Japan,
6. Relative vulnerable stock biomass to Chinese fleet from the light purse-seine fishery by China, and
7. Relative vulnerable stock biomass from the trawl fishery by Russia.

The predicted values of these abundance indices can be expressed in the following general equation:

$$\hat{I}_{k,y} = q_k \left[\sum_{a=0}^{6+} \left(\chi_{a,y,k} N_{a,y}\right)\right]^{b_k}. \quad (13)$$

The subscripts *k*, *y*, *a* represent index, year, and age, respectively. q_k and b_k are the proportionality constant and the nonlinear coefficient, respectively, for index *k*. Note that this equation does not mean that all the abundance indices are all nonlinear against abundance but includes a linear case (b_k =1). The parameter $\chi_{a,y,k}$ is a multiplier on the number of fish in age *a* and year *y* ($N_{a,y}$) for index *k*. For the abundance indices for age 0 fish number (*k*=1,2),

$$\chi_{a,y,k} = \begin{cases} 1, & a = 0 \\ 0, & \text{otherwise} \end{cases}. \quad (14)$$

For the abundance index for age 1 fish number (*k*=3),

$$\chi_{a,y,k} = \begin{cases} 1, & a = 1 \\ 0, & \text{otherwise} \end{cases}. \quad (15)$$

For the abundance indices for SSB (*k*=4,5),

$$\chi_{a,y,k} = g_{a,y} w_{a,y}\,. \quad (16)$$

The abundance indices for vulnerable stock biomass to Chinese and Russian fleets (*k*=6,7) would represent a part of the stock for each fleet or each member's fishery. For the abundance indices for vulnerable stock biomass (*k*=6,7), therefore,

$$\chi_{a,y,k} = \hat{s}_{a,y,k} w_{a,y,k}\,, \quad (17)$$

where $\hat{s}_{a,y,k}$ is the estimated fishery selectivity in age *a* and year *y* for index (or fleet) *k*. We cannot estimate fleet-specific *F* in the current setting of SAM or, therefore, derive fleet-specific predicted catch at age (see Eqn. 14). Since the fleet-specific catch-at-age data is available (Fig. 5a), however, we can approximate the fleet-specific *F* as follows:

$$F_{a,y,k} \fallingdotseq \frac{C_{a,y,k}}{\sum_f C_{a,y,f}} F_{a,y}\,, \quad (18)$$

where $C_{a,y,k}$ are the observed catch number in age a and year y for fleet k. This approximation assumes that the fleet-specific F is proportional to fleet-specific "observed" catch at age in number. We then obtain the fleet-specific selectivity:

$$\hat{s}_{a,y,k} = \frac{F_{a,y,k}}{\mathrm{E}[\boldsymbol{F}_{y,k}]}, \quad (19)$$

where $\boldsymbol{F}_{y,k} = (F_{0,y,k}, F_{1,y,k}, \ldots, F_{6+,y,k})^{\boldsymbol{T}}$. It is important to note that $\chi_{k,a,y}$ for k=6 include the estimated parameters ($F_{a,y,k}$), whereas $\chi_{k,a,y}$ for k=1-5 are provided from input data. We used the ratios of catch numbers of China and Russia to the total catch numbers as input data to fit the CPUEs of Chinese light purse seine fishery and Russian trawl fishery. In calculating the vulnerable biomass, fleet- and age- specific weight ($w_{a,y,k}$ in Eqn. 12) is needed. However, since there are no agreed data of fleet- and age- specific weights in fishing year, we took a simpler approach to using the stock weights for biomass calculation: $w_{a,y,k} = w_{a,y}$ (Fig. 4b).

The list of fixed-effect and random-effect parameters is shown in Table 1. The parameters are estimated to maximize the marginal likelihood of summing process-error components and observation error components. The marginal likelihood is computed by the numerical integration using the Laplace approximation via Template Model Builder (TMB: Kristensen et al., 2016). We applied a generic bias-correction estimator for derived quantities calculated as a nonlinear function of random effects (e.g., $N_{a,y}$ is a derived quantity calculated from the random effect of $\log(N_{a,y})$), which is implemented in TMB (Thorson and Kristensen, 2016). Estimation uncertainties including standard errors (SEs) and confidence intervals were computed from the delta method in TMB. In this stock of chub mackerel, the period from July to the following June is treated as a fishing year (NPFC-2025-TWG CMSA09-WP01), and the estimated abundance is that at the beginning of the fishing year (i.e., July).

4.2 Model selection

SAM estimates age-specific process errors for F and N and age-specific observation error for C (σ_a, ω_a and τ_a, respectively: Table 1). Estimating these errors for all ages without any restriction may cause the failure to converge and/or over-parameterization. Estimating the nonlinearity parameters (b_k) for all of the abundance indices also may lead to the same problem. Because some abundance indices might respond linearly to the stock abundance, absence of the nonlinearity parameter of the abundance indices can lead to overestimation or underestimation of resources (Nishijima et al., 2019; Rose and Kulka, 1999). However, at the same time, estimation of nonlinear parameters for indices that actually react linearly to the abundance dynamics might cause overparameterization or even non-convergent estimation.

To address these problems, we conducted a series of model selections. We first focused on the optimization of the settings of the observation and process errors, fixing the relationship of the abundance dynamics and the abundance indices linear (b_k = 1). We introduced restrictions to these errors: For example, the process error for F can be restricted to be identical among ages 0–2 and

among ages 3–6+. Because there are huge number of the restriction pattern, we applied a stepwise approach, rather than trying all the possible restriction patterns. We started from the simplest model in which σ_a, ω_a and τ_a were common among all age classes. We assume that the seven abundance indices have different SDs of the measurement errors even in the simplest model because each abundance index is derived from different sources and/or age classes. Then we chose the best between-age breakpoints at which the values of σ_a, ω_a and τ_a changed based on AIC. In this step, one breakpoint was set to each of σ_a, ω_a and τ_a. This process was iterated until no further reduction in AIC was observed. Exceptionally, the N process error (ω_a) breakpoints were not placed between ages 2 and 3 in order to avoid setting independent process errors for each of them. This is because the maturities for ages 2 and 3 have declined to 0 and 0.3, respectively, after 2015 and we suspect that the SSB index does not have sufficient recent information corresponding to these ages.

In the second step, we consider which nonlinear coefficients of abundance indices should be estimated. We classified the seven abundance indices into five categories:

1. Trawl surveys by Japan (summer for age 0 and autumn for ages 0 and 1)
2. Egg survey for SSB by Japan
3. Dipnet fishery CPUE for SSB by Japan
4. Light purse-seine fishery CPUE by China
5. Trawl fishery CPUE by Russia.

We analyzed 32 (= 2^5) cases of all combinations in which the nonlinear coefficients of abundance indices in each category were either estimated or fixed at 1, with the selected restrictions of the errors above. We filtered out models without convergence, models that did not output SE due to non-positive definite of Hessian matrix, or models having very large SE of any of the fixed-effect parameters (>10). Among models meeting these criteria, the simplest model with ΔAIC < 2.0 was selected.

4.3 Agreed base case scenario

In this assessment, we consider two scenarios as candidates for the base case analysis. The difference between these two base case scenarios is exclusion or inclusion of the latest abundance indices. The first scenario, namely S01-InitBase, excludes the six abundance indices in 2024 (Note that Chinese light purse-seine fishery CPUE has no 2024 data). The other scenario, S02-Index24_1, includes the 2024 indices. Because SAM requires biological parameters (weight at age and maturity at age) in 2024 and the proportion of Russian catch number in 2024 to estimate the 2024 population status, we assume they are the averages of themselves over 2016–2023 and 2021–2023, respectively. The sensitivity analysis for these settings confirmed that the assumption has a minor effect on the stock assessment results (NPFC-2025-TWG CMSA11-WP07).

The TWG CMSA based this year's stock assessment on the previous assessment and included the following scenarios as candidate base cases:

- **S01-InitBase.** This scenario is based on the TWG CMSA 09 base case (S28-Proc Est), which excluded the latest abundance indices. Therefore, the abundance indices up to FY2023 were used as input in this scenario (FY2024 indices were excluded).

- **S02-Index24_1.** This scenario included the FY2024 abundance indices from Japanese and Russian fisheries and Japanese surveys. The weight and maturity at age for FY2024 were assumed to be their averages throughout FY2016–FY2023. The proportion of Russian catch out of the total catch was assumed to be its average over FY2021–FY2023. Although the catch in FY2024 is not available, stock status at the beginning of FY2024 can be calculated because stock status is determined before exploitation.

Seventeen other sensitivities were used to investigate the effect of alternative assumptions regarding the biological parameters in FY2024, Russian catch proportion in FY2024, nonlinearity for abundance indices, stock-recruit relationship, maturity processes and assumptions regarding process error in numbers at age.

The TWG CMSA agreed to select S02-Index24_1 as the base case scenario because it showed a smaller Mohn's rho in both the retrospective analysis and retrospective forecasting, as well as better performance in hindcasting cross-validation compared with S01-InitBase (Nakayama et a. 2025, Nishijima et al. 2025e). The selection also reflected the robustness of the stock assessment results to the assumptions about the FY2024 biological and catch composition data (, Nishijima et al. 2025e).

4.4 Model diagnostics

For the selected base case models, we applied several model diagnostics to check the reliability from a statistical point of view. Firstly, we performed a jitter analysis in which the initial values of the parameters were varied and re-estimated to confirm that the estimated parameters reach the global optimum. We checked whether the final gradients of the fixed effect parameters are close to zero, which is a necessary condition for model convergence.

We then plotted residuals in the catch number by age and in abundance indices to examine whether the residuals have temporal patterns. We also examined residuals in process errors for numbers by age ($\eta_{a,y}$ in Eqns. 1-3) and F by age (diagonal components of ξ_y in Eqn. 6). to show the stock abundance historically changed by these process errors. To visualize the effect of the process errors for numbers by age on the biomass-at-age, we plotted the deviances between the biomass-at-age

estimated with the process error and the biomass-at-age expected with *no* process error. The deviances were calculated by $\widehat{N}_{a,y} \times \omega_{a,y} \times \left[\exp\left(\hat{\eta}_{a,y}\right) - 1\right]$. Furthermore, we performed one-step-ahead (OSA) projections using the parameters estimated with full data and visualized the residuals between observation and projection to check whether there are temporal patterns in the OSA residuals in catch-at-age and the abundance indices.

A five-year retrospective analysis was performed to examine if the estimates had systematic bias for the removal (updating) of data. Mohn's rho was calculated for total biomass, SSB, recruitment, and mean F. We also performed a retrospective forecasting, which excludes the stock index values and catch number by age from the latest year and compares the results of a one-year-ahead forecasting from the terminal year of those data (in which age-specific weight and maturity rates were used) with estimates from the model using all data. We fixed the nonlinear coefficients (b_k) at the estimates with the full data in the retrospective analysis.

The leave-one-out (LOO) index analysis was next conducted by excluding the seven abundance indices one by one and comparing the estimates with the results obtained when all indices were used. This analysis allows us to examine the impact of each index on abundance estimates and check their robustness.

To evaluate whether the parameters converged to the maximum likelihood estimate (MLE) and the uncertainty of the estimate, we lastly examined the log-likelihood when the parameters were varied around the estimate. The parameters profiled are those related to the stock-recruitment relationship and proportionality constants for the abundance indices. For the indices for which nonlinear coefficients were estimated, the likelihood profile was obtained by fixing the nonlinear coefficients to the estimated values, because it was shown that the likelihood did not change much if the value of the proportionality constant was changed, and it was unclear whether the index had sufficient information on stock abundance. We also change the value of natural mortality coefficient (M), given as input data, and its effects on the likelihood and abundance estimates.

4.5 Setting and equations for biological reference points and future projections

The population dynamics model for stochastic future projections is the same as is used in SAM. Future projections were conducted assuming a constant catch a fixed amount (ranging from 0 to 200 thousand mt in increments of 10 thousand mt) each year from FY2026 to FY2036. Constant F projections were also conducted under Fcur and Constant-F scenarios where the catch was calculated by a fixed fishing mortality (ranging from F30%SPR to F70%SPR in increments of

5%SPR) each year since FY2026. For all scenarios the catch in FY2024 and FY2025 is based on the assumption that the fishing mortality in FY2024 and FY2025 would be the same as the FY2023 fishing mortality estimated by SAM.

Two assumptions regarding biological parameters were used for the calculation of reference points, one where the future biological parameters are assumed to equal the average of the recent eight (FY 2016–FY2023) years, and another where the mean biological parameters for the entire model time period (FY1970–FY2023) are used to calculate the reference points. The TWG CMSA recommends the use of the recent average based on the assumption that the prevailing conditions will likely persist for the near future.

4.5.1 Reference points

F-based reference points

The TWG CMSA calculated these reference points along with commonly used biological reference points such as F%SPR (30%, 40%, 50%, 60% and 70%), F0.1, with mean biological parameters and selectivity of the current fishing mortality (F_{cur}, average in FY2021 to FY2023). In particular, the biological parameters such as weight-at-age and maturity-at-age used for calculation of biological reference points are assumed as the average values during the most recent 8 years (FY2016 to FY2023), which represents the recent shift in biological parameters. As a comparable, the average of the biological parameters over the stock assessment period is used for the calculation of these reference points.

B-based reference points

While the F-based reference points are relatively robust to the time-varying biological parameters, commonly used B-based reference points such as SSB_{MSY} and SSB0 are found to be significantly affected by the changes of biological parameters in this stock as well as by the assumptions of stock recruitment relationships and model configurations. Owing to the uncertainty, the TWG CMSA explored some empirical reference points based on percentiles of historical SSB in FY1970–FY2023. The 25^{th} percentile of SSB could be regarded as the limit, being above the SSB levels when the stock has been severely depleted during the 1990's and early 2000's. The remaining two reference points ($SSB_{REFERENCE_A}$ and $SSB_{REFERENCE_B}$) are the 50^{th} and 70^{th} percentiles of historical estimated SSB.

Although these levels of SSB are significantly lower than the theoretically calculated SSB_{MSY} under the assumption of Beverton-Holt type SR relationship without considering the time-varying nature of biological parameters, the two SSB reference points are about 20% of $SSB_{F=0_RECENT}$ and about 40% of $SSB_{F=0_RECENT}$, respectively, which is calculated as the multiplier between average lifetime contribution to the spawning stock biomass per fish assuming no fishing (SPR0) and average

number of recruitment during the most recent 8 years. The quantity roughly approximates the level of SSB that could have been attained on average over the last decade if there had been no fishing.

4.5.2 Equations for calculating and population dynamics in future projection

The population dynamics model for future projections is the same as that used in SAM. The calculation was conducted by an R package named *frasyr* (https://github.com/ichimomo/frasyr), which has been developed for the stock assessment of Japanese domestic fisheries resources. In particular, we used the functions for future projection and the calculation of biological reference points in *frasyr*. The general equations of the forward calculation of the population dynamics are

$$N^i_{a,y} = \begin{cases} \dfrac{\hat{\alpha} SSB^i_y}{1+\hat{\beta} SSB^i_y} \exp\left(\eta^i_{0,y}\right) \ \ (a=0) \\ N^i_{a-1,y-1} \exp\left(-M_{a-1} - F^i_{a-1,y-1}\right) \exp\left(\eta^i_{a,y}\right) \ (0<a<6) \\ N^i_{a-1,y-1} \exp\left(-M_{a-1} - F^i_{a-1,y-1}\right) \exp\left(\eta^i_{a,y}\right) + N^i_{a,y} \exp\left(-M_a - F^i_{a,y}\right) \exp\left(\eta^i_{a,y}\right) \ \ (a=6+) \end{cases} \tag{24}$$

where $\hat{\alpha}$ and $\hat{\beta}$ are stock recruitment parameters estimated by SAM, $N^i_{a,y}$ is the number of fish in year y and age a at ith iteration, $F^i_{a,y}$ is fishing mortality coefficient in year y and age a at ith iteration, $\eta^i_{a,y} \sim \mathrm{N}(0, \hat{\omega}^2)$ where $\hat{\omega}^2$ is the variance of process error at recruitment estimated by SAM, and SSB^i_y is SSB defined as $\sum_{a=0}^{6} N^i_{a,y} w_{a,y} g_{a,y}$. The equations are generally applied from the end year of the stock assessment period with the initial conditions of $N^i_{a,2024} = \widehat{N}_{a,2024}$ in the base case scenario S02-Index24_1, where $\widehat{N}_{a,y}$ is the point estimates by SAM. Before management measures are implemented in 2026, we assumed that the fishing mortality in FY2024 and FY2025 would be the same as the 2023 fishing mortality estimated by SAM. If we were to assume the average fishing mortality for FY2021–2023 (F_{CUR}) during this period, the projected catch in the FY2024 would exceed 200,000 tons, which is unrealistically high considering current fishing situation. The fishing mortality in FY2023 was lower than in FY2021–2022, and using F2023 results in projected catches for FY2024–2025 that are similar to FY2023 (170,000 –180,000 tons), so we adopted this assumption. The future biological parameters of w_a and m_a are the averages of the most recent 8 years.

Two types of future harvesting methods were considered: constant-catch scenarios and constant-F scenarios. In the constant-catch scenarios, a total catch (*CC*) was predetermined ranging from 0 to 200,000 tons. Catch number at age $C^i_{y,a}$ in year y and age a is calculated with the Baranov catch equation

$$C^i_{y,a} = \frac{F^i_{y,a}}{F^i_{y,a} + M_a} \left(1 - \exp\left(-F^i_{y,a} - M_a\right)\right) N^i_{y,a} \,, \tag{25}$$

where $F_{y,a}^{i}$ is equal to x_y^iFcur with the same selectivity as Fcur and adjustment factor of x_y^i that is determined to satisfy the equation of $\sum_{a=0}^{6+} w_a C_{y,a}^{i} = CC$. If we cannot find x_y^i to satisfy the equation because of too small number of fishes, we took the smaller of the two numbers, $x_i = \exp(10)$ or fishing mortality corresponding to 99% of total catches when $x_i = \exp(100)$.

In the constant-F scenarios, we examined F ranging from F30%SPR to F70%SPR in 5% increments. In the Baranov equation above, $F_{y,a}^{i}$ was set as xF_{CUR}, where x used the values obtained when calculating the biological reference points. The constant-catch and constant-F scenarios were initiated in FY2026, and population dynamics were projected through to 2036, ten years later. We also conducted a future scenario in which the stock is exploited with current F since FY2026 to inform the current fishing impact on the stock in the future. The stochastic simulations were conducted 3,000 times for each model and scenario.

STOCK ASSESSMENT RESULTS

5.1 Base case model results

The TWG CMSA based this year's stock assessment on the previous assessment and included the following scenarios as base cases:

- **S01-InitBase.** This scenario is based on the TWG CMSA 09 base case (S28-Proc Est), which excluded the latest abundance indices. Therefore, the abundance indices up to FY2023 were used as input in this scenario (FY2024 indices were excluded).
- **S02-Index24_1.** This scenario included the FY2024 abundance indices from Japanese and Russian fisheries and Japanese surveys. The weight and maturity at age for FY2024 were assumed to be their averages throughout FY2016–FY2023. The proportion of Russian catch out of the total catch was assumed to be its average over FY2021–FY2023.

For both scenarios the model estimates the nonlinear coefficients only for the three trawl surveys by Japan which was identified by the lowest AIC in S01-InitBase and obtained the second lowest AIC in S02-Index24_1, the difference of AIC under this setting and the lowest AIC was only 0.48 and this was the simplest setting among those with ΔAIC < 2.0.

The chub mackerel stock in the NWPO has experienced large changes in biological parameters over the time period of the model. The main temporal changes are a recent decrease in maturity at age, along with a recent decrease in the weight at age, both of which were observed to change over the model time period to cause temporal changes of biological reference points. Fixed Effects parameter estimates are shown in Table 2, and the management related quantities are listed in Table 3.

5.1.1 Parameter estimates

The estimated fixed effects parameters for the base-case scenario (S02-Index24_1) are shown in Table 2. For all parameters, the final gradient values were very close to 0 and the SE values were less than 2.5. We found no problems in jitter analysis (results not shown). Correlation coefficients from the covariance matrices of the fixed effects parameters showed that q_k and b_k for age-0 and age-1 fish in the Japanese trawl surveys were highly negatively correlated (Fig. 8). In addition, the parameters α and β of the Beverton-Holt stock-recruitment relationship were highly positively correlated. However, since β is a function of α, this is to be expected (Beverton & Holt 1957). These strong correlations between α and β are explained by the scales of abundance and SSB (for details, see Discussion in TWG CMSA 2025), and there were no problems with model convergence, as indicated by the absolute values of the final gradients approaching zero and sufficiently small SEs for these parameters (Table 2). The nonlinear coefficients in the Japanese trawl survey indices were estimated in the range of 1.7−2.4 (Table 2), suggesting that they have a tendency of hyperdepletion (Fig. 9).

5.1.2 Time-series estimates for abundances and fishing impacts

The two scenarios obtained almost identical population dynamics. Since 1970, total biomass, SSB, and recruitment of chub mackerel have drastically fluctuated (Table 4, Fig.10). Specifically, stock levels were historically high in the 1970s, but declined in the 1980s, were maintained at fairly low levels from the 1990s to the early 2000s; stock levels gradually recovered in the late 2000s and increased rapidly after the occurrence of the strong year class in 2013. However, after peaking in 2018, the stock levels rapidly dropped again. In 2023, the spawning stock biomass was only 16% of the respective peak levels. Neither of the peaks in 2017 in 2018 reached the stock levels observed in the 1970s. In addition, the spawning stock biomass in 2024 further declined from 2023, to 14% of the peak in 2018. Exploitation rate (estimated catch biomass / total biomass) and mean F remained constant, with some fluctuations, until the 2000s, but decreased thereafter (Fig. 10).

5.1.3 Stock-recruitment relationship

The estimated Beverton-Holt stock-recruitment relationship is shown in Fig. 11 for the final base case (S02-Index24_1). The estimated stock-recruitment relationships were slightly convex, suggesting that the density-dependent effect in the stock-recruitment relationship is not strong in the chub mackerel population dynamics. The SD of recruitment variability was 0.78 in S02-Index24_1 (Table 2).

5.2 Model diagnostics

5.2.1 Residual plots

In this assessment, the predicted catch and the observed catch do not match because of the assumption of observation error in the age-specific catch numbers, but the difference between these

values was small, except in some years (Fig. 12). Observation errors for catch-at-age were larger in the young and old age (ages 0, 1, and 6+) groups than those in the intermediate age (ages 2–5) groups which resulted in larger estimates of expected catch than the observed catches (Figs. 12 and 13). The time-series trend of the residuals was weak.

For the abundance indices, observation error was notably high in the Russian trawl fishery CPUE (Figs. 14 &15). The summer age-0, and autumn age-1 indices tended to have positive residuals in recent years, except for the 2023 autumn (Figs. 14 & 15).

The process errors in log(*N*) for age-0 fish fluctuated strongly, and those for age 1 and 2 fish fluctuated moderately, compared to those for older ages (Fig. 16, top, and Fig. 17). The recruitment residual has been positive after 2020. In addition, the first seven years from 1971 had positive recruitment residuals (except 1974), but for the next 13 years through 1990, the residuals were negative in all years except 1985. A large positive process error was observed in age 2 in 2015, resulting in a large positive deviance in the same year and age (Fig. 17).

Process errors for log(*F*) (deviation from random walk) were larger in ages 0 and 1 than in the other ages (Fig. 17, bottom). The pattern of random walks for each age was very similar, as evidenced by the very high correlation coefficient of 0.98 between the closely adjacent ages (Tables 5 and 6).

5.2.2 Retrospective analysis

In the retrospective analysis, the biomass and recruitment tended to be revised downward as the data were updated and as a result, F shows negative retrospective pattens in the base-case scenario S02-Index24_1 (Fig. 18). SSB had much smaller retrospective pattern compared to biomass and recruitment.

The same tendencies, the positive retrospective patterns in the biomass, recruitment and SSB were obtained in the retrospective forecasting (Fig. 19), but the Mohn’s rho values were expanded relative to those in the retrospective analyses.

5.2.3 Leave-one-out index analysis

In the LOO index analysis, although the abundance, SSB, recruitment, and exploitation rate somewhat varied in recent years depending on the index removed, the patterns observed were largely consistent, indicating that the stock estimates are robust (Fig. 20). Among the abundance indices, the absence of summer Japanese trawl survey for age 0 had relatively large effect on the recruitment. This is natural because this index was slightly inconsistent with the autumn Japanese

trawl survey index for age 0 (e.g., 2021 year class). The absence of Japanese trawl surveys for age 0 in summer and for age 1 in autumn also led to the increase of the recent exploitation rate, presumably because of the smaller estimated recruitment.

5.2.4 Evaluation of the One Step Ahead residuals

OSA residuals were calculated for the age composition data the indices of abundance (Figs. 21 & 22). Absolute values of residuals for catch-at-age were larger between the late 1980s and the mid 2000s. In general, the catch-at-age OSA residuals tended to be small and lacked any consistent patterning. The OSA residuals from the fits to the indices of abundance showed a similar lack of patterning and did not suggest systematic model deficiencies such as underfitting or overfitting. Overall, the OSA residuals indicate no issues with the model's performance. In the one-step-ahead projection, we observed no clear temporal tendencies in the residuals for catch-at-age and the indices except that the Japanese dipnet fishery's standardized CPUE (Fig. 22). The residuals almost followed a normal distribution (Fig. 23).

5.2.5 Likelihood profiling

To evaluate whether the recruitment parameters converged to the maximum likelihood estimate (MLE) and the uncertainty of the estimate, we examined the log-likelihood when the parameters were varied around the estimate. The negative log-likelihood had a convex shape against the parameters, with the MLE as the smallest, indicating convergence to the optimal value (Fig. 24). The dip of the negative log-likelihood of β was not as sharp as those of other parameters, suggesting a greater uncertainty in the density-dependent parameter. We also investigated likelihood profiles for proportionality constants for the seven abundance indices, indicating converged estimation of these parameters (Fig. 25).

Finally, the effect of the natural mortality coefficient (M), given as input data, was examined: the change in log likelihood was examined by adding values of -0.3 to 0.5 simultaneously from the values of M in the two scenarios. The results revealed that the negative log-likelihood monotonically decreases (i.e., the likelihood increases) as M is decreased (Fig. 26). This suggests that it is difficult to estimate M from these data inside SAM.

5.2.6 Comparison with previous assessments

Comparing the current two scenarios (S01-InitBase, S02-Index24_1) with the previous base case (S28-ProcEst, TWG CMSA 2024a), the estimated historical population dynamics were also almost consistent (Fig. 27). However, focusing on the recent population dynamics, inclusion of 2023 indices revised the biomass, SSB, and recruitment downward considerably (Fig. 28). This is presumably because all abundance indices consistently decreased in 2023 and this information was not included in the previous base case. The decrease in the 2023 indices contributed to the increase

in the retrospective patten this year from last year (NPFC-2025-TWG CMSA11-WP08. Some degree of revision to stock estimates due to data updates is an essential part of the annual assessment process.

5.3 Reference points

5.3.1 Historical change in spawning potential of SPR0

SPR0 has changed annually according to the biological parameters that changed each year (Fig. 29). In particular, SPR0 decreased significantly from FY2015 onwards, reaching a minimum in 2019 and remaining low during the FY2020-2023 period. The average SPR0 for the 2020s (FY2020-2023) was 166 g in Scenario S02-Index24_1 which is about half of the SPR0 averaged for other decades.

5.3.2 Reference Points

F-based reference points

The TWG CMSA calculated these reference points along with commonly used biological reference points such as F%SPR (30%, 40%, 50%, 60% and 70%), F0.1, with mean biological parameters and selectivity of the current fishing mortality (F_{cur}, average in FY2021 to FY2023) (Table 3). In particular, the biological parameters such as weight-at-age and maturity-at-age used for calculation of biological reference points are assumed as the average values during the most recent 8 years (FY2016 to FY2023), which represents the recent shift in biological parameters. As a comparable, the average of the biological parameters over the stock assessment period is used for the calculation of these reference points.

B-based reference points

While the F-based reference points are relatively robust to the time-varying biological parameters, commonly used B-based reference points such as SSB_{MSY} and SSB0 are found to be significantly affected by the changes of biological parameters in this stock as well as by the assumptions of stock recruitment relationships and model configurations. Owing to the uncertainty, the TWG CMSA explored some empirical reference points based on percentiles of historical SSB in FY1970–FY2023 (Fig. 24). The 25^{th} percentile of SSB could be regarded as the limit, being above the SSB levels when the stock has been severely depleted during the 1990's and early 2000's. The remaining two reference points ($SSB_{REFERENCE_A}$ and $SSB_{REFERENCE_B}$) are the 50^{th} and 70^{th} percentiles of historical estimated SSB (Fig. 29).

Although these levels of SSB are significantly lower than the theoretically calculated SSB_{MSY} under the assumption of Beverton-Holt type SR relationship without considering the time-varying nature of biological parameters, the two SSB reference points are about 20% of $SSB_{F=0_RECENT}$ and about 40% of $SSB_{F=0_RECENT}$, respectively, which is calculated as the multiplier between average lifetime contribution to the spawning stock biomass per fish assuming no fishing (SPR0) and average

number of recruitment during the most recent 8 years. The quantity roughly approximates the level of SSB that could have been attained on average over the last decade if there had been no fishing (Fig. 30).

5.4 Future projections

Constant F projections were conducted under F_{cur} and Constant-F scenarios where the catch was calculated by a fixed fishing mortality (ranging from F30%SPR to F70%SPR in increments of 5%SPR) each year since FY2026 (Fig. 31). Future projections were also conducted under constant catch scenarios (i.e. a fixed amount ranging from 0 to 200 thousand mt in increments of 10 thousand mt) each year from FY2026 to FY2036 (Fig. 32). The probability that future SSB on July 1, at the beginning of the fishing year, is above $SSB_{REFERENCE_B}$, $SSB_{REFERENCE_A}$, and SSB_{LIMIT} (70^{th} percentile, 50^{th} percentile and 25^{th} percentile, respectively) under constant catch and fishing mortality projections for the base case scenario S02_24_Index1 are shown in Tables 5 & 6.

Two assumptions regarding biological parameters were used for the calculation of reference points, one where the future biological parameters are assumed to equal the average of the recent eight (FY 2016–FY2023) years, and another where the mean biological parameters for the entire model time period (FY1970–FY2023) are used to calculate the reference points. The TWG CMSA recommends the use of the recent average based on the assumption that the prevailing conditions will likely persist for the near future.

DISCUSSION

In this working paper, a stock assessment of Northwestern Pacific chub mackerel was conducted using SAM with existing agreed data. SSB gradually decreased from the high period in the 1970s to the 1980s, and SSB remained at a low level from the 1990s to the early 2000s; the beginning of the decreasing trend in SSB in the 1980s can be explained by a reversal from the positive recruitment residuals that often appeared until FY1977 to negative residuals that often appeared thereafter, shown in the plot for process errors (Fig. 17). High fishing mortalities were found since FY1986 thorough the 1990s, causing the extremely low levels of SSB for this time period. In the late 2000s, SSB gradually recovered as fishing pressure slowly decreased, and after the occurrence of the strong year class in FY2013. Although SSB recovered in the 2010s, it was still lower than in the late 1970s. Recent declines in the estimated biomass and recruitment trends (Fig. 10) correspond with both the CPUE (Fig. 14) series as well as a shift to lower SPR0 (Fig. 30). This may be due to the overall effect of the change in weight and maturity at age (Fig. 4).

Retrospective analysis revealed a negative pattern in fishing mortality, which was related to a small positive bias in recruitment and total biomass. These retrospective patterns are consistent with the catch history and the available data on maturity and catch at age. The LOO index analysis showed

that the effect of excluding one index was small, suggesting that the age-0 and age-1 fish indices have similar information to each other and the SSB indices have similar information to each other.

For this stock, the choice of the stock-recruitment relationship is a difficult issue. In this case, we used the Beverton-Holt model, which is the simplest model and fits well with chub mackerel, but recruitment shows almost proportional relationship with SSB and the density-dependent effect is very small. Therefore, the uncertainty of the parameters related to the density dependence was large.

Estimating stock recruitment relationships in an assessment model is inherently challenging due to the complex interplay of biological and environmental factors that influence fish population dynamics. Variability in recruitment can result from factors such as fluctuating environmental conditions, changes in predator-prey interactions, and genetic diversity within the stock (Myers, 1998). Additionally, data limitations, such as insufficient time series data, measurement errors, and biases in sampling methods, further complicate the estimation process (Maunder & Deriso, 2013). These difficulties are exacerbated by the non-linear and often unpredictable nature of recruitment, making it hard to develop reliable models that accurately capture the true dynamics of fish populations (Hilborn & Walters, 1992). From the viewpoint of stock assessment and management for chub mackerel, it will be necessary to consider how the stock-recruitment relationship should be characterized in the future.

The chub mackerel stock in the NWPO has experienced large changes in biological parameters over the time period of the model. The main temporal changes are a recent decrease in maturity at age, along with a recent decrease in the weight at age, both of which were observed to change over the model time period to cause temporal changes of biological reference points. Maximum sustainable yield (MSY)-based reference points are highly variable over the time series of the assessment because the weight- and maturity- at age of chub mackerel has varied widely which impacts the productivity of the stock. Unfished spawning biomass per recruit (SPR0) represents the theoretical equilibrium productivity per fish assuming no fishing. SPR0 has varied remarkably over time (Fig. 27).

In addition, as there is little recruitment compensation in the stock-recruitment relationship within the range of historically observed SSB and recruitment (Fig. 11), estimates of biomass-based MSY reference points are extreme explorations that are highly sensitive to model configuration.

Because of the above reasons, commonly used reference points such as MSY-related or SPR-related reference points vary over time and are uncertain, and do not take into account non-stationarity of key population dynamics parameters. are potentially misleading with respect to stock status. The TWG CMSA explored empirical biomass-based reference points based on percentiles of historical SSB in FY1970–FY2023. These empirical reference points attempt to account for the non-

stationarity in key population parameters, future research on this topic is recommended.

SUMMARY

Stock status overview

Total biomass, Spawning Stock Biomass

The time series of estimated chub mackerel total biomass and SSB generally declined from the 1970s through the 1990s (Fig. 10). The stock began to recover in the early 2000s, peaking in FY2018, then SSB has declined to 16% of that peak in 2023. The spawning stock biomass in 2023 is slightly higher than SSB_{LIM} (SSB_{2023}/SSB_{LIM}=1.23) but lower than $SSB_{REFERENCE_A}$ and $SSB_{REFERENCE_B}$ (Table 3).

Recruitment

The level of recruitment in the 1970s was estimated to be high (~15 billion individuals on average) and reached a low period between the 1990s and the 2010s (Fig. 10). Recruitment in the most recent decade (FY2014–FY2023) was also high on average (~7.4 billion), but not as high as in the 1970s and had a decreasing trend since the last peak in 2018. The estimated Beverton-Holt stock recruitment relationship was slightly concave (Fig. 11), suggesting that the density-dependent effect in recruitment is not strong.

Exploitation status

Estimated exploitation rate generally fluctuated between 10% and 35%, with over 40% and below 10% in several years, following the estimated F dynamics. No clear temporal trend was observed (Fig. 10). The current fishing mortality (F_{cur}) corresponds to 16% SPR, and higher than the commonly used F-based reference points such as F0.1 and F30–70%SPR (Table 3). Fishing mortality related reference points indicate that the stock is at approximately 16% SPR, indicating that current fishing mortality are also reported for percent FSPR values, in relation to the current F (Fcur, average FY2021–FY2023) for FSPR from the recent period (FY2016–FY2023) as well as over the entire time period (FY1970–FY2023; Table 3).

Conclusions and recommendations

The chub mackerel stock in the NWPO has experienced large changes in biological parameters over the time period of the model. The main temporal changes are a recent decrease in maturity at age, along with a recent change in the weight at age, both of which were observed to impact the model time period to cause temporal impacts on biological reference points. MSY-based reference points are highly variable over the time series of the assessment because the weight- and maturity- at age of chub mackerel have varied widely (Fig 4.), which impacts the productivity of the stock. Unfished spawning biomass per recruit (SPR0) has varied remarkably over time (Fig. 30).

Besides such uncertainty, the current fishing mortality (average FY2021–FY2023) is higher than the commonly used reference points such as F%30–60%, and SSB in FY2024 is lower than the reference levels of median and 70th percentiles ($SSB_{REFERENCE_A}$ & $SSB_{REFERENCE_B}$, respectively), but slightly above the SSB_{LIM}.

Harvest Recommendations

Given the uncertainty in biological parameters in future, which has a large impact on the projection results, the TWG CMSA considers it is not appropriate to provide long-term harvesting recommendations at this time. However, in response to the request from COM09, 10 year projection was undertaken to assess the effects of varying catch and F levels based on the most recent eight years' biological data (Figs. 31 & 32, Tables 7 & 9). Projections indicate that current fishing mortality is unsustainable, and probabilities of achieving various reference levels under catch-constant as well as F-constant scenarios are provided in Tables 5 & 6. It is recommended to reduce fishing mortality to recover SSB to the reference levels.

Data and Research needs

The assessment results, including projections, are dependent on biological parameters and processes which are uncertain. Therefore, future studies should be focused on collecting and analyzing biological information, e.g., maturity-at-age and weight-at-age, which would improve the assessment. Fisheries-dependent data, such as fleet-specific catch-at-age, are also critical to develop Member-specific fishing fleet and age-specific abundance indices. It is also important to explore the factors that contributed to the lower-than-expected presence of the 2018 year class in catch-at-age data, despite strong signals in survey indices.

A critically important recommendation that should be carried out in 2-3 years is to develop a harvest control rule (HCR) specific to this stock via a Management Strategy Evaluation (MSE) process. This HCR should be dynamic and able to adjust annual total catches depending on the stock abundance as well as the target and limit reference points. During the process of the development of MSE, uncertainties in parameter estimates, time-varying or density-dependent biological parameters, stock-recruitment assumptions, process errors, and selectivity should be considered.

Timely collection of biological information and further research on biological parameters and processes, including the effect of environment and climate change, are critically important to facilitate the accurate estimation of reference points.

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TABLES

Table 1

The list of mathematical notations for SAM, including the symbol used, its type (Index, Data, random effects: RE, fixed effects: FE, and derived quantities: DQ, and its description).

Symbol	Type	Description
a	Index	Age class (from 0 to 6+)
y	Index	Fishing year (from 1970 to 2022)
k	Index	Fleet ID for abundance index (from 1 to 6)
$C_{a,y}$	Data	Observed catch number at age *a* in a year *y*
$w_{a,y}$	Data	Stock weight at age *a* in a year *y* (also used as catch weight for simplicity)
$g_{a,y}$	Data	Maturity at age *a* in a year *y*
$M_{a,y}$	Data	Natural mortality coefficient at age *a* in a year *y*
$N_{a,y}$	RE	Number at age *a* in a year *y*
$F_{a,y}$	RE	Fishing mortality coefficient at age *a* in a year *y*
ω_a	FE	SD for the process error in number at age *a*
σ_a	FE	SD for the process error in F at age *a*
ρ	FE	Correlation coefficient in MVN of F random walk between adjacent age classes
τ_a	FE	SD for the measurement error in catch at age *a*
q_k	FE	Catchability coefficient for abundance index *k*
v_k	FE	SD for the measurement error in abundance index *k*
b_k	FE	Nonlinear coefficient for abundance index *k*
α	FE	Slope of stock-recruitment relationship at the origin
β	FE	Strength of density dependence in stock-recruitment relationship
$\hat{C}_{a,y}$	DQ	Predicted catch number at age *a* in a year *y*
$\hat{s}_{a,y}$	DQ	Selectivity at age *a* in a year *y*

Table 2

Fixed-effect parameters (FE), their maximum likelihood estimates (MLE), their standard errors (SE), their final gradients, symbols including the information on age class and index fleet, and unlinked value (inverse link function of MLE) under Scenario S02-Index24_1.

FE	MLE	SE	Gradient	Unlinked value
logQ (JPN summer survey)	-15.6792	2.30289004	-7.62E-06	1.55E-07
logQ (JPN autumn survey age 0)	-14.504035	2.31148929	1.79E-05	5.02E-07
logQ (JPN autumn survey age 1)	-10.55497	1.60459597	1.43E-05	2.61E-05
logQ (JPN egg survey)	-0.2258006	0.12389846	8.10E-06	0.79787717
logQ (JPN dipnet)	-2.4622594	0.15433565	-1.21E-05	0.08524213
logQ (CHN purse sein)	-5.4552764	0.13437866	-3.17E-05	0.0042737
logQ (RUS trawl)	-4.1736122	0.24869381	1.02E-05	0.01539654
logB (JPN summer survey)	0.86975	0.11907331	-9.39E-05	2.3863142
logB (JPN autumn survey age 0)	0.8151345	0.12543536	0.00033094	2.25947956
logB (JPN autumn survey age 1)	0.5671192	0.12302012	0.00020807	1.76318035
logσ (age 0–1)	-0.7204778	0.18383944	-9.29E-07	0.48651976
logσ (age 2)	-1.0075574	0.19443062	-3.99E-05	0.36510972
logσ (age 3–)	-1.2833983	0.17074541	2.87E-05	0.27709406
logω (age 0)	-0.2462263	0.12565032	3.35E-05	0.78174529
logω (age 1–)	-1.1454601	0.13351863	-3.37E-05	0.31807753
logτ (age 0)	-0.254829	0.13671048	-1.85E-05	0.77504905
logτ (age 1)	-0.6482389	0.16962969	-1.94E-05	0.52296595
logτ (age 2–3)	-1.6101614	0.33527145	-2.33E-05	0.19985535
logτ (age 4–5)	-0.9270467	0.13953189	1.34E-05	0.39572066
logτ (age 6+)	-0.1216399	0.13187202	3.20E-05	0.88546719
log$v$ (JPN summer survey)	-0.3178417	0.2609826	-1.23E-05	0.72771799
log$v$ (JPN autumn survey age 0)	-0.4051246	0.27451485	-2.19E-05	0.66689369
log$v$ (JPN autumn survey age 1)	-0.4699654	0.24942735	1.47E-06	0.6250239
log$v$ (JPN egg survey)	-1.0565971	0.18352748	1.24E-05	0.34763676
log$v$ (JPN dipnet)	-0.5338454	0.16441418	-1.07E-05	0.58634587
log$v$ (CHN purse sein)	-1.278561	0.25989131	1.77E-06	0.27843769
log$v$ (RUS trawl)	-0.473255	0.24889304	5.76E-06	0.62297121
logα	-4.3024831	0.19719966	-8.53E-06	0.01353491
logβ	-8.0077947	1.33589477	9.39E-08	0.00033286
logitρ	4.06929803	0.83600232	-8.99E-06	0.98319776

Table 3

Reference points for the base case scenario (S02-Index24_1). F-based reference point values that are dependent on time varying parameters are calculated by holding F_{cur} the same for all calculations, but by varying the time period (either FY2016–FY2023 or FY1970–FY2023) over which the biological parameters are estimated. Refer to Glossary in the stock assessment report for the definitions. *For the description of the biological parameters, see Table ANNEX 3.*

Reference Points	Biological parameters	
	FY2016–FY2023	FY1970–FY2023
F-based reference points		
Current%SPR	**16.2**	27.8
$F0.1/F_{cur}$	**0.838**	0.838
$FpSPR.30.SPR/F_{cur}$	**0.580**	0.911
$FpSPR.40.SPR/F_{cur}$	**0.412**	0.609
$FpSPR.50.SPR/F_{cur}$	**0.295**	0.416
$FpSPR.60.SPR/F_{cur}$	**0.207**	0.282
$FpSPR.70.SPR/F_{cur}$	**0.139**	0.184
Biomass-based reference points		
$SSB_{F=0_RECENT}$	**1399**	–
25th Percentile Historical SSB (SSB_{LIM}) (thousand mt)	**107**	
50th Percentile Historical SSB ($SSB_{REFERENCE_A}$) (thousand mt)	**289**	
70th Percentile Historical SSB ($SSB_{REFERENCE_B}$) (thousand mt)	**585**	
SSB_{2023}/ SSB_{LIM}	**1.23**	
SSB_{2023}/ $SSB_{REFERENCE_A}$	**0.46**	
SSB_{2023}/ $SSB_{REFERENCE_B}$	**0.23**	
SSB_{LIM} / $SSB_{F=0_RECENT}$	**0.08**	–
$SSB_{REFERENCE_A}$ / $SSB_{F=0_RECENT}$	**0.21**	–
$SSB_{REFERENCE_B}$ / $SSB_{F=0_RECENT}$	**0.42**	–

Table 4

Time series of estimates of total biomass, spawning stock biomass, recruitment, catch, and exploitation rate (catch/biomass) and their standard error (SE) under Scenario ScenarioS02-Index24_1. *The SEs were derived using the delta method.*

Fishing	Biomass (1000 MT)		SSB (1000 MT)		Recruitment (billion)		Catch (1000 MT)		Exploitation rate	
year	MLE	SE	MLE	SE	MLE	SE	MLE	SE	MLE	SE
1970	4326.1	744.5	733.6	94.5	19.4	7.0	883.6	129.6	0.209	0.042
1971	4924.1	795.3	911.2	121.6	22.4	7.6	896.5	111.9	0.186	0.034
1972	5227.4	931.3	757.8	107.1	9.7	3.4	699.6	101.1	0.137	0.027
1973	4524.1	675.8	986.7	132.0	8.0	2.7	808.9	95.4	0.182	0.031
1974	4214.5	573.6	1398.7	198.4	12.5	4.2	882.7	102.4	0.212	0.033
1975	3685.5	512.2	1160.8	154.7	19.4	6.5	864.8	100.1	0.238	0.038
1976	4693.4	785.8	1122.3	149.4	23.7	7.9	735.3	87.2	0.160	0.030
1977	5768.0	899.8	1257.0	158.9	18.5	6.1	990.4	128.6	0.175	0.030
1978	5928.0	855.1	1382.0	164.1	13.2	4.4	1416.4	188.6	0.242	0.038
1979	3812.0	500.0	1352.3	170.0	6.5	2.2	1096.3	134.3	0.290	0.043
1980	2301.9	308.9	1079.1	154.0	7.2	2.4	596.8	71.6	0.262	0.039
1981	2531.6	423.6	756.8	114.8	8.8	2.9	396.6	52.3	0.160	0.031
1982	2389.7	377.8	581.2	79.2	5.9	1.9	380.8	47.5	0.162	0.029
1983	1928.2	270.6	548.1	69.1	6.3	2.1	394.4	46.0	0.208	0.033
1984	2443.7	373.9	619.7	76.2	7.6	2.4	517.4	62.4	0.215	0.035
1985	2098.1	301.7	498.3	59.5	7.7	2.5	463.6	62.2	0.224	0.035
1986	1626.0	221.0	379.9	44.7	3.5	1.1	569.5	87.9	0.352	0.045
1987	974.4	117.9	330.5	36.8	1.3	0.4	362.9	48.6	0.374	0.044
1988	604.2	71.8	282.7	38.2	0.6	0.2	253.0	33.0	0.420	0.046
1989	345.4	52.2	150.5	21.1	0.5	0.2	109.6	14.2	0.321	0.051
1990	255.7	49.1	78.0	13.1	0.6	0.2	30.6	4.0	0.123	0.028
1991	359.7	81.3	62.4	10.3	1.3	0.4	26.7	3.7	0.077	0.018
1992	665.3	153.7	69.9	10.4	3.0	1.0	57.2	11.7	0.089	0.024
1993	698.9	121.1	106.5	15.4	1.0	0.3	243.5	63.4	0.349	0.064
1994	421.6	59.2	109.6	14.0	0.9	0.3	119.1	17.1	0.285	0.043
1995	402.5	64.4	90.5	11.2	1.5	0.5	116.0	19.9	0.291	0.045
1996	712.8	177.5	52.0	6.1	4.3	1.5	165.2	43.4	0.235	0.046
1997	672.7	139.6	44.5	5.0	0.7	0.2	286.1	78.8	0.422	0.061
1998	337.3	46.4	94.6	14.7	0.4	0.1	104.7	17.0	0.312	0.046
1999	313.3	58.1	89.0	12.5	1.0	0.3	74.6	11.5	0.243	0.041
2000	263.3	47.8	54.5	6.9	0.6	0.2	61.1	12.6	0.234	0.045
2001	178.7	27.6	63.0	8.9	0.4	0.1	42.7	6.9	0.242	0.046
2002	273.4	46.3	40.4	5.9	1.5	0.4	31.3	6.0	0.116	0.025
2003	357.8	58.5	55.3	6.9	1.2	0.3	61.8	12.8	0.174	0.034
2004	845.3	142.9	138.0	18.8	4.3	1.0	131.4	22.9	0.157	0.029
2005	839.5	136.2	87.8	10.3	1.5	0.3	195.8	41.0	0.234	0.040
2006	747.4	99.2	281.1	43.1	0.5	0.1	223.9	36.4	0.301	0.043
2007	684.6	87.2	266.8	37.5	2.3	0.5	153.1	19.0	0.225	0.032
2008	657.5	85.2	156.7	21.2	1.3	0.3	153.3	23.8	0.234	0.036
2009	683.9	86.0	162.9	22.0	2.2	0.4	138.7	18.6	0.204	0.032
2010	765.7	105.4	144.4	21.1	1.9	0.4	122.2	18.2	0.161	0.028
2011	879.3	123.0	199.1	30.9	1.2	0.3	100.2	13.5	0.115	0.020
2012	1160.7	159.1	295.7	43.7	3.0	0.6	130.1	15.6	0.113	0.019
2013	2474.5	398.9	334.3	49.1	11.6	2.7	209.1	30.6	0.085	0.016
2014	2267.4	362.7	364.6	53.6	3.3	0.8	237.5	37.6	0.106	0.020
2015	2684.6	409.2	257.4	43.5	4.6	0.9	318.5	46.4	0.120	0.020
2016	3107.9	411.8	457.9	77.3	8.3	1.9	358.1	45.1	0.116	0.018
2017	3127.7	394.5	799.2	145.6	9.1	2.0	403.3	49.5	0.130	0.020
2018	3900.7	558.9	800.8	133.6	16.8	4.1	495.1	58.1	0.128	0.021
2019	2869.2	374.0	694.7	121.5	5.1	1.0	410.8	49.7	0.144	0.023
2020	2439.2	300.7	549.8	93.5	7.9	1.7	476.4	53.2	0.196	0.029
2021	2087.1	293.9	391.1	66.7	8.7	2.0	415.9	49.6	0.201	0.032
2022	1772.1	265.2	250.9	45.5	7.0	1.6	278.3	37.6	0.159	0.029
2023	1375.3	231.3	131.6	28.0	3.4	0.9	172.9	23.4	0.127	0.026
2024	1220.9	233	111.5	27.2	3.6	0.9	NA	NA	NA	NA

Table 5

Probability that future SSB on July 1, at the beginning of the fishing year, is above $SSB_{REFERENCE_B}$, $SSB_{REFERENCE_A}$, and SSB_{LIMIT} (70^{th} percentile, 50^{th} percentile and 25^{th} percentile, respectively) under constant catch projections for the base case scenario. The projection towards FY2036 is shown below.

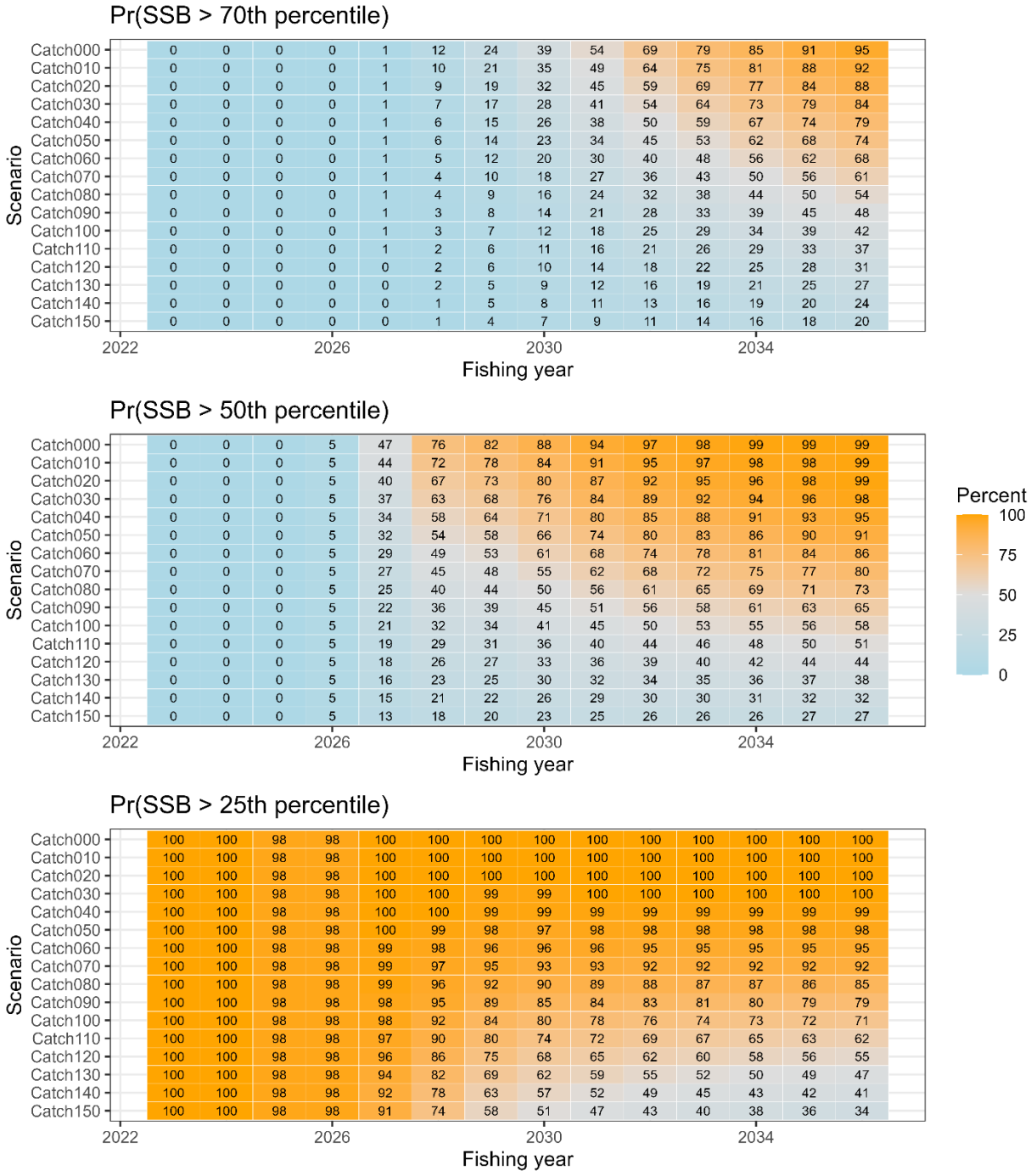


Table 6

Probability that future SSB on July 1, at the beginning of the fishing year, is above $SSB_{REFERENCE_B}$, $SSB_{REFERENCE_A}$, and SSB_{LIMIT} (70^{th} percentile, 50^{th} percentile and 25^{th} percentile, respectively) under constant fishing mortality projections for the base case scenario. The projection towards FY2036 is shown below.

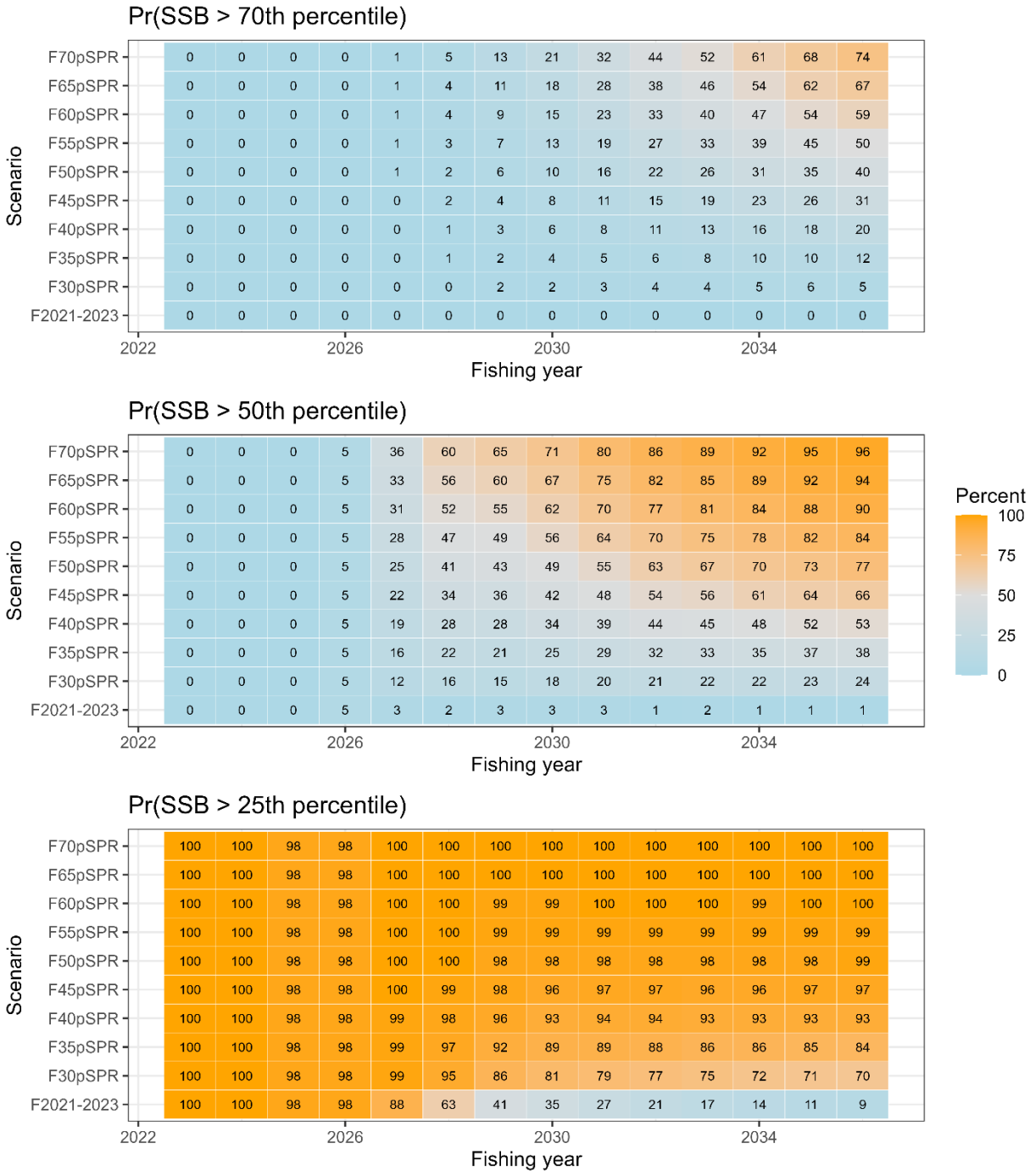


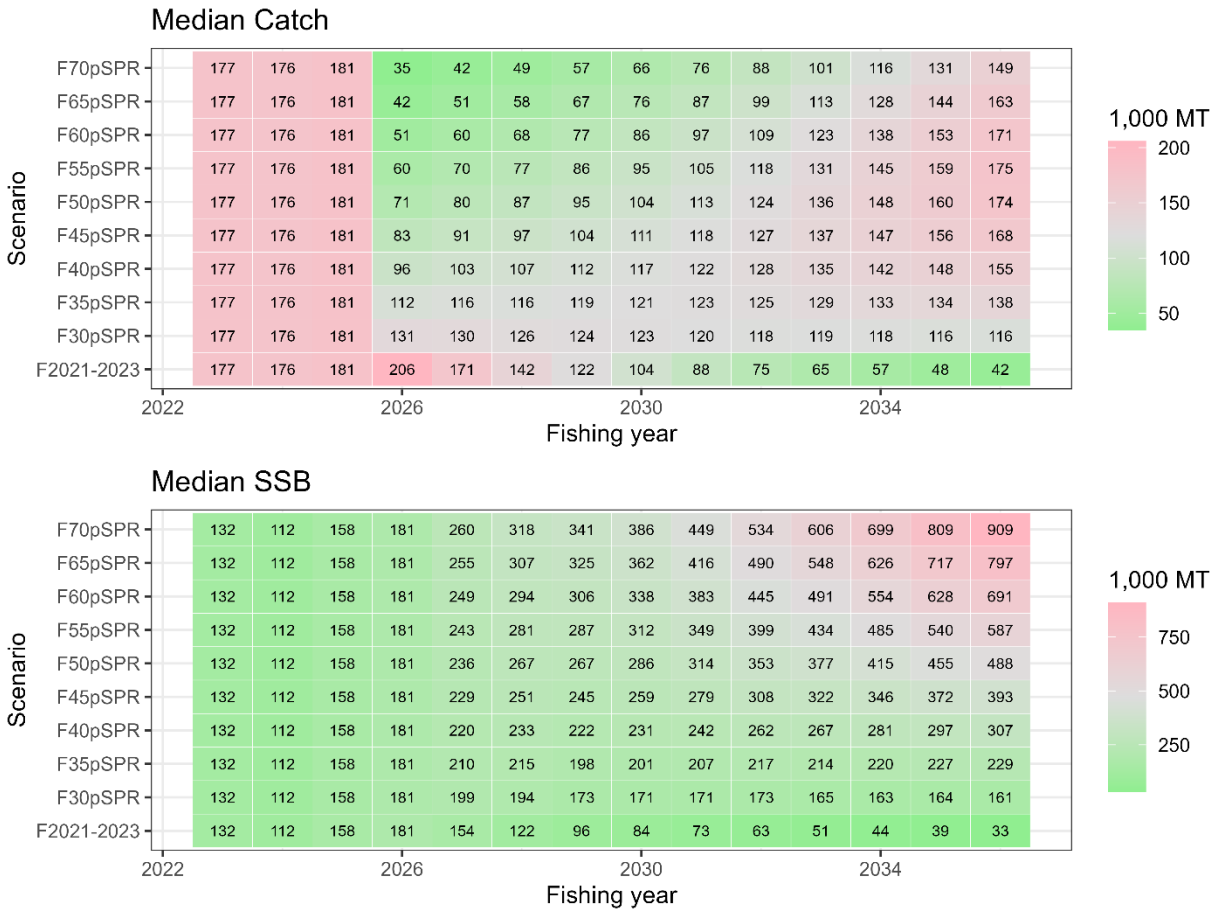
Table 7

Median catch and median SSB based on constant-catch scenarios (ranging from 0 mt to 150 thousand mt).



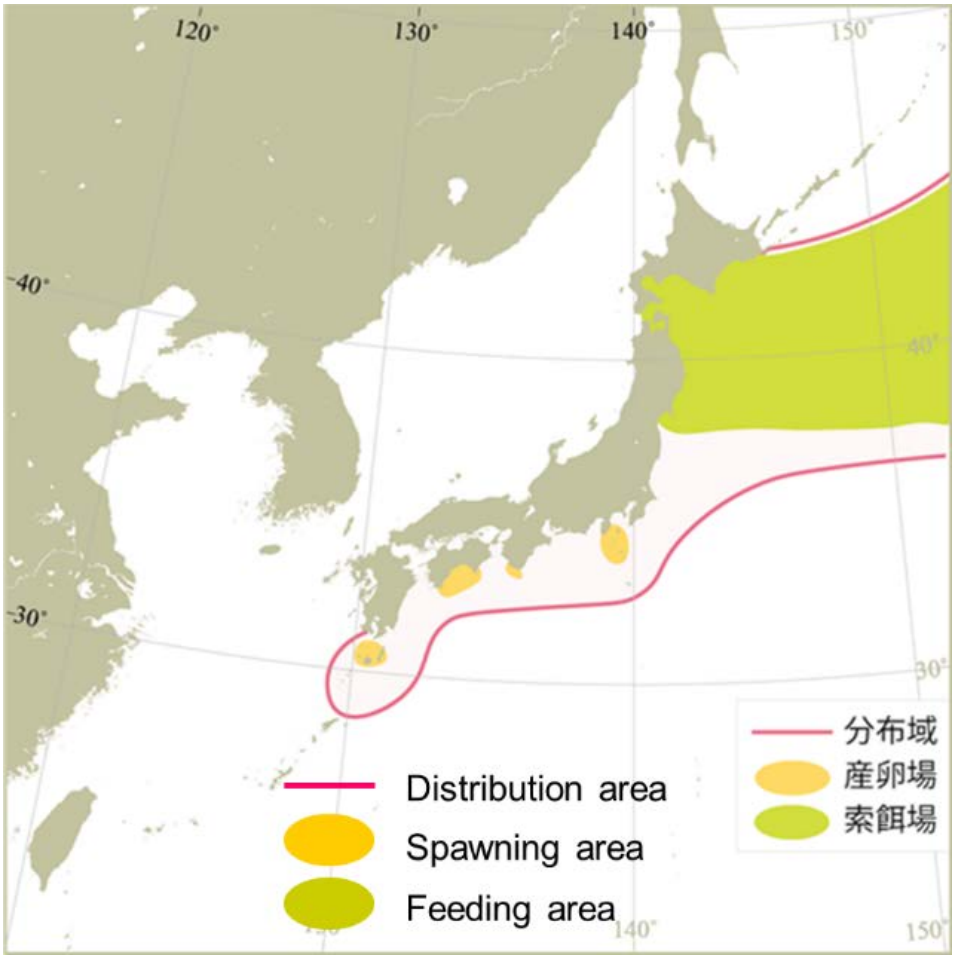
Table 8

Median catch and median SSB based on projections using constant F scenarios.



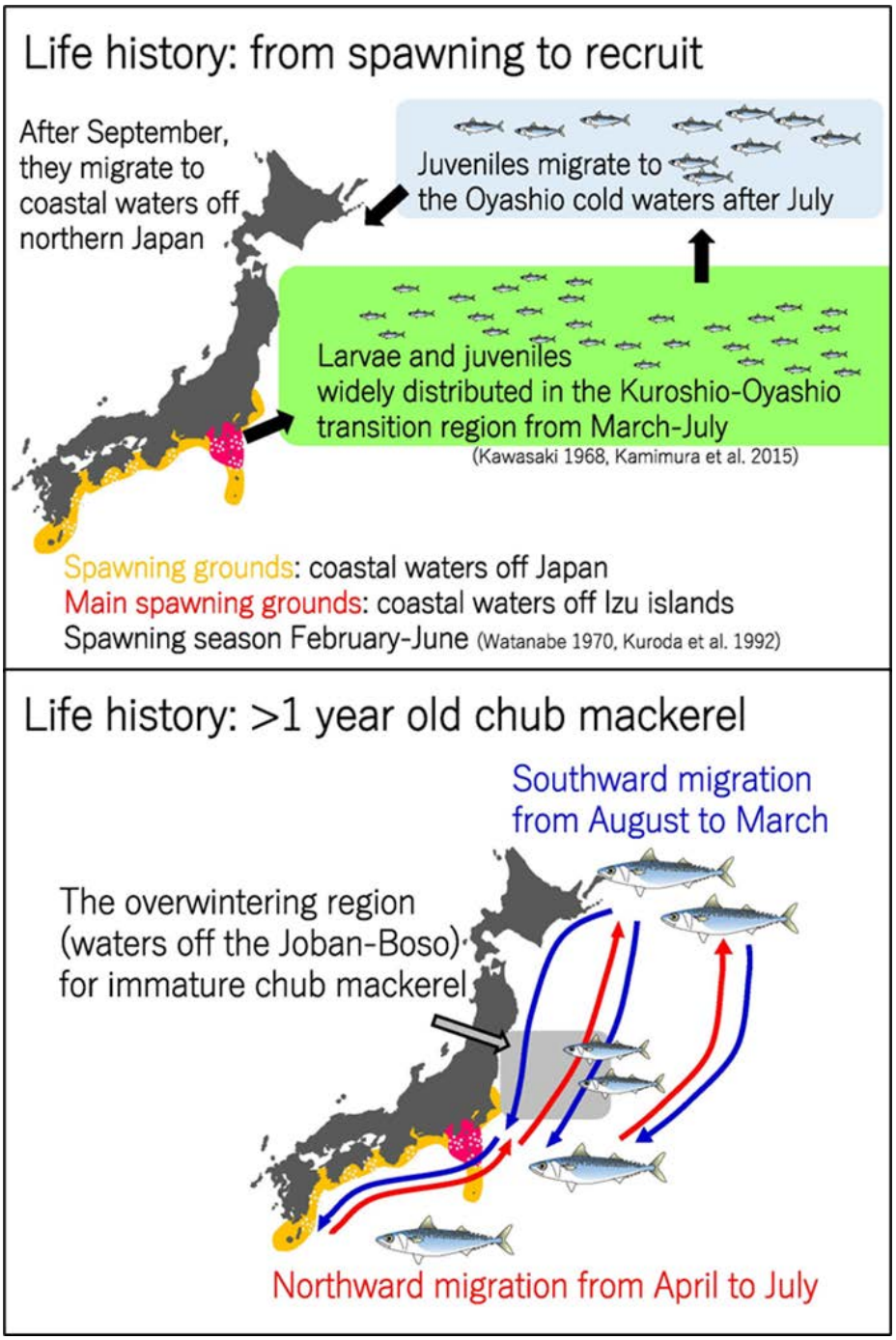
FIGURES

Figure 1



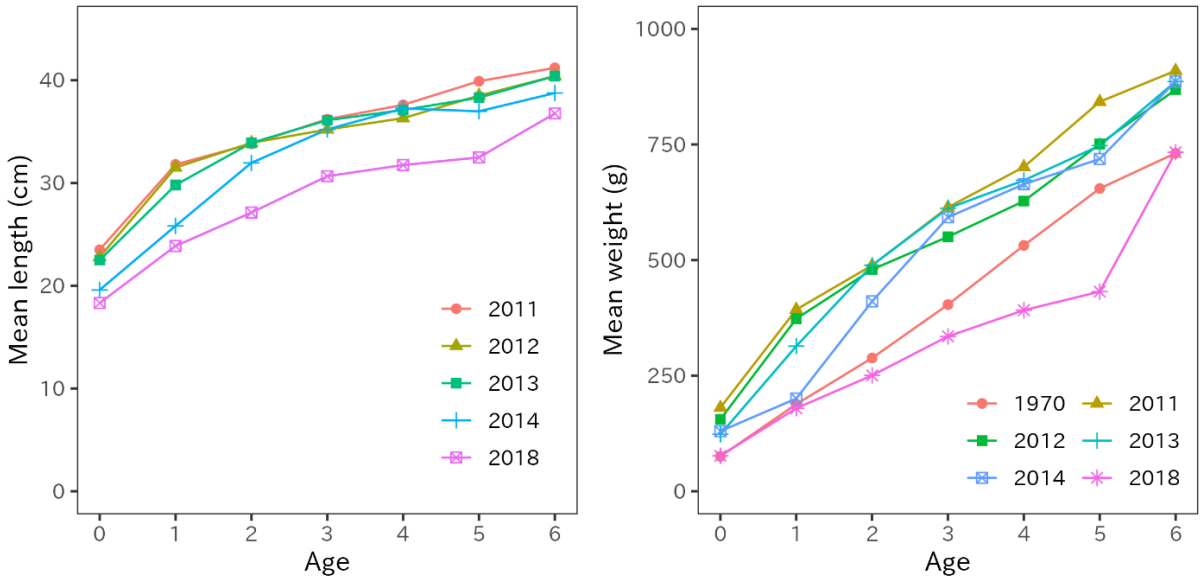
Map of distribution of chub mackerel in the North Pacific (Yukami et al. 2024).

Figure 2



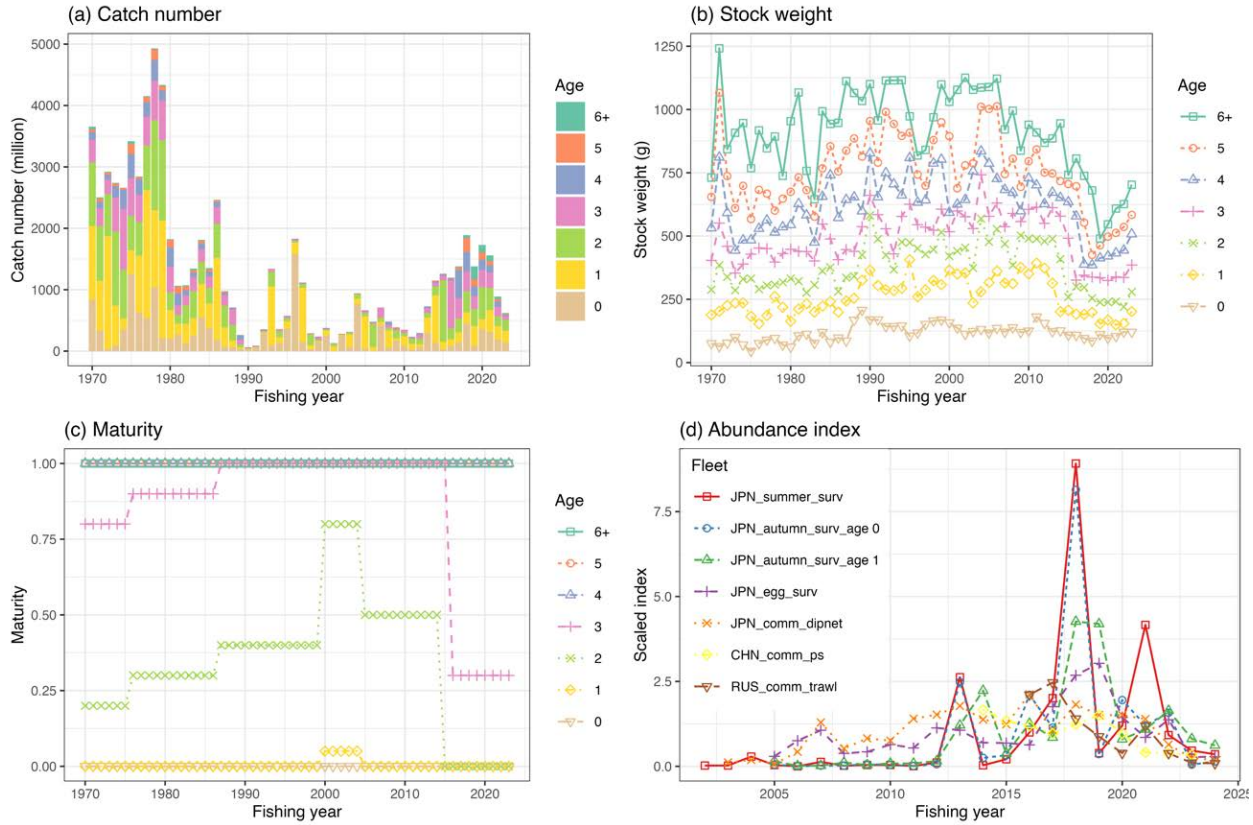
Migration pattern of chub mackerel by growth stage. The upper and bottom panels show seasonal movement of age 0 fish from spawning to recruitment and fish at age 1 and older, respectively (Kamimura, 2017).

Figure 3



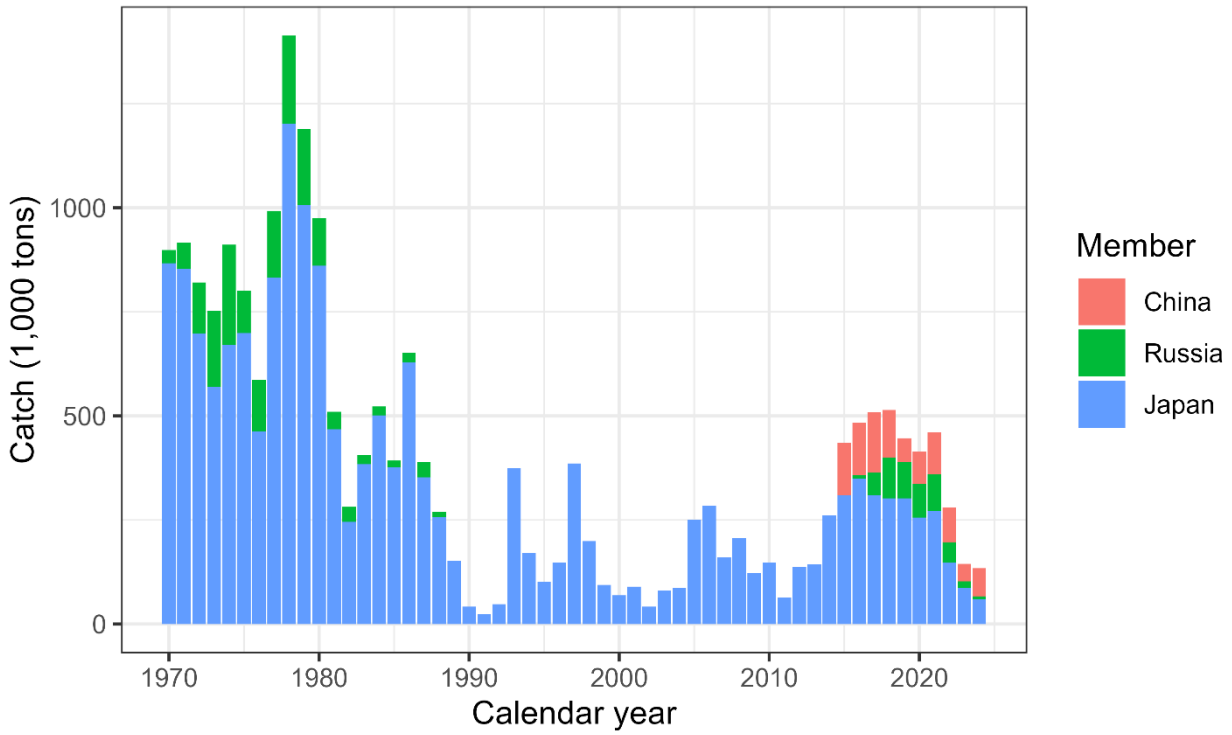
Mean fork lengths of chub mackerel at ages 0 to 6 in FY2011-2014 and FY2018 (left panel). Mean weight at age in FY1970s, FY2011-2014 and FY2018 (right panel).

Figure 4



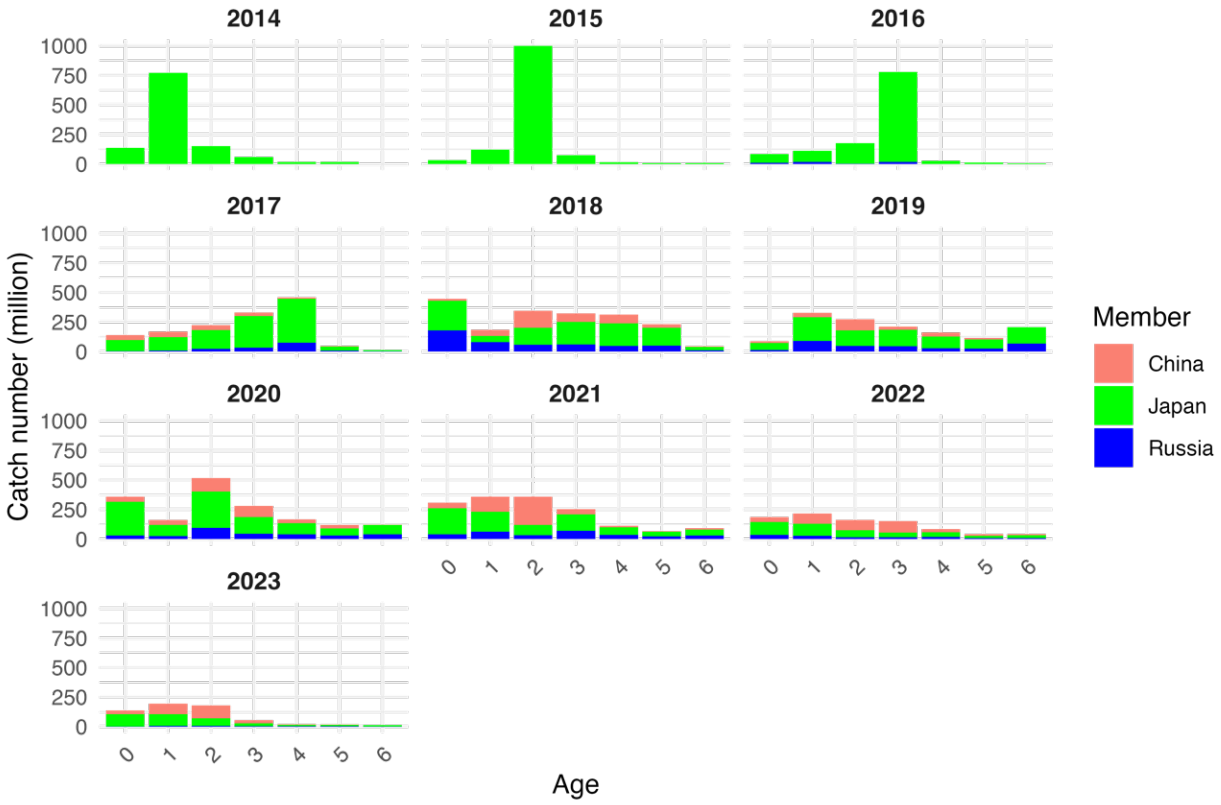
The time series data used for the base case scenario of chub mackerel stock assessment. (a) catch number by age, (b) weight by age, (c) maturity by age, (d) abundance index. Each abundance index is scaled by its mean value for visualization. Note that the Japanese and Russian abundance indices are included through FY2024.

Figure 5



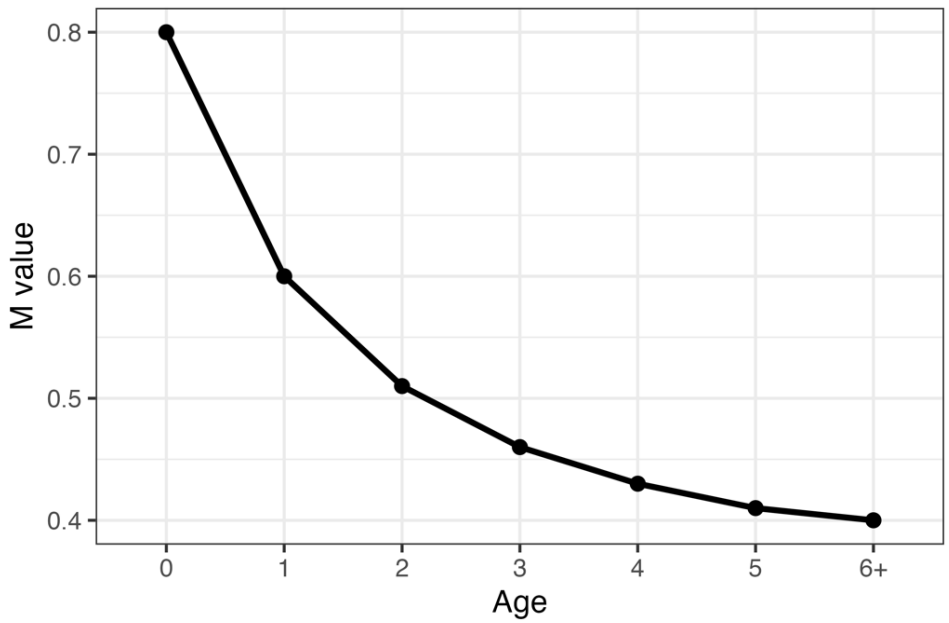
Historical chub mackerel catch in weight by Member. The provisional Chinese catch for CY2024 is estimated using the historical ratio for chub mackerel and blue mackerel. Blue mackerel has been excluded from the catch using the chub-to-blue-mackerel ratio. Catch data for China was obtained from the Annual Summary Footprint, which is available at https://www.npfc.int/summary-footprint-chub-mackerel-fisheries and adjusted using this ratio. Russia's catch data is sourced from the Annual Summary Footprint which reflects no blue mackerel catches. Japan's catch data was collected from coastal prefectures along the Pacific Ocean, where chub mackerel are typically captured. The catch data of this figure is different from the catch data described in the data section above.

Figure 6



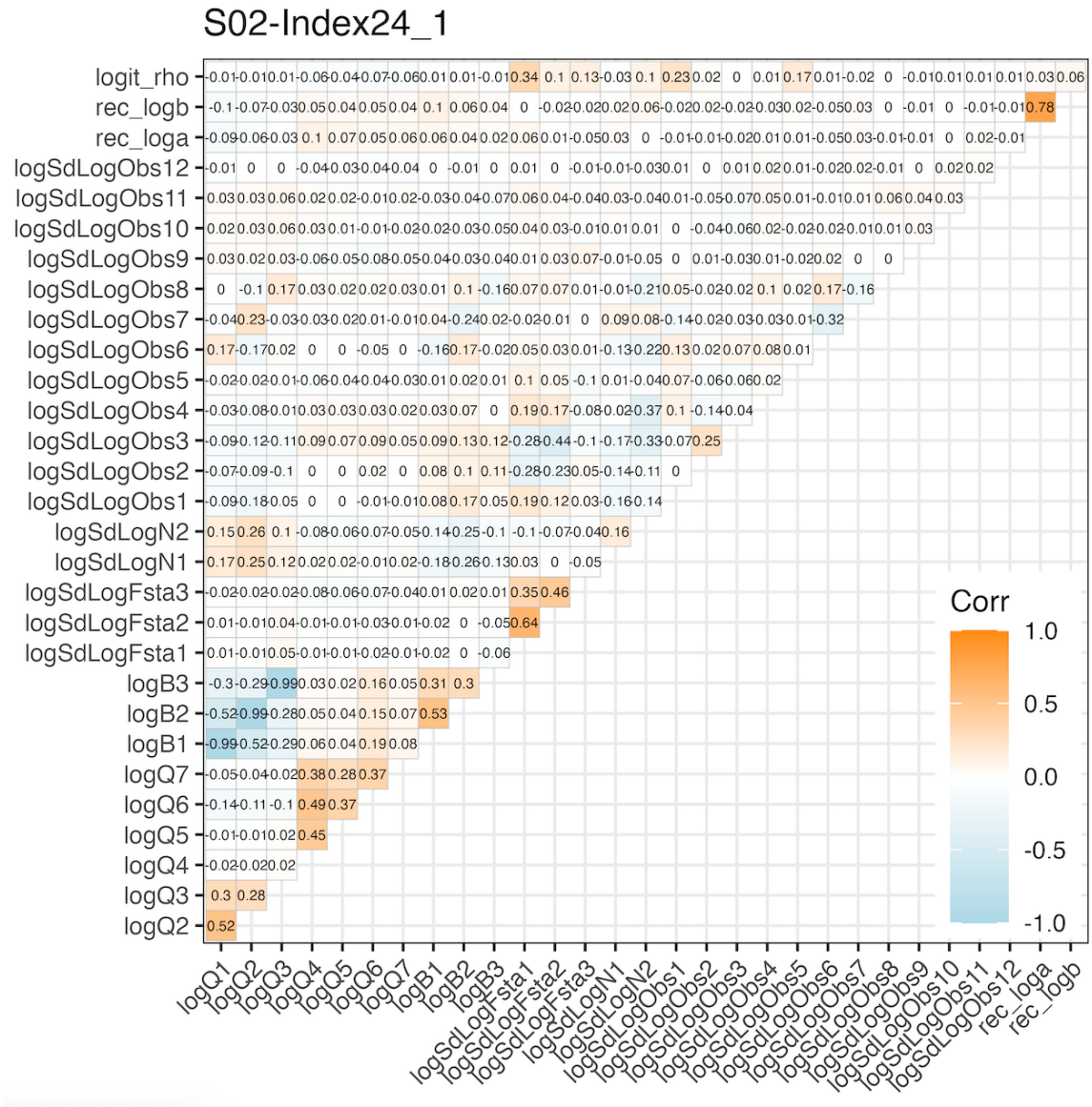
Catch number of chub mackerel by member by age by year from FY2014 to FY2023.

Figure 7



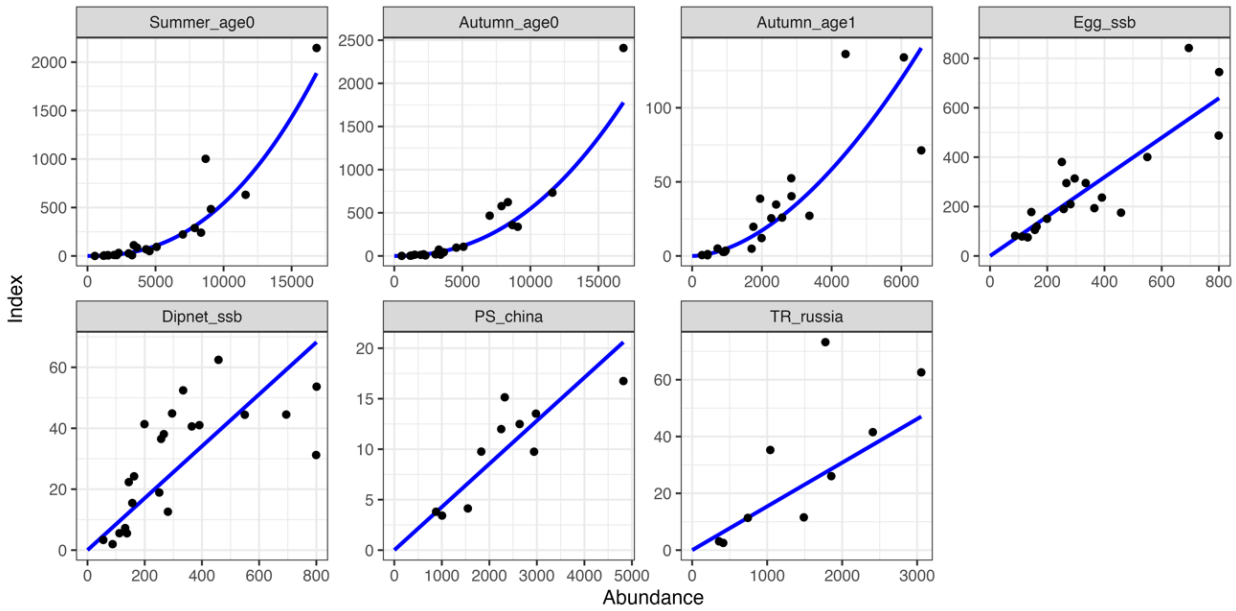
Natural mortality (M) values under the two candidate base case scenarios.

Figure 8



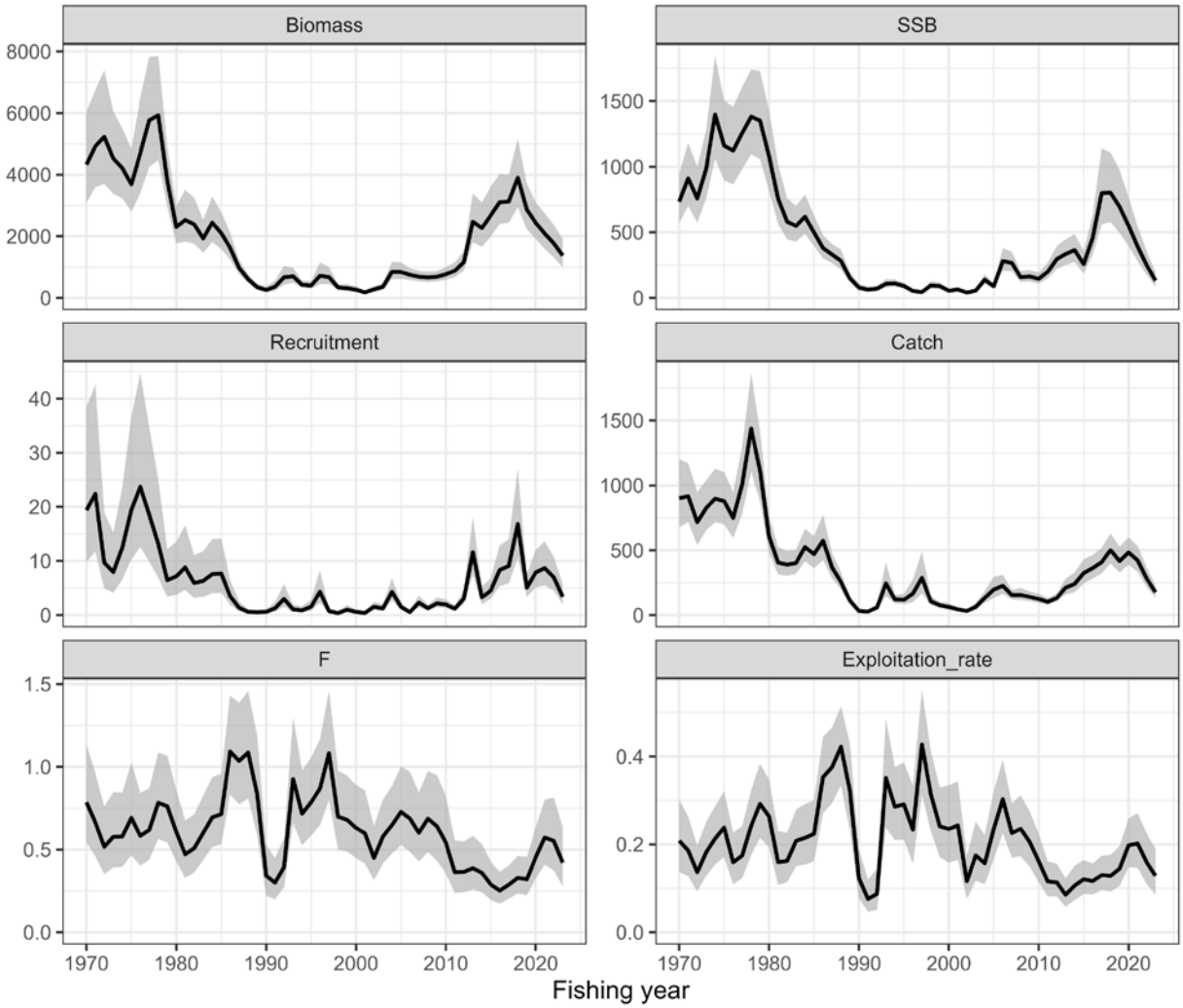
Plot of the correlation matrix obtained from the covariance matrix of the fixed effects parameter estimates, for the base case scenario (Scenario S02-Index24_1). Orange colors indicate positive correlation, while light blue indicates negative correlation.

Figure 9



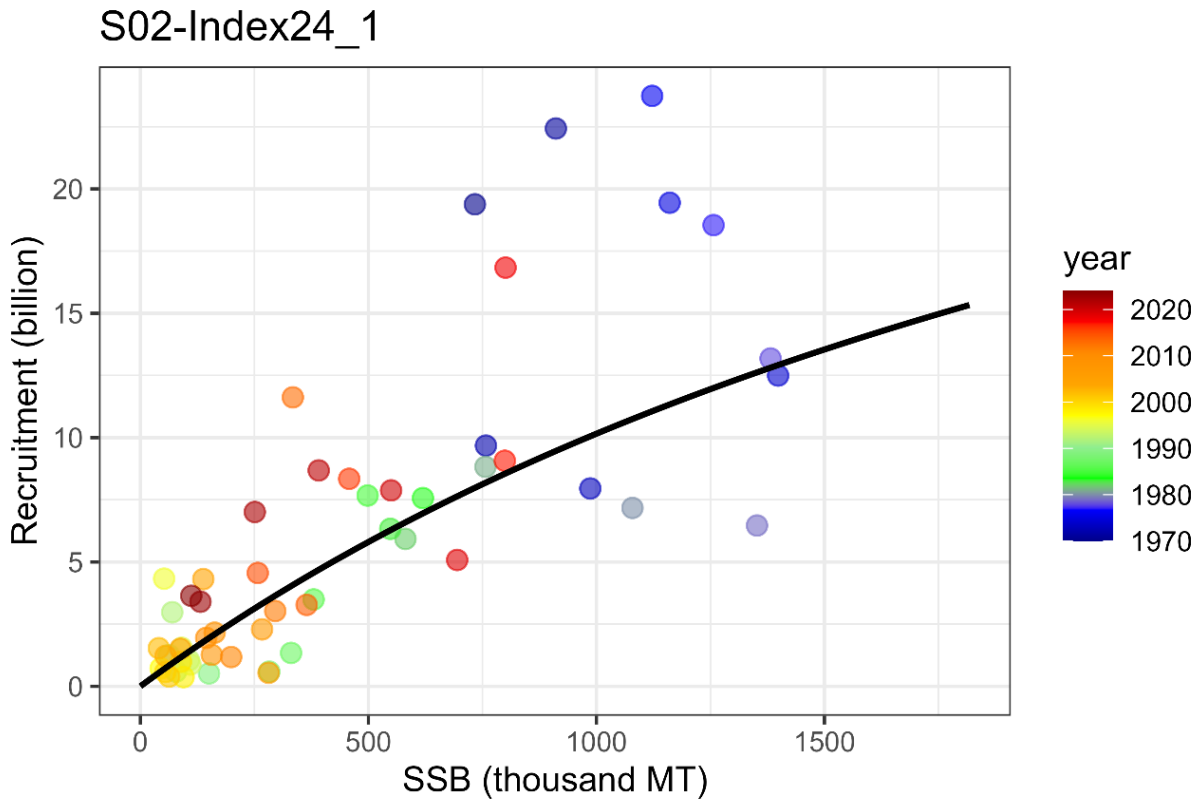
Relationship between seven abundance indices and their corresponding abundance estimates under the base case scenario (Scenario S02-Index24_1). The blue lines indicate the precited relationships.

Figure 10



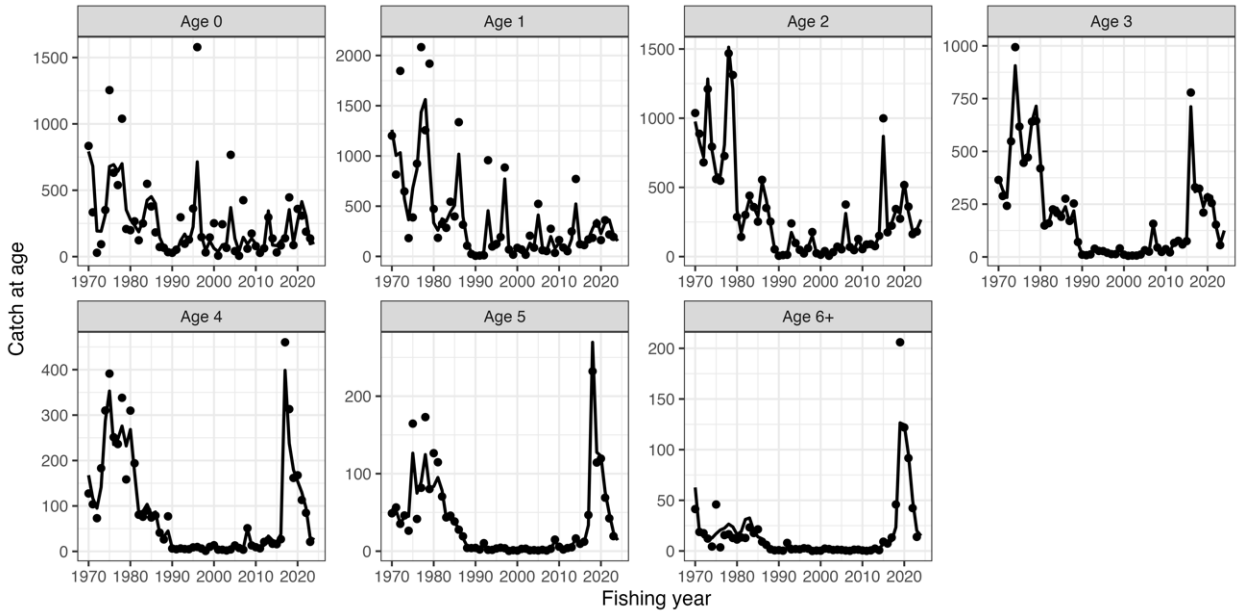
Time series of estimates of total biomass (1,000 MT), SSB (1,000 MT), recruitment (billion), catch (1,000 MT), mean F, and exploitation rate (catch divided by total biomass) of chub mackerel under the base case scenario (Scenario S02-Index24_1).

Figure 11



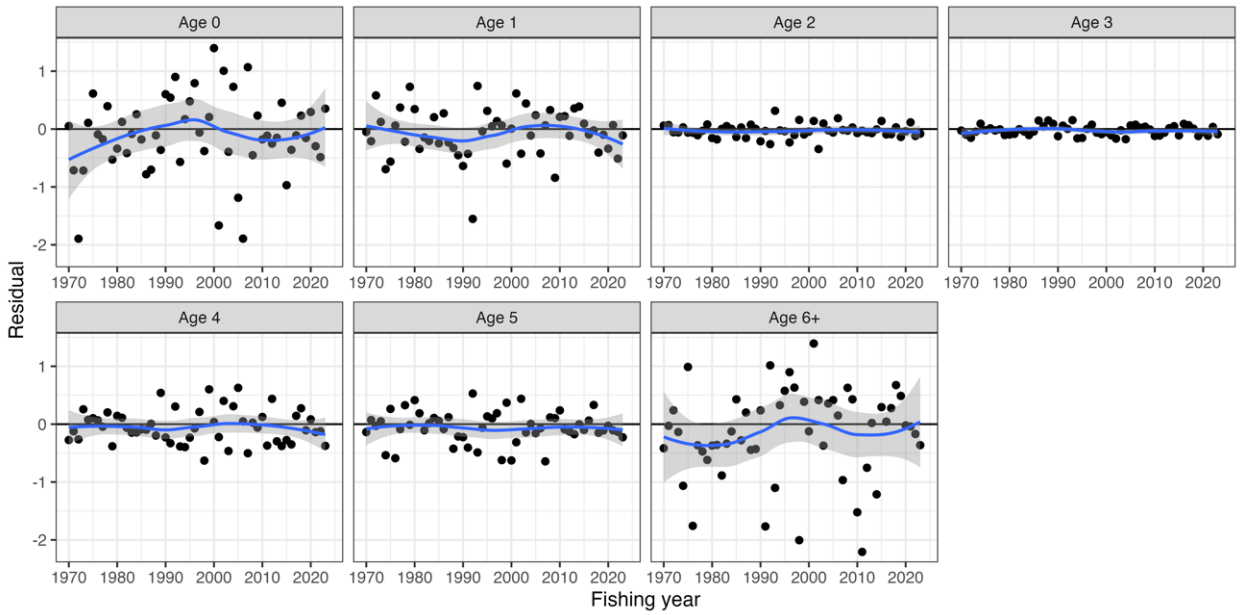
Estimated Beverton-Holt stock recruitment relationship of chub mackerel under the base case scenario (Scenario S02-Index24_1) (black line) and estimated past SSB and number of recruits (circles colored by decade).

Figure 12



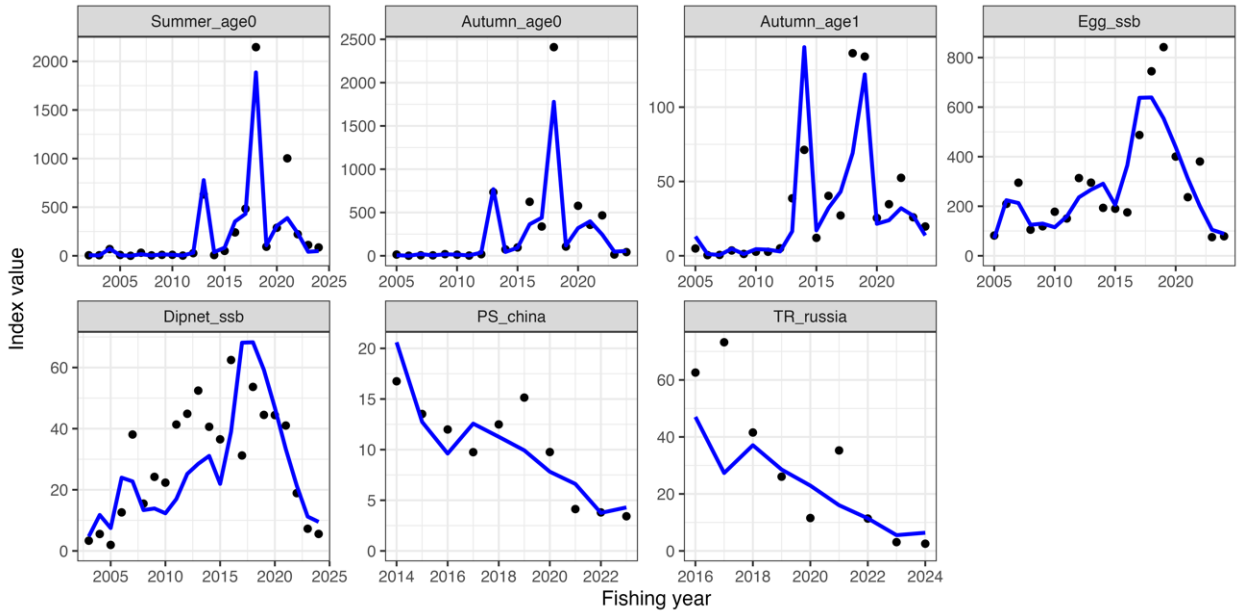
Observed catch numbers by age (dots) and their predicted values (lines)of chub mackerel under the base case scenario of Scenario S02-Index24_1.

Figure 13



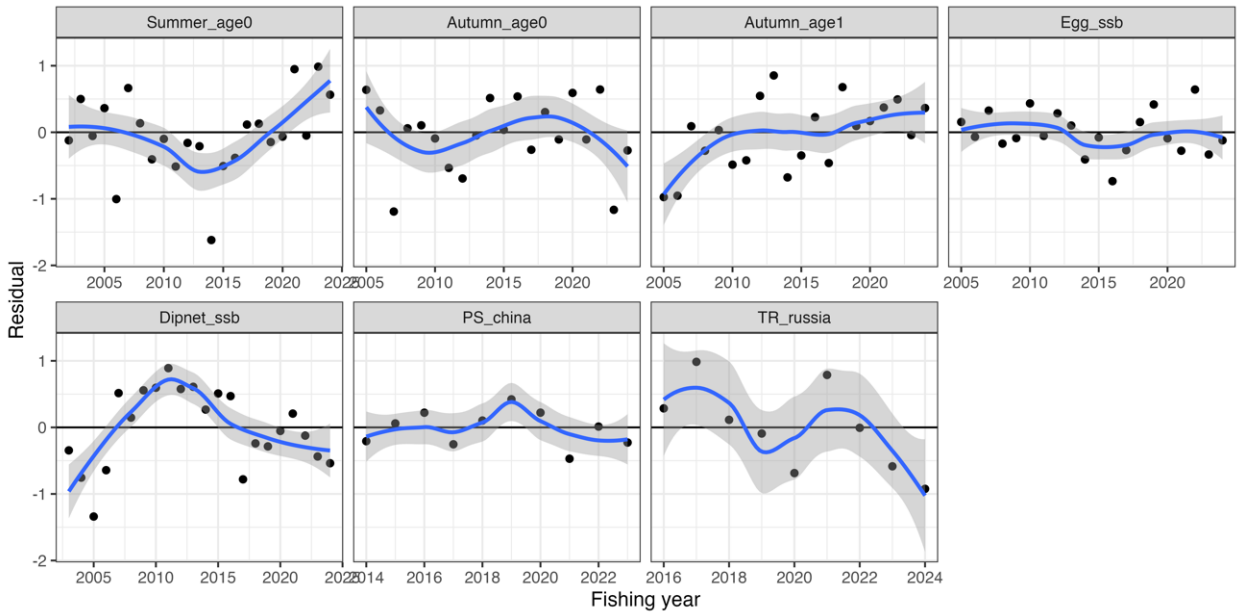
Residual plot for catch numbers of chub mackerel by age under the base case scenario of Scenario S02-Index24_1. Blue curves and shaded areas indicate smoothed curves estimated by LOESS and their 95% confidence intervals.

Figure 14



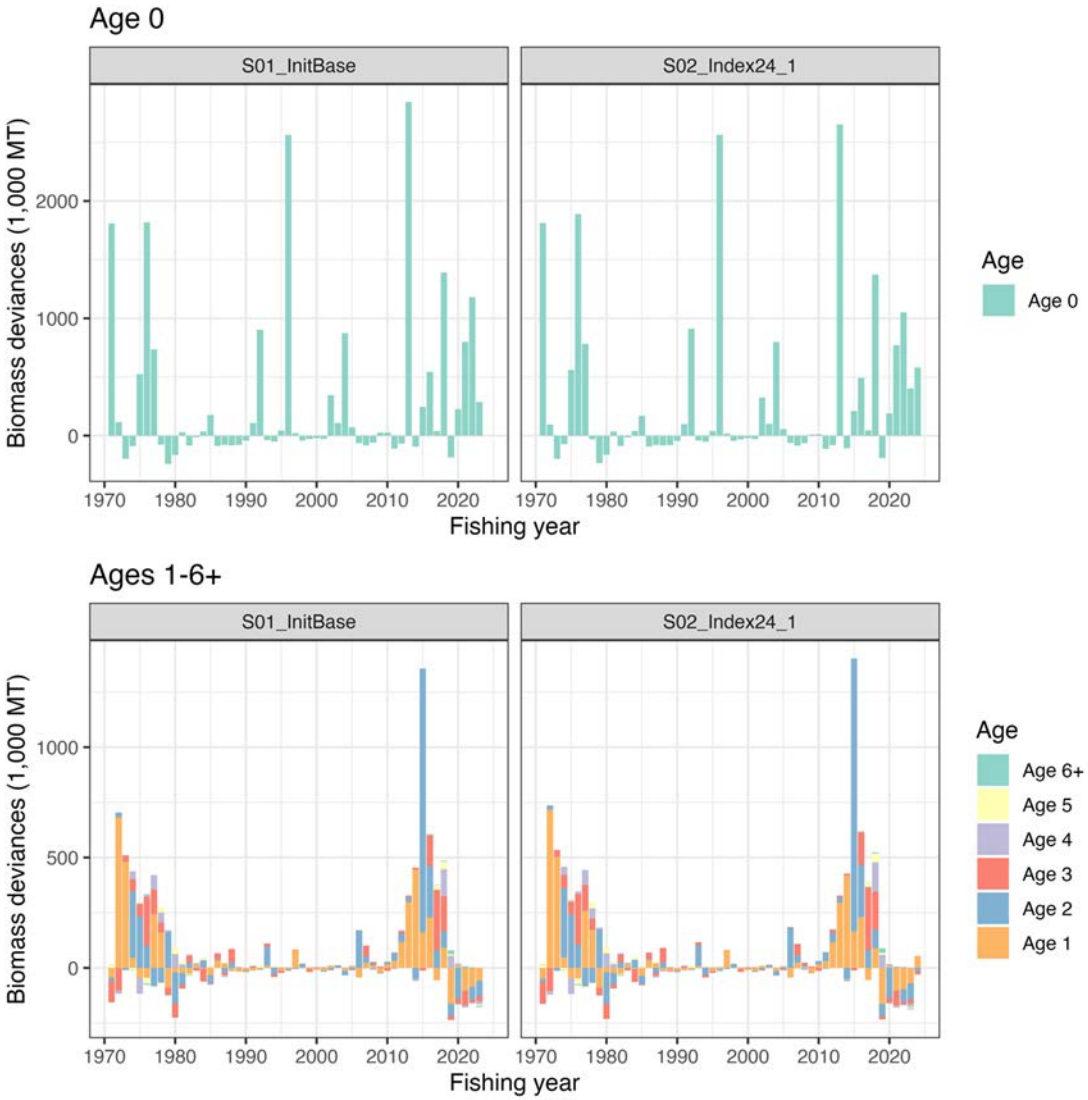
Trends of abundance indices used (dots) and their predicted values (lines) of chub mackerel under the base case scenario of Scenario S02-Index24_1.

Figure 15



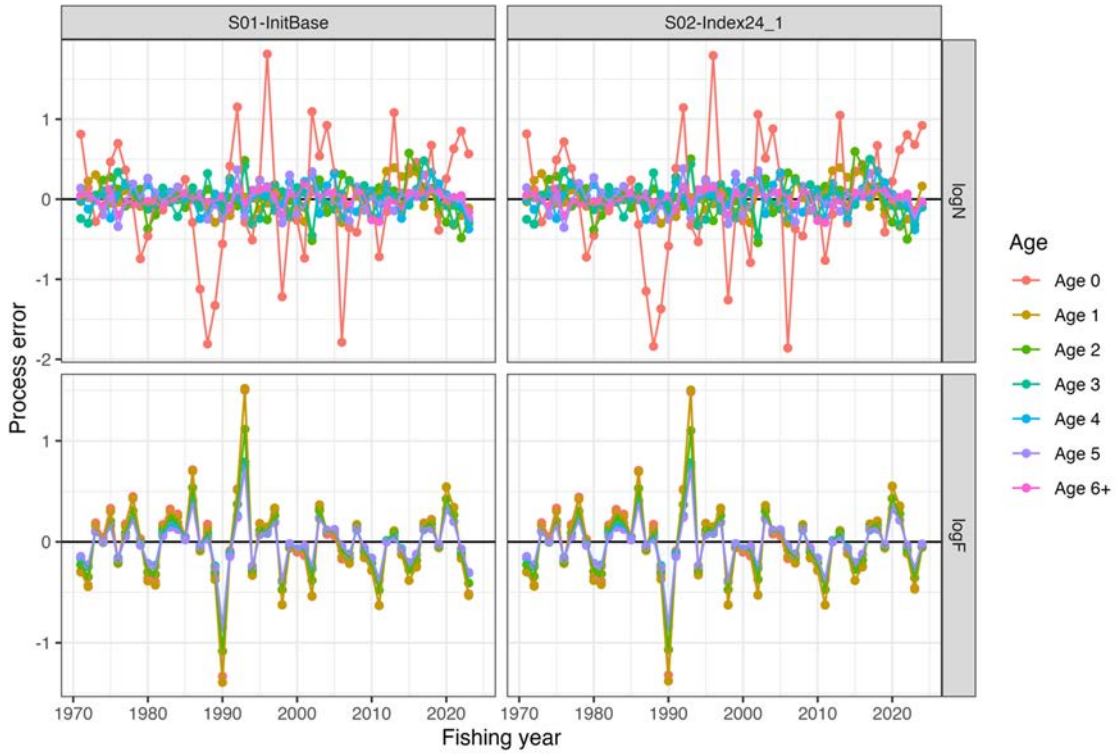
Residual plot for abundance indices of chub mackerel under the base case scenario of Scenario S02-Index24_1. Blue curves and shaded areas indicate smoothed curves estimated by LOESS and their 95% confidence intervals.

Figure 16



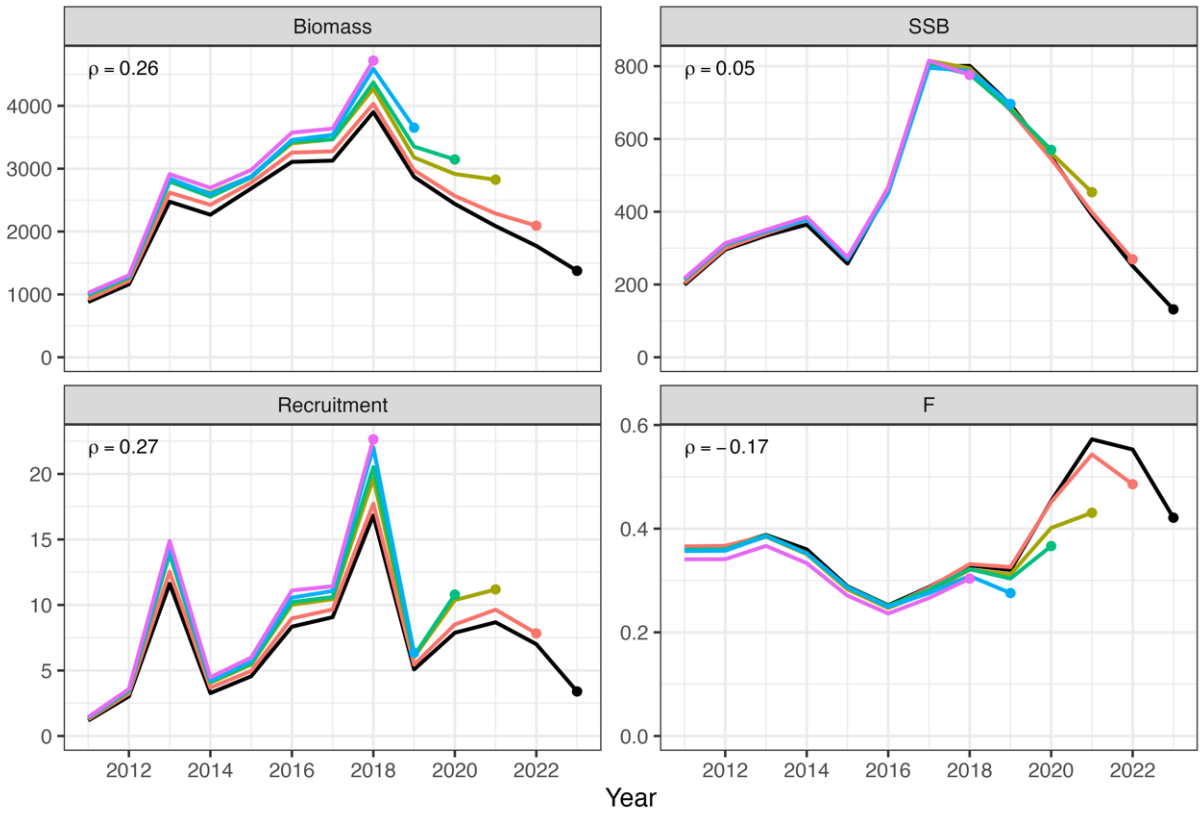
Deviances of abundances under S01-InitBase (left) and S02-Index24_1 (right) scenarios. Only Age 0 deviances are plotted separately (Top) because of the different scale of the observed deviances.

Figure 17



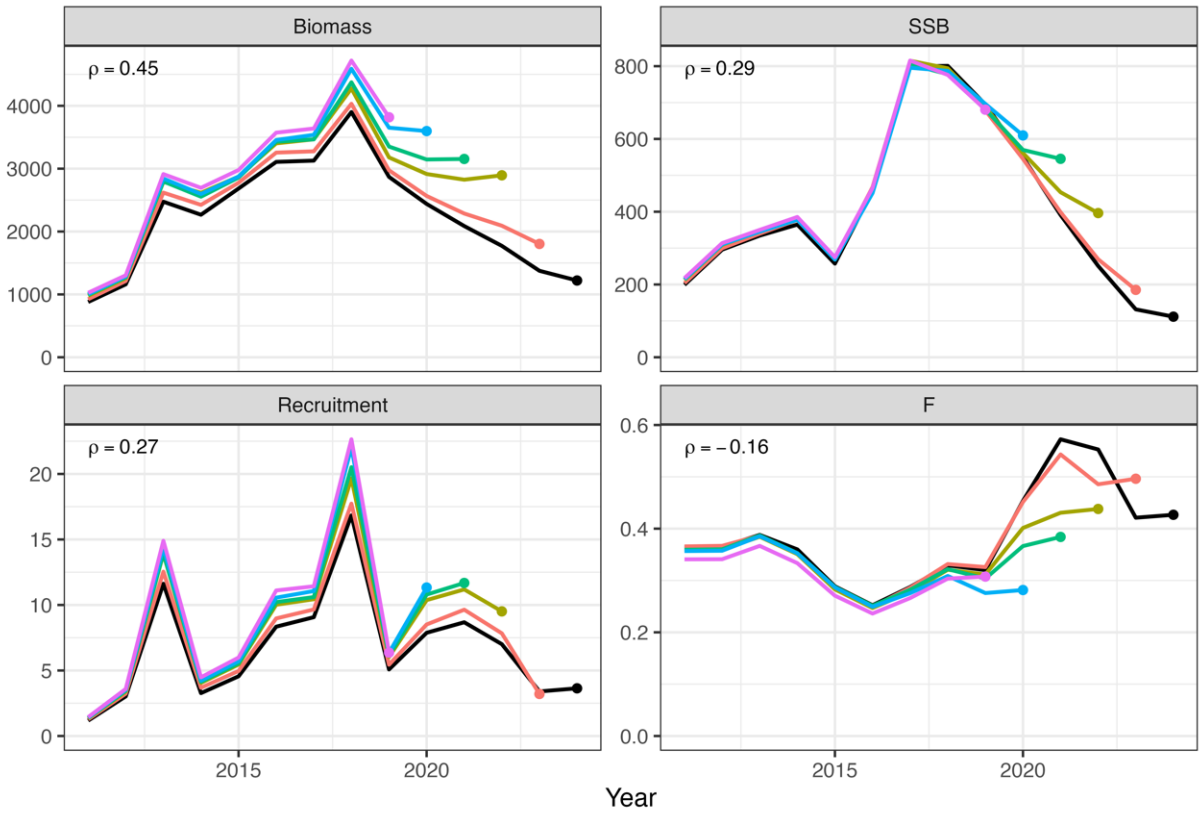
Process errors log(N) (top) and log(F) (bottom) under S01-InitBase (left) and S02-Index24_1 (right) scenarios.

Figure 18



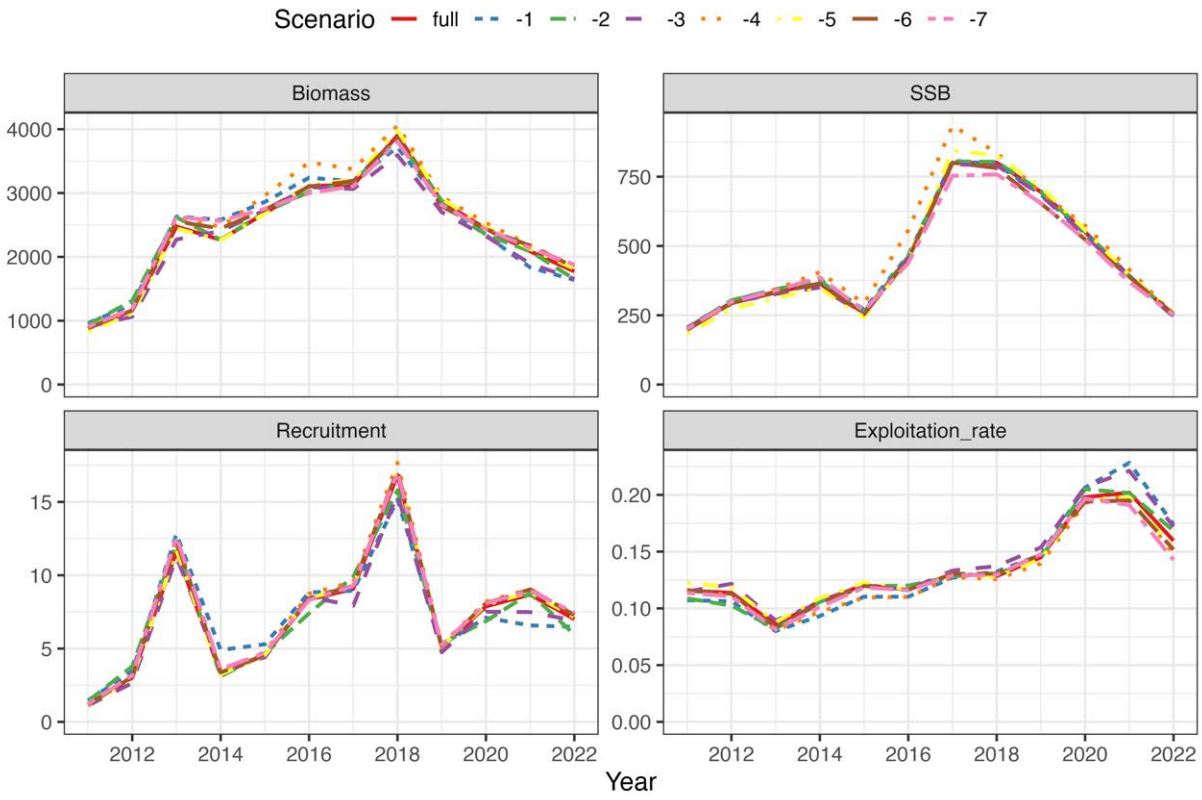
Retrospective patterns for total biomass (top left), SSB (top right), recruitment (bottom left), and mean F (bottom right) of chub mackerel under the base case scenario of Scenario S02-Index24_1. Black Lines represent models with all data, and colored lines represent models with the most recent data trimmed. Mohn's rho is shown in the upper left corner. The dots indicate the terminal year for the calculation of Mohn's rho.

Figure 19



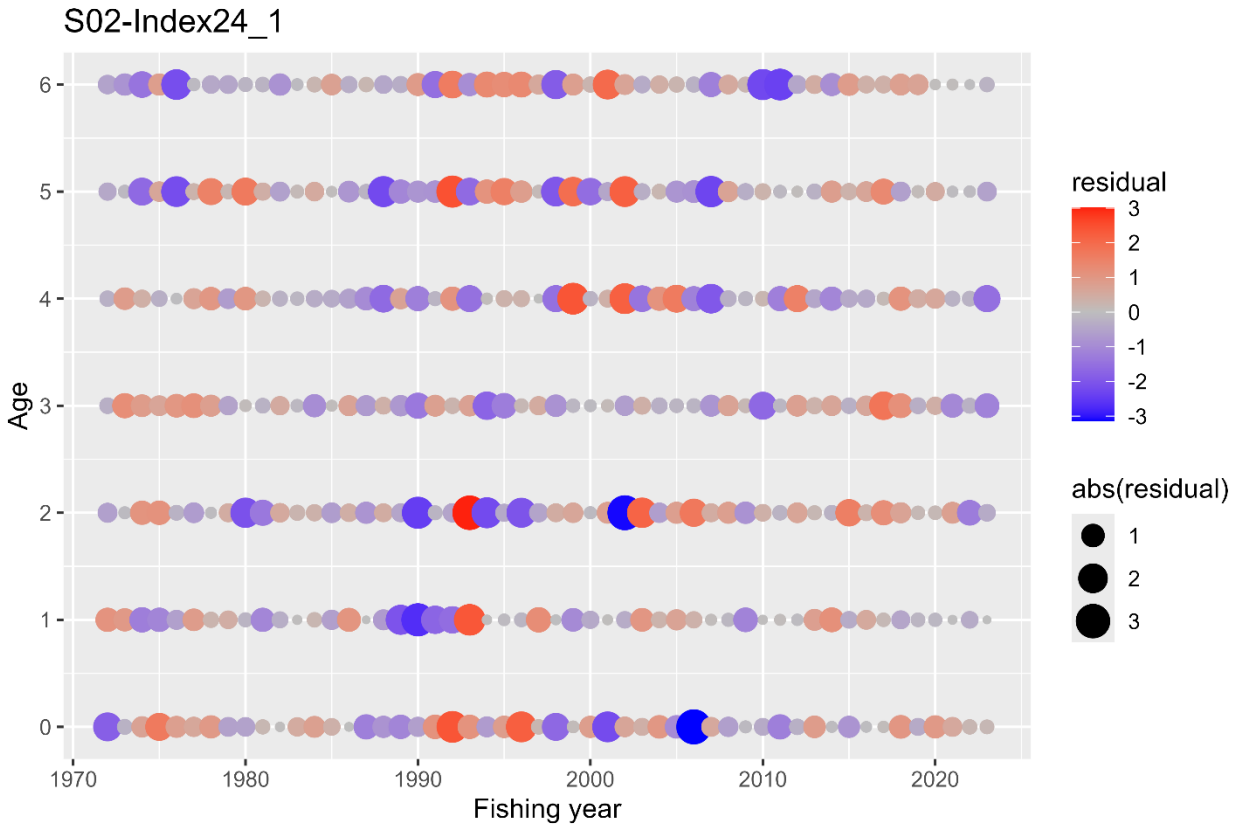
Patterns of retrospective forecasting for total biomass (top left), SSB (top right), recruitment (bottom left), and mean F (bottom right) of chub mackerel under the base case scenario of Scenario S02-Index24_1. Black Lines represent models with all data, and colored lines represent models with the most recent data trimmed. Mohn's rho is shown in the upper left corner. The dots indicate the year of one-year-ahead forecasting, used for the calculation of Mohn's rho.

Figure 20



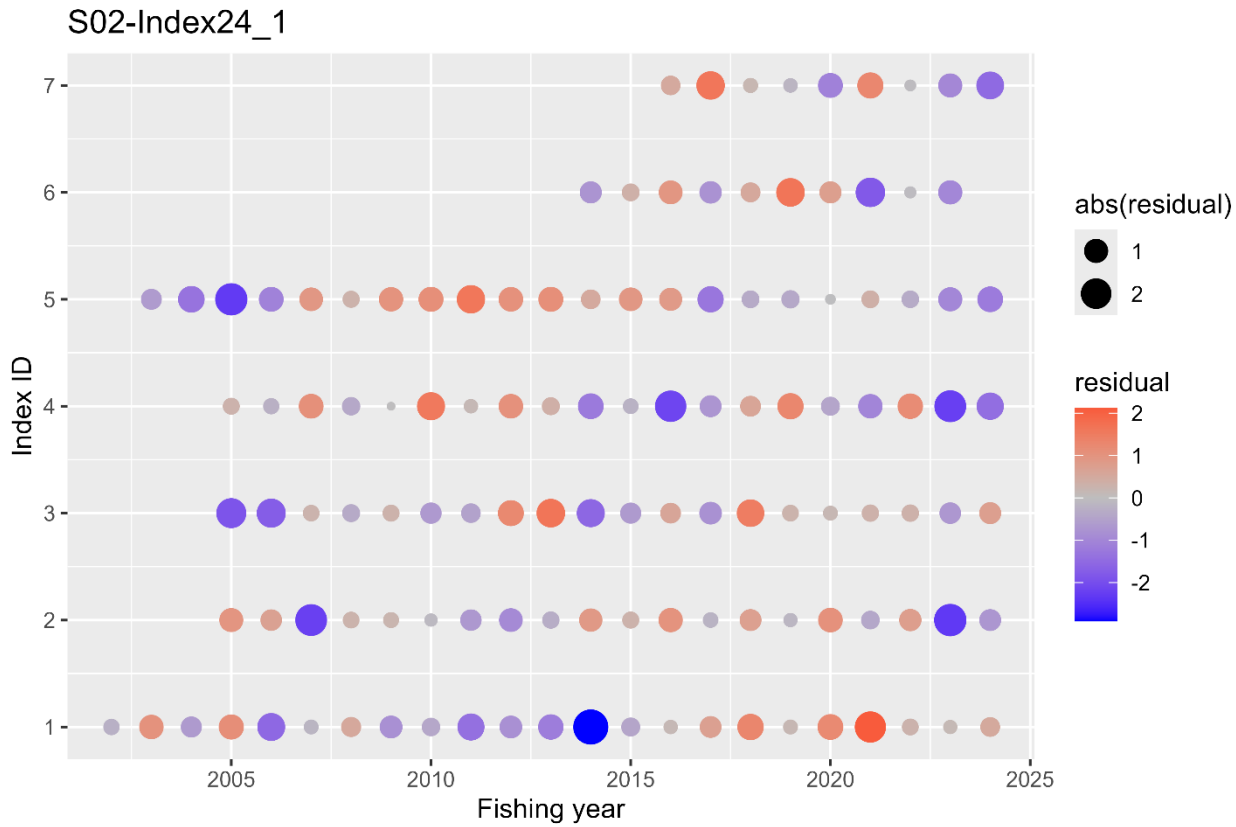
Comparison of the results of the estimates of chub mackerel when all index values are used and when each indicator is excluded for the base case scenario of Scenario S02-Index24_1. The IDs of the index are as follows: (1) relative stock number of age 0 from the summer survey by Japan, (2) relative stock number of age 0 from the autumn survey by Japan, (3) relative stock number of age 1 from the autumn survey by Japan, (4) relative SSB from the egg survey by Japan, (5) relative SSB from the dip-net fishery by Japan, and (6) relative vulnerable stock biomass from the light purse-seine fishery by China.

Figure 21



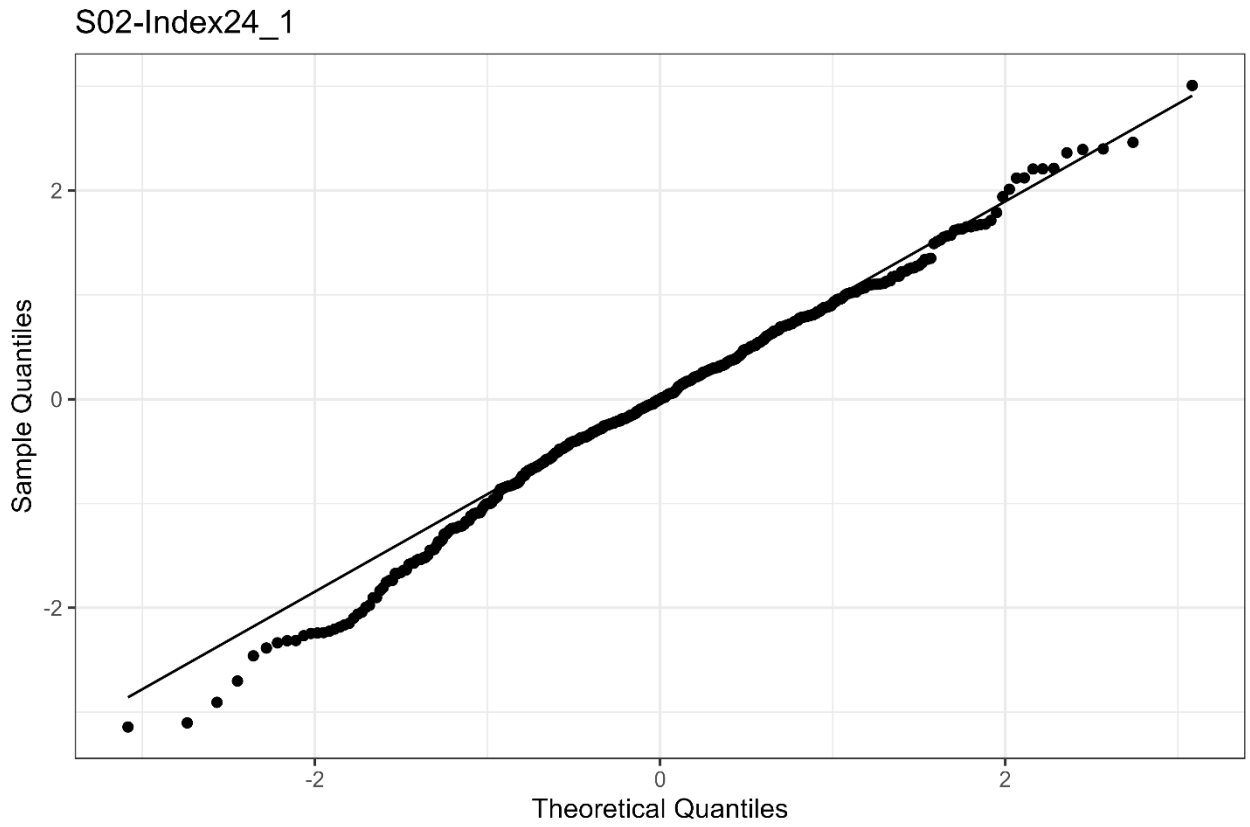
One-Step-Ahead residuals for the catch at age for the base case scenario S02-Index24_1.

Figure 22



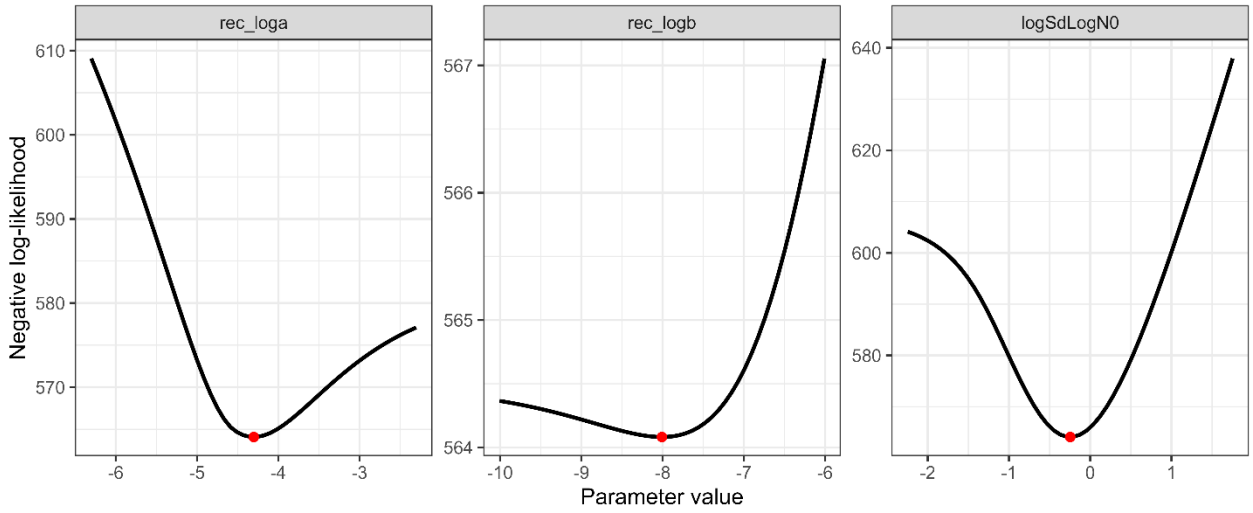
One-Step-Ahead residuals for the indices of abundance for the base case scenario S02-Index24_1. The IDs of the index are as follows: (1) relative stock number of age 0 from the summer survey by Japan, (2) relative stock number of age 0 from the autumn survey by Japan, (3) relative stock number of age 1 from the autumn survey by Japan, (4) relative SSB from the egg survey by Japan, (5) relative SSB from the dip-net fishery by Japan, and (6) relative vulnerable stock biomass from the light purse-seine fishery by China.

Figure 23



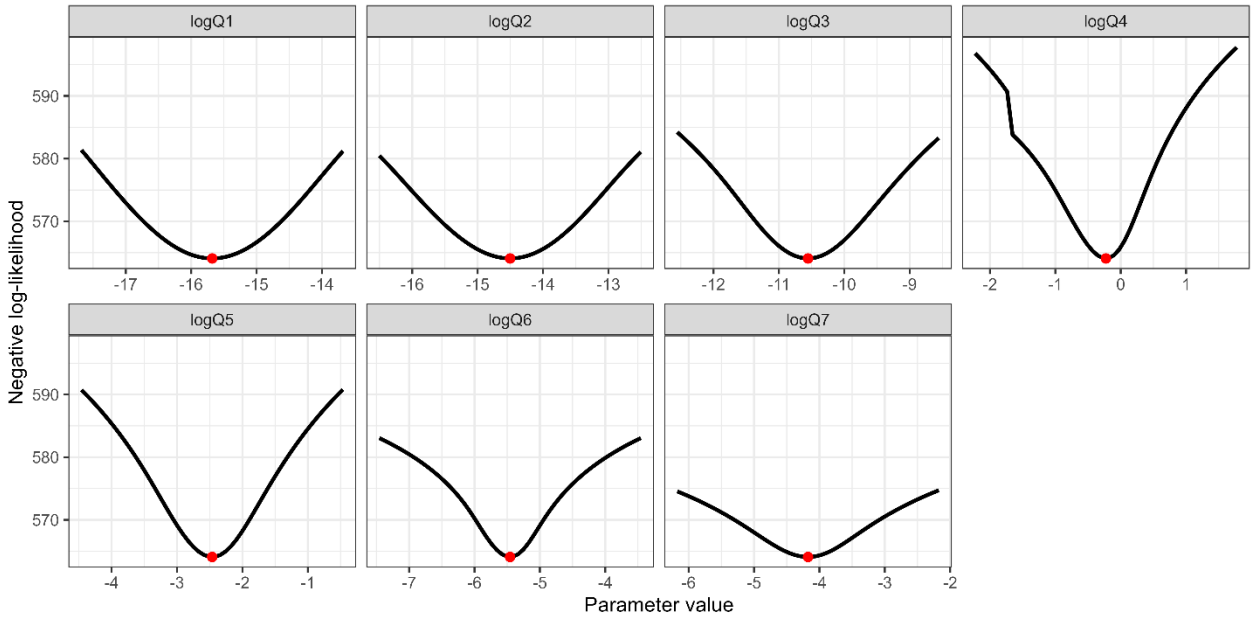
QQplot of the One-Step-Ahead residuals from the indices and catch-at-age for the base case scenario S02-Index24_1.

Figure 24



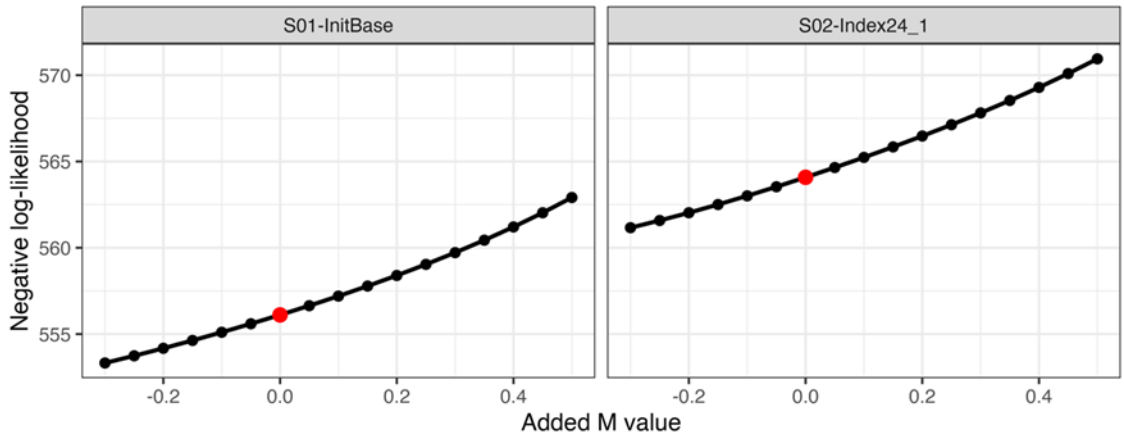
Changes in negative log-likelihoods by varying parameters related to the stock-recruitment relationship (α, β, ω_0 in log space).

Figure 25



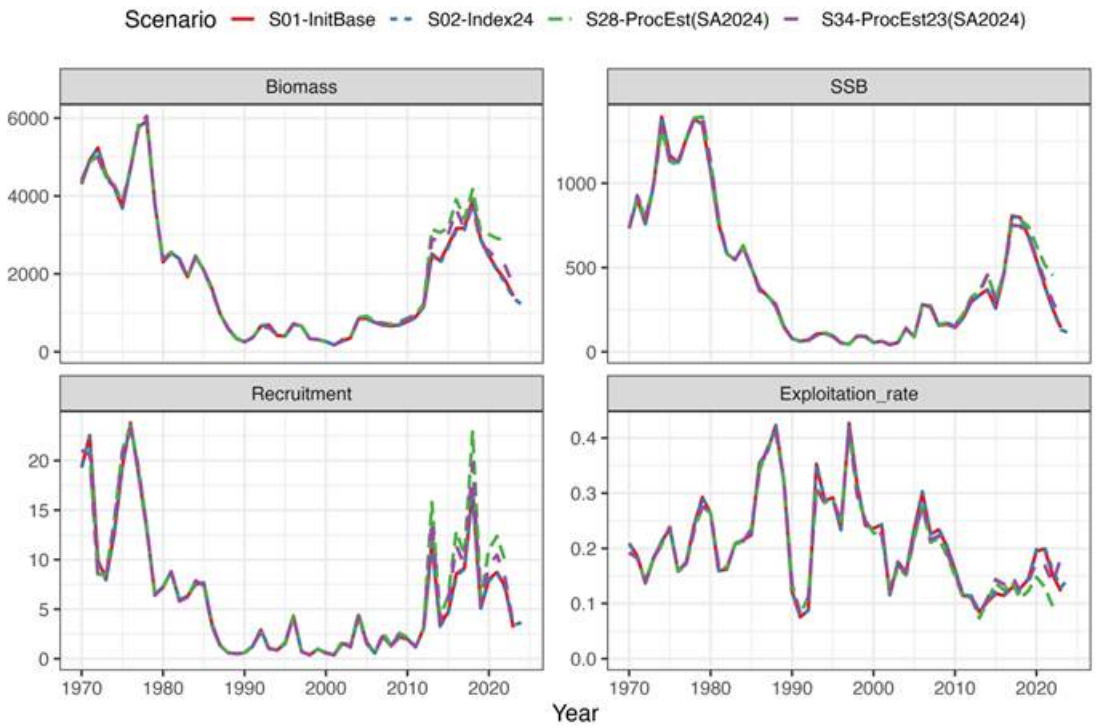
Changes in negative log-likelihoods by varying parameters of proportionality constants for abundance indices (q_k in log space). The red dotes indicate the input values for the base case scenarios.

Figure 26



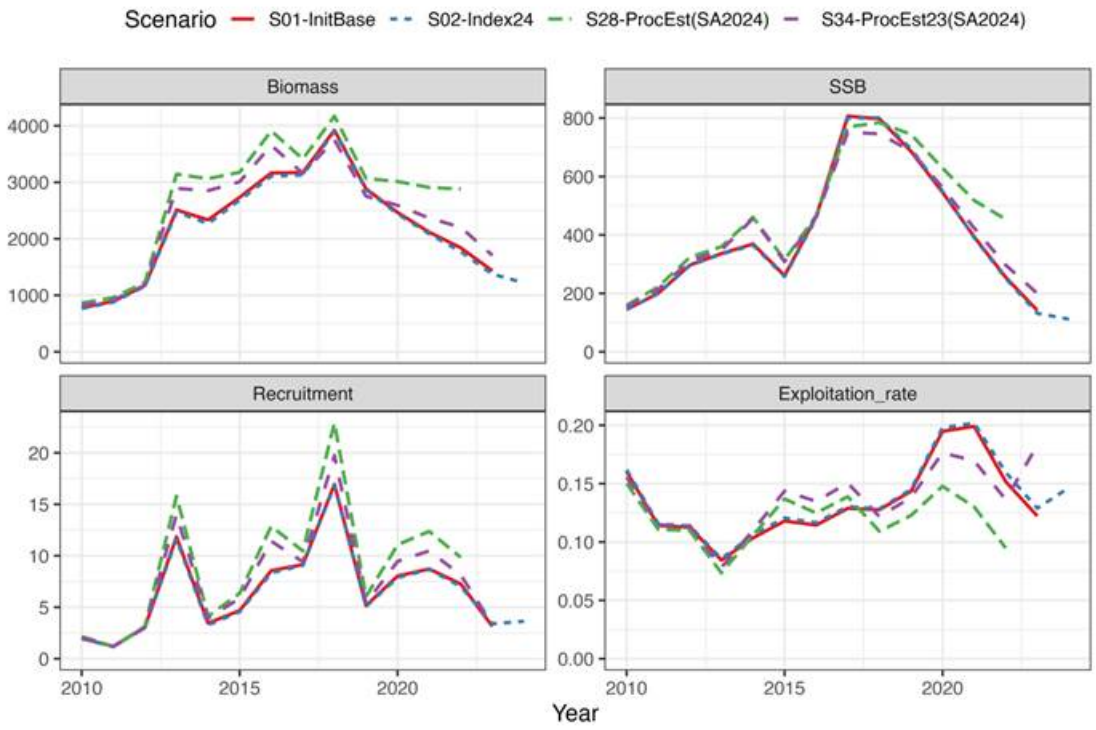
Changes in negative log-likelihood by adding different M values. The red dotes indicate the input values for the base case scenarios.

Figure 27



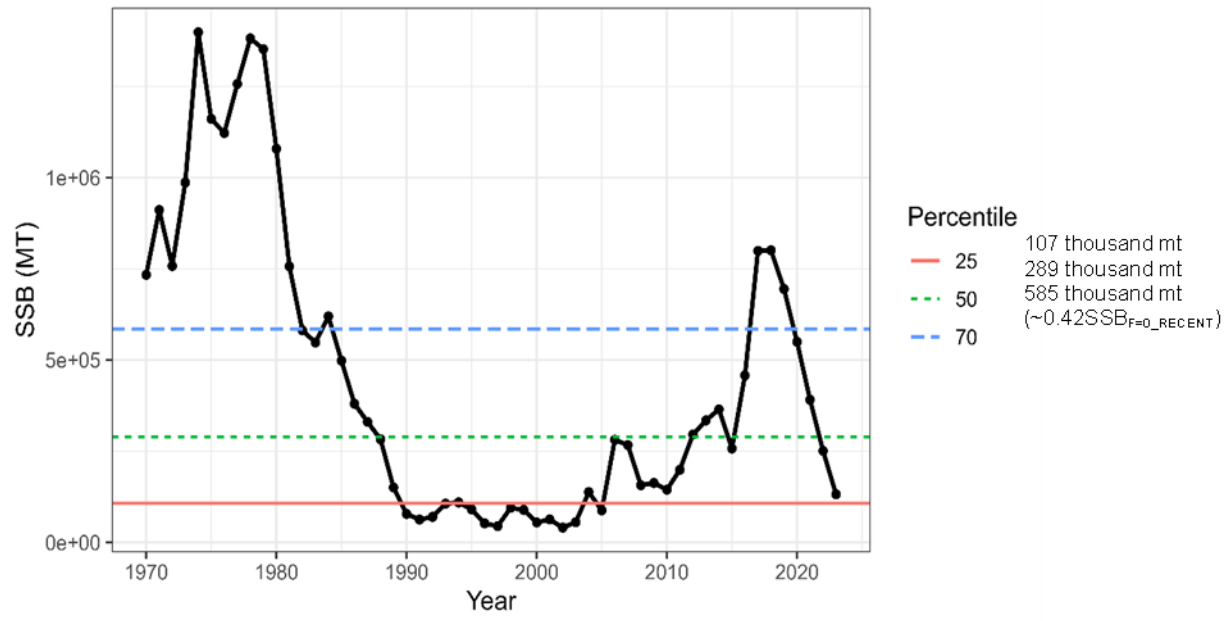
Comparison of the estimated population dynamics between current (red and blue for S01-InitBase and S02-Index24_1, respectively) and previous (S28ProcEst, denoted by green) stock assessments. Note that the purple line indicates S34-ProcEst23, a representative scenario in the previous stock assessment, in which the 2023 indices were used.

Figure 28



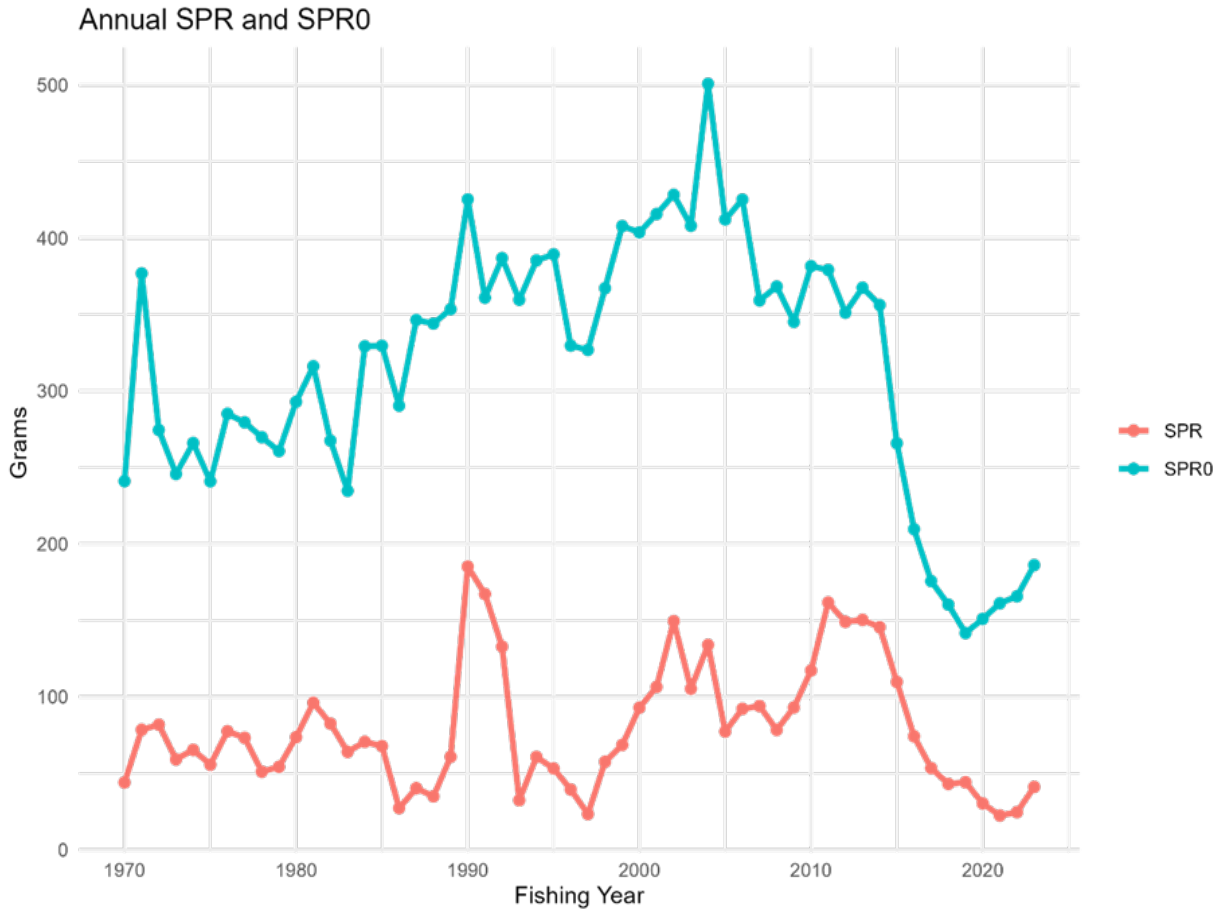
Same as Figure 27, but focusing on the recent years.

Figure 29



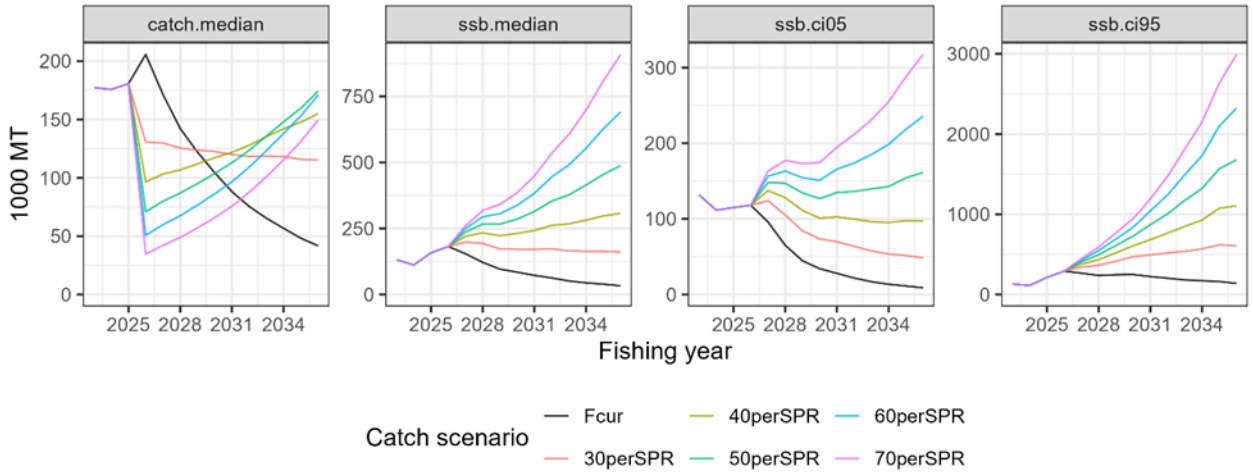
Estimated spawning stock biomass and its 25th, 50th and 70th percentiles.

Figure 30



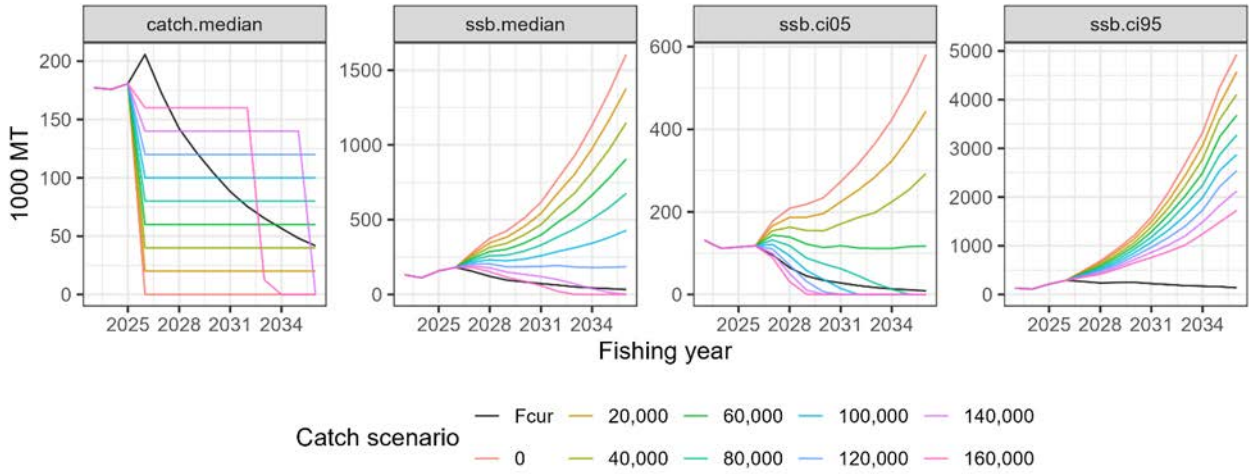
Trajectories of spawners per recruit with (SPR) and without fishing (SPR0).

Figure 31



Future trajectories median catch (left), median SSB (second from left), 5% lower limit of predictive interval for SSB (third from left) and 95% SSB (right) with mean biological parameters for the entire time series. 30–70%SPR and "F_{cur}" in "Catch scenarios" indicate total amount of catches (mt) in constant fishing mortality scenarios of F30–70%SPR in increments of 10% and current fishing morality, respectively.

Figure 32



Future trajectories of median catch (left), median SSB (second from left), 5% lower limit of predictive interval for SSB (third from left) and 95% SSB (right) with mean biological parameters in recent 8 years. Numbers and "F_{cur}" in "Catch scenarios" indicate total amount of catches (mt) in constant catch scenarios of 0 to 160 thousand mt in increments of 20 thousand mt and current fishing mortality, respectively.

ANNEX 1 Additional Tables

Table A1. Descriptions of common terms in the assessment. For terms that are time specific (either a year or a range of years), examples are given for 2023, although the text may refer to alternative years.

Term	**Description**
TBy2023	Total stock biomass in FY2023 (1,000 MT)
SSBy2023	Spawning stock biomass in FY2023 (1,000 MT)
Ry2023	The number of recruits in FY2023 (million)
AFy2023	Weighted average of F-at-age by estimated catch-at-age in FY2023
Ey2023	Exploitation rate (estimated catch divided by stock biomass) in FY2023
CurrentSPR/SPR0	Ratio of spawners per recruit (SPR) in the average of FY2021-2023 to that without fishing
SSBmedian	Median spawning biomass from FY1970 to 2023
F0.1/ F_{cur}	Ratio of F0.1 to current F (average F in FY2020-2023)
FpSPR.30.SPR/ F_{cur}	Ratio of F30%SPR to current F (average F in FY2020-2023)
FpSPR.40.SPR/ F_{cur}	Ratio of F40%SPR to current F (average F in FY2020-2023)
FpSPR.50.SPR/F_{cur}	Ratio of F50%SPR to current F (average F in FY2020-2023)
FpSPR.60.SPR/F_{cur}	Ratio of F60%SPR to current F (average F in FY2020-2023)
FpSPR.70.SPR/F_{cur}	Ratio of F70%SPR to current F (average F in FY2020-2023)
F_{MSY}/F_{cur}	Ratio of FMSY to current F (average F in FY2020-2023)
B_{MSY}	Deterministic MSY reference point for total biomass (1,000 MT)
SSB_{MSY}	Deterministic MSY reference point for spawning stock biomass (1,000 MT)
h	Steepness
SSB0	Virgin spawning stock biomass (1,000 MT)
SSB_{MSY}/SB_0	Ratio of SB_{MSY}Y to SB_0
F_{MSY}SPR	%SPR for F_{MSY}
B/B_{MSY}	Ratio of total biomass in FY2023 to B_{MSY}
SSB/SSB_{MSY}	Ratio of spawning biomass in FY2023 to SSB_{MSY}
$SSB_{MSY}y/SSB_{MAX}$	Ratio of SSB_{MSY} to the historical maximum of spawning biomass

Table A2. Settings and specifications of SAM for S02-Index24_1.

Model configuration	**Parameter**	**Option(s) addressed after input data fixed by TWG CMSA11(?)**
Recruitment	$N_{0,y}$	Parameterized Beverton-Holt stock-recruitment relationship with α and β estimated in the model (base case)
Catchability or proportionality constant for abundance indices	q_k	Assumed constant across years
Nonlinear coefficient for abundance indices	b_k	Searching the best option(s) about how constraints are imposed on which indices based on AIC etc. *b* is estimated for the three Japanese trawl surveys, whereas fixed at 1 for other indices.
Years of F random walk	-	Include the Markov process for all years as the base case
Correlation of age classes in F random walk	ρ	Using a simple function of age difference ($\rho^{\lvert a-a' \rvert}$)
Process errors in numbers older than age 0	ω_a $(a>0)$	Searching the best option(s) about how constraints are imposed on which age classes based on AIC etc., prohibiting setting breakpoints between ages 2 and 3 (base case).
SD in F random walk	σ_a	Searching the best option(s) about how constraints are imposed on which age classes based on AIC etc. Estimate SDs of F random walk for ages 0-1, 2, and above 3.
SD in measurement errors of catch at age	τ_a	Searching the best option(s) about how constraints are imposed on which age classes based on AIC etc. Estimate SDs in measurement errors of catch at age for age 0, 1, 2-3, 4-5, and 6+.
SD in measurement errors of abundance indices	v_a	Assuming different measurement errors among abundance indices
Number of fleets	-	Single fleet
Natural mortality	M	Age-specific M (0.80 for age 0, 0.60 for age 1, 0.51 for age 2, 0.46 for age 3, 0.43 for age 4, 0.41 for age 5, and 0.40 for age 6+) (base case)

Maturity-at-age		JPN Maturity-at-age (base case)
Catch-at-age	$C_{a.y}$	See Annex F, NPFC-2025-TWG CMSA11-WP03 Rev.1
Weight-at-age		To compute total biomass and SSB using an average, weighted by age-specific catch number with the same ratio across all years (FY2014–FY2023) by Member, of CHN, E/W JPN and RUS WAA
Summer survey index (age 0)		Used for SA (NPFC-2025-TWG CMSA10-WP08)
Autumn survey indices (ages 0, 1)		Used for SA (NPFC-2025-TWG CMSA10-WP05)
Egg abundance (SSB)		Used for SA (NPFC-2025-TWG CMSA10-WP07 (Rev. 1))
Dipnet fishery (SSB)		Used for SA (NPFC-2025-TWG CMSA10-WP06)
Chinese fishery CPUE		Used for SA (NPFC-2025-TWG CMSA10-WP09)
Russian fishery CPUE		Used for SA (NPFC-2025-TWG CMSA11-WP05)

Table A3. Future projection settings for the base case scenario, S02-Index2.

Projection Aspect	Future Projection Settings
Type of simulation	Stochastic (3,000 times)
Duration	10 years after introduction of management
Start year for incorporating management	2026
Catch or F levels	・Constant catch of 0 to 160 thousand mt in increments of 20 thousand mt ・Constant F, with values of F30–70%SPR in increments of 10% and current fishing mortality (F_{CUR}).
Estimation of catch from terminal year (FY 2024) to current year (FY 2025)	The most recent F (F2023)
Process error other than Age 0	Consider as random stochasticity with the estimated variances in SAM when it is estimated
Recruitment level	Model-based approach using S-R relationship
Error structure in recruitment	Parametric with process error.
Biological parameters	Recent 8-years average

Annex I:

Terms of Reference for the Small Scientific Committee on Japanese Sardine (SSC JS)

(December 2025)

1. To review and evaluate fishery data
   - Catch and efforts (including spatial-temporal distribution of landings and discards)
   - Age/size composition data
   - Evaluation of data quantity, data quality, sources of uncertainty
   - Others
   - Recommendation for future works

2. To review and evaluate fishery-dependent and fishery-independent indices
   - Evaluate/update sampling design for fishery-independent survey
   - Characterize the source of uncertainty for the fishery-dependent and fishery-independent data
   - Develop/review/update the CPUE standardization Protocol taking into account of characteristics of respective fisheries
   - Conduct CPUE standardization
   - Review and update fishery-dependent and fishery-independent indices
   - Recommendation for future works

3. To review, share, and update biological and other information/data relevant to stock assessment
   - Stock structure (including taxonomy of JS)
   - Growth
   - Reproduction and maturity schedule
   - Natural mortality
   - Migration pattern
   - Environmental influences (e.g. oceanographic, habitat, or species interactions)
   - Others
   - Evaluation of data quantity, data quality, sources of uncertainty
   - Recommendation for future works

4. To conduct the stock assessment
   - Identify and apply an appropriate stock assessment model
   - Develop/review/update the Stock Assessment Protocol
   - Conduct stock assessment following the Stock Assessment Protocol
   - Create the scientific advice on management based on the results of the stock assessment
   - Recommendation for future works

5. To facilitate data- and code- sharing processes

6. To review/improve presentation of stock assessment results (including stock status summary report in a format to be determined by the SSC)

Annex J:

Tasks for the SSC JS, SWG JFS, and SWG BM the from SC10

Tasks	SSC JS	SWG JFS	SWG BM
Fishery and biological information			
(a) Update species summary	X	X	X
(b) Share biological data, including unpublished data if possible	X		
(c) Update catch and effort data	X	X	X
(d) Discuss potential data sharing needs or data that could be collected through a regional observer program (ROP)	X		
(e) Evaluate the influence of environmental variables on the life history, biology, and population dynamics		X	X
Distinguish between CM and BM			
(f) Develop a tool to easily distinguish between CM and BM for observers or fishers at sea			X
Stock Assessment			
(g) Calculate nominal CPUE and develop a CPUE standardization protocol	X		
(h) Develop a stock assessment protocol	X		
(i) Explore the application of existing stock assessment models or develop new stock assessment models for JS	X		
(j) Conduct other research that may contribute to the provision of management advice	X		
(k) Share code for developing a stock assessment model for JS	X		
(l) Observe domestic stock assessments by Members unless there is a collaborative NPFC stock assessment	X	X	X
(m) Review terms of reference (TOR)	X		
(n) Draft a rolling 5 year work plan	X		

Annex K:

Template for SC data calls

Scientific Committee Data Call – 202X

Rationale

A data call is essential to ensure that the Scientific Committee and its subsidiary bodies have access to the most complete, consistent, and up-to-date information needed to conduct robust stock assessments and provide sound scientific advice to the Commission. Regular and standardized data submissions allow the SC subsidiary bodies to integrate fishery-dependent and fishery-independent information from all Members and CNCPs, assess trends across the Convention Area, and evaluate stock status against agreed reference points. This process not only supports transparency and comparability among datasets but also fulfils Members' obligations under the relevant NPFC Conservation and Management Measures (CMMs), which require the timely provision of scientific and catch data to underpin evidence-based management decisions.

A centralized request for data is preferable to fragmented intersessional requests because it ensures coherence, transparency, and equity in how Members and CNCPs are asked to contribute information. When data are requested through a single, coordinated call, all parties receive the same guidance, deadlines, and specifications, reducing the risk of inconsistent interpretations or selective participation. It also helps align the timing of submissions with the scientific and management calendar, ensuring that the SC subsidiary bodies have the necessary inputs well in advance of analyses and meetings.

1. Scope of the data call

NPFC Members and CNCPs are requested to submit the data specified in Section 4 and 5 in accordance with the present data call for year 202X. These data are essential to support the scientific analyses, assessments, and evaluations carried out by the Scientific Committee and its subsidiary bodies. The information provided will form the basis for robust and transparent stock assessments and related scientific work, which in turn underpin the development of sound management advice and recommendations to the Commission.

2. Regulatory basis

The exchange and provision of data for scientific purposes are explicitly grounded in the Convention on the Conservation and Management of High Seas Fishery Resources in the North Pacific Ocean. In addition to the Commission's functions under **Article 7(1)(f)** and Members' obligations under **Article 9(1)(a)** to provide data in accordance with adopted procedures, **Article 16 ("Data and Information")** sets out the guiding principles for data exchange. It requires that "*Members of the Commission shall provide to the Commission in a timely manner complete and*

accurate data concerning fishing activities and related scientific research in the Convention Area" and further mandates that "*the Commission shall compile, maintain and make available such data as are necessary for the implementation of this Convention*." Moreover, **Article 16(2)** emphasizes that data and information "*shall be provided and used in accordance with procedures adopted by the Commission,*" ensuring both transparency and consistency. Collectively, these provisions form the regulatory foundation for issuing coordinated data calls and for the scientific exchange of information essential to the work of the Scientific Committee and its subsidiary bodies.

Data shared by Members shall be used in accordance with the NPFC Data Sharing and Data Security Protocol and SC's Regulations for Management of Scientific Data and Information.

3. Deadlines

Example:

Subsidiary body	**Chair**	**Deadline**
TWGCMSA	Kazuhiro Oshima	15/02/2025

4. Data to report

a. TWG CMSA

Example:

Datatype (Fishery independent/dependent)	**Data source**	**Temporal Scope**	**Aggregation**
FI	Trawl survey	2021-2025	Annual
	Recruitment survey	2022-2023	Annual
FD	Catch at age	2000-2012	Quarter

5. Subsidiary bodies specifications

Specific data that SSC/TWG/SWG might require and are not routinely provided.

6. Submission

a. To the SC database

Reference will be made to the SC database once it is developed, including the accompanying user manual and any supporting documentation. This will ensure that all procedures, data flows, and validation steps are aligned with the finalized database structure and the guidance provided within its official documentation.

b. To the Collaboration site

Specific ad-hoc data requests that don't go into the SC database.

7. Contact information

Annex L:

Report of the Small Working Group on Data (SWG Data)

Executive summary

The Small Working Group on Data (SWG Data) met four times in 2025 (28 April, 4 June, and 12 August and 23 October 2025) via WebEx. The group, chaired by Karolina Molla Gazi (EU), advanced the development of the NPFC Scientific Committee (SC) database, including database architecture, user roles, confidentiality provisions, and harmonized templates. The SWG also reviewed the draft Conservation and Management Measure (CMM) on Minimum Data Standards, consolidating feedback from Members. Significant progress was achieved on defining data types, developing reference code lists, and outlining implementation steps.

1. Introduction

A database is a structured system for storing and managing large amounts of information in an organized and secure way. It ensures that all data are consistent, searchable, and easily accessible from a single location rather than scattered across multiple files and repositories. By maintaining standardized and up-to-date datasets, it promotes operational consistency, minimizes errors, and reduces redundant work. Built-in confidentiality controls (such as user roles and access permissions) enhance security, while documentation and tracking functions allow users to monitor modifications, imports, and exports. Overall, a database streamlines workflows, improves efficiency, and increases the overall quality and reliability of data management.

In the context of Regional Fisheries Management Organizations (RFMOs), a well-structured database is essential for effective scientific collaboration and credible stock assessment. RFMOs rely on data contributed by multiple Members, each with their own systems, formats, and standards. Without a common, centralized structure, data become fragmented, inconsistent, and difficult to integrate, eventually undermining the quality and comparability of analyses. A shared database provides a consistent framework for storing, managing, and accessing fisheries, and biological data, ensuring that all Members and expert groups work from the same verified and up-to-date information. This not only enhances transparency and reproducibility in stock assessments but also supports timely scientific advice by streamlining data preparation and reducing duplication of effort across working groups.

Confidentiality controls, such as user-based access levels, allow sensitive Member’s data to be stored securely while still enabling their use in joint analytical work, such as standardized CPUE analyses, stock assessment, and MSE development. In addition, version tracking and documentation features improve traceability and accountability, allowing scientists to follow the history of each dataset and the methods applied.

2. SC database development

The starting point of the work was figure 1, which illustrates the transition from the current to the proposed process for data sharing and scientific analysis among Members and subsidiary groups. At present, data are prepared using separate templates for each SC subgroup (e.g., SSC PS, SSC NFS, TWG CMSA, and other species) and submitted either by email or uploaded to the collaboration site. There is no systematic validation step, and data storage is fragmented between the collaboration site and the data warehouse. Data consolidation is carried out manually before being used for analysis. Under the proposed system, a common data template by data type will be used across all groups and submitted through a dedicated database interface. Validation will occur automatically during import, checking formats and allowed field values. Data will then be stored in a centralized database, where automated extraction queries will enable streamlined data consolidation and facilitate more efficient and consistent analyses.

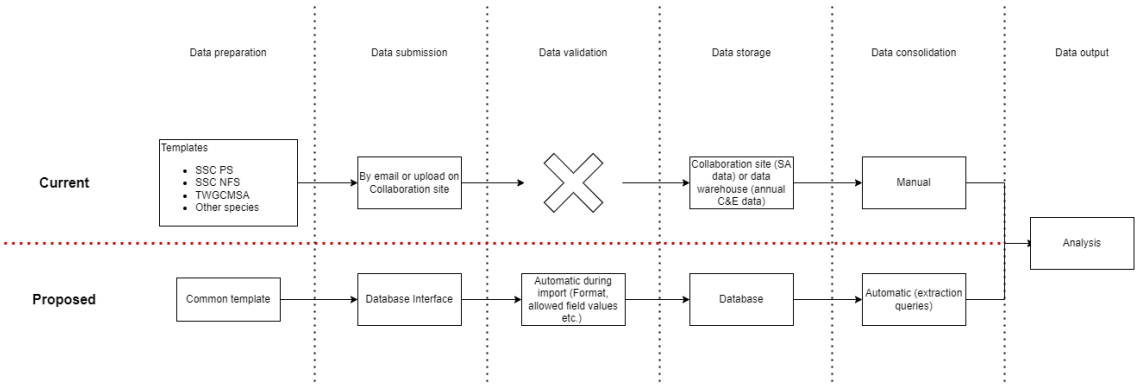


Figure 1: Current and proposed process for scientific data provision.

As a first step, the group discussed the types of data to be included in the database, based on a table of data categories previously compiled and circulated by the Secretariat (table 1).

It was agreed that a clear distinction should be made between raw (unprocessed) data and processed or estimated data products, as these categories would require different templates and potentially separate storage tables. Figure 2 illustrates the relationship between raw, processed, and estimated data. On the left, raw data originate from logbooks and observer records on board, capturing catch, effort, and biological sampling information. These datasets are then transformed into processed data, such as monthly catch and effort summaries, annual footprint overviews, and biological ratios derived from sampling. Finally, these processed products feed into estimated data used for analyses, including Catch Per Unit Effort (CPUE) indices and aggregated biological estimates.

Table 1: Data shared to support the NPFC stock assessments and scientific analyses.

Group	Data Type	Minimum Temporal Resolution	Minimum Spatial Resolution	Minimum Fleet Resolution
TWGCMSA	ALK	Quarter	EEZ areas and CA	Aggregated over all Member's fleets
TWGCMSA	Age composition	Quarter	EEZ areas and CA	Aggregated over all Member's fleets
TWGCMSA	Length composition	Quarter	EEZ areas and CA	Aggregated over all Member's fleets
TWGCMSA	Maturity ogive	Quarter	EEZ areas and CA	Aggregated over all Member's fleets
TWGCMSA	Chub and blue mackerel ratio	Annual	EEZ and CA	Aggregated over all Member's fleets
SSCBM	Chub and blue mackerel ratio	Annual		
SSCBM	Length composition	Month		
SSCBM	Length-weight	Annual		
SSCJS	Catch	Month	EEZ and CA	Gear
SSCJS	Effort	Month	EEZ and CA	Gear
SSCJS	Length composition	Month		Gear
SSCJS	Length-weight	Annual		Gear
SSCPS	Catch	Month	1 x 1 degree	Gear
SSCPS	Effort	Month	1 x 1 degree	Gear
SSCPS	Length composition	Month	1 x 1 degree	Gear
SSCPS	Age composition	Month	1 x 1 degree	Gear
SSCPS	ALK	Month		Gear
SSCBFME	Length composition	Month	Seamount	Gear
SSCBFME	Age composition	Month	Seamount	Gear
SSCBFME	Maturity ogive	Month	Seamount	Gear
SSCBFME	Effort	Decade	30" x 30"	Gear
SSCNFS	Catch	Month	1 x 1 degree	Gear
SSCNFS	Effort	Month	1 x 1 degree	Gear
SSCNFS	Length composition			Gear

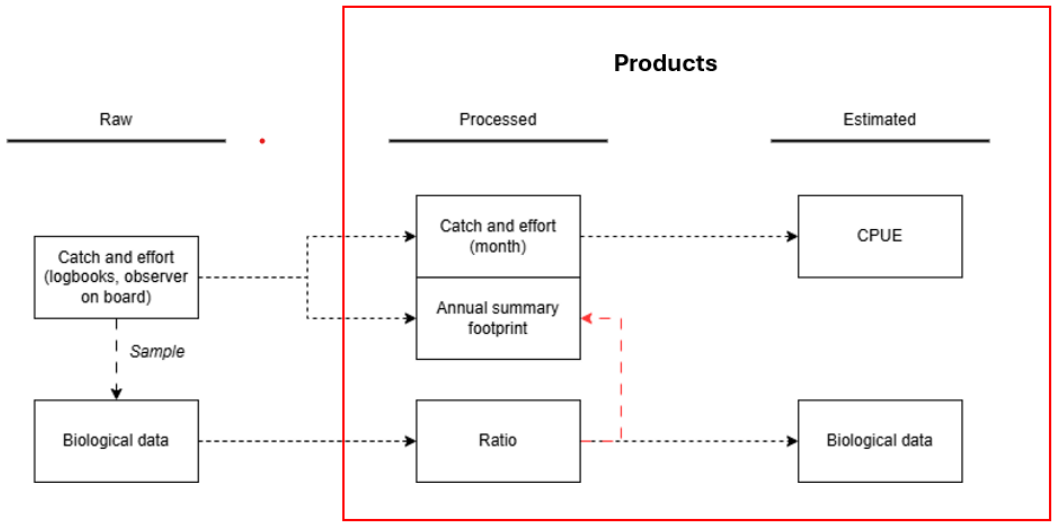


Figure 2: Schematic overview of the relationship between raw, processed, and estimated data types.

The Secretariat's analyses identified the need to harmonize existing data templates among SC subsidiary groups that handle similar data, ensuring compatibility and consistency. It was acknowledged that certain specialized datasets, such as 30x30 effort data from bottom fisheries and VME visual survey data, may not be incorporated in the initial development phase but could be accommodated in future versions. It was also noted that raw data from bottom fishery observer programs are currently not shared directly with the Secretariat, but may be provided to specific expert groups for analytical purposes. The group also discussed the potential inclusion of hyperlinks

within the database to relevant NPFC policies and protocols hosted on the NPFC website.
Table 2 shows the classification of different types of data according to their level of processing and analytical use.

Table 2: Classification of different types of data

Category	Examples
Raw data	Biological data
Processed data	Catch & effort (C&E), annual footprint, chub and blue mackerel ratio.
Estimated data	Standardized CPUE, ALK, length, age, maturity data

Criteria for inclusion in the SC database

When determining which data types should be included, the primary criterion is whether the data are used directly and routinely in stock assessments or other scientific analyses that inform management decisions. These datasets form the foundation of the SC's analytical work and must therefore be prioritized for inclusion. Additionally, data that may not currently be used in assessments but are commonly shared among Members because they provide valuable contextual or biological information could also be considered in the future.

User Roles and Confidentiality

User roles and confidentiality establish controlled access to data and system functions. Each user is assigned a specific role defining what actions they can perform, from uploading data to viewing restricted content. This role-based structure ensures data integrity, prevents unauthorized modifications, and maintains a clear audit trail of all activities. Confidentiality measures further protect sensitive or Member-specific data, allowing information to be shared securely while respecting data ownership and privacy agreements.

The access-control matrix in Annex 1 outlines user permissions following the standard CRUD model: Create, Read, Update, and Delete. These actions define what each user role can do within the various data domains, including Biological Estimates, Catch and Effort, and Ratio data. "Read" permissions allow users to view records, while "Create" and "Update" permissions enable them to add or modify data, generally restricted to information submitted by their own Member. "Delete" operations are implemented as soft deletes, meaning entries are archived rather than permanently removed, ensuring a complete audit trail. The use of the CRUD model provides a clear and consistent structure for managing data and maintaining transparency across user roles. The matrix also defines the roles within the system: Anonymous users have no access to Member-submitted data; Authenticated users can view publicly available reference information; Member Data Submitters can create, read, and update their own Member's datasets; Species Data Analysts can read data for the species assigned to them; and the Secretariat has full CRUD permissions across

all domains.

Table 3: Defined user roles and access rights.

Role	Description	Permissions	Notes
Anonymous User	A user who is not logged into the system.	Read access only to publicly available reference data (e.g., gear codes, species lists).	No access to any Member-submitted datasets.
Authenticated User	A registered user with an account but not associated with a Member for data submission.	Read-only access to non-sensitive reference data synchronised from MaM or public websites.	Cannot view or modify Member-level data.
Member Data Submitter	A user designated by a Member to upload, edit, and manage their own data submissions.	Full CRUD (Create, Read, Update, Delete*) for their **own Member's data** in all required domains.	*Delete operations are soft deletes (archive mode) to maintain an audit trail.*
Species Data Analyst	A scientifically authorised user assigned specific species for analysis.	Read access to Member-submitted data **for the species assigned to them**.	No permission to create, update, or delete Member-submitted records.
Secretariat	Administrative users responsible for system oversight, coordination, and data governance.	Full CRUD across all data domains and Members.	Oversees system integrity, quality control, and administrative management.

Data templates & reference lists

It was agreed that each data type should correspond to a single harmonized template, to be developed in close coordination with the relevant subsidiary groups. The SWG Data coordinated with SSCs, TWGs, and SWGs to ensure data harmonization and requested a focal point to be nominated in order to review the templates developed under SWG Data. This process went smoothly and the SC's subsidiary groups provided the necessary feedback which was incorporated to reflect their views.

This led to the creation of multiple templates capturing the different data types. For further

information please refer to the collaboration site where they are stored. In addition, code reference lists in a database provide standardized sets of predefined values, such as species codes, gear types, or country identifiers, that ensure consistency and accuracy across datasets (table 3). They prevent discrepancies caused by variations in naming or formatting and make it easier to validate, compare, and integrate data from multiple sources.

Table 4: Illustrative example of reference lists.

Field	Description	Example(s)
SizeType	Measurement types and definitions	FL – Fork length; TL – Total length
NumbersUnit	Units for numbers of specimens	C – Count; K – Thousands; M – Millions
EffortUnits	Units for measuring fishing effort	kwd – Kilowatt-days; fd – Fishing days
Members	Codes and names of Members	CA – Canada; EU – European Union; JP – Japan
Species	Codes, names, and references	MAS – Scomber japonicus; SAP – Cololabis saira

Harmonizing and establishing definitions across all NPFC systems

During the meetings, the importance of adopting a common terminology to ensure consistency and comparability across the data submitted by Members was identified. Differences in terminology, such as variations in how effort, catch categories, or weight types are defined, can lead to misinterpretations and hinder the integration of datasets from different sources. Establishing standardized definitions and terms will make it possible to accurately compare, combine, and analyze data across Members. To that end, the SWG Data proposes to the SC that the following definitions are considered for adoption among all subsidiary bodies.

Table 5: Proposed definitions for weight and effort metrics.

Metric	Definition
Fishing days	Fishing days. Total time spent actively fishing (excludes transit, searching, or any other non-fishing activities) expressed in days.
Vessel days	Vessel days. Total days the vessel is at sea, including transit, searching and any other non-fishing activities.
Live weight	The weight of the whole fish as caught, prior to any processing (i.e. before gutting, heading, or removal of other parts).
Gutted weight	The weight of the fish after removal of internal organs (viscera), but before further processing such as heading, filleting, or skinning.

Coordination and Governance

It is important to establish a process for the inclusion of new codes in the official code lists is essential to ensure both flexibility and consistency in database management. A practical approach would be for each SC subsidiary group to propose new codes to the Secretariat whenever gaps or new needs are identified. The Subsidiary groups will bear the responsibility to verify the new proposed codes in terms of relevance, uniqueness, and alignment with the existing coding structure before formally integrating them into the master lists. This procedure ensures that the database can evolve to reflect emerging data requirements while maintaining a coherent and standardized system across all data submissions and analyses.

Deliverables and Timeline

Figure 3 illustrates the stepwise process for developing, testing, and releasing the SC database. The first draft of the templates was presented at SWG Data 03. These initial templates were then shared with Members and the SC subsidiary bodies for review under the Members Review Templates stage. Members provided feedback, which was compiled and circulated. Based on this input, the Prototype Development phase begins, during which the templates and database interface are further designed and adjusted.

Following prototype completion, Internal Testing will be conducted to verify functionality, consistency, and data handling. This stage may feed back into prototype development if issues or improvements are identified. It is expected that a manual will be developed at this phase to assist Members to populate the database. The process then moves to Training (expected in January 2026), where users are familiarized with the new system and templates, and finally to Release, marking the official deployment of the tested and approved database tools.

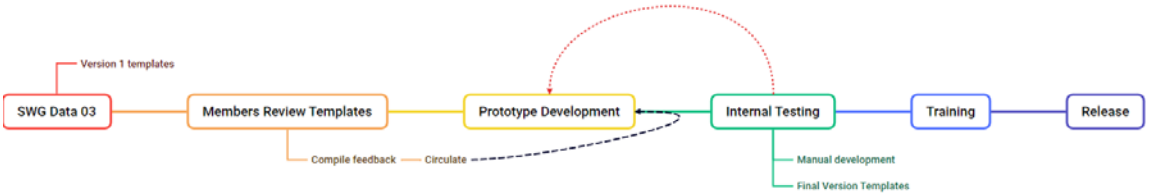


Figure 3: Process for developing, testing, and releasing the SC database.

Future developments

Further development of the database may include several enhancements to improve functionality, accessibility, and data transparency. These could involve the implementation of Data Dictionary tabs providing detailed field-level descriptions, and Charts tabs displaying Member submission coverage and other key visual summaries. Additional analytical charts and reports may also be developed to support more comprehensive data exploration. Technical improvements could include

synchronization of data with the NPFC Data Warehouse to ensure consistency across systems, interface translation to support languages other than English, and interfaces for retrieving previous versions of updated records to enhance traceability. Together, these developments would strengthen usability and support broader participation and analytical capacity within the SC framework.

3. Review of the Draft CMM on Minimum Data Standards

The SWG Data was tasked with reviewing the EU-proposed draft CMM on Minimum Data Standards. Member feedback noted that many fields requested are not collected in logbooks, and detailed haul or tow data can only be realistically collected by observers. Fields for 'data source' (fisher or observer) and precise definitions of 'live weight' and 'fishing days' were recommended. A questionnaire was circulated after the second meeting to capture Members' data collection practices, with responses due by 15 September 2025 for compilation before SC10.

Feedback to the CMM questionnaire was submitted by Canada, China, Chinese Taipei, Japan, Korea, Russia and the EU using the NPFC Minimum Standards Questionnaire templates. Each file included multiple annexes corresponding to data domains, such as general data collection, gear-specific information, and annual catch data. The responses were reviewed to determine which fields were completed, which were left blank, and where Members added written comments. All Members completed most annexes. The majority of fields contained "Yes", showing that Members were collecting the information. Blank or "NA" cells were primarily associated with annexes that were not relevant to a Member's fisheries. Only a small number of "No" or "Yes/No" entries were found. Across all submissions, approximately 70–75% of all cells contained "Yes", about 10–15% contained "No" or "Yes/No", and the remainder were blank or "NA".

Annex summaries

Annex 1 – All Fishing Activities

All Members completed this annex, and almost all fields were marked "Yes". A few fields were left blank or marked "NA" where specific identifiers or vessel categories did not apply. Several Members added comments clarifying that some identifiers (for example owner names or internal vessel codes) are not publicly shared or that the data exist in national systems but are not transmitted in this exact format. In addition, private and confidential information (such as the address of the master), it is not needed for scientific purposes.

Annex 2 – Trawl

This annex was completed by all Members with trawl fisheries. Most responses were "Yes", confirming that trawl activity, catch, and sampling data are available. Blank or "NA" cells mainly appeared in submissions from Members without trawl operations. A small number of "No" responses were found in fields related to discarded weight. Comments commonly stated that the

information in the logbooks focuses on main target species.

Annex 3 – Purse Seine

Annex 3 was completed by Members operating purse-seine fleets, including Japan, Korea, and Chinese Taipei. Nearly all fields were filled with “Yes”. Occasional “No” or “Yes/No” responses appeared in data-storage and reporting sections. Comments indicated that these data are collected through national observer programmes and stored within existing national institutes. Overall, this annex showed consistently high completeness and clear data structure across Members.

Annex 4 – Jigging

Only some Members operate jigging fisheries, and this annex was therefore partially completed. Where applicable, most fields contained “Yes”, but a few “No” entries were recorded. Comments referred to manual data entry still being used for part of the data flow and to ongoing efforts to move to digital reporting systems. The annex shows that the required information exists but that electronic data capture is still being expanded.

Annex 5 – Stick-Held Dip Net

Few Members use this gear, so most submissions marked this annex as “NA”. Where it was completed, nearly all fields were “Yes”. No explanatory comments were recorded. The annex was generally considered not relevant for most Members’ fisheries.

Annex 6 – Bottom Gear (Longline, Trap, Gillnet)

This annex was relevant only for Members with bottom-fishing operations. It was filled in by a small number of Members and marked “NA” by others. The completed sections contained a mixture of “Yes” and blank cells. Comments mainly stated that no vessels operate these gear types under NPFC authorization or that such activities occur only domestically. Where applicable, Members provided information indicating that data exist for these gears but are limited in spatial scope. It should be noted that the Annex for the trap gear was not included initially and it was proposed to be added by a Member, given that there are fisheries using this type of gear in NPFC.

Annex 7 – Annual Catch Data

All Members completed Annex 7, and almost every field was marked “Yes”. This annex showed the highest overall consistency. Only a few “NA” or blank cells appeared, mostly in optional metadata sections. The structure and completeness of this annex indicate that annual catch information is available for all Members in the format requested.

Completion by annex

All Members completed Annex 1 (All Fishing Activities) and Annex 7 (Annual Catch Data). Annexes 2–6 were completed to varying degrees, depending on whether the described gear types

or activities occurred in that Member's fisheries. Blank or "NA" cells mainly reflected non-applicability rather than lack of information. Comments were found in specific fields across the questionnaires. These were typically used to describe implementation status, applicability, or the type of national system used. Annex 2 provides a summary of the fields where responses differed from "Yes," including the associated comments and their general content.

4. Recommendations to the Scientific Committee (SC10)

- The SWG Data suggests that the Scientific Committee consider adopting the common terminology discussed by the group regarding effort, gears, and the definitions of live and gutted weight.
- The SWG Data suggests that the Scientific Committee and its subsidiary bodies share information regarding the maturity scales and corresponding stages used at a national scale in order to develop the code list.
- The SWG Data suggests that the Scientific Committee endorses a 4-hour training workshop in January 2026 on the use of the database.
- The SWG Data suggests that the Scientific Committee considers continuing the SWG Data for one more year to finalize the development of the SC database.
- The SWG Data suggests that the Scientific Committee considers the future of the group and it's scope beyond the development of the database.

ANNEX 1

NPFC Scientific Data Repository System Design Specification

1 Objectives

The aim of this web portal application is to establish a centralised repository of scientific datasets provided by NPFC Members. The repository is to enforce the use of standard data reporting templates for all Members and facilitate the extraction of data for analytical needs, with appropriate access controls.

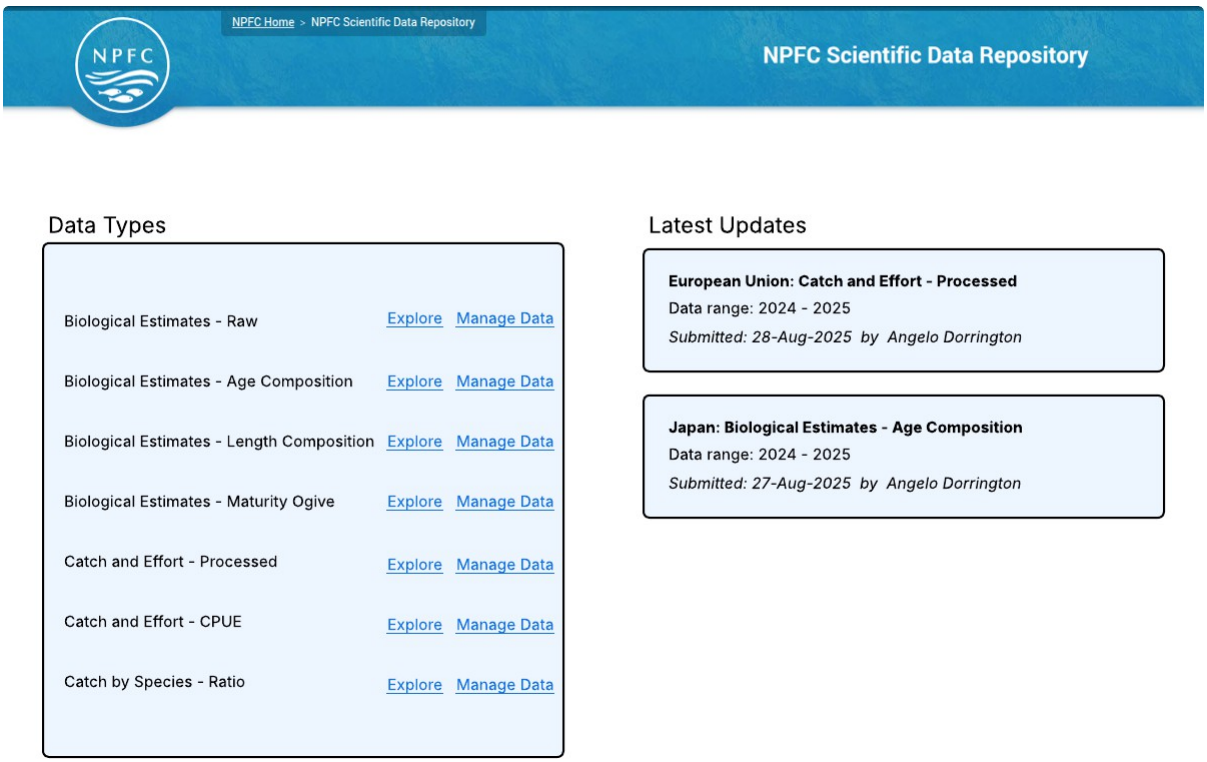
Seven data types have been defined to be supported by the repository:

Biological Estimates - Raw
Biological Estimates - Age Composition
Biological Estimates - Length Composition
Biological Estimates - Maturity Ogive
Catch and Effort - Processes Catch and Effort - CPUE
Catch by Species - Ratio

2 User Operation

2.1 Exploring and Extracting Data

After logging into the portal, users will be presented with a landing page where they can navigate to explore the data of any of the supported data types.



After selecting a data type the user will be presented with an ‘Explore Data’ page listing the 100 latest records for that dataset, with pagination to allow exploring through more data records. The explore data page will allow for:

Filtering data by year (defaulting to current year)

Filtering data by submitting Member

Filtering data by species

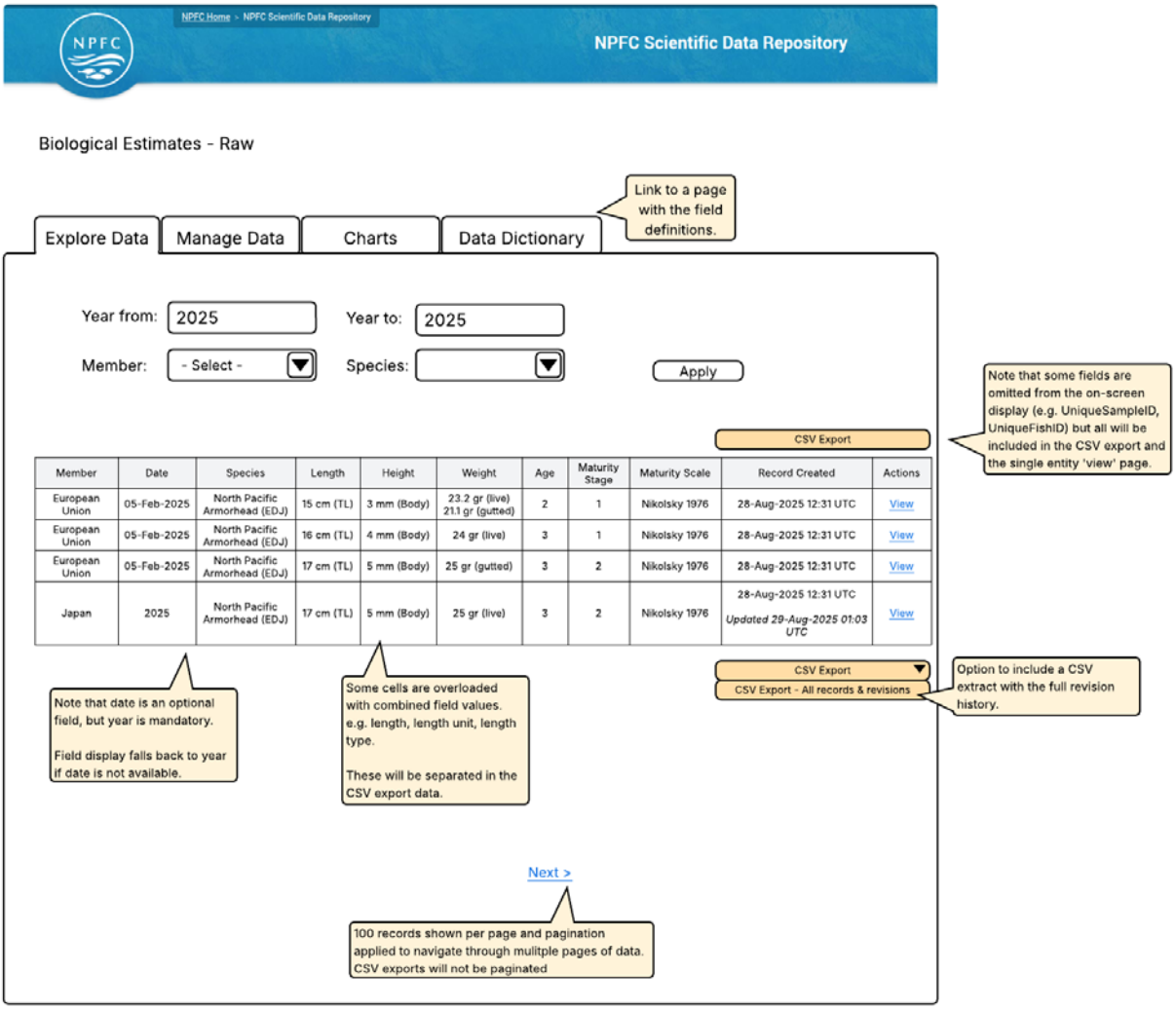
Exporting data records into CSV format spreadsheets

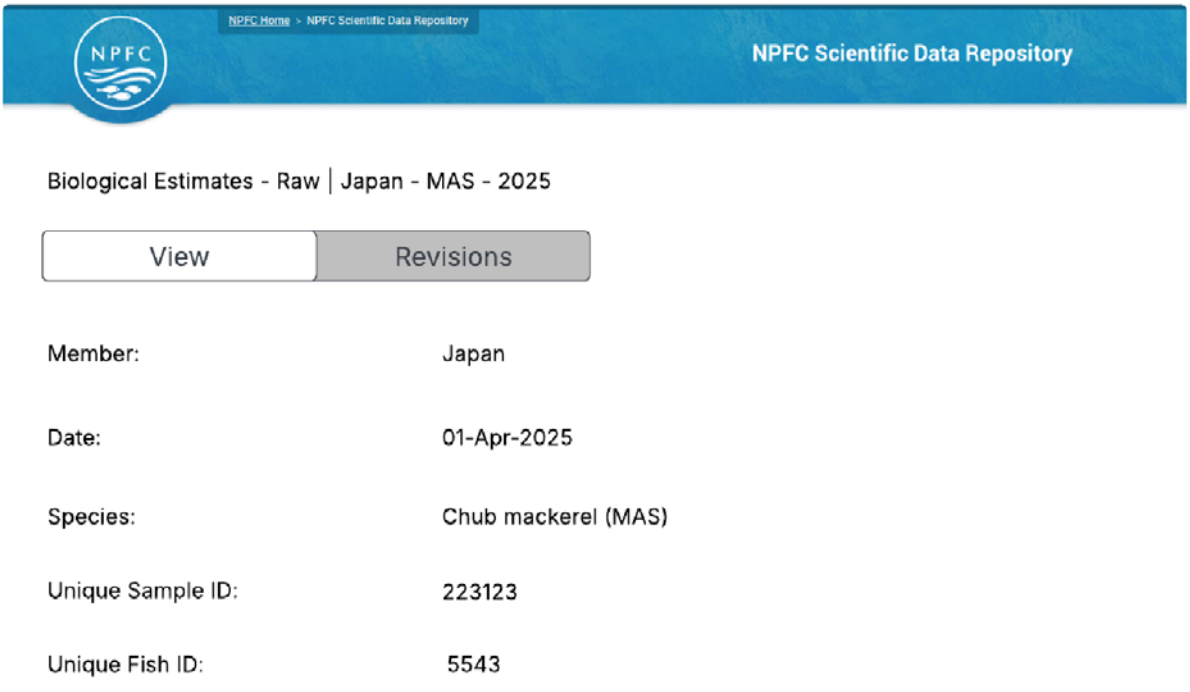
The CSV export will respect the applied filters.

The CSV export will include all data columns for the data record, even where the ‘Explore Data’ tab shows only a subset of data columns due to the restricted screen space on a webpage.

An additional CSV export that includes the data revision history, i.e. one row per revision of a record.

Viewing a single record page - this is particularly useful for viewing all data fields of a particular record where the ‘Explore Data’ tab shows only a subset of data columns due to the restricted screen space on a webpage.

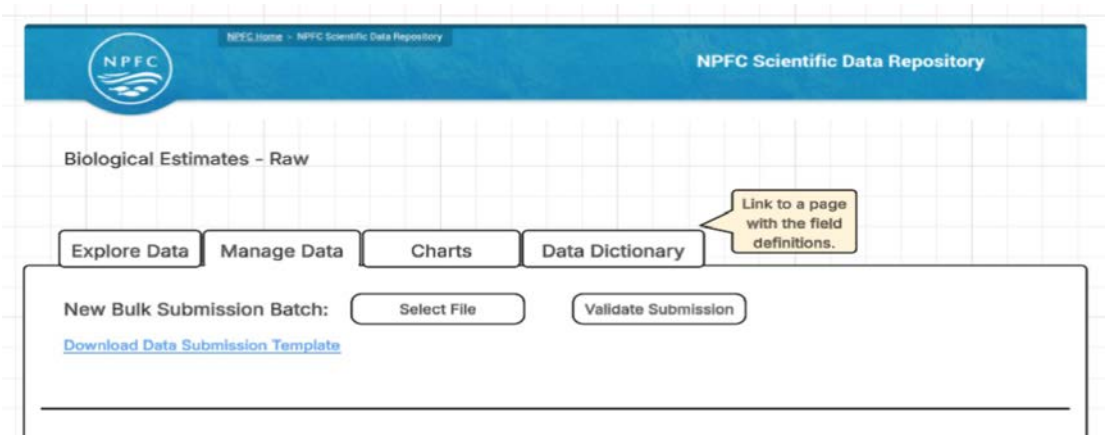

NPFC Home > NPFC Scientific Data Repository
NPFC Scientific Data Repository
Biological Estimates - Raw
Link to a page with the field definitions.
Explore Data
Manage Data
Charts
Data Dictionary
Year from: 2025
Year to: 2025
Member: - Select -
Species:
Apply
CSV Export
Note that some fields are omitted from the on-screen display (e.g. UniqueSampleID, UniqueFishID) but all will be included in the CSV export and the single entity 'view' page.
Member | Date | Species | Length | Height | Weight | Age | Maturity Stage | Maturity Scale | Record Created | Actions
European Union | 05-Feb-2025 | North Pacific Armorhead (EDJ) | 15 cm (TL) | 3 mm (Body) | 23.2 gr (live) 21.1 gr (gutted) | 2 | 1 | Nikolsky 1976 | 28-Aug-2025 12:31 UTC | View
European Union | 05-Feb-2025 | North Pacific Armorhead (EDJ) | 16 cm (TL) | 4 mm (Body) | 24 gr (live) | 3 | 1 | Nikolsky 1976 | 28-Aug-2025 12:31 UTC | View
European Union | 05-Feb-2025 | North Pacific Armorhead (EDJ) | 17 cm (TL) | 5 mm (Body) | 25 gr (gutted) | 3 | 2 | Nikolsky 1976 | 28-Aug-2025 12:31 UTC | View
Japan | 2025 | North Pacific Armorhead (EDJ) | 17 cm (TL) | 5 mm (Body) | 25 gr (live) | 3 | 2 | Nikolsky 1976 | 28-Aug-2025 12:31 UTC Updated 29-Aug-2025 01:03 UTC | View
CSV Export
CSV Export - All records & revisions
Option to include a CSV extract with the full revision history.
Note that date is an optional field, but year is mandatory.
Field display falls back to year if date is not available.
Some cells are overloaded with combined field values. e.g. length, length unit, length type.
These will be separated in the CSV export data.
Next >
100 records shown per page and pagination applied to navigate through mulitple pages of data. CSV exports will not be paginated


NPFC Home > NPFC Scientific Data Repository
NPFC Scientific Data Repository
Biological Estimates - Raw | Japan - MAS - 2025
View
Revisions
Member: Japan
Date: 01-Apr-2025
Species: Chub mackerel (MAS)
Unique Sample ID: 223123
Unique Fish ID: 5543

Length:	18
Length Unit:	Centimeters
Length Type:	Total Length (TL)
Height:	9
Height Unit:	Centimeters (cm)
Height Type:	Body (BH)
Live Weight:	-
Live Weight Unit:	-
Gutted Weight:	-
Gutted Weight Unit:	-
Age:	-
Maturity Stage:	-
Gonad Weight:	-
Gonad Weight Unit:	-

2.2 Loading Data

For each data type, users with sufficient access rights will be able to go to a ‘Manage Data’ tab. From here users will be able to bulk-load data by uploading a CSV spreadsheet of data records they wish to submit.



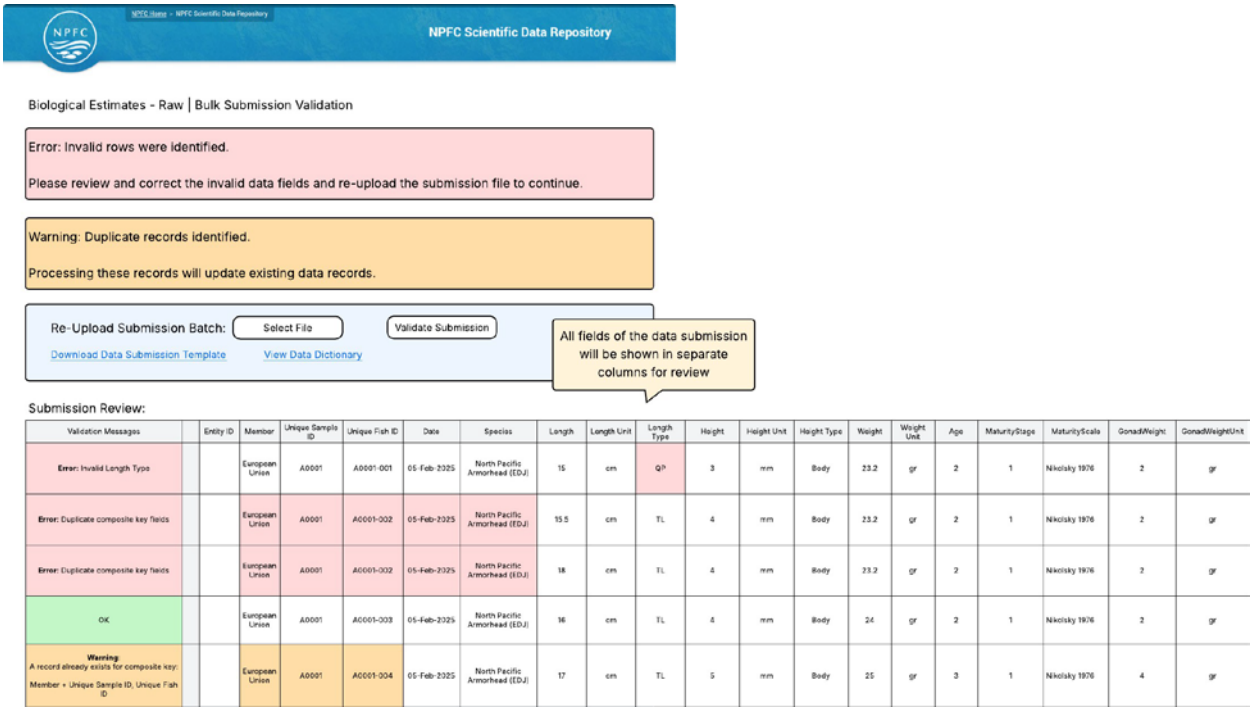
The uploaded spreadsheet will need to align with the template defined for that data type. An example template CSV file will be available for download, which will contain the correct column headers for data loading and some example records.

To further assist users to provide data in the correct format a ‘Data Dictionary’ tab will be available for each data type, which will contain detailed descriptions for each field.

After uploading a CSV file with data to load, the user will be taken to a validation / confirmation page.

If there are any validation errors that will restrict at least one row of data from being loaded then the user will be presented with information identifying which rows did not pass validation and they will not be able to proceed with the data load until they re-upload a file that successfully passes validation.
Examples of errors that will disallow the data batch to be loaded include:

- Missing mandatory fields.
- Fields with invalid options.
- Numeric values outside of allowed ranges.
- Multiple rows with identical composite key fields.



Validation Messages	Entity ID	Member	Unique Sample ID	Unique Fish ID	Date	Species	Length	Length Unit	Length Type	Height	Height Unit	Height Type	Weight	Weight Unit	Age	MaturityStage	MaturityScale	GonadWeight	GonadWeightUnit
Error: Invalid Length Type		European Union	A0001	A0001-001	05-Feb-2025	North Pacific Armorhead (EDJ)	15	cm	QP	3	mm	Body	23.2	gr	2	1	Nikolsky 1976	2	gr
Error: Duplicate composite key fields		European Union	A0001	A0001-002	05-Feb-2025	North Pacific Armorhead (EDJ)	15.5	cm	TL	4	mm	Body	23.2	gr	2	1	Nikolsky 1976	2	gr
Error: Duplicate composite key fields		European Union	A0001	A0001-002	05-Feb-2025	North Pacific Armorhead (EDJ)	18	cm	TL	4	mm	Body	23.2	gr	2	1	Nikolsky 1976	2	gr
OK		European Union	A0001	A0001-003	05-Feb-2025	North Pacific Armorhead (EDJ)	16	cm	TL	4	mm	Body	24	gr	2	1	Nikolsky 1976	2	gr
Warning: A record already exists for composite key: Member + Unique Sample ID, Unique Fish ID		European Union	A0001	A0001-004	05-Feb-2025	North Pacific Armorhead (EDJ)	17	cm	TL	5	mm	Body	25	gr	3	1	Nikolsky 1976	4	gr

If there are no strict validation errors there may still be some data issues that trigger the presentation of warnings to the user, but do not stop them from continuing with the data load.

An example of a warning scenario is where composite key fields on a submitted data record match with an existing data record, identifying that the submitted record is a duplicate. In this scenario the user can choose to continue with the data load, which will result in the existing record being updated rather than a new record being created.

However, if a row is an **exact match** with a record already in the database, this row will simply be skipped and the existing row will be left untouched.



If there are no errors or warnings identified during the validation process, all rows will be marked with a green “Ok” message and the user can proceed with the loading operation.

2.3 Updating Data

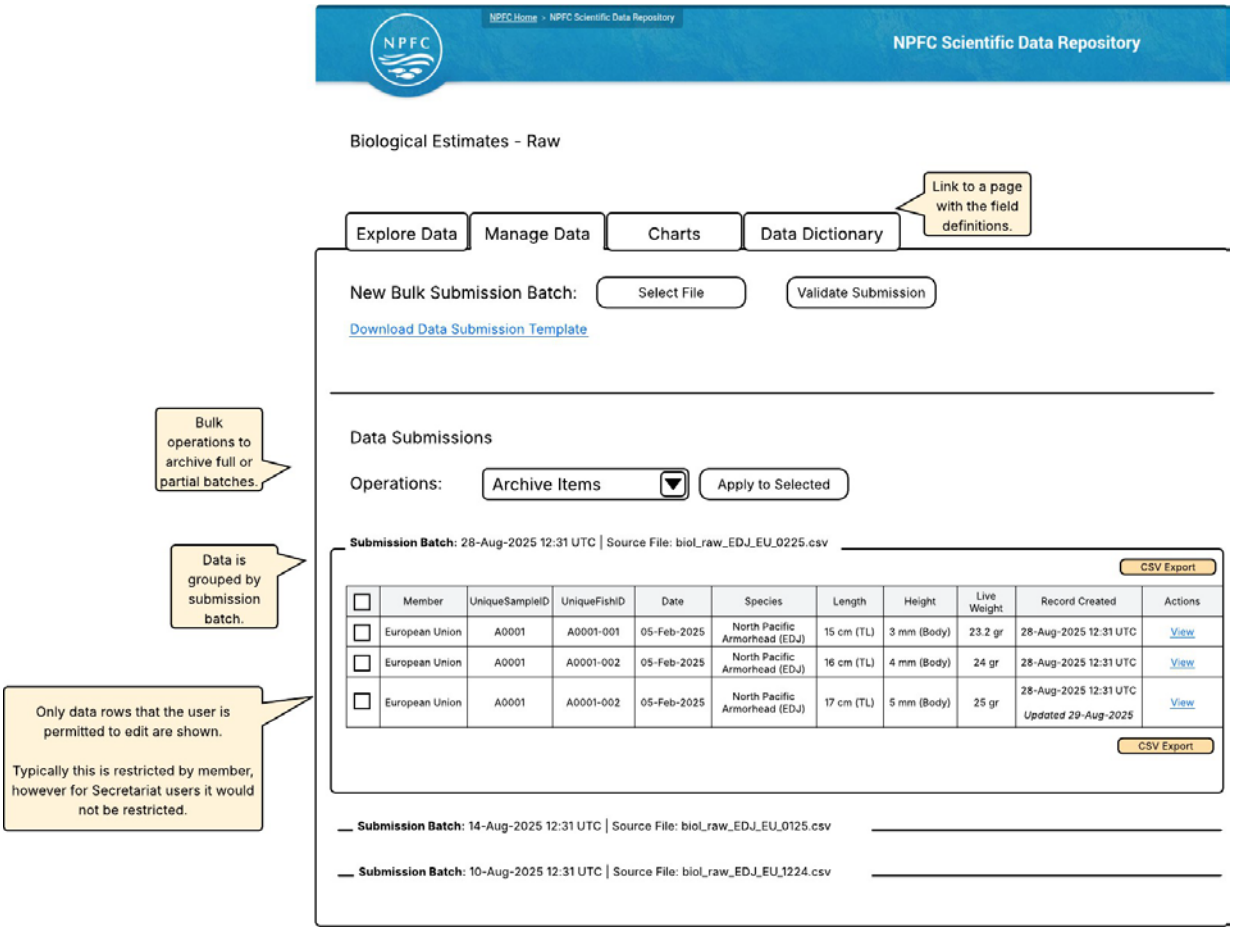
If previously submitted data is found to be incorrect, or otherwise needs to be revised, it can be updated in several different ways.

a) Archive the old records and then submit new records.

The ‘Manage Data’ tab will provide data submitter users with the option to archive previously submitted

records, either based on selecting an upload batch or by selecting individual records.

Note that on the ‘Manage Data’ tab, users will only be presented with the rows that they have permission to edit or archive, which in most cases will be the rows submitted by their own Member country.



After the old records are archived, corrected records can be submitted.

b) Update operation during bulk CSV submission.

If a data row in a CSV bulk submission batch contains a value in the Entity ID field, it will be interpreted as intending to update the existing row identified by that Entity ID.

Similarly, if composite key values in a data row match that of an existing data record it will be identified as a duplicate and handled as an update operation.

The validation process will check that the user has sufficient permission to update the identified record and a warning will be presented to the user, requiring the user to confirm to proceed with the update.

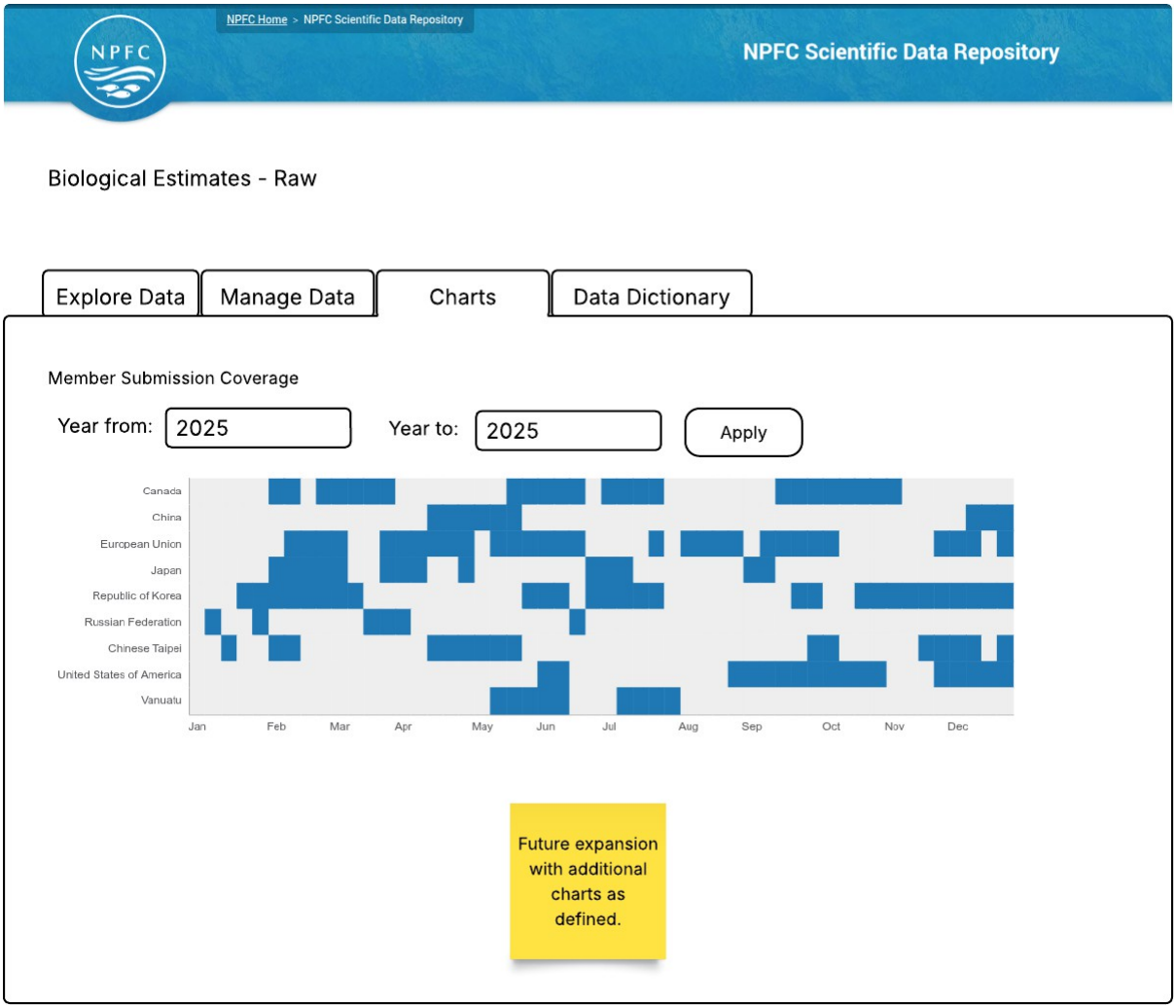
If an existing record is updated, the database will maintain a revision history such that an audit trail of changes is maintained in the database. At this stage it is however not expected for the revision history to be available through the application user interface.

2.4 Scientific Analysis

It is expected that most data analysis will occur external to this application. The data repository portal will facilitate users with sufficient access rights to extract data from the repository in CSV format for external processing.

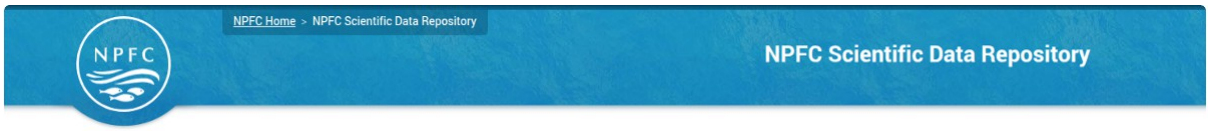
The data repository portal can however contain a ‘Charts’ tab for each data type. A first step may be for this tab will contain only a single chart, which will summarise the member submission coverage of the stored data using the Member, Year, Season and Date fields.

The Charts tab may be an area for future enhancement through the inclusion of other analytical outputs such as data driven charts.



2.5 Data Dictionary

A Data Dictionary tab will be available for each data type and will present the definition of each data field included in that data type.



Biological Estimates - Raw

Explore Data | Manage Data | Charts | Data Dictionary

Field	Mandatory	Description	Allowed Values
Member	Y	ISO 2-char code representing the Member	
Date	Y	01-Jan-2000 format.	
Species	Y	The species 3-alpha code	See NPFC species list
UniqueSampleID	Y	Unique identifier for the sample	
UniqueFishID	Y	Unique identifier for the individual measured	
Length		The length of the individual	
LengthType		The type of the length measured	FL | Fork length TL | Total length SL | Standard length ML | Mantle length CL | Carapace length
LengthUnit		The unit corresponding to the length	mm | Millimetres cm | Centimetres m | Metres
Height		The height of the individual	mm | Millimetres cm | Centimetres m | Metres
HeightType		The type of the height measured	BH | Body height
HeightUnit		The unit corresponding to the height measured	mm | Millimetres cm | Centimetres m | Metres
Weight		The weight of the individual measured	
WeightUnit		The unit corresponding to the weight measured	g | Gram kg | Kilogram t | Metric ton
Age		The age of the fish	
MaturityStage		Maturity stage depending on the scale (1-6, 1-5 etc)	
MaturityScale		The maturity scale used (e.g., Nikolsky, 1976, Yassien, 1992, national etc.)	Nikolsky, 1976 Yassien, 1992
GonadWeight		The weight of the gonad measured	
GonadWeightUnit		The unit corresponding to the gonad weight measured	g | Gram

3 User Management and Authentication

The NPFC Scientific Data Repository will allow for the following roles. Access rules are defined within the Access Control Matrix (see page 15).

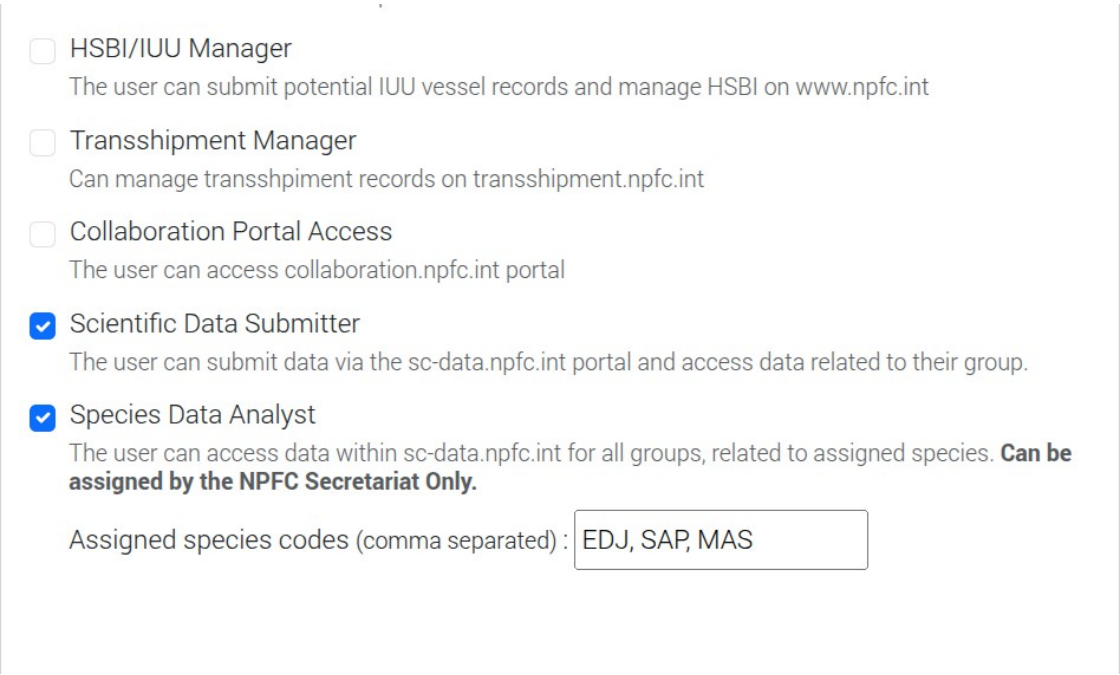
Member Data Submitter

Species Data Analyst
Secretariat

As per other NPFC web portals, user accounts will be managed through the NPFC Member Account Management (MaM) system, allowing users to access the system with a common set of credentials across different NPFC portals.

The NPFC MaM system will allow Group (Member) Admin users to delegate Member Data Submitter functional access to users within their group.

The Species Data Analyst functional role however will not be available for Group Admin users to assign themselves. This must be assigned by a NPFC User Admin. When a NPFC User Admin assigns the Species Data Analyst permission, they will also need to specify which species the user will be granted access. This is to be achieved by entering a comma separated list of species codes.



The following role mapping will be applied between the MaM system and the Scientific Data Repository.

MaM Group Security Access	SC Data Repository Role
Member : Scientific Data Submitter NEW CNCP : Scientific Data Submitter NEW	Member Data Submitter

MaM Group Security Access	SC Data Repository Role
Member : Species Data Analyst NEW CNCP : Species Data Analyst NEW Secretariat Guests: Species Data Analyst NEW (*To be assigned with relevant species codes*)	Species Data Analyst
Secretariat : Scientific Data Manager NEW	Secretariat

4 Access Control Matrix

	Anonymous	Authenticated	Member Data Submitter	Species Data Analyst	Secretariat
Group *(reference data synchronised from MaM)*			R	R	R
Species *(reference data synchronised from website)*			R	R	R
Gear Type *(reference data synchronised from website)*			R	R	R
Biological Estimates - Raw			CRUD (where data references own Member only)	R (for assigned species only)	CRUD
Biological Estimates - Age Composition			CRUD (where data references own Member only)	R (for assigned species only)	CRUD
Biological Estimates - Length Composition			CRUD (where data references own Member only)	R (for assigned species only)	CRUD
Biological Estimates - Maturity Ogive			CRUD (where data references own Member only)	R (for assigned species only)	CRUD

	Anonymous	Authenticated	Member Data Submitter	Species Data Analyst	Secretariat
Catch and Effort - Processed			CRUD (where data references own Member only)	R (for assigned species only)	CRUD
Catch and Effort - CPUE			CRUD (where data references own Member only)	R (for assigned species only)	CRUD
Catch by Species - Ratio			CRUD (where data references own Member only)	R (for assigned species only)	CRUD

C = Create, R = Read, U = Update, D = Delete

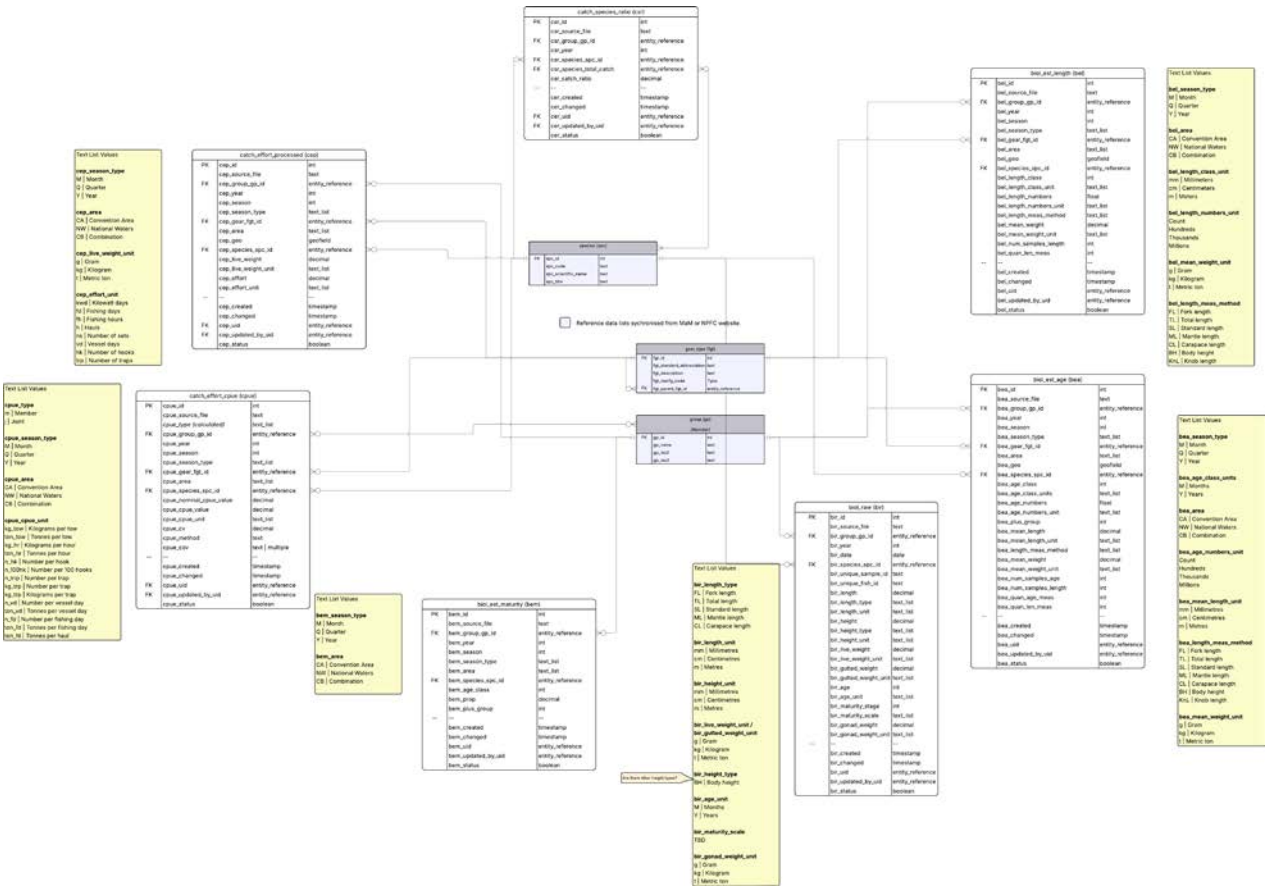
All Delete operations are to be implemented as soft delete / archive operations. Operationally this will be equivalent to a delete, but allows for an audit trail of data changes to be maintained in the back-end database.

5 Data Structure

5.1 Entity Relationships Diagram

The below entity relationships diagram details the data entities to be included in this application. The diagram includes three reference data entities. To ensure the consistency of reference data values used between different NPFC systems and datasets, the data for these three entities will be synchronised from the authoritative sources.

Dataset	Authoritative Source
Group *Note that Group is a broad term that encompasses Members, CNCPs, Observers, Secretariat. For the purposes of this application, Observer groups are not required and will not be synchronised into the scientific data repository application.*	Member Account Management (MaM) System
Gear Type	NPFC Website
Species	NPFC Website



5.2 Data Updates and Revisioning

An update operation on a data record will occur:

a) during a bulk data submission if the primary key Entity ID value is provided in a data row, identifying the row that is to be updated.

b) during a bulk data submission if a provided data row contains a composite key that matches an existing record.

During the validation step of the data loading process, primary key or composite key matches will display as a warning, making the user aware that existing records will be updated but allowing them to review and continue.

When an update operation occurs, the underlying database will maintain a revision history for that row. Each revision will also contain a timestamp and a reference to the user who performed that operation. This data revisioning strategy establishes an audit trail of data changes.



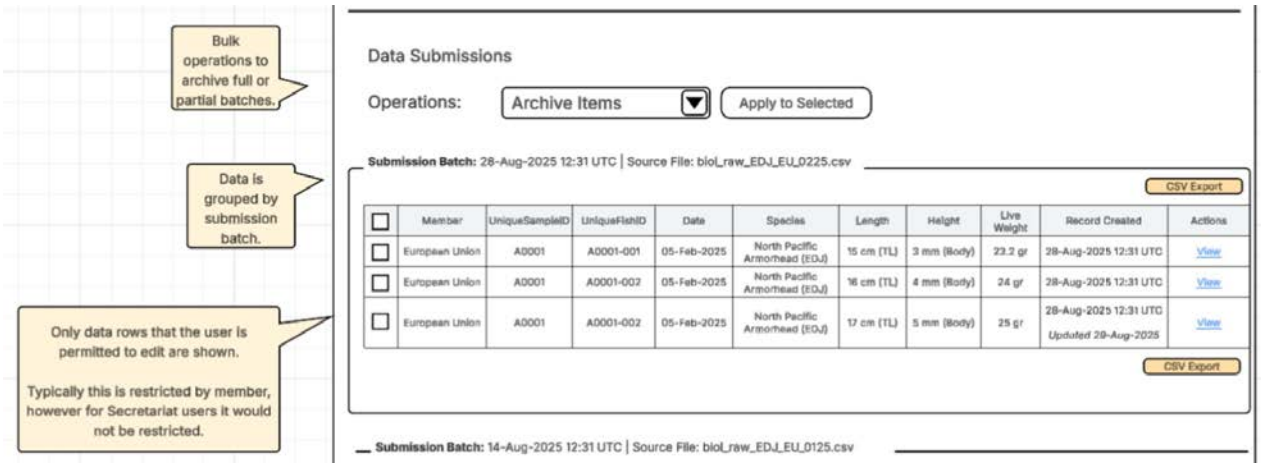
Validation Messages		Entity ID	Member	Unique Sample ID	Unique Fish ID	Date	Species	Length	Length Unit	Le
OK			European Union	A0001	A0001-001	05-Feb-2025	North Pacific Armorhead (EDJ)	15	cm	
OK			European Union	A0001	A0001-002	05-Feb-2025	North Pacific Armorhead (EDJ)	16	cm	
Warning: A record already exists for composite key: Member + Unique Sample ID, Unique Fish ID			European Union	A0001	A0001-003	05-Feb-2025	North Pacific Armorhead (EDJ)	17	cm	

5.3 Delete (Archive) Operations

If data records have been loaded with mistakes, or a Member otherwise wishes to remove some data, this can be done from the Manage Data tab for the data type in question. Data Manager users will be able to select previously uploaded records either based on a whole submission batch or by selecting individual rows, and then select the ‘Archive Items’ bulk operation.

The archive operation will remove visibility of the selected records. Effectively this this akin to a delete, however the data will maintain in the database flagged as archived, which serves as an audit trail for the changes and allows for synchronisation of the archive operation to the data warehouse.

If a Member wishes to permanently purge (hard-delete) all of their records from the database, including the audit trail of changes, this would need to be handled as a special request to the Secretariat and performed as a manual task by the database maintainer.



6 Data Type: Biological Estimates - Raw

6.1 Data Entity Definition and Validation Rules

Field	Data Type	Label	Definition	Validation Rules
bir_id	int	Entity ID	Primary key identifying the data record. System generated.	PRIMARY KEY MANDATORY
bir_group_g p_id	entity_reference	Member	The Member who has submitted the data.	FOREIGN KEY MANDATORY COMPOSITE KEY A
bir_date	date	Date	Date of the sample provided in format e.g. 01-Jan-2000	MANDATORY COMPOSITE KEY A
bir_species_spc_id	entity_reference	Species	The species	MANDATORY COMPOSITE KEY A
bir_unique_sample_id	text	Unique Sample ID	Unique identifier for the sample	MANDATORY COMPOSITE KEY A
bir_unique_fish_id	text	Unique Fish ID	Unique identifier for the individual measured	MANDATORY COMPOSITE KEY A
bir_length	decimal (8,2)	Length	The length of the individual	OPTIONAL >0

Field	Data Type	Label	Definition	Validation Rules
bir_length_t ype	text_list	Length Type	The type of the length measured	OPTIONAL Valid Options: FL | Fork length TL | Total length SL | Standard length ML | Mantle length CL | Carapace length
bir_length_u nit	text_list	Length Unit	The unit corresponding to the length	OPTIONAL Valid Options: mm | Millimetres cm | Centimetres m | Metres
bir_height	decimal (8,2)	Height	The height of the individual	OPTIONAL >0
bir_height_t ype	text_list	Height Type	The type of the height measured	OPTIONAL Valid Options: BH | Body height
bir_height_u nit	text_list	Height Unit	The unit corresponding to the height measured	OPTIONAL Valid Options: mm | Millimetres cm | Centimetres m | Metres
bir_live_wei ght	decimal (8,3)	Live Weight	The "live" (ungutted, with head, tail, fins, gills and viscera intact.) weight of the individual measured	OPTIONAL >0
bir_live_wei ght_unit	text_list	Live Weight Unit	The unit corresponding to the live weight measured	OPTIONAL Valid Options: g | Gram kg | Kilogram t | Metric ton
bir_gutted_ weight	decimal (8,3)	Gutted Weight	The weight of the fish measured from which the viscera have been removed; head, tail, fins and skin remain.	OPTIONAL

Field	Data Type	Label	Definition	Validation Rules
bir_gutted_weight_unit	text_list	Gutted Weight Unit	The unit corresponding to the gutted weight	OPTIONAL **Valid Options:** g | Gram kg | Kilogram t | Metric ton
bir_age	int	Age	The age of the fish	OPTIONAL >0
bir_age_unit	text_list	Age Unit	Unit of the age measurement, indicating the time increment used when reading growth structures.	OPTIONAL **Valid Options:** M | Months Y | Years
bir_maturity_stage	int	Maturity State	Maturity stage depending on the scale (1-6, 1-5 etc)	OPTIONAL TBD >0
bir_maturity_scale	text_list	Maturity Scale	The maturity scale used (e.g., Nikolsky, 1976, Yassien, 1992, national etc.)	OPTIONAL **Valid Options:** TBD
bir_gonad_weight	decimal (8,3)	Gonad Weight	The weight of the gonad measured	OPTIONAL >0
bir_gonad_weight_unit	text_list	Gonad Weight Unit	The unit corresponding to the gonad weight measured	OPTIONAL **Valid Options:** g | Gram kg | Kilogram t | Metric ton

COMPOSITE KEY A

bir_group_gp_id

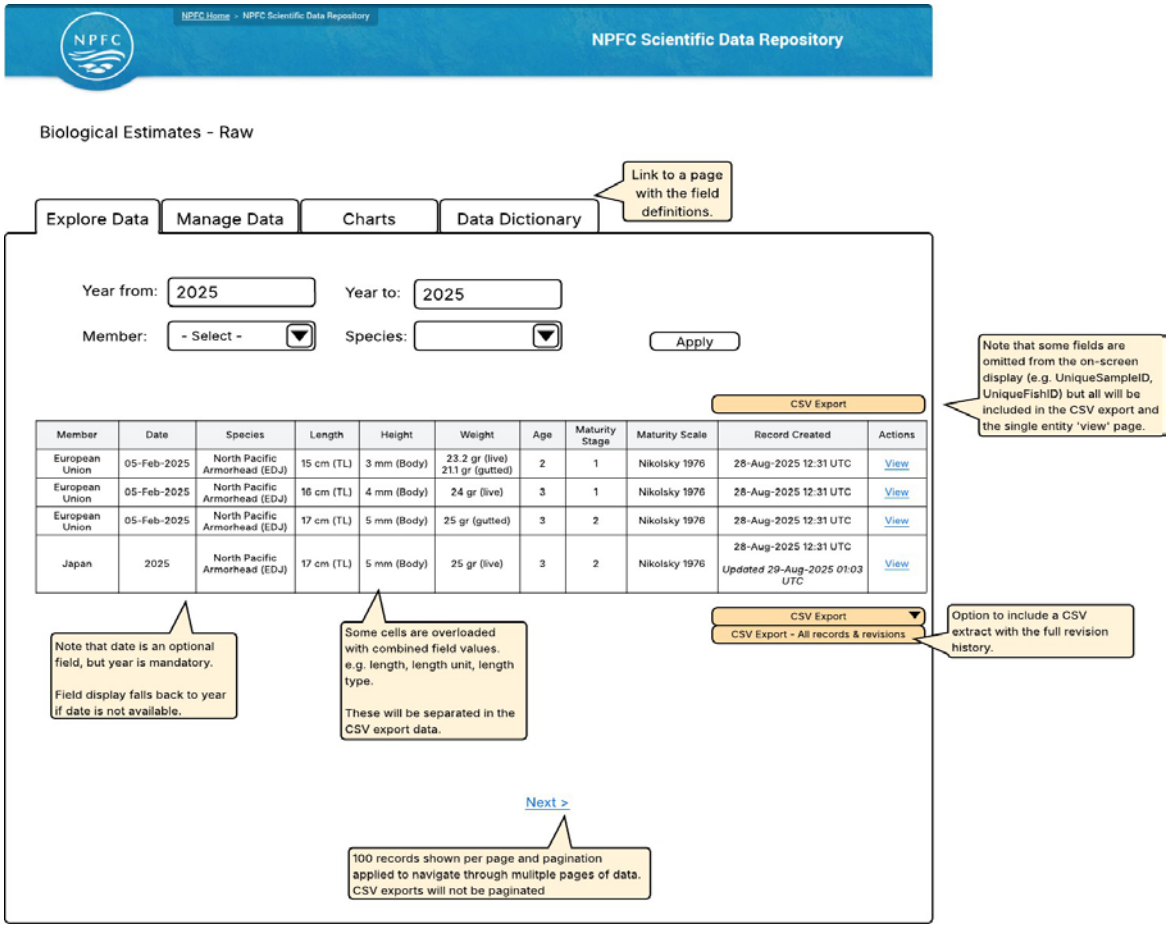
bir_unique_sample_id

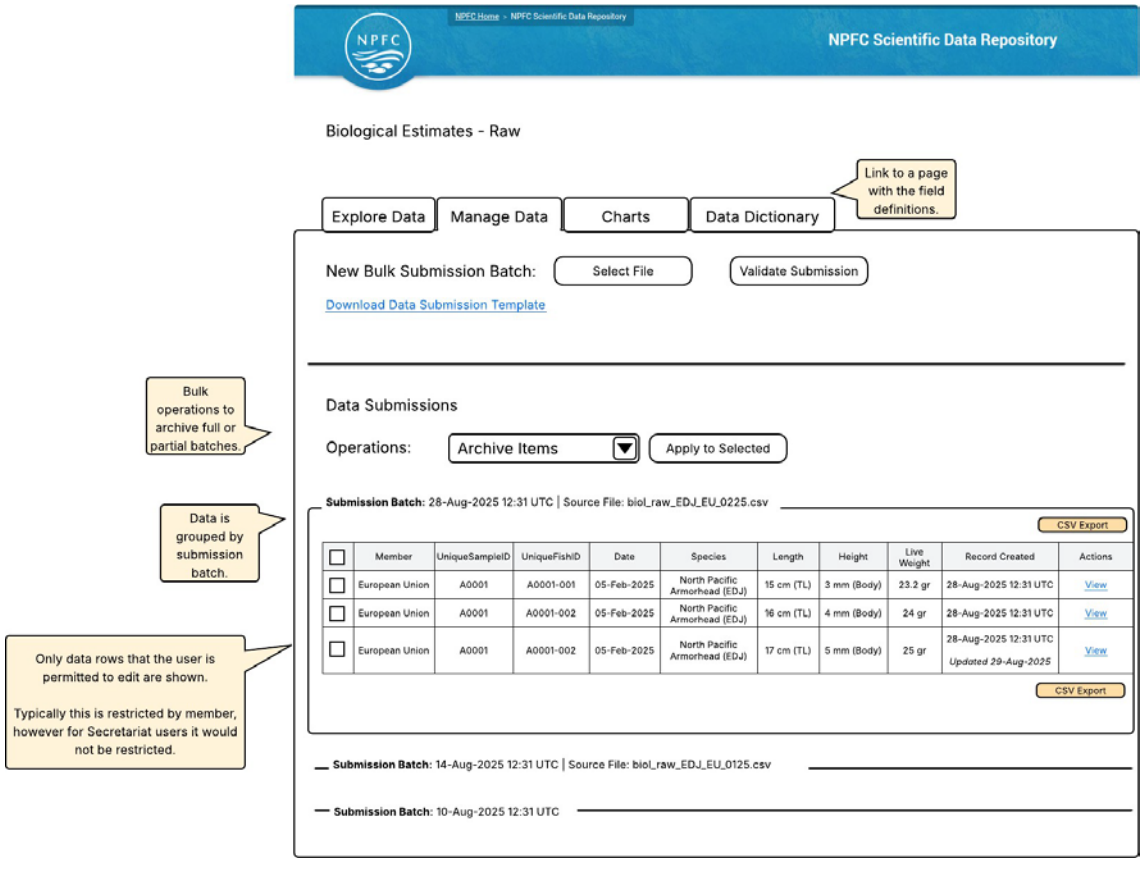
bir_unique_fish_id

bir_date

bir_species_spc_id

6.2 User Interface Wireframes





7 Data Type: Biological Estimates - Age Composition

7.1 Data Entity Definition and Validation Rules

Field	Data Type	Label	Definition	Validation Rules
bea_id	int	Entity ID	Primary key identifying the data record. System generated.	PRIMARY KEY MANDATORY
bea_group_gp_id	entity_reference	Member	The Member who has submitted the data.	FOREIGN KEY MANDATORY COMPOSITE KEY A
bea_year	int	Year	The year of the data collection.	MANDATORY 4 digits > 2000 COMPOSITE KEY A
bea_season	int	Season	The temporal aggregation level of the data. Can be the same as the year of the data collection	MANDATORY If season_type is month, value must be between 1 and 12. If season_type is quarter, value must be between 1 and 4. If season_type is year, value must match the year field. COMPOSITE KEY A
bea_season_type	text_list	Season Type	The type of temporal aggregation level. E.g., if the estimation is done on a quarter basis, then the SeasonType is Quarter	MANDATORY **Valid Options** M | Month Q | Quarter Y | Year COMPOSITE KEY A
bea_gear_fgt_id	entity_reference	Gear Type	The fishing gear type based on the ISSCFG list.	MANDATORY COMPOSITE KEY A

Field	Data Type	Label	Definition	Validation Rules
bea_area	text_lis t	Area	The area	MANDATORY **Valid Options** CA | Convention Area NW | National Waters CB | Combination COMPOSITE KEY A
bea_geo	geofiel d	Latitude / Longitud e	Decimal degree coordinates	(MANDATORY COMPOSITE KEY A ONLY if bea_gear_fgt_id references PS or NFS, otherwise optional.)
bea_spe cies_spc _id	entity_r eferen ce	Species	The species	MANDATORY COMPOSITE KEY A
bea_age _class	int	Age	The age class	MANDATORY COMPOSITE KEY A Between 1 and 99
bea_age _class_u nit	text_lis t	Age Class Unit	Unit of the age measurement, indicating the time increment used when reading growth structures.	MANDATORY COMPOSITE KEY A **Valid Options:** M | Month Y | Year
bea_age _number s	float	Age Number s	The number of fish estimated in that age class	MANDATORY >0
bea_age _number s_unit	text_lis t	Age Number s Unit	Unit of the number of fish estimated in that age class	MANDATORY **Valid Options:** Count Hundreds Thousands Millions
bea_plus _group	int	Plus Group	The age where fish of a certain age and/or older are grouped at	OPTIONAL >0

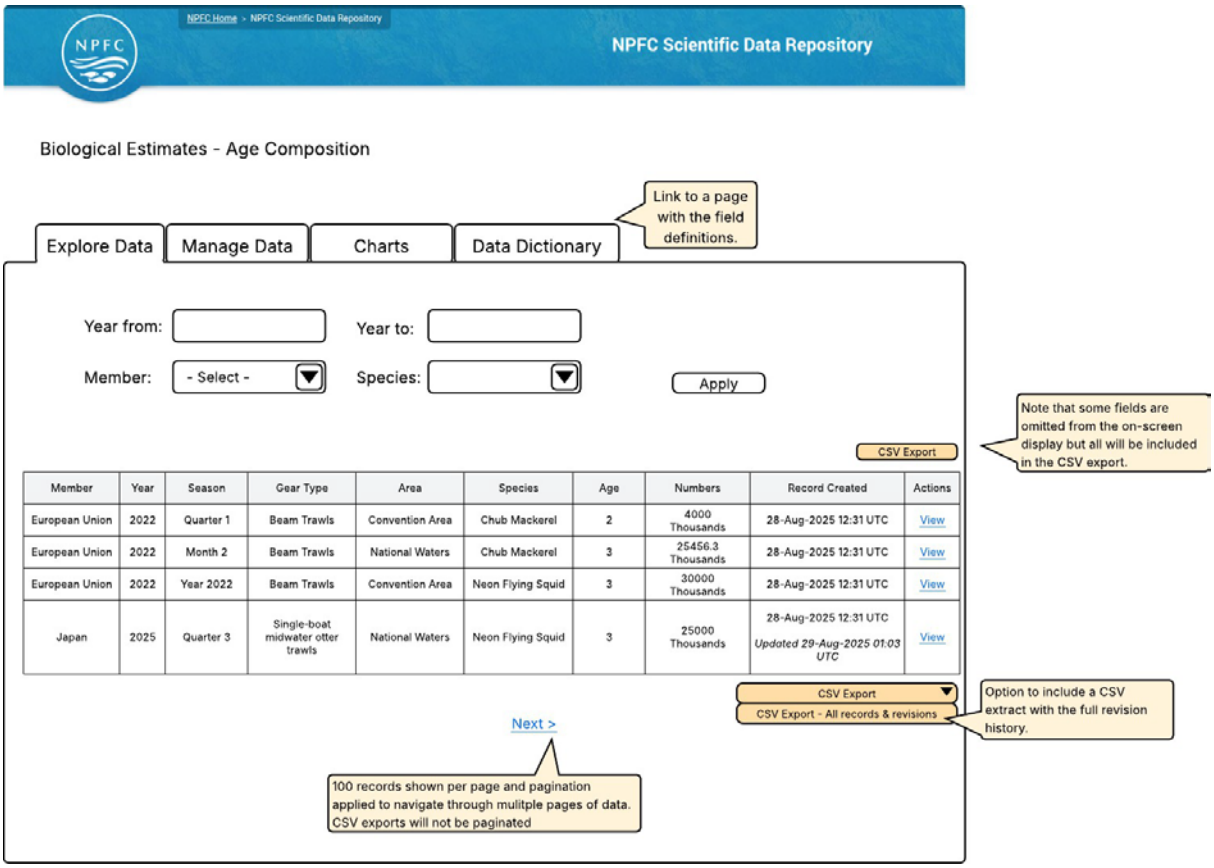
Field	Data Type	Label	Definition	Validation Rules
bea_mean_length	decimal(8,2)	Mean Length	The mean length corresponding to the age class	OPTIONAL >0
bea_mean_length_unit	text_list	Mean Length Unit	The mean length unit corresponding to the MeanLength	OPTIONAL **Valid Options:** mm | Millimetres cm | Centimetres m | Metres
bea_length_measure_method	text_list	Length Measurement Method	The measurement method of the fish. E.g., fork length, total length	OPTIONAL **Valid Options:** FL | Fork length TL | Total length SL | Standard length ML | Mantle length CL | Carapace length BH | Body height KnL | Knob length
bea_mean_weight	decimal(8,3)	Mean Weight	The mean weight corresponding to the age class	OPTIONAL >0
bea_mean_weight_unit	text_list	Mean Weight Unit	The mean weight unit corresponding to the Mean Weight	OPTIONAL **Valid Options:** g | Gram kg | Kilogram t | Metric ton
bea_num_samples_age	int	Number of Age Samples	The number of age samples for the combination of fields defined by composite key A.	OPTIONAL Between 1 and 9999
bea_num_samples_length	int	Number of Length Samples	The number of length samples for the combination of fields defined by composite key A.	OPTIONAL Between 1 and 9999
bea_quan_age_meas	int	Number of Fish Aged	The number of fish aged for the combination of fields defined by composite key A.	OPTIONAL Between 1 and 999999

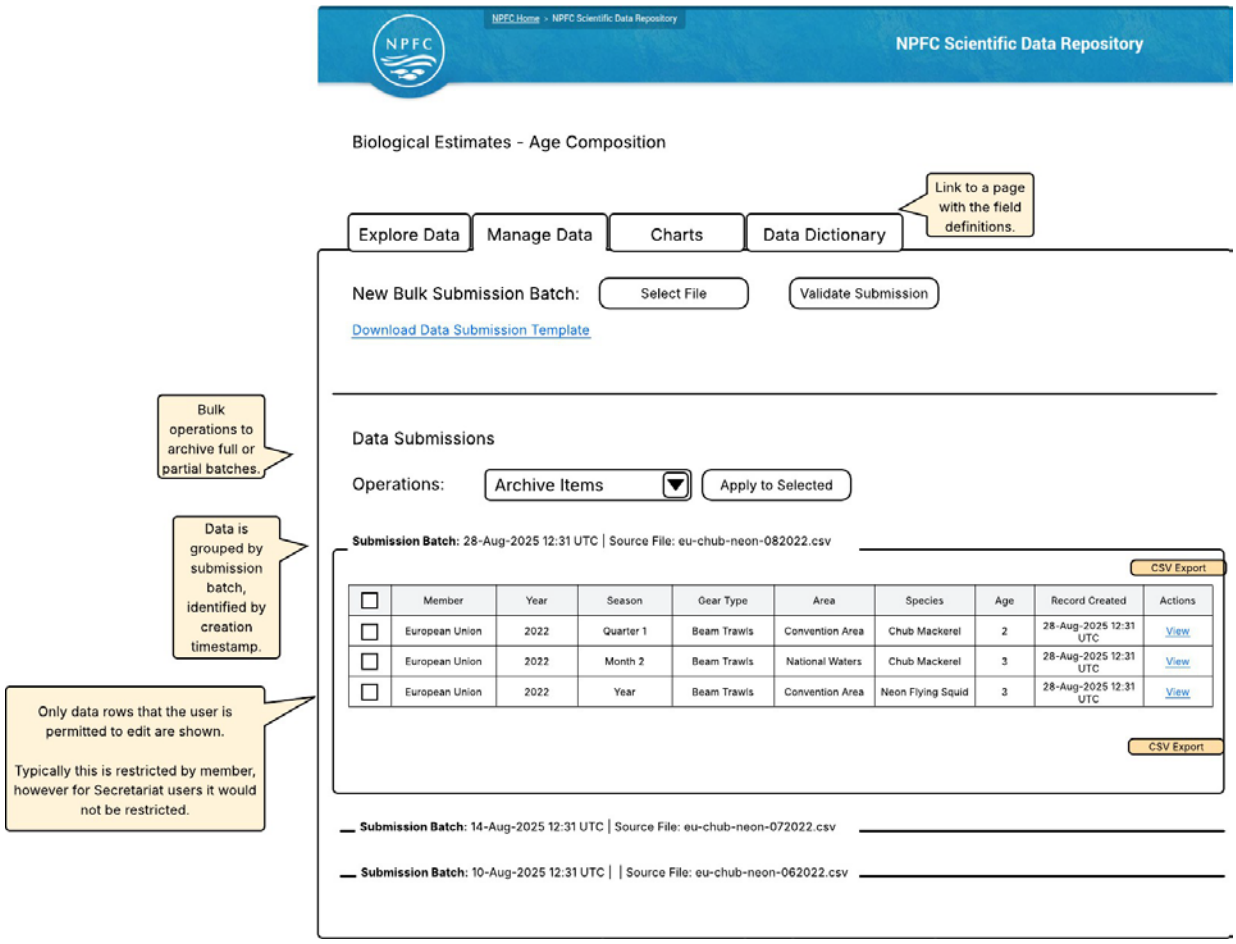
Field	Data Type	Label	Definition	Validation Rules
bea_quan_len_meas	int	Number of Fish Length Measure d	The number of fish length measured for the combination of fields defined by composite key A. Between 1 and 999999	

COMPOSITE KEY A

bea_group_gp_id bea_year
bea_season
bea_season_type bea_gear_type
bea_area
bea_species_spc_id bea_age_class
bea_lat_lon (only included in composite key for PS and NFS)

7.2 User Interface Wireframes





8 Data Type: Biological Estimates - Length Composition

8.1 Data Entity Definition and Validation Rules

Field	Data Type	Label	Definition	Validation Rules
bel_id	int	Entity ID	Primary key identifying the data record. System generated.	PRIMARY KEY MANDATORY
bel_group_gp_id	entity_reference	Member	The Member who has submitted the data.	FOREIGN KEY MANDATORY COMPOSITE KEY A
bel_year	int	Year	The year of the data collection.	MANDATORY 4 digits > 2000 COMPOSITE KEY A

bel_season	int	Season	The temporal aggregation level of the data. Can be the same as the year of the data collection	MANDATORY If season_type is month, value must be between 1 and 12. If season_type is quarter, value must be between 1 and 4. If season_type is year, value must match the year field. COMPOSITE KEY A
bel_season_type	text_list	Season Type	The type of temporal aggregation level. E.g., if the estimation is done on a quarter basis, then the SeasonType is Quarter	MANDATORY **Valid Options** M | Month Q | Quarter Y | Year COMPOSITE KEY A
bel_gear_fgt_id	entity_reference	Gear Type	The fishing gear type based on the ISSCFG list.	MANDATORY COMPOSITE KEY A

Field	Data Type	Label	Definition	Validation Rules
bel_area	text_list	Area	The area	MANDATORY **Valid Options** CA | Convention Area NW | National Waters CB | Combination COMPOSITE KEY A
bel_lat_lon	geofield	Latitude / Longitude	Decimal degree coordinates	(MANDATORY if bea_gear_fgt_id references PS or NFS, otherwise optional)
bel_species_spc_id	entity_reference	Species	The species	MANDATORY COMPOSITE KEY A
bel_length_class	int	Length Class	The length class of the fish (usually following a common method for rounding to the nearest length class in cm if measured to the nearest mm)	MANDATORY >0

bel_length_class_unit	text_list	Length Class Unit	The length unit corresponding to that length class	MANDATORY **Valid Options:** mm | Millimeters cm | Centimeters m | Meters
bel_length_numbers	float	Numbers	The number of fish estimated in that length class	MANDATORY >0
bel_length_numbers_unit	text_list	Numbers Unit	Unit of the number of fish estimated in that length class	MANDATORY **Valid Options:** Count Hundreds Thousands Millions

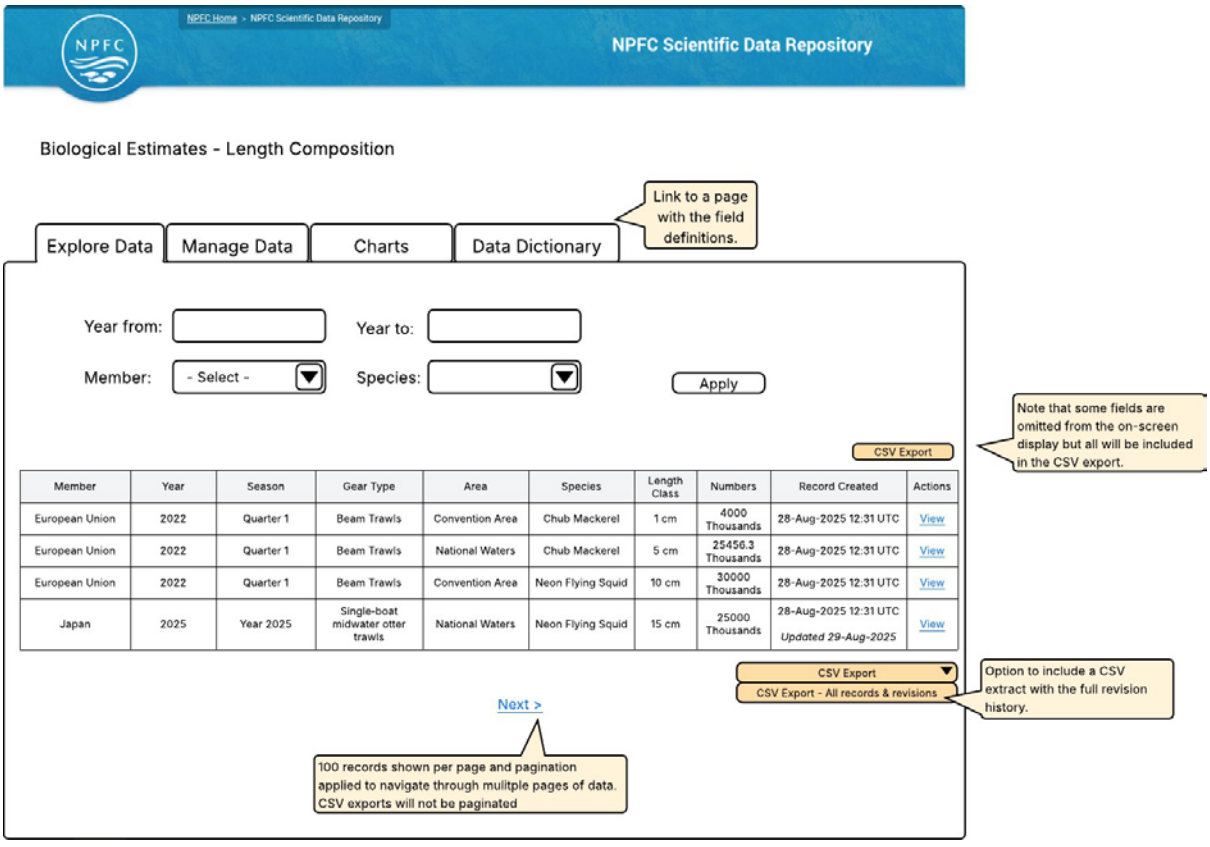
Field	Data Type	Label	Definition	Validation Rules
bel_length_meas_method	text_list	Length Measurement Method	The measurement method of the fish. E.g., fork length, total length	OPTIONAL **Valid Options:** FL | Fork length TL | Total length SL | Standard length ML | Mantle length CL | Carapace length BH | Body height KnL | Knob length
bel_mean_weight	decimal(8,3)	Mean Weight	The mean weight corresponding to the age class	OPTIONAL >0
bel_mean_weight_unit	text_list	Mean Weight Unit	The mean weight unit corresponding to the MeanWeight	OPTIONAL **Valid Options:** g | Gram kg | Kilogram t | Metric ton
bel_num_samples_length	int	Number of Length Samples	The number of age samples for the combination of Year*Season*SeasonType*Area*Fleet*Species	OPTIONAL Between 1 and 9999

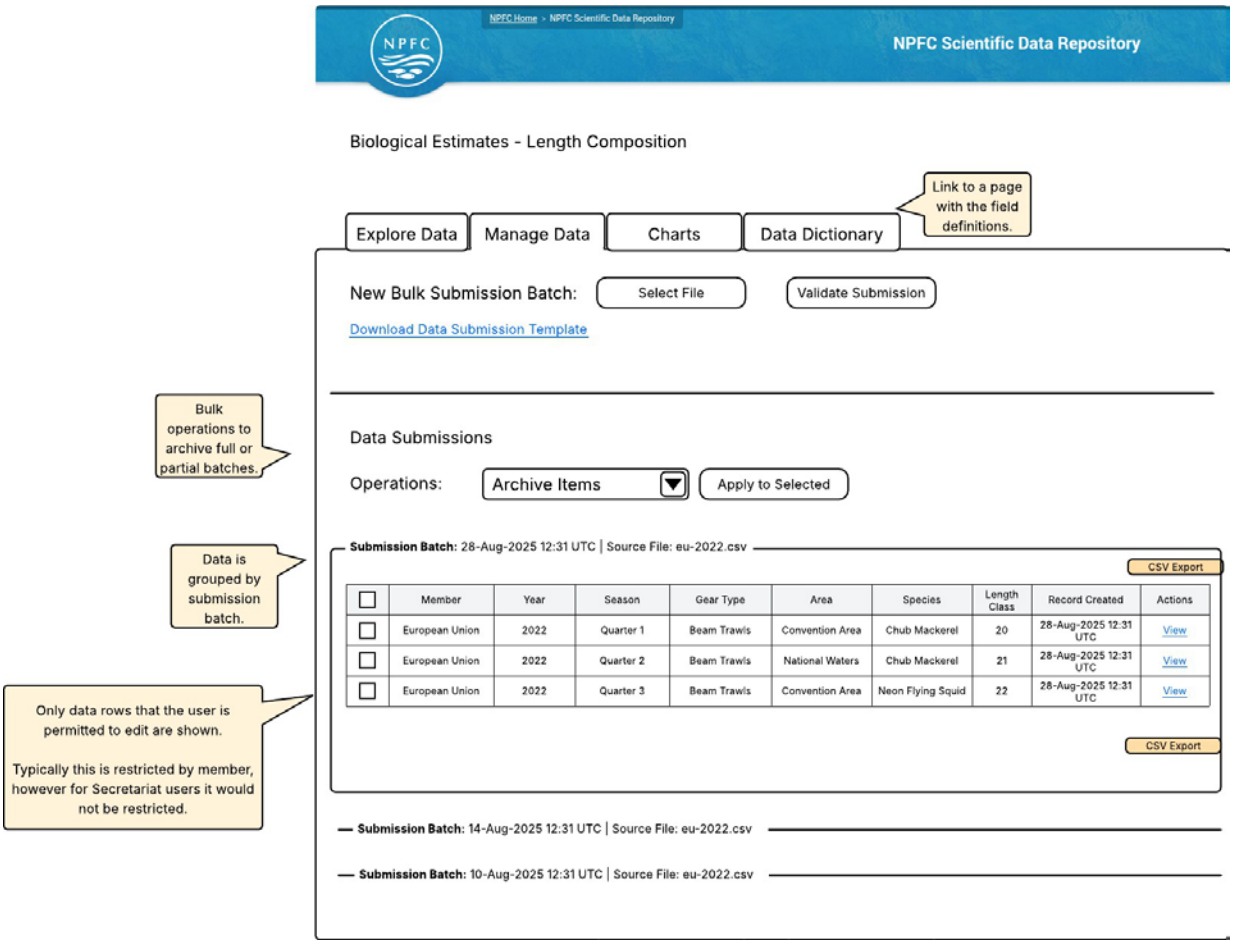
bel_quan_len_meas	int	Number of Fish Aged	The number of fish aged for the combination of Year*Season*SeasonType*Area*Fleet*Speci es	OPTIONAL Between 1 and 999999

COMPOSITE KEY A

bel_group_gp_id
bel_year bel_season
bel_season_type
bel_gear_type
bel_area
bel_species_spc_id
bea_lat_lon (only included in composite key for PS and NFS)

8.2 User Interface Wireframes





9 Data Type: Biological Estimates - Maturity Ogive

9.1 Data Entity Definition and Validation Rules

Field	Data Type	Label	Definition	Validation Rules
bem_id	int	Entity ID	Primary key identifying the data record. System generated.	PRIMARY KEY MANDATORY
bem_group_gp_id	entity_reference	Member	The Member who has submitted the data.	FOREIGN KEY MANDATORY COMPOSITE KEY A
bem_year	int	Year	The year of the data collection.	MANDATORY 4 digits > 2000 COMPOSITE KEY A

bem_season	int	Season	The temporal aggregation level of the data. Can be the same as the year of the data collection	MANDATORY If season_type is month, value must be between 1 and 12. If season_type is quarter, value must be between 1 and 4. If season_type is year, value must match the year field. COMPOSITE KEY A
bem_season_type	text_list	Season Type	The type of temporal aggregation level. E.g., if the estimation is done on a quarter basis, then the SeasonType is Quarter	MANDATORY **Valid Options** M | Month Q | Quarter Y | Year COMPOSITE KEY A

Field	Data Type	Label	Definition	Validation Rules
bem_area	text_list	Area	The area	MANDATORY **Valid Options** CA | Convention Area NW | National Waters CB | Combination COMPOSITE KEY A
bem_species_spc_id	entity_reference	Species	The species	MANDATORY COMPOSITE KEY A
bem_age_class	int	Age	The age class	MANDATORY 1 to 9999
bem_prop	decimal (8,3)	Proportion	The proportion of mature fish in that age class	MANDATORY >0
bem_plus_group	int	Plug Group	The age where fish of a certain age and/or older are grouped at	OPTIONAL 1 to 9999

COMPOSITE KEY A

bel_group_gp_id

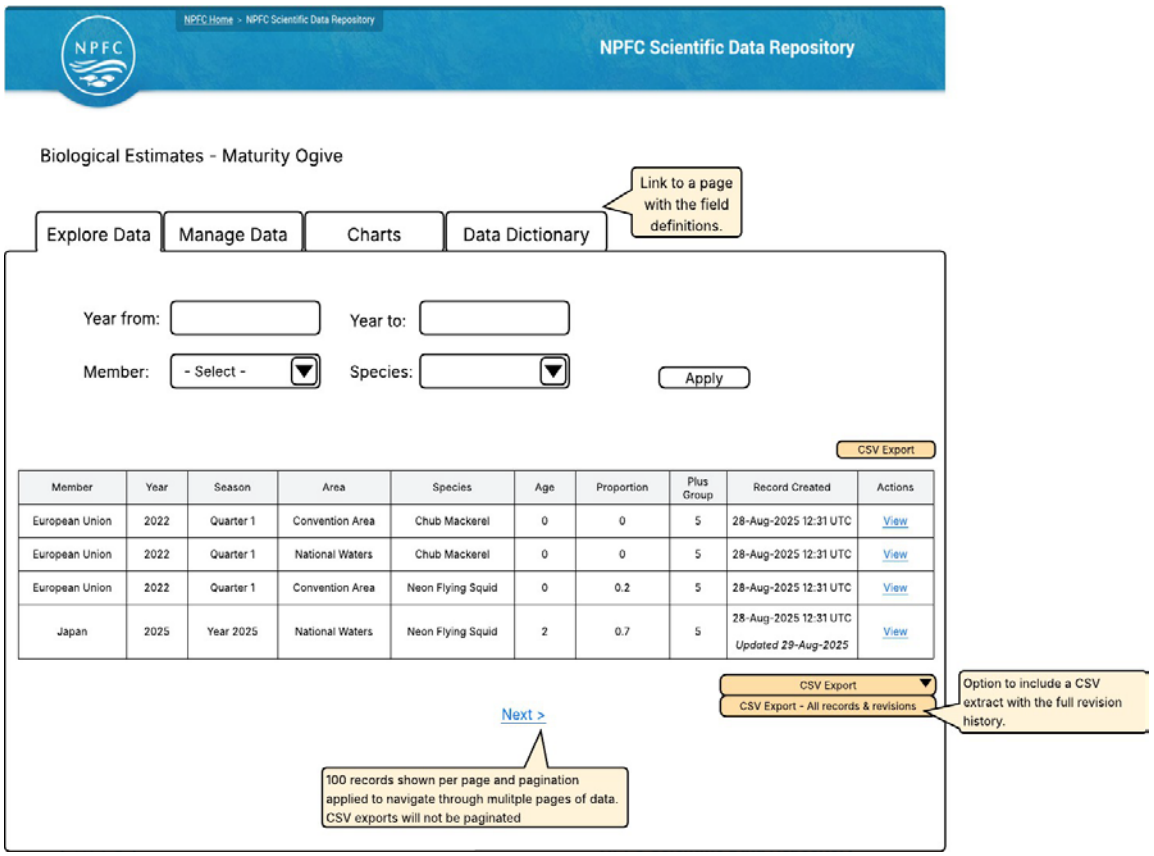
bel_year bel_season

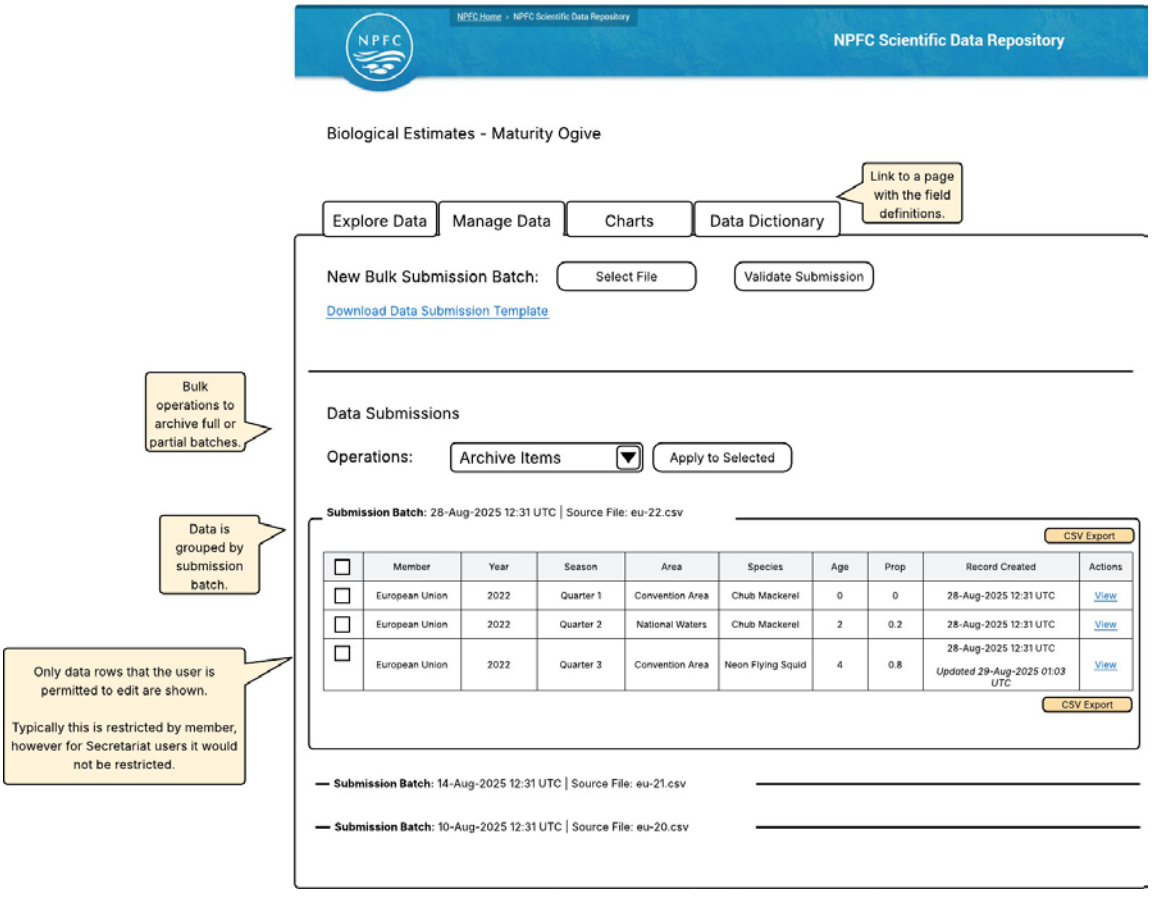
bel_season_type

bel_area

bel_species_spc_id

9.2 User Interface Wireframes





10 Data Type: Catch and Effort - Processed

10.1 Data Entity Definition and Validation Rules

Field	Data Type	Label	Definition	Validation Rules
cep_id	int	Entity ID	Primary key identifying the data record. System generated.	PRIMARY KEY MANDATORY
cep_group_gp_id	entity_reference	Member	The Member who has submitted the data.	FOREIGN KEY MANDATORY COMPOSITE KEY A
cep_year	int	Year	The year of the data collection.	MANDATORY 4 digits > 2000 COMPOSITE KEY A
cep_season	int	Season	The temporal aggregation level of the data. Can be the same as the year of the data collection	MANDATORY If season_type is month, value must be between 1 and 12. If season_type is quarter, value must be between 1 and 4. If season_type is year, value must match the year field. COMPOSITE KEY A
cep_season_type	text_list	Season Type	The type of temporal aggregation level. E.g., if the estimation is done on a quarter basis, then the SeasonType is Quarter	MANDATORY **Valid Options** M | Month Q | Quarter Y | Year COMPOSITE KEY A
cep_gear_fgt_id	entity_reference	Gear Type	The fishing gear type based on the ISSCFG list.	MANDATORY COMPOSITE KEY A

Field	Data Type	Label	Definition	Validation Rules
cep_are a	text_list	Area	The area	MANDATORY **Valid Options** CA | Convention Area NW | National Waters CB | Combination COMPOSITE KEY A
cep_lat_ lon	geofiel d	Latitud e / Longit ude	Decimal degree coordinates	(MANDATORY if bea_gear_fgt_id references PS or NFS, otherwise optional.)
cep_spe cies_sp c_id	entity_r eferenc e	Specie s	The species	MANDATORY COMPOSITE KEY A
cep_live _weight	decima l (8,3)	Live Weight	The species weight at the time of capture, before any processing such as gutting, filleting, or freezing.	MANDATORY COMPOSITE KEY A > 0
cep_live _weight _unit	text_list	Live Weight Unit	The weight unit corresponding to the live weight	MANDATORY COMPOSITE KEY A **Valid Options:** g | Gram kg | Kilogram t | Metric ton
cep_eff ort	decima l (8,2)	Effort	The total amount of fishing activity	MANDATORY > 0
cep_eff ort_unit	text_list	Effort Unit	The effort units	MANDATORY **Valid Options:** kwd | Kilowatt days fd | Fishing days fh | Fishing hours h | Hauls ns | Number of sets vd | Vessel days hk | Number of hooks trp | Number of traps

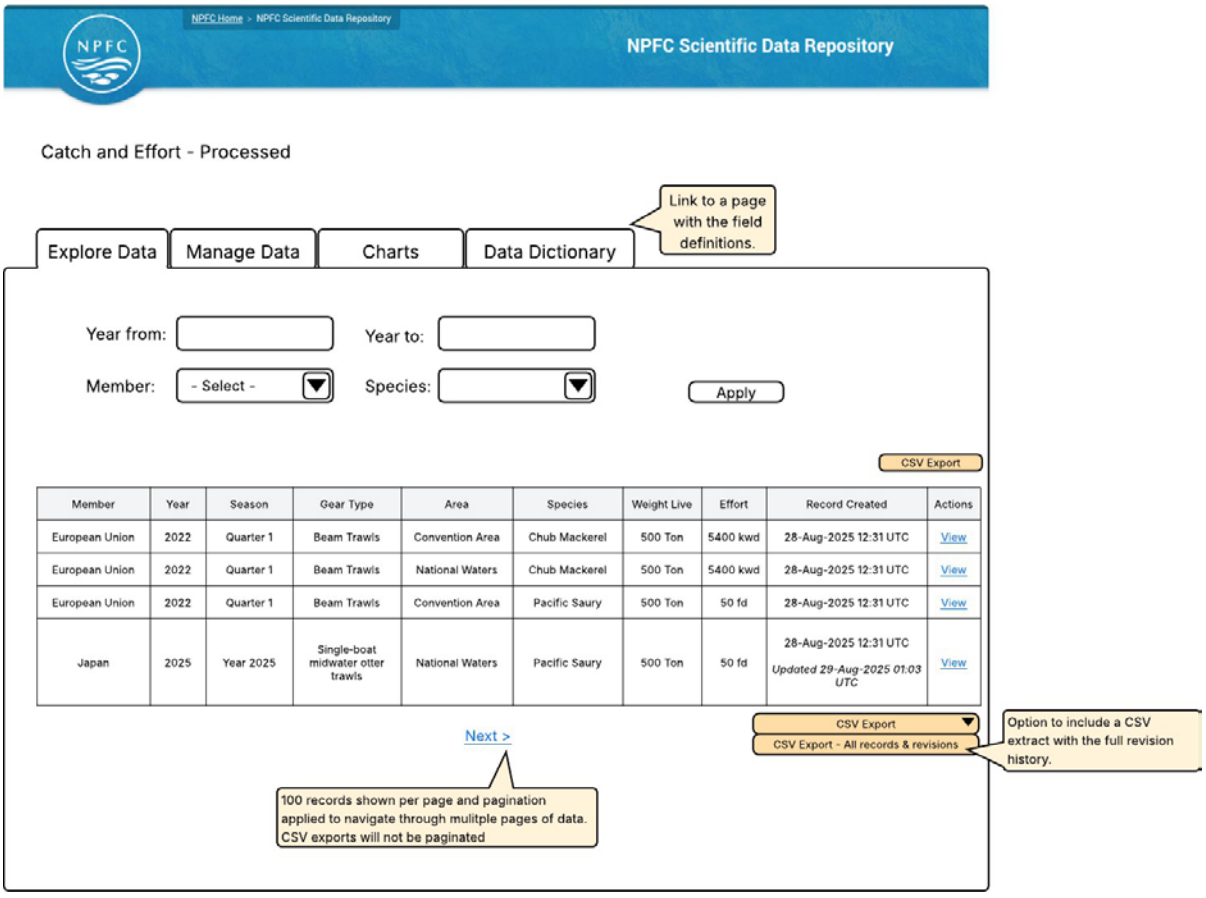
COMPOSITE KEY A

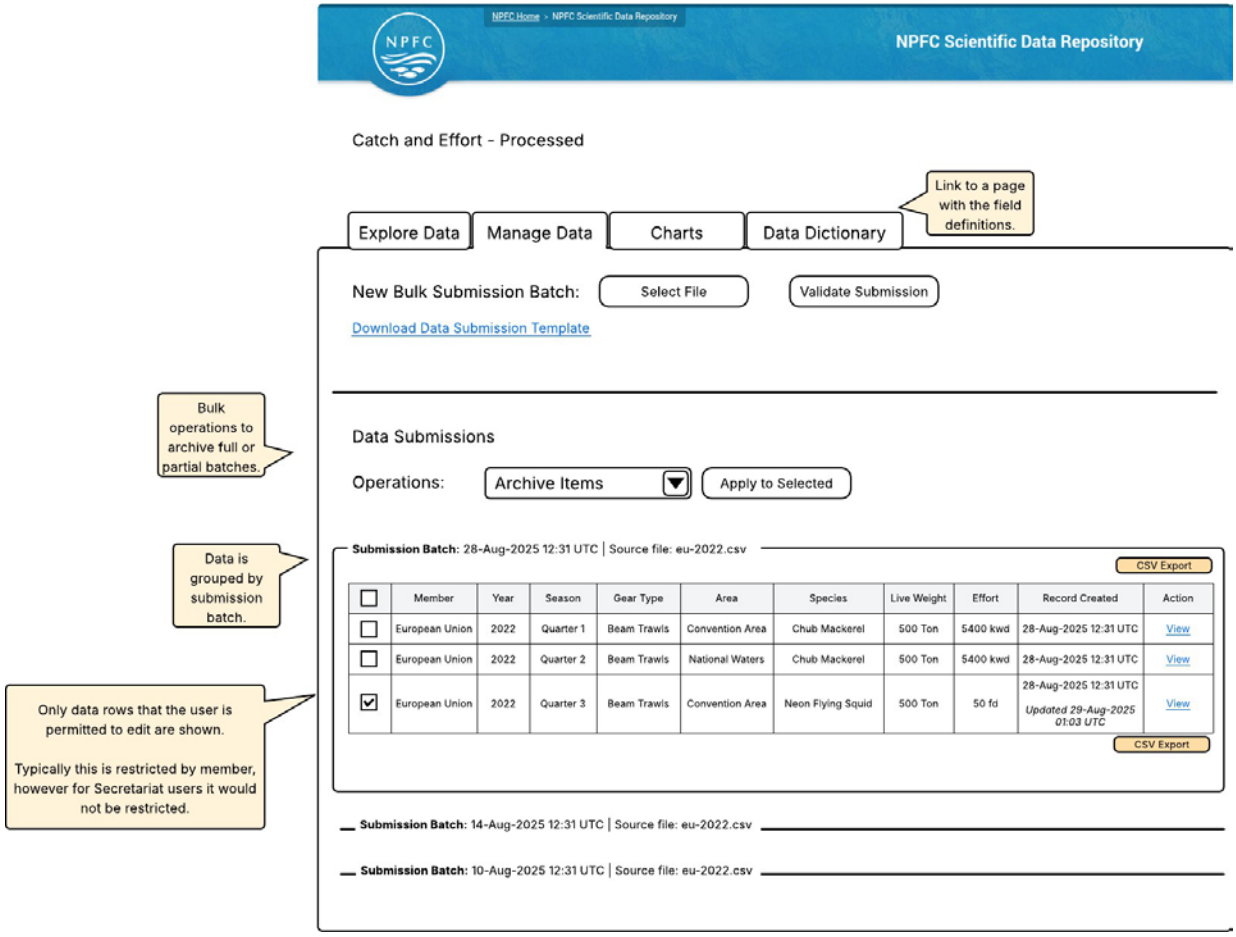
cep_group_gp_id

cep_year

cep_season
cep_season_type cep_gear_type
cep_area
cep_species_spc_id
cep_lat_lon (only included in composite key for PS and NFS)
cep_live_weight
cep_live_weight_unit

10.2 User Interface Wireframes





11 Data Type: Catch and Effort - CPUE

11.1 Data Entity Definition and Validation Rules

Field	Data Type	Label	Definition	Validation Rules
cpue_id	int	Entity ID	Primary key identifying the data record. System generated.	PRIMARY KEY MANDATORY
cpue_type	text_list	CPUE Type	Member for single Member or Joint for multiple	Auto-calculated as M if one member is referenced or J if multiple members are referenced.

cpue_group_gp_id	entity_reference	Member	The Member who has submitted the data.	FOREIGN KEY MANDATORY COMPOSITE KEY A MULTI-VALUED
cpue_year	int	Year	The year of the data collection.	MANDATORY COMPOSITE KEY A 4 digits > 2000

Field	Data Type	Label	Definition	Validation Rules
cpue_season	int	Season	The temporal aggregation level of the data. Can be the same as the year of the data collection	MANDATORY COMPOSITE KEY A If season_type is month, value must be between 1 and 12. If season_type is quarter, value must be between 1 and 4. If season_type is year, value must match the year field.
cpue_season_type	text_list	Season Type	The type of temporal aggregation level. E.g., if the estimation is done on a quarter basis, then the Season Type is Quarter	MANDATORY COMPOSITE KEY A **Valid Options** M | Month Q | Quarter Y | Year
cpue_gear_fgt_id	entity_reference	Gear Type	The fishing gear type based on the ISSCFG list.	OPTIONAL

cpue_area	text_list	Area	The area	OPTIONAL **Valid Options** CA | Convention Area NW | National Waters CB | Combination
cpue_species_spc_id	entity_reference	Species	The species	MANDATORY COMPOSITE KEY A

Field	Data Type	Label	Definition	Validation Rules
cpue_nominal_cpue_value	decimal (8.2)	Nominal Catch Per Unit of Effort	Catch per unit of effort calculated directly from raw data, without standardization for factors such as vessel, gear, or area.	OPTIONAL >0
cpue_cpue_value	decimal (8.2)	Catch Per Unit of Effort	Catch per unit of effort (standardized)	MANDATORY >0

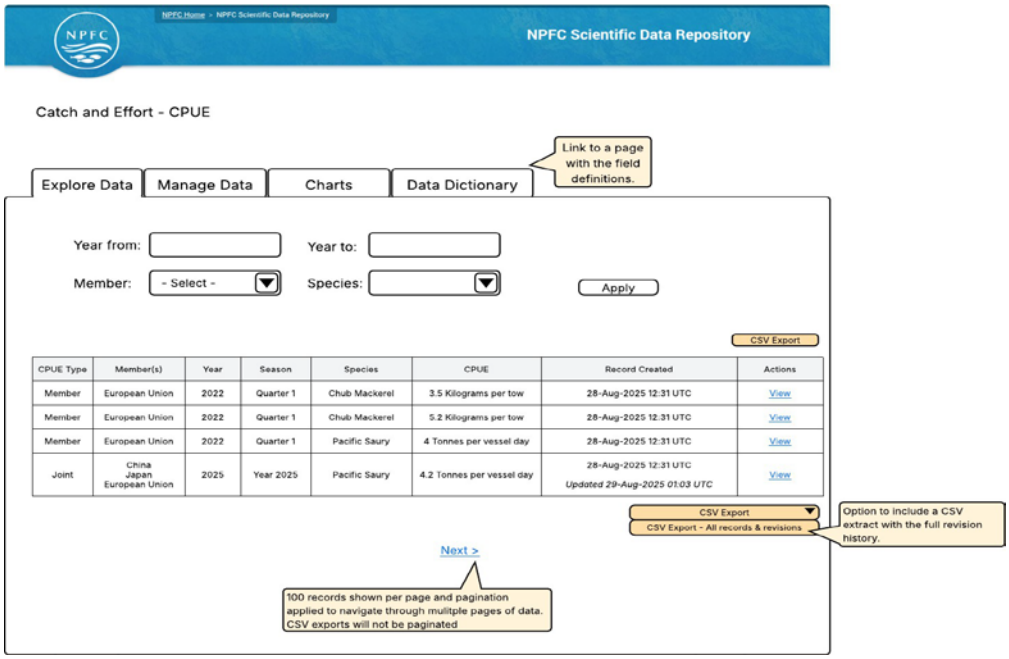
cpue_cpue_unit	text_list	CPUE Unit	Unit of measurement for the CPUE	MANDATORY **Valid Options:** kg_tow | Kilograms per tow ton_tow | Tonnes per tow kg_hr | Kilograms per hour ton_hr | Tonnes per hour n_hk | Number per hook n_100hk | Number per 100 hooks n_trip | Number per trap kg_trp | Number per trap kg_trp | Kilograms per trap n_vd | Number per vessel day ton_vd | Tonnes per vessel day n_fd | Number per fishing day ton_fd | Tonnes per fishing day ton_hl | Tonnes per haul >0

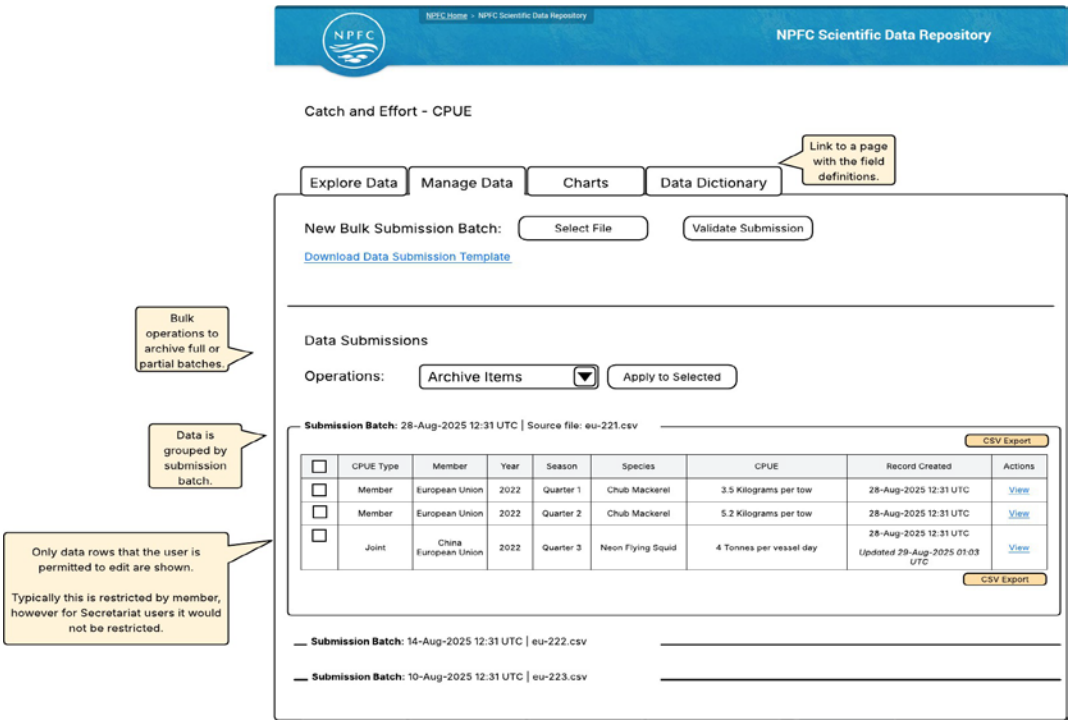
Field	Data Type	Label	Definition	Validation Rules
cpue_cv	decimal (8,2)	Cooefficient of Variation	Coefficient of variation of the CPUE value (unitless 0 to 1)	OPTIONAL >0
cpue_method	text	Method / Model Used	Method/model used (e.g., GLM, GAM, delta lognormal)	OPTIONAL >0
cpue_cov	text	Covariates	List of covariates used in the standardization separated by an underscore "_"	OPTIONAL MULTI-VALUED

COMPOSITE KEY A

cpue_group_gp_id
cpue_year cpue_season
cpue_season_type
cpue_species_spc_id

11.2 User Interface Wireframes





12 Data Type: Catch by Species - Ratio

12.1 Data Entity Definition and Validation Rules

Field	Data Type	Label	Definition	Validation Rules
cbsr_id	int	Entity ID	Primary key identifying the data record. System generated.	PRIMARY KEY MANDATORY
cbsr_group_gp_id	entity_reference	Member	The Member who has submitted the data.	FOREIGN KEY MANDATORY COMPOSITE KEY A
cbsr_year	int	Year	The year of the data collection.	MANDATORY COMPOSITE KEY A 4 digits > 2000
cbsr_species_spc_ id	entity_reference	Species	The species	MANDATORY
cbsr_species_total_catch	entity_reference	Species Total Catch	Species that comprise the total catch group used in the catch ratio calculation. The total catch group includes all species with misidentification issues relevant to and including the species code indicated in the "Species" field.	MANDATORY MULTI-VALUED
cbsr_catch_ratio	decimal (4,3)	Catch Ratio	Ratio of the species catch to the total catch	MANDATORY 0 <= n <= 1

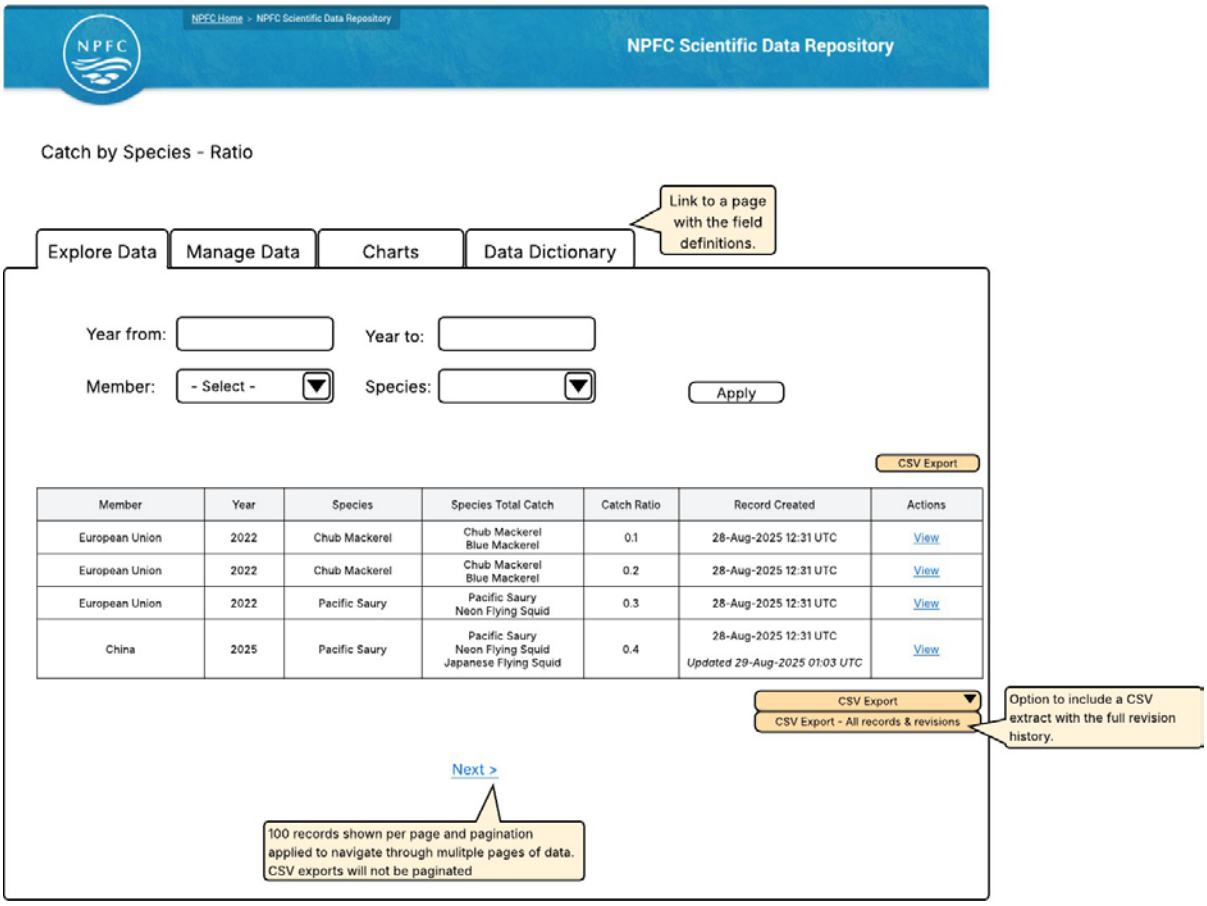
COMPOSITE KEY A

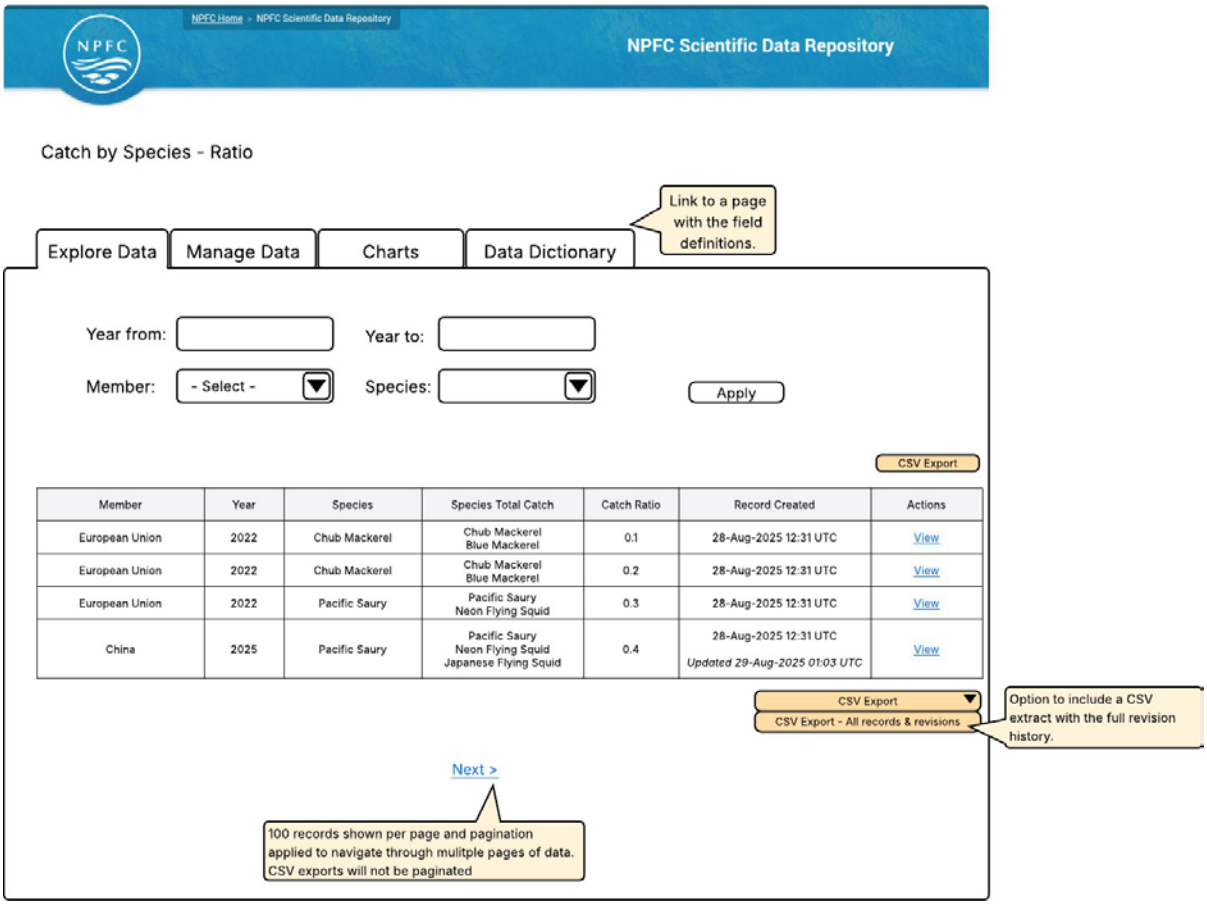
cbsr_group_gp_id

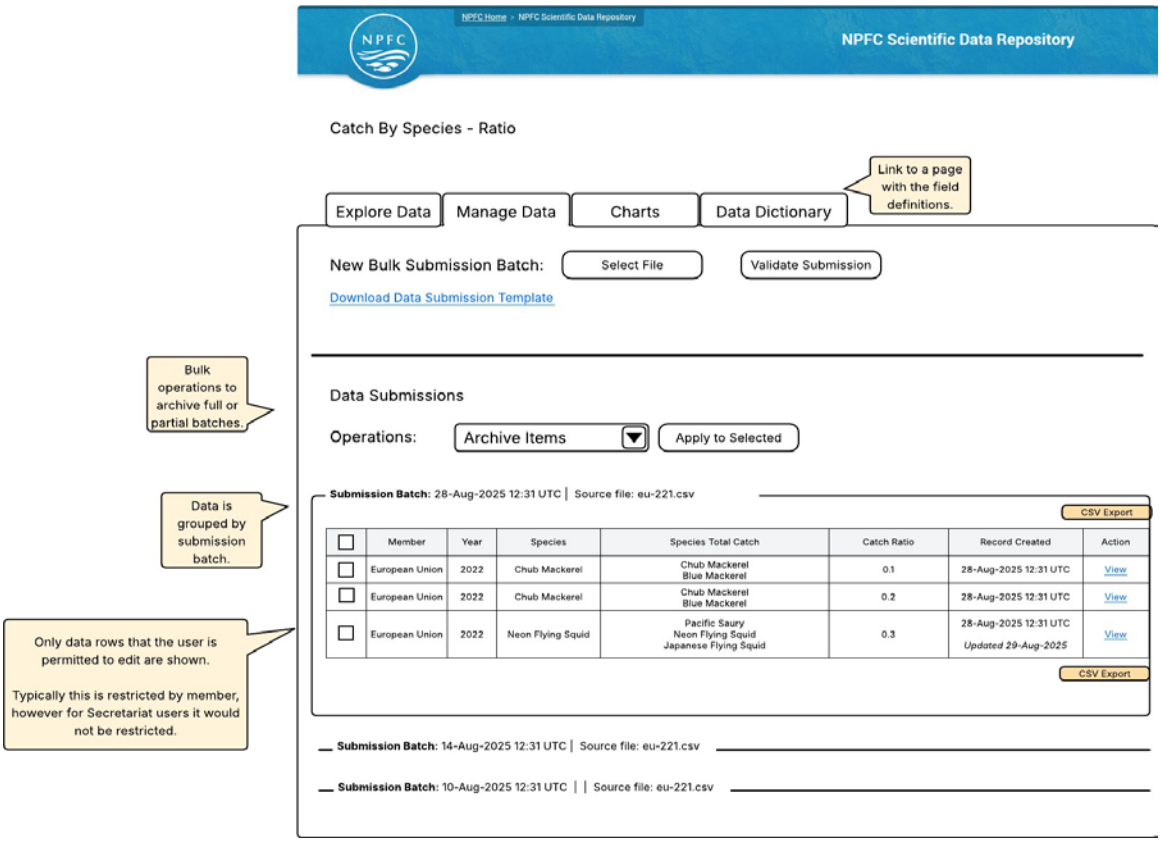
cbsr_year

cbsr_species_spc_id

12.2 User Interface Wireframes



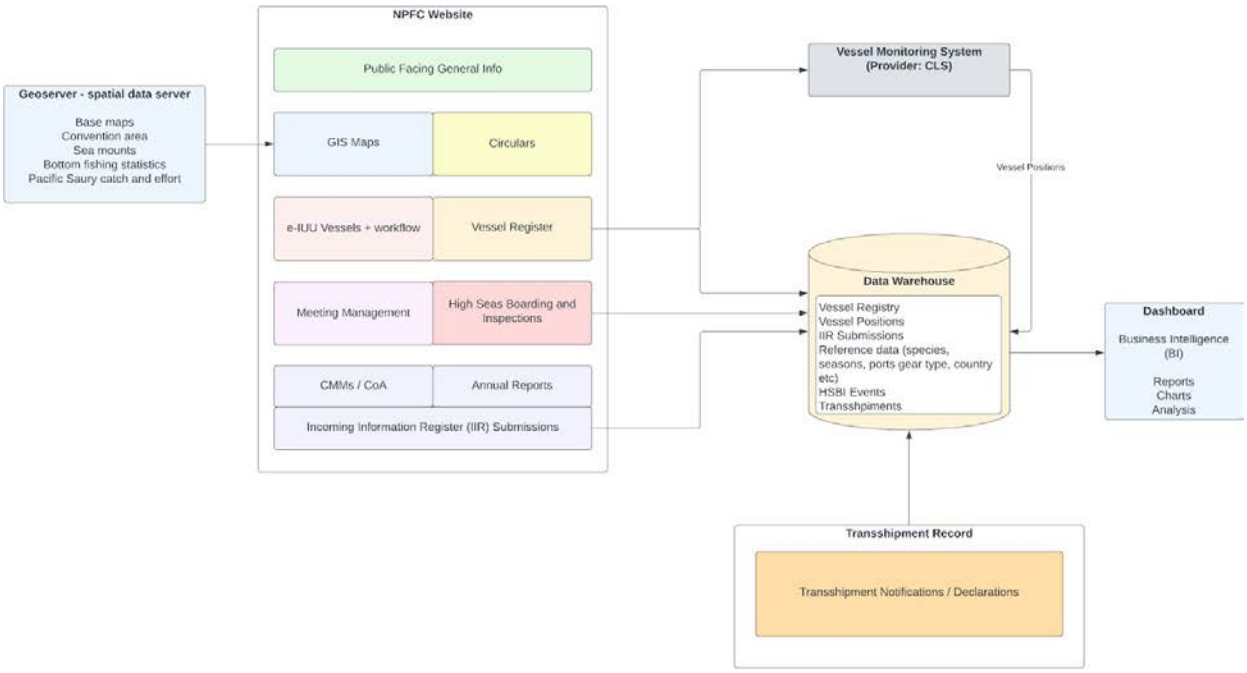

NPFC Home > NPFC Scientific Data Repository
NPFC Scientific Data Repository
Catch by Species - Ratio
Explore Data
Manage Data
Charts
Data Dictionary
Link to a page with the field definitions.
Year from:
Year to:
Member:
- Select -
Species:
Apply
CSV Export
Member
Year
Species
Species Total Catch
Catch Ratio
Record Created
Actions
European Union
2022
Chub Mackerel
Chub Mackerel
Blue Mackerel
0.1
28-Aug-2025 12:31 UTC
View
European Union
2022
Chub Mackerel
Chub Mackerel
Blue Mackerel
0.2
28-Aug-2025 12:31 UTC
View
European Union
2022
Pacific Saury
Pacific Saury
Neon Flying Squid
0.3
28-Aug-2025 12:31 UTC
View
China
2025
Pacific Saury
Pacific Saury
Neon Flying Squid
Japanese Flying Squid
0.4
28-Aug-2025 12:31 UTC
Updated 29-Aug-2025 01:03 UTC
View
CSV Export
CSV Export - All records & revisions
Option to include a CSV extract with the full revision history.
Next >
100 records shown per page and pagination applied to navigate through mulitple pages of data. CSV exports will not be paginated


NPFC Home > NPFC Scientific Data Repository
NPFC Scientific Data Repository
Catch By Species - Ratio
Explore Data
Manage Data
Charts
Data Dictionary
Link to a page with the field definitions.
New Bulk Submission Batch:
Select File
Validate Submission
Download Data Submission Template
Bulk operations to archive full or partial batches.
Data Submissions
Operations:
Archive Items
Apply to Selected
Data is grouped by submission batch.
Submission Batch: 28-Aug-2025 12:31 UTC | Source file: eu-221.csv
CSV Export
Member
Year
Species
Species Total Catch
Catch Ratio
Record Created
Action
European Union
2022
Chub Mackerel
Chub Mackerel
Blue Mackerel
0.1
28-Aug-2025 12:31 UTC
View
European Union
2022
Chub Mackerel
Chub Mackerel
Blue Mackerel
0.2
28-Aug-2025 12:31 UTC
View
European Union
2022
Neon Flying Squid
Pacific Saury
Neon Flying Squid
Japanese Flying Squid
0.3
28-Aug-2025 12:31 UTC
Updated 29-Aug-2025
View
CSV Export
Only data rows that the user is permitted to edit are shown.
Typically this is restricted by member, however for Secretariat users it would not be restricted.
Submission Batch: 14-Aug-2025 12:31 UTC | Source file: eu-221.csv
Submission Batch: 10-Aug-2025 12:31 UTC | | Source file: eu-221.csv

13 Data Warehouse Integration

13.1 Data Management Infrastructure Background

NPFC currently operates several data-driven information systems with associated databases.



Operational applications such as the VMS, Transshipment Record and the NPFC website (containing Vessel Register etc) each contain a database that supports the operation of the application, data workflows and associated data access control rules.

A data warehouse (DWH) is also in place. The DWH ingests data from the various operational applications into a centralised relational database (PostresSQL with spatial data support). This centralised data repository aims to support data analysis and reporting in a number of ways:

Datasets are in one location so can be combined and cross referenced for deeper and easier analysis.
Application business logic is removed, leaving raw, finalised data for easier analysis.
All datasets can be queried using standard SQL (Structure Query Language) syntax.

A rudimentary dashboard-building application (Re-Dash) is connected to the data warehouse for data analysis and report building. Other analysis tools may be connected to the DWH as data analysis needs expand in the future.

13.1.1 Data Warehouse Access Control

An important aspect to consider in regard to the data warehouse is that it does not apply fine-grained access control rules.

Operational application modules will often apply complex row-level or even field-level access control business rules. A common scenario is for records submitted by one Member to not be visible to users of other Member states.

Within the data warehouse, these access rules are removed, leaving only a single role level. Authentication is still required, but there are no table-level, row-level or field-level restrictions. This simplicity makes the data warehouse extremely usable for broad analytical purposes, but must be restricted to Secretariat staff or Secretariat representatives (e.g. data analyst consultants) only.

13.1.2 Scientific Data Synchronised to the Data Warehouse

The NPFC Scientific Data Repository will act as an operational application to facilitate Members to load and update datasets, plus view data and extract data as CSV outputs. This operational application will apply row- level access control logic as defined in the Access Control Matrix.

Synchronisation processes will be put in place so that the scientific data entities included in the operational application are also synchronised into the NPFC data warehouse, and kept up to date as scientific data is added, updated or archived. This will allow for these datasets to be combined with other related datasets within the data warehouse for combined data analysis.

To facilitate this synchronisation, the Scientific Data Repository will have API based read-access enabled, with security authentication.

14 Prototype Implementation Plan

The below development schedule details the deliverables of three sprints of software development with the aim to achieve a functional Minimum Viable Product (MVP) within existing contractual budgets designated towards prototype implementation.

Sprint	Weeks	Key Deliverables / User Acceptance Testing Checklist
Sprint 1 - Project Initialisation	Weeks 1 - 3	• Preparation of project code repositories, UAT/Staging/Production hosting environments and domain name configuration. • Implementation of data structures as per ER diagram, with validation constraints rules and revisioning support. • Setup of web portal branding / theme based on previous NPFC web portals. • Sample data generation scripts to facilitate automated test development. • Implementation of landing page with navigation and latest updates list. • Implementation of Explore Data tabs with filters and pagination. • Implementation of CSV Export functionality on Explore Data tabs.

Sprint 2 - Data loading, access control	Weeks 3 - 6	• Implementation of Manage Data tabs with CSV upload • Implementation of validation stage with error and warning display and row highlighting. • Implementation of bulk insert / update processing operations. Generation of • data submission templates based on data definitions. • Listing of data submissions by batch on the Manage Data tab, with Archive Items bulk operation. • Implementation of roles and access control rules, with test coverage.
Sprint 3 - Integration points and deployment	Week 7	Addition of roles to NPFC MaM, including species assignment option. • Integration of Single Sign On (SSO). • Synchronisation of Member / CNCP groups from NPFC MaM. • Synchronisation of Species and Fishing Gear data from NFPC website. • Training / handover workshop Production • deployment

14.1 Future Development Items

The following items are considered beyond the scope of the prototype (MVP) implementation, but may be considered for future enhancements.

- Implementation of Data Dictionary tabs displaying field level descriptions.
- Implementation of Charts tabs with Member Submission Coverage chart.
- Additional charts / reports
- Synchronisation of data into the NPFC Data Warehouse
- Interface translation for languages other than English
- Interfaces to allow for the extraction of previous versions of updated data records.

15 Ongoing, Maintenance and Capacity Requirements

Post-implementation of the NPFC Scientific Data Repository portal there are a number of future considerations.

15.1 Ongoing hosting and maintenance

As with any online, web based application there will be a need for hosting, as well as maintenance such as application of software security updates.

It is proposed that this application will be developed using the Drupal content management framework. This framework is consistent with other NPFC data management systems, thus benefiting from some economies of scale for ongoing maintenance under the terms of NPFC's existing application support retainer agreement.

An expectation for approximately 10 hours per quarter of software developer time needed towards hosting and security maintenance is recommended.

15.2 Additional data types

This application has been designed in a way that allows for each of the seven data types to be managed in a consistent manner. This allows for the possibility that additional datasets may be required in the future and can be accommodated without major application refactoring.

15.3 Scientific reporting and analytical outputs

The scope of this application so far does not include analytical outputs. A possible future development enhancement would be to include additional output formats such as data driven charts, dashboards and reports.

15.4 Secretariat capacity

It is recommended that the NPFC Secretariat maintain capacity to undertake the following tasks:

Support end-users

Provide guidance and assistance to Members on how to access and operate the application.

Maintaining help guides / documentation on system usage.

System business owner role

While contracted software developers can implement technical changes and enhancements to the software, the Secretariat is better placed to understand the subject matter of the data and act as a conduit between end-users and developers.

As the business owner of the application the Secretariat should maintain the analytical capacity to guide future change management processes in order to maintain data integrity and support the data collection and analytical needs of the Members. This tasking should be responsible for ensuring that future change requests to modify data entity definitions, validation rules or access control rules do not compromise historically collected data or breach NPFC data security policies.

Responses to Annex 1 of the CMM on Minimum Data Standards – All fishing activities

FIELD	CANADA	CHINA	CHINESE TAIPEI	EU	JAPAN-JS	JAPAN-MA	JAPAN-JFS_NFS	JAPAN-PS	KOREA	RUSSIA
ADDRESS OF MASTER	Yes	No	Yes — We do not recommend providing such personal data.	No	Private information. Needed for scientific use?	Private information. Needed for scientific use?	Private information. Needed for scientific use?	Private information. Needed for scientific use?	Yes — The data field exists in the reporting system but is not a mandatory submission item.	No
AMOUNT OF FISH ONBOARD AFTER UNLOADING (MT)	No — This number should be zero according to licensing conditions, but I don't think it is recorded	No — For stock assessment purposes, these are likely unnecessary.	Yes	Yes	No	No	No	No	No — Domestic landings are managed by a different agency.	Yes
AMOUNT OF FISH ONBOARD AT START OF TRIP (MT)	No — This number should be zero according to licensing conditions, but I don't think it is recorded	No — For stock assessment purposes, these are likely unnecessary.	Yes	Yes	No	No	Yes	Yes — Usually, zero	No — Domestic landings are managed by a different agency.	Yes
DATE AND TIME OF ARRIVAL	Yes	No	Yes — Providing the arrival date should be sufficient. Propose to delete 'time'.	Yes	No	No	No	No	Yes — The data field exists in the reporting system but is not a mandatory submission item.	Yes
DATE AND TIME	Yes	No	Yes — Providing	Yes	No	No	No	No	Yes — The	Yes

OF DEPARTURE			the departure date should be sufficient. Propose to delete 'time'.						data field exists in the reporting system but is not a mandatory submission item.	
DATE AND TIME OF LANDING	Yes	No	Yes — If the master is required to submit Annex 1 at the end of a trip and, where applicable, after every transshipment at sea, then this annex should include additional fields for transshipment details.	Yes	No	No	No	No	No — Domestic landings are managed by a different agency.	Yes
EXTERNAL IDENTIFICATION	Yes	No	Yes	Yes	Yes/No	Yes/No	Yes	Yes	Yes	Yes
FISHING PERMIT OR LICENCE NUMBER(S)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
INTERNATIONAL RADIO CALL SIGN	Yes	No	Yes	Yes	Yes	Yes	Yes/No	Yes	Yes	Yes
NAME OF MASTER	Yes	Yes	Yes	Yes	Private information. Needed for scientific use?	Private information. Needed for scientific use?	Private information. Needed for scientific use?	Private information. Needed for scientific use?	Yes	Yes, See NPFC Vessel ID
PORT OF ARRIVAL	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes — The data field exists in the reporting system but is not a mandatory submission item.	Yes
PORT OF LANDING (IF DIFFERENT FROM PORT OF ARRIVAL)	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	No — Domestic landings are managed by a different agency.	Yes
REGISTRATION NUMBER OF	Yes	No	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

VESSEL SPECIES (FAO 3-ALPHA CODE)	Yes	Yes	Yes	Yes	Almost Yes — S. melanostictus does not have a 3-alpha code in the ASFIS database	Almost Yes — CM and BM are not separated in the logbooks	Yes	Yes	Yes	Yes
TOTAL AMOUNT OF FISH DISCARDED (MT)	Yes	Yes	Yes	Yes — This is typically not considered reliable when it's coming from the logbooks	No	No	No	No — No discard of PS	Yes	Yes/No
TOTAL AMOUNT OF FISH KEPT (MT)	Yes	Yes	Yes	Yes	Yes	Yes	No	No	Yes	Yes
TRIP NUMBER THIS YEAR	Yes	Yes — Regardless of the fishery, most Chinese fishing vessels typically complete only one fishing trip per year, as they transit across several oceans to conduct different fisheries.	Yes	Yes	Yes	Yes	Yes	Yes	No — This information could be derived or collected additionally if required.	Yes

Responses to Annex 2 of the CMM on Minimum Data Standards - Trawl

FIELD	CANADA	CHINA	CHINESE TAIPEI	EU	JAPAN-JS	JAPAN-MA	JAPAN-JFS_NFS	JAPAN-PS	KOREA	RUSSIA
BOTTOM DEPTH AT START OF FISHING		No — Is this the water depth (seabed depth) or the depth of the footrope?		Yes		No				Yes
ESTIMATED DISCARDS BY SPECIES (FAO 3-ALPHA CODE)		Yes		Yes — This is typically not considered reliable when it's coming from the logbooks		No				Yes/No
GEAR DEPTH AT START OF FISHING		No — Does this refer to the depth of the headline or the footrope?		Yes		No				Yes
HEIGHT OF NET OPENING		No — This data is only available for some fishing vessels and not every year, as it depends on whether the vessel is equipped with a net sonde to measure gear parameters. It is also not feasible to take such measurements for every single haul.		Yes		No				Yes/No
INCIDENTAL CAPTURES OF SPECIES OF CONCERN OR BENTHIC TAXA? (YES/NO/UNKNOWN)		Yes		Yes		Unknown				Yes
INTENDED TARGET SPECIES (FAO 3-ALPHA CODE)		Yes		Yes		Almost Yes — Blue and chub mackerel is not				Yes

			distinguished in logbooks	
MESH SIZE	No — It's possible to include this in the future.	Yes	No	Yes
TOW END DATE AND TIME (UTC)	Yes	Yes	No	Yes
TOW END POSITION	Yes	Yes	No	Yes
TOW START DATE AND TIME (UTC)	Yes	Yes	No	Yes
TOW START POSITION	Yes	Yes	No	Yes
TYPE OF TRAWL (S/D/T)	Yes — Do the terms "single" and "double" here refer to the number of vessels involved—as in single-boat trawling versus pair (double-boat) trawling? It's also worth noting that trawling is further categorized as either midwater or bottom trawling.	Yes	No	Yes
WIDTH OF NET OPENING	No — This data is only available for some fishing vessels and not every year, as it depends on whether the vessel is equipped with a net sonde to measure gear parameters. It is also not feasible to take such measurements for every single haul.	Yes	No	Yes/No

Responses to Annex 3 of the CMM on Minimum Data Standards – Purse seine

FIELD	CANADA	CHINA	CHINESE TAIPEI	EU	JAPAN-JS	JAPAN-MA	JAPAN-NFS	JAPAN-PS	KOREA	RUSSIA
ESTIMATED DISCARDS BY SPECIES (FAO 3-ALPHA CODE)		Yes			No	No				Yes/No — Observers are not required for Purse Seine (Pelagic) fisheries
INCIDENTAL CAPTURES OF SPECIES OF CONCERN OR BENTHIC TAXA? (YES/NO/UNKNOWN)		Yes — Recording data for every haul is difficult. Please summarize it daily, based on the first net deployment and the last net retrieval.			Unknown	Unknown				Yes/No — Observers are not required for Purse Seine (Pelagic) fisheries
INTENDED TARGET SPECIES (FAO 3-ALPHA CODE)		Yes			Almost Yes — S. melanostictus does not have a 3-alpha code in the ASFIS database	Almost Yes — Blue and chub mackerel is not distinguished in logbooks				Yes
MESH SIZE		No			No	No				No
NET HEIGHT		No			No	No				No
NET LENGTH		No			No	No				No
SET END DATE AND TIME (UTC)		Yes			No	No				Yes
SET START DATE AND TIME (UTC)		Yes			No	No				Yes

Responses to Annex 4 of the CMM on Minimum Data Standards – Squid Jigging

FIELD	CANADA	CHINA	CHINESE TAIPEI	EU	JAPAN-JS	JAPAN-MA	JAPAN-NFS	JAPAN-PS	KOREA	RUSSIA
ECHO SOUNDER USED? (YES/NO)		Yes — It's available since 2024	Yes				No		Yes	
END POSITION OF DRIFT		Yes — It's available since 2024	Yes				No — Daily fishing position is available		Yes	
ESTIMATED DISCARDS BY SPECIES (FAO 3-ALPHA CODE)		Yes — It's available since 2024	Yes				No		Yes	
INCIDENTAL CAPTURES OF SPECIES OF CONCERN OR BENTHIC TAXA? (YES/NO/UNKNOWN)		Yes — It's available since 2024	Yes				No		Yes	
MAXIMUM OPERATING DEPTH		Yes — It's available since 2024	Yes				No		Yes — The data field exists in the reporting system but is not a mandatory submission item.	
NUMBER OF CREW		Yes — Does this number refer only to the crew members participating in handline fishing, or does it include the entire vessel crew? It's available since 2024	Yes				No		Yes — The data field exists in the reporting system but is not a mandatory submission item.	

NUMBER OF JIGS PER LINE		Yes — It's available since 2024	Yes	No	Yes — The data field exists in the reporting system but is not a mandatory submission item.
START POSITION OF DRIFT		Yes — It's available since 2024	Yes	No — Daily fishing position is available	Yes
TOTAL DECK LIGHT POWER (KW)		Yes — It's available since 2024	Yes	No	Yes
TOTAL HOURS FISHED		Yes — It's available since 2024	Yes	No	Yes

Responses to Annex 5 of the CMM on Minimum Data Standards – Stick held dip net

FIELD	CANADA	CHINA	CHINESE TAIPEI	EU	JAPAN-JS	JAPAN-MA	JAPAN-NFS	JAPAN-PS	KOREA	RUSSIA
ESTIMATED DISCARDS BY SPECIES (FAO 3-ALPHA CODE)		No — The CMM prohibits the discarding of Pacific saury; however, the discarding practices for other species remain unknown.	Yes					No	Yes	No
HAUL END DATE AND TIME (UTC)		No — Recording data for every haul is difficult. Please summarize it daily, based on the first net deployment and the last net retrieval.	No					No	Yes	Yes
HAUL END POSITION		No — Recording data for every haul is difficult. Please summarize it daily, based on the first net deployment and the last net retrieval.	No					No	Yes	Yes
HAUL START DATE AND TIME (UTC)		No — Recording data for every haul is difficult. Please summarize it daily, based on the first net deployment and the last net retrieval.	No — We would like to note that the time and position data of individual haul may not provide meaningful catch information. On the Taiwanese saury fishing vessels, once a haul is retrieved, the catch is immediately transferred to the					No	Yes	Yes

			processing cabin, where it undergoes a continuous workflow of sorting, packing, freezing, and storage. This process takes time to complete. During periods of high catch, the processing of one haul may not be finished before the next haul arrives, resulting in the mixing of successive catches. This makes it impossible to track the catch amount on a haul-by-haul basis. Therefore, collecting the haul start and end times and their positions is meaningless. Instead, we propose recording "Number of hauls", as this is essential for estimating CPUE on a per-haul basis.			
HAUL START POSITION		No — Recording data for every haul is difficult. Please summarize it daily, based on the first net deployment and the last net retrieval.	No	No	Yes	Yes
INCIDENTAL CAPTURES OF SPECIES OF CONCERN OR BENTHIC TAXA? (YES/NO/UNKNOWN)		Unknown — Stick-Held Dip Net rarely catch bycatch species, with squid constituting a very small proportion.	Yes	Unknown	Yes	No
MESH SIZE		No	Yes	No	No — This requires additional collection.	No

NET HEIGHT	No	Yes — We suggest revising the term 'Net height' to 'Operating depth' to reflect the actual deployment characteristics of the stick-held dip net. The term 'Net height' may be confusing, as it could be interpreted as the physical dimensions of the net, rather than its functional depth in the water column during fishing operations. In addition, since there may be several hauls operating per night, the term 'Maximum operating depth' is more appropriate than 'Operating depth'.	No	No — This requires additional collection.	No
NET LENGTH	No	Yes	No	No — This requires additional collection.	No
NUMBER OF CREW	Yes — For stock assessment purposes, these are likely unnecessary.	Yes	Yes	No — This requires additional collection.	Yes — In the NPFC register
TOTAL DECK LIGHT POWER (KW)	No	Yes	No	Yes	No
TOTAL HOURS FISHED	No — Recording data for every haul is difficult. Please summarize it daily, based on the first net deployment and the last net retrieval.	Yes	No	Yes	Yes

Annex M:

Scientific activities and projects in 2026

Stock assessment

#	Title	Time	Details	Funding
1.1	SSC JS: - Meeting costs - Rapporteur - Secretariat	Every year, 3 days	Stock assessment meeting; Tokyo, Japan	SC fund: 0.566 mil JPY 0.3 mil JPY Duty travel: 0 Overtime for GS: 0.1 mil JPY
1.2	SSC NFS: - Meeting costs - Rapporteur - Secretariat	Every year, 3 days	Stock assessment meeting; Tokyo, Japan	SC fund: 0.566 mil JPY 0.3 mil JPY Duty travel: 0 Overtime for GS: 0.1 mil JPY
1.3	TWG CMSA: - Meeting costs - Rapporteur - Secretariat	Every year, 4 days	Stock assessment meeting	SC fund: 1.5 mil JPY 0.62 mil JPY Duty travel: 0.64 mil JPY Overtime for GS: 0.1 mil JPY
1.4	SSC BF-ME: - Meeting costs - Rapporteur[1] - Secretariat[2]	Every year, 2.5 days	Stock assessment and VME	SC fund: 1.5 mil JPY 0.465 mil JPY Duty travel: 0.48 mil JPY Overtime for GS: 0.1 mil JPY
1.5	SSC PS: - Meeting costs - Rapporteur - Secretariat	Every year, 4 days	Stock assessment meeting	SC fund: 1.5 mil JPY 0.62 mil JPY Duty travel: 0.64 mil JPY Overtime for GS: 0.1 mil JPY
1.6	SC: - Meeting costs - Rapporteur - Secretariat	Every year, 4 days	Science advice and recommendations to Commission. Hybrid format	SC fund: 1.5 mil JPY 0.785 mil JPY Duty travel: 1,925 mil JPY Overtime for GS: 0.2 mil JPY
2.1	TWG CMSA: - Rapporteur	Every year, 3 days	Data preparation	SC fund: 0
2.2	SSC NFS:	Every year,	Data preparation	SC fund:

[1] Consultancy fee and travel costs for hybrid meetings

[2] Travel costs for hybrid meetings and overtime work for General Staff (GS: Data Coordinator and Executive Assistant)

	- Rapporteur	3 days		0
2.3	SSC JS: - Rapporteur	Every year, TBD	Data preparation	SC fund: 0
2.4	SSC PS: - Rapporteur	Every year, 3 days	Data preparation	SC fund: 0
3.1	TWG CMSA - Consultancy fee - Travel	Every year	Support to CM stock assessment	SC fund: 1.827 mil JPY (12,180 USD/21 days) 0.65 mil JPY
3.2	SSC NFS - Consultancy fee - Travel	Every year	Support to NFS stock assessment	SC fund: 2.25 mil JPY (15,000 USD/25 days) 0.6 mil JPY
3.3	SSC JS - Consultancy fee - Travel	Every year	Support to JS stock assessment	SC fund: 1.5 mil JPY (10,000 USD/17 days) 0.6 mil JPY
3.4	SSC PS - Consultancy fee - Travel	Every year	Support to PS stock assessment	SC fund: 2.25 mil JPY (15,000 USD/25 days) 0.65 mil JPY
3.5	SSC BF-ME - Consultancy fee - Travel	2024- 2026	Support to SA and NPA stock assessments	**SPF fund**: 1.827 mil JPY (12,180 USD/21 days) 0.65 mil JPY
3.6	External peer-review of stock assessments	Every 3-5 years for each species		SC fund: None in 2026
	Total			**SC fund:** **20.549 mil JPY** Duty travel: 3.685 mil JPY Overtime for GS: 0.7 mil JPY SPF: 2.477 mil JPY

SC projects

#	Title	Time	Details	Funding	Priority
1	SC database	2025-2026	Database for scientific data	**VCF fund**: Up to50,000 EUR (Or **SC fund**: Up to 9.2 mil JPY)*	Highest
2	PICES Annual meeting	Every year	Travel support to an SC participant to attend PICES Annual meeting	SC fund: 0.75 mil JPY (5,000 USD)	Medium
3	PICES/ICES/FAO Small Pelagic Fish Symposium	2025-2026	Co-sponsorship of the symposium (travel support for an SC	SC fund: 0.75 mil JPY (5,000 USD)	High

			participant)		
4	Other science meetings / capacity development	Every year	Training for capacity building or travel support to attend relevant science meetings	SC fund: 0.75 mil JPY (5,000 USD)	Lowest priority
	Total			**SC fund:** **2.250 mil JPY** **(+9.2 mil JPY*)** EU VCF: 50,000 EUR	

* This project may be funded either by a voluntary contribution from Members or by the SC fund

2025 SC projects for reference

#	Project	Time	Status	Next step: activities, required funds
1	Pacific saury stock assessment meetings (meeting costs)	Every year	*TWG PSSA meetings: Feb 2017, Dec 2017, Nov 2018, Mar 2019.* *SSC PS meetings: Nov 2019, Aug 2023.*	WG NSAM meeting. Jul 2025. *2025 FY: 2mil JPY* *Source: China's Voluntary Contribution Fund (VCF)* SSC PS15 meeting. Sep 2025. *2025 FY: virtual, no funds required.*
2	Chub mackerel stock assessment meeting (meeting costs)	Every year	*TWG CMSA meetings: Dec 2017, Mar 2019, Sep 2023, Jul 2024.*	TWG CMSA11 meeting. Jul 2025. *2025 FY: 1.5mil JPY (10,000USD)* *Source: SC fund.* TWG CMSA12. Early 2026. *2025 FY: virtual, no funds required.*
3	Neon flying squid stock assessment meeting (meeting costs)	Every year		SSC NFS02 meeting. Jul 2025. *2025 FY: 1.5mil JPY (10,000USD)* *Source: SC fund.*
4	Invited expert to support TWG CMSA (consultancy fee and travel costs for one in-person meeting)	2020-current	An external expert has been contracted to support TWG CMSA.	*2025 FY:* *0.6mil JPY - SC fund, and* *0.8mil JPY - US VCF.*
5	Invited expert to support SSC PS (consultancy fee and travel costs for two in-person meeting)	2019-current	An external expert has been contracted to support SSC PS and its subsidiary WG NSAM.	*2025 FY: 2.4mil JPY* *Source: SC fund.*
6	Invited expert to support WG NSAM (consultancy fee and travel costs for one in-person meeting)	2024-		*2025 FY: 3.3mil JPY* *Source: SC fund.*
7	Invited expert to support SSC NFS (consultancy fee and travel costs for two in-person meetings)	2024-current	An external expert has been contracted to support SSC NFS.	*2025 FY: 2.2mil JPY* *Source: SC fund.*
8	Invited expert to support SA and NPA stock assessments	2024-current	Two external experts were contracted in 2024 as a separate project covered by the SPF.	*2025 FY: 2.2mil JPY* *Source: SC fund.*

9	PICES Annual meeting	Every year	Travel support to a participant of the SC or its subsidiary bodies to attend PICES Annual meeting.	*2025 FY: 0.75mil JPY (5,000USD)* *Source: SC fund.*
10	Other science meetings / capacity development	2024	Training for capacity building or travel support to attend other relevant science meetings.	*2026 FY: 0.75mil JPY (5,000USD)* *Source: SC fund.*
11	PICES/ICES/FAO Small Pelagic Fish Symposium. 4-8 May 2026, La Paz, Mexico	2025& 2026	An invitation from PICES for co-sponsorship and participation in the symposium.	*2025 FY: 0.75mil JPY (5,000USD)* *2026 FY: 0.75mil JPY (5,000USD)* *Source: SC fund.*
12	Database for scientific data	2025-2026	A proposal to develop a database for scientific data.	*2025 FY: 10,000 EUR* *2026 FY: 20,000 EUR* *Source: EU's VCF and Members' in kind contribution*
	Total			*2025 FY: 15.2mil JPY* *Source: SC fund.*

Annex N:
Revised Terms of Reference for the Scientific Committee

NORTH PACIFIC FISHERIES COMMISSION
SCIENTIFIC COMMITTEE
TERMS OF REFERENCE

Context

Article 7(3b) of the Convention states that the Commission shall "adopt a plan of work and terms of reference for the Scientific Committee, for the Technical and Compliance Committee and, as necessary, for other subsidiary bodies."

Article 10(1) of the Convention states that "the Scientific Committee shall provide scientific advice and recommendations in accordance with the terms of reference for the Committee to be adopted at the first regular meeting of the Commission and as may be amended from time to time."

Purpose

The Scientific Committee should provide a forum for consultation and cooperation among Contracting Parties and Fishing Entities (Members) with respect to the evaluation and exchange of scientific information relating to the fisheries of the Convention Area, and to encourage and promote cooperation among the members in scientific research designed to fill gaps in knowledge pertaining to these matters.

Functions

In accordance with Article 10(4) of the Convention, the functions of the Scientific Committee shall be to:

(a) Develop and maintain a research plan that would be presented to the Commission, including specific issues and items to be addressed by the scientific experts or by other organizations or individuals, as appropriate, and identify data needs and coordinate activities that meet those needs;

(b) regularly plan, conduct and review the scientific assessments of the status of fisheries resources in the Convention Area, identify actions required for their conservation and management, and provide advice and recommendations to the Commission;

(c) collect, analyze and disseminate relevant information;

(d) assess the impacts of fishing activities on fisheries resources and species belonging to the same ecosystem or dependent upon or associated with the target stocks;

(e) develop a process to identify vulnerable marine ecosystems, including relevant criteria for doing so, and identify, based on the best scientific information available, areas or features where these ecosystems are known to occur, or are likely to occur, and the location of bottom fisheries in relation to these areas or features, taking due account of the need to protect confidential information;

(f) identify and advise the Commission on additional indicator species for vulnerable marine ecosystems for which directed fishing shall be prohibited;

(g) establish science-based standards and criteria to determine if bottom fishing activities are likely to produce significant adverse impacts on vulnerable marine ecosystems or marine species in a given area based on international standards such as the FAO International Guidelines and make recommendation for measures to avoid such impacts;

(h) review any assessments, determinations and management measures and make any necessary recommendation in order to attain the objective of this Convention;

(i) develop rules and standards, for adoption by the Commission, for the collection, verification, reporting, and the security of, exchange of, access to and dissemination of data on fisheries resources, species belonging to the same ecosystem, or dependent upon or associated with the target stocks and fishing activities in the Convention Area;

(j) to the extent practicable, provide analysis to the Commission of alternative conservation and management measures that estimates the extent to which each alternative would achieve the objectives of any management strategy adopted or under consideration by the Commission; and

(k) provide such other scientific advice to the Commission as it considers appropriate or as may be required by the Commission.

Consistent with Article 7(3c), the Commission shall refer to the Scientific Committee any question pertaining to the scientific basis for the decisions the Commission may need to take concerning conserving and managing fisheries resources and species belonging to the same

ecosystem or dependent upon or associated with the target stocks and assessing and addressing the impacts of fishing activities on vulnerable marine ecosystems.

In accordance with Article 10(6), the Scientific Committee "shall not duplicate the activities of other scientific organizations and arrangements that cover the Convention Area." Further, consistent with Article 21, the Committee shall seek, with the approval of the Commission, to develop cooperative working relationships with other intergovernmental organizations that can contribute to its work.

Structure

1. Membership

The Scientific Committee shall be composed of Members of the Commission. Members are encouraged to identify a focal point to facilitate the operations of the Committee. Scientific Committee participants would have a science background. Invitation and participation of non-members in the meetings and other activities of the Committee are subject to relevant provisions in Rule 9 of the Commission's Rules of Procedure.

2. Chair and Vice-Chair

i. Selection and Term

The Chair and Vice-Chair of the SC will be selected by consensus by SC Members, subject to approval by the Commission, in accordance with relevant provisions of the Convention and the Rules of Procedure of the Commission, unless the Commission decides otherwise.

The SC Chair shall be elected for a period of two years and shall be eligible for reelection for two additional terms of two years. The SC Chair's term shall continue until the Commission approves the elected Chair. The Chair's term shall begin after the approval by the Commission. In the case that the Chair is unable or unwilling to serve a full term, the Vice-Chair will assume the Chair's position in accordance with the Rules of Procedure. The Vice-Chair would succeed the Chair after the Chair's term expires and a new Vice- Chair would be identified.

The Chairs of the SC subsidiary bodies will be selected by Members of these subsidiary bodies, and the selection becomes effective immediately afterwards. They may serve more than two consecutive terms, recognizing the specialized nature of the subjects and tasks that its subsidiary bodies deal with, and noting the need to provide greater consistency and continuity of expertise to its subsidiary bodies.

ii. *Duties of the Chair*

- Coordinate the meeting schedule and agenda preparation;
- Chair Committee meetings as well as prepare reports of the meetings;
- Foster constructive and active dialogue at Committee meetings;
- Coordinate the development of specific deliverables identified in the Committee's functions, as per Article 10 in the Convention;
- Liaise with the Commission Chair, TCC Chair, and other relevant international organizations as appropriate to enhance the quality of activities;
- Represent or designate a competent person to represent the Committee to participate, as appropriate, in various regional and international meetings and fora; and,
- Invite, as appropriate, non-members to contribute to the Committee's meeting agendas and activities.

3. Meetings

Consistent with Article 10 in the Convention, the Scientific Committee shall meet, unless the Commission otherwise decides, at least once every two years, and prior to the regular meeting of the Commission.

4. Sub-Committees or Working Groups

Consistent with Article 6 in the Convention, the Committee may establish working groups and may seek external advice in accordance with any guidance provided by the Commission.

Agendas and Meeting Conduct

The Scientific Committee will endeavor to develop agendas and conduct its meetings in a manner that is consistent with Rule 5 in the Commission's Rules of Procedure.

Decisions

Decisions will be adopted in a manner that is consistent with Article 8 of the Convention and Rule 2 in the NPFC Rules of Procedure. Consistent with Article 8, as a general rule, the Committee shall strive to make its decisions by consensus.

Language

In accordance with Rule 7 in the Rules of Procedure, English shall be the working language of the Committee. Any other language may be used on condition that persons doing so will provide interpreters.

Records and Reports

In accordance with Article 6(2) in the Convention, after each meeting, the Committee will provide a report on its work to the Commission that includes, where appropriate, advice and recommendations to the Commission.

As per Article 10(3) in the Convention, the Committee shall make every effort to adopt its reports by consensus. If every effort to achieve consensus has failed, the report shall indicate the majority and minority views and may include the differing views of the representatives of the members on all or any part of the report.

These Terms of Reference are subject to approval by the Commission. They may be revised by the Committee based on consensus and subsequent approval by the Commission.

Annex O:

Five-Year Research Plan and Work Plan of the Scientific Committee

North Pacific Fisheries Commission
Scientific Committee
2025-2029 Research Plan

1.0 BACKGROUND

Article 10, Section 4(a) of the *Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean* states that the Scientific Committee (SC) will "recommend to the Commission a research plan including specific issues and items to be addressed by the scientific experts or by other organizations or individuals, as appropriate, and identify data needs and coordinate activities that meet those needs."

An initial draft of this research and accompanying work plan was presented for review during the 4th Preparatory Conference and a subsequent discussion was held by a small working group to establish science priorities for the NPFC. This plan draws on those discussions and was updated by the SC Chair based on the progress made by the NPFC since that Conference.

The development of multi-year science research or work plans is common across regional fisheries management organizations as well as domestic fisheries science agencies. This draft plan draws on such examples, and has been developed for consideration by the SC before it may be adopted by the Commission.

2.0 OBJECTIVES

The research plan is intended to guide the work of the Scientific Committee by identifying key research priorities and associated areas of work to be undertaken or maintained. The plan should also serve to: ensure efficient utilization of scarce resources within the Commission; inform Parties' domestic research planning as a means of complementing the Commission's science activities; and help the Commission identify potential sources of external funding.

It is not intended as an exhaustive plan describing all research activities that may be carried out by Parties, nor is it intended to preclude work already taking place. The plan should support the Commission's primary objective (*Article 2* in the Convention), which is to "ensure the long-term conservation and sustainable use of the fisheries resources in the Convention Area while protecting the marine ecosystems of the North Pacific Ocean in which these resources occur". The plan should also help the Scientific Committee fulfill its functions as specified in the Convention.

3.0 PRIORITY RESEARCH AREAS

In addition to discussions held during the Preparatory Conference (referenced above) followed by the Commission and Scientific Committee after their establishment, the identification of priority research areas draws largely from the Commission's Convention, which outlines specific functions for the Scientific Committee in *Article 10, Section 4*. These priority research areas are subject to the approval of the Commission, and may be revisited and/or revised as deemed appropriate by the Commission. Proposed rolling five-year work plans for the priority areas are available in the attached (Annex 1).

The proposed priority research areas are:
1. Stock assessments for target fisheries and bycatch species
2. Ecosystem approach to fisheries management
3. Data collection, management and security

At its 7th meeting, the Commission adopted a resolution on climate change and tasked the SC to identify relevant data availability and needs and integrate analyses of climate change relevant to NPFC fisheries into its work plan. The resolution also requires SC to include climate change as a standing agenda item of its meetings.

3.1 Stock Assessments

Rationale

Accurate stock assessments are critical in helping to ensure the long-term conservation and sustainable use of fisheries resources in the Convention Area. One of the primary functions of the Commission is setting total allowable catch or total allowable level of fishing effort, and as per *Article 7-1(b)*, this is to be in "accordance with the advice and recommendations of the Scientific Committee".

Consistent with this, *Article 10-4(b)* states that one of the functions of the Scientific Committee is to "regularly plan, conduct and review the scientific assessments of the status of fisheries resources in the Convention Area, identify actions required for their conservation and management, and provide advice and recommendations to the Commission".

Finally, *Article 10-4(i)* states that the Scientific Committee shall also "develop rules and standards, for adoption by the Commission, for the collection, verification, reporting, and the security of, exchange of, access to and dissemination of data on fisheries resources, species belonging to the same ecosystem, or dependent upon or associated with the target stocks and fishing activities in the Convention Area".

The Scientific Committee should endeavor to understand the current status and trends in production of populations of priority species as agreed by the 2nd Commission meeting in 2016, as well as factors that may affect future trends.

Areas of work

• Development of baseline assessment of the status of priority stocks
• Review of existing data standards in relation to stock assessments (e.g. Annual Report template, NPFC's vessel monitoring system)
• Stock delineation of important commercial species for the purpose of providing advice for the determination of management units
• For each commercial species, determination of data requirement, including data availability and data gaps; identification, where possible, of strategies to fill the data gaps, including for bycatch
• Development of a standardized method to provide advice to the Commission
• Development of assessment models by species and research as required to determine various assessment parameters
• Provide fisheries data to support Members' stock assessments of Japanese flying squid *Todarodes pacificus*, Japanese sardine *Sardinops melanostictus*, and blue mackerel *Scomber australasicus*.

3.1.1. Pelagic fish stock assessment

Rationale

Pelagic fish and squids are primary fisheries resources for NPFC Members. They comprised more than 99% of total catch of species covered by the Convention. Many of them are migratory species with wide geographical distributions which include both EEZs of the North Pacific Rim countries and High Seas. Management of such stocks requires close cooperation among Members concerned to ensure sustainable use and conservation of fisheries resources.

Four fish species and two squid species were recognized by the Scientific Committee as priority species: Pacific saury *Cololabis saira*, Chub mackerel *Scomber japonicus*, Blue mackerel *Scomber australasicus*, Japanese sardine *Sardinops melanostictus*, Neon flying squid *Ommastrephes bartramii*, Japanese flying squid *Todarodes pacificus*.

Areas of work

• Completion of stock assessment for Pacific saury and development of the framework and timeline

for its regular improvement and update
• Conducting stock assessment for Chub mackerel and other priority species considering their top-down prioritization (Spotted mackerel - Japanese sardine - Neon flying squid – Japanese flying squid) and available funds and capacity
• Identification of data gaps, determination of activities to address those gaps and development of standards and mechanisms for data collection and verification

• Develop a management strategy evaluation (MSE) for Pacific saury in collaboration with NPFC's Commission, Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS), Technical and Compliance Committee (TCC), fishery managers, fishers, stakeholders, and observers.

3.1.2. Bottom fish stock assessment

Rationale

Data used for traditional stock assessment are sparse for bottom fish, and it is unlikely that traditional methods will be applicable for most deepwater species in the Convention Area. In addition, some bottom species have unique life cycles, sporadic recruitment patterns and irregular spawning-recruitment relationships that also makes difficult accurate stock assessment. All these require specific approaches for management and sustainable use of bottom fisheries resources. More than ten bottom species have been exploited by fisheries in the Convention Area during the last two decades. Four fishes are recognized as priority species: North Pacific armorhead (NPA) *Pentaceros wheeleri,* splendid alfonsino (SA) *Beryx splendens,* sablefish *Anonoploma fimbria,* and skilfish *Erilepsis zonifer*.

Areas of work

• Review of approaches applicable for stock assessment of target bottom species and investigate various management strategies
• Further development of the Adaptive Management approach for NPA and mechanism for its implementation
• Identification of data needs and establishment of activities to fill data gaps

3.2 Ecosystem Approach to Fisheries Management

Rationale

Article 3 (c) in the Convention states that: "In giving effect to the objective of this Convention, the

following actions shall be taken individually or collectively as appropriate: (c) adopting and implementing measures in accordance with the precautionary approach and an ecosystem approach to fisheries, and in accordance with the relevant rules of international law, in particular as reflected in the 1982 Convention, the 1995 Agreement and other relevant international instruments".

Article 7-1 (c,d) in the Convention states that the Commission shall: "adopt, where necessary, conservation and management measures for species belonging to the same ecosystem or dependent upon or associated with the target stocks"; and, "adopt, where necessary, management strategies for any fisheries resources and for species belonging to the same ecosystem or dependent upon or associated with the target stocks, as may be necessary to achieve the objective of this Convention."

Article 10-4 (d) states that the Scientific Committee shall "assess the impacts of fishing activities on fisheries resources and species belonging to the same ecosystem or dependent upon or associated with the target stocks."

Areas of work

• Formulation of a work plan on how to implement the ecosystem approach to fisheries management in the Convention Area
• Vulnerable Marine Ecosystems
• Understand ecological interactions among species
• Ecosystem modelling
• Evaluate impacts of fishing on fisheries resources and their ecosystem components, including bycatch species
• Other issues related to marine ecosystems including marine debris and pollution

3.2.1 Vulnerable Marine Ecosystems

Rationale

The identification of vulnerable marine ecosystems is a necessary precursor to implementing measures to protect these ecosystems, and such measures that are explicitly called for in the Convention (e.g. *Article 7-1(e)*).

Article 10-4 (e) states that the Scientific Committee shall "develop a process to identify vulnerable marine ecosystems, including relevant criteria for doing so, and identify, based on the best scientific information available, areas or features where these ecosystems are known to occur, or are likely to occur, and the location of bottom fisheries in relation to these areas or features, taking due account of the need to protect confidential information."

Article 7-1 (e) states that the Commission shall "adopt conservation and management measures to prevent significant adverse impacts on vulnerable marine ecosystems in the Convention Area, including but not limited to: measures for conducting and reviewing impact assessments to determine if fishing activities would produce such impacts on such ecosystems in a given area; measures to address unexpected encounters with vulnerable marine ecosystems in the course of normal bottom fishing activities; and as appropriate, measures that specify locations in which fishing activities shall not occur."

To date, Japan, Russia, Korea, the US and Canada have completed a report on identification of VMEs and an assessment of impacts caused by bottom fishing activities on VMEs and marine species. The Scientific Committee may build on these reports, which will be kept up to date by respective Parties.

Areas of work

• Review existing NPFC standards on VME data collection, including guidelines set forth in the CMMs for bottom fisheries and protection of vulnerable marine ecosystems in the northwestern and northeastern Pacific Ocean (CMM 2025-05 and CMM 2025-06), and determine if any modifications to these standards are needed in the short-term and/or longer term
• Review of Encounter Protocol for bottom fisheries on Vulnerable Marine Ecosystems
• Determination of data requirements and identification of what data may be collected through commercial fishing operations
• Develop consensus on criteria used to identify VMEs and how this might be applied in the NPFC (note that guidelines from the FAO are already referenced in Annex 2 of the CMM 2025-05 and CMM 2025-06)
• Analysis of known or suspected VMEs in the Convention Area
• Visual surveys of VMEs for data collection
• Development of a framework to conduct assessments of Impacts of Bottom Fishing Activities on Vulnerable Marine Ecosystems

3.2.1.1 Review of Encounter Protocol for bottom fisheries on Vulnerable Marine Ecosystems

Rationale

The purposes of VME encounter protocols in NPFC Convention Area include:
• Ensuring early detection and protection of potential VMEs within an existing fishing area;
• Ensuring early detection and protection of potential VME within an unfished area;

• Documenting information on known occurrences of VME indicators within the Convention Area.

Development of the Encounter Protocol progressed through Scientific Committee meetings as well as intersessional activities. VME encounter protocols are incorporated in the CMMs for bottom fisheries and protection of vulnerable marine ecosystems in the northwestern and northeastern Pacific Ocean, specifically in Para 4(g) and 3(j), respectively.

Areas of Work

Consideration of the following subjects of research and analyses are recommended to further refine encounter protocols in the Convention Area (as notified in Appendix C, NPFC01-2016-SSCVME01- Final Report):

• Other taxa, topographical, geographical and geological features that may indicate the presence of VMEs;
• Taxon-specific encounter thresholds and reporting;
• Framework for evaluating the effectiveness of encounter protocols;
• Tiered approach with different encounter protocols associated with different thresholds;
• Gear-specific thresholds to reflect differences in catchability;
• Gear-specific move-on distances to reflect type of gear;
• Different reporting requirements for different catches;
• Tiered approach to reporting bycatch of VME indicator taxa;
• Different encounter protocols for existing and new fishing areas

3.3 Data collection, management and security

Rationale

Article 10, paragraph 4 (i) in the Convention states that the functions of the Scientific Committee shall be to: “develop rules and standards, for adoption by the Commission, for the collection, verification, reporting, and the security of, exchange of, access to and dissemination of data on fisheries resources, species belonging to the same ecosystem, or dependent upon or associated with the target stocks and fishing activities in the Convention Area”.

Areas of work

• Review of data standards related to stock assessments and other relevant data, including VME data collection and vessel monitoring systems
• Identify data sources to meet data needs for priority areas of work above and develop

programs for data collection
• Develop data security policy including data handling and sharing protocol, information confidentiality classification and access control security guideline

4.0 IMPLEMENTATION AND REVIEW

The SC will review the Research Plan and update it as necessary on an annual basis. The Research Plan will form the foundation of SC's rolling five-year Work Plan. Monitoring the implementation of this Research Plan will be the responsibility of the Chair of the Scientific Committee in collaboration with the Chairs of the Scientific Committees' subsidiary groups and the Executive Secretary. Members of the Commission and the Secretariat will share responsibility for implementation of the Research Plan.

Full implementation of the Research Plan will likely be beyond the means of the Commission's core budget. Extra-budgetary funds from voluntary contributions of Members and other sources will be required and actively sought by the Commission. Nevertheless, adoption of the Plan by the Scientific Committee and subsequent strong support from the Commission is a prerequisite to securing the necessary extra-budgetary funds.

An independent external review of the Plan may periodically be requested by the SC. The Scientific Committee will be responsible for preparing the terms of reference for the review. The Scientific Committee will present the report of the review to the next regular session of the Commission.

5.0 SCIENTIFIC COLLABORATION WITH OTHER ORGANIZATIONS

While not included as a priority, *Article 21* of the Convention addresses cooperation with other organizations or arrangements. It calls on the Commission to cooperate, as appropriate, on matters of mutual interest with the Food and Agriculture Organization (FAO), other specialized agencies of the FAO and relevant Regional Fisheries Management Organizations (RFMOs). Further, the Commission is called on to develop cooperative working relationships, including potential agreements, with intergovernmental organizations that can contribute to its work.

Article 10 also speaks to this issue in clauses five and six, stating that the Scientific Committee may exchange information on matters of mutual interest with other relevant scientific organizations or arrangements, and that the Committee shall not duplicate the activities of other scientific organizations and arrangements that cover the Convention Area.

The impetus to collaborate is made stronger by the prospect of limited research funding in the Commission, at least in the short-term, but it is also in the best interests of the Commission to seek synergies with other organizations with mutual interests and similar membership (e.g. North Pacific

Marine Science Organization (PICES) and North Pacific Anadromous Fish Commission (NPAFC)).

Activities could include:

• Evaluate reports of International Organizations that may be relevant to the functioning of the Scientific Committee
• Identify other organizations with relevant mandates and activities
• Formalize relationships with these organizations (e.g. MOUs, standing invitations to meetings)
• Identify potential funding opportunities

Five-Year Work Plan of the Scientific Committee and its subsidiary bodies

Priority list:

1. Conduct a stock assessment update based on BSSPM analyses
2. Further investigate improvements to the BSSPM
3. Develop an age/size-structured model
4. Develop a list of plausible ranges for biological parameters
5. Develop databases to support age/size-structured models
6. Continue joint CPUE work to incorporate broader spatial and temporal coverage
7. Update the biomass estimate using the existing method (swept area method)
8. Develop spatio-temporal model for the biomass estimate
9. Continue exploring climate indices to explain impacts on Pacific saury stock productivity
10. Support any technical work on MSE under SWG MSE PS

ITEM	2025	2026	2027	2028	2029	Progress
Regular update of inputs						
Update & improvement of biomass survey index	Continue regular review of 1) survey plan 2) analytical work 3) any related issues including experiments to produce absolute biomass index and additional surveys by other Members to increase coverage	Same as on the left	Same as on the left	Same as on the left	Same as on the left	Completed annually
Update & improvement of	Continue review of outcomes of regular	Continue review of outcomes of regular	Same as on the left	Same as on the left	Same as on the left	Completed annually

ITEM	2025	2026	2027	2028	2029	Progress
CPUE indices	update and analytical works	update and analytical works including spatio-temporal analysis				
Development of joint CPUE index	Continue review of outcomes of regular update and analytical works	Same as on the left	Same as on the left	Same as on the left	Same as on the left	Completed annually
Regular update of the existing SA						
Routine update BSSPM as a benchmark	Continue review of outcomes of regular BSSPM update [1)]	Same as on the left	Same as on the left	Same as on the left	Same as on the left	Completed annually
Improvement and further investigation of BSSPM	Review any outcomes of improvements, inter alia in light of possible incorporation of environmental information and reduction of retrospective pattern	Same as on the left	Same as on the left	Same as on the left	Same as on the left	Completed annually
Toward age/size-structured models (ASSMs)						
Data preparation/update	Explore age-specific abundance indices and recruitment indices. Conditional age at length information. Spatio-temporal variation of size composition.	TBD	TBD	TBD	TBD	Completed annually
Summarizing available information on PS biology	Update regularly, specifically maturity ogive and growth function	Continue	Continue	Continue	Continue	Collaboration between modelers and biologists has been done well and it will continue for updates.

ITEM	2025	2026	2027	2028	2029	Progress
Development of models	Finalize development of a new stock assessment model	Finalize development of a new stock assessment model				SS3 model was reviewed. WG NSAM will continue to work on the development of the SS3 model.
Uncertainty in models (possible link with OM grid under MSE)	Refine the plausible range of values of key biological parameters. Refine assumptions about prior distributions and the ranges for model parameters.	Continue	Continue	Continue	Continue	On going with in the work on new stock assessment
Other key matters						
Climate impact assessment	Explore models for assessing climate impacts on distribution and productivity	Continue	Continue	Continue	Continue	Modelling has been conducted and the work to be continued
HCR	Evaluate the performance of the interim HCR in the presence of retrospective pattern	Continue				Start in 2025

[1)] Until any new stock assessment models other than the BSSPM are accomplished, the outcome will produce key inputs for the Harvest Control Rule (HCR).

Small Scientific Committee on Bottom Fish and Marine Ecosystems

Priority list:

1. NPA: Review monitoring survey
2. NPA: Conduct stock assessment and provide management advice
3. SA: Conduct stock assessment and provide management advice
4. NPA, SA and Sablefish: Develop and implement harvest control rule
5. Sablefish: Evaluate historical harvest relative to trip limits and update trip limits if necessary
6. Sablefish and VME: Conduct trade-off analysis between commercial fishing and VME protection
7. VME: Assess the relative risk of SAI for VME as a step towards standardized approach to SAI

ITEM	SSC BFME06 (2025)	SSC BFME07 (2026)	SSC BFME08 (2027)	SSC BFME09 (2028)	SSC BFME10 (2029)	Progress
North Pacific Armorhead						
Assess and monitor status of stock	Update catch data for NPA	Update catch data for NPA	Update catch data for NPA	Update catch data for NPA	Update catch data for NPA	Completed annually
	Review results of NPA monitoring surveys	Review results of NPA monitoring surveys	Review results of NPA monitoring surveys	Review results of NPA monitoring surveys	Review results of NPA monitoring surveys	Completed annually
	Implement alternative methods for stock status	Implement alternative methods for stock status	Update status of stock	Update status of stock	Update status of stock	Exploring alternative methods for stock status
	Apply depletion method to assessing stock	Further develop and apply depletion method to estimate stock status				Currently underway
	Identify and conduct additional research on NPA	Identify and conduct additional research on NPA	Identify and conduct additional research on NPA	Identify and conduct additional research on NPA	Identify and conduct additional research on NPA	Completed annually

ITEM	SSC BFME06 (2025)	SSC BFME07 (2026)	SSC BFME08 (2027)	SSC BFME09 (2028)	SSC BFME10 (2029)	Progress
	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Completed annually
Conserve stock		Develop conservation objective(s)				Not completed
		Implement adaptive management				Not completed
	~~Update data and implement HCR~~	Develop HCR and implement	Update data and implement HCR	Update data and implement HCR		Not completed
Splendid alfonsino						
Assess and monitor status of stock	Update catch data and CPUE standardization for SA Update life history based approach and provide management advice if necessary	Update catch data and CPUE standardization for SA Update life history based approach and provide management advice if necessary	Update catch data and CPUE standardization for SA Update life history based approach and provide management advice if necessary	Update catch data and CPUE standardization for SA Update life history based approach and provide management advice if necessary	Update catch data and CPUE standardization for SA	Completed annually Completed life history based approach (to be presented at BFME05)
	Apply data-limited integrated approach	Complete data-limited integrated approach				On track for completion by BFME07
	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Completed annually

ITEM	SSC BFME06 (2025)	SSC BFME07 (2026)	SSC BFME08 (2027)	SSC BFME09 (2028)	SSC BFME10 (2029)	Progress
Conserve stock	~~Develop conservation objective(s); Define and implement harvest control rule based on stock synthesis approach~~	Develop HCR and implement	Update data and implement HCR	Update data and implement HCR	Update data and implement HCR	Not completed
Sablefish						
Assess and monitor status of stock	Update catch data and CPUE index Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish	Update catch data and CPUE index Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish	Update catch data and CPUE index Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish	Update catch data and CPUE index Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish	Update catch data and CPUE index Provide an update on USA-Canada stock assessment models for Sablefish and joint research on Sablefish	Completed annually Completed annually
	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Completed annually
Conserve stock	[Design HCR specific to NPFC Sablefish (joint intersessional work with Canada and USA assessment authors]	[Design HCR specific to NPFC Sablefish (joint intersessional work with Canada and USA assessment authors]	Update data and implement HCR	Update data and implement HCR		Not completed
Other research		~~Update trade-off analysis for Sablefish fishing and VME protection (as new data is available)~~	-	-		~~Not updated (no new data available)~~

ITEM	SSC BFME06 (2025)	SSC BFME07 (2026)	SSC BFME08 (2027)	SSC BFME09 (2028)	SSC BFME10 (2029)	Progress
Vulnerable marine ecosystems						
Defining and Identifying VMEs		Consolidate other potential data sources and clarify gaps and deficiencies in VME data				Completed mapping (SWG VME report)
	Review and update quantitative definition of VMEs as needed	Review and update quantitative definition of VMEs as needed	Review and update quantitative definition of VMEs as needed	Review and update quantitative definition of VMEs as needed	Review and update quantitative definition of VMEs as needed	Completed annually
	Update identification of new VME and areas likely to be VMEs as new data becomes available	Update identification of new VME and areas likely to be VMEs as new data becomes available	Update identification of new VME and areas likely to be VMEs as new data becomes available	Update identification of new VME and areas likely to be VMEs as new data becomes available	Update identification of new VME and areas likely to be VMEs as new data becomes available	Completed annually
	Review updated taxonomy for corals and VME indicator taxa as needed	Review updated taxonomy for corals and VME indicator taxa as needed	Review updated taxonomy for corals and VME indicator taxa as needed	Review updated taxonomy for corals and VME indicator taxa as needed	Review updated taxonomy for corals and VME indicator taxa as needed	Completed annually
Identifying and defining SAI's	Determine data requirements and spatial/temporal resolution for SAI assessment and continue developing risk assessment for SAI	Assess risk of SAI for bottom fisheries	Conduct integrated SAI assessment	Conduct integrated SAI assessment	Conduct integrated SAI assessment	Work in progress
	Develop standardized and measurable metrics to assess cumulative impacts of fisheries on VME	Assess other threats to VME, such as climate change and lost fishing gear				
Quantifying interactions between fisheries and VMEs	Update spatially explicit fishing effort data	Update spatially explicit fishing effort data	Update spatially explicit fishing effort data	Update spatially explicit fishing effort data	Update spatially explicit fishing effort data	Completed annually

ITEM	SSC BFME06 (2025)	SSC BFME07 (2026)	SSC BFME08 (2027)	SSC BFME09 (2028)	SSC BFME10 (2029)	Progress
	Develop or research alternative methods to apply to Japan and Korea's indicator taxa bycatch to further refine encounter thresholds that are taxon and gear specific					Completed - To be presented at BFME06
	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Review fisheries observer program data collection for adequacy to produce data streams to support management advice	Completed annually
Conserving VMEs	Refine framework for future monitoring of recovering VMEs	Periodic review of VME management	Periodic review of VME management	Periodic review of VME management	Periodic review of VME management	Not completed
Other ecosystem components						
Assess the impact of fisheries on other ecosystem components		Work towards assessment of fishing impacts on other (non-target) ecosystem components				Completed - To be presented at BFME05
Climate Change						Progress
Preparing for climate change effect on bottom fish	Literature review for SA, NPA (SWG NPA&SA) or Sablefish (Canada)	Literature review for SA, NPA (SWG NPA&SA) or Sablefish (Canada)				NA

Small Scientific Committee on Neon Flying Squid

Priority list:

1. Conduct research to appropriately separate two cohorts using spatial and age/size characteristics
2. Continue CPUE standardization work
3. Conduct research and literature reviews to better understand the biological characteristic (e.g., growth rate, natural mortality), life history (e.g., cohorts associated with spawning timing and location, feeding and spawning migration) of the species and population structure (e.g. genetic analysis)
4. Conduct a stock assessment based on surplus production model
5. Further investigate improvements to the surplus production model
6. Explore and develop alternative approaches, such as the management strategy evaluation framework and data-limited management procedures, to provide effective management advice
7. Conduct research and literature reviews to better understand the factors driving abundance fluctuations (including climate change) in this short-lived species
8. Review other successful (or unsuccessful) stock assessment and management practices for squid or other short-lived species globally to inform SSC NFS work
9. Develop other models e.g., age/size-structured model
10. Develop databases to support age/size-structured models

ITEM	2025	2026	2027	2028	2029	Progress
Regular update of inputs						
Update & improvement of CPUE indices	Continue review of outcomes of regular update and analytical works	Submit standardized CPUE by each member	Update	Update	Update	Updated CPUE indices of Japanese survey and Chinese squid jigging fishery
Joint CPUE standardization		Conduct joint CPUE standardization	Update	Update	Update	No progress
Regular update of the surplus						

ITEM	2025	2026	2027	2028	2029	Progress
production model						
Update and review of surplus production model and other stock assessment models	Conduct preliminary stock assessment	Conduct preliminary stock assessment using standardized CPUE from each member	Same as on the left	Same as on the left	Same as on the left	Some Members (China and Japan) conducted preliminary stock assessment using JABBA and SPiCT
Improvement and further investigation of surplus production model	Review any outcomes of improvements, inter alia in light of possible incorporation of environmental information	Same as on the left	Same as on the left	Same as on the left	Same as on the left	No progress
Toward age/size-structured models						
Data inventory (CPUE and size/age in space and time)			Conditional age at length information. Spatio-temporal variation of size composition.	TBD	TBD	Information on size composition was shared by some Members
Summarizing available information on neon flying squid biology			Update regularly, specifically maturity ogive and growth function	Continue	Continue	Updated information on spawning ground and age composition
Development of models			Develop models to be evaluated	TBD	TBD	No progress
Toward other approaches to provide management advises						
MSE or data-limited			Develop framework	TBD	TBD	Libin Dai (China)

ITEM	2025	2026	2027	2028	2029	Progress
management procedures			to provide management advice (MSE or data-limited management procedures)			conducted MSE as part of SC capacity building and reported its outcome
Review other successful (or unsuccessful) stock assessment and management practices for squid or other short-lived species globally to inform SSC NFS work	Review by the invited expert	TBD	TBD	TBD	TBD	Invited expert reviewed stock assessment methods and management measures for squid and other short-lived species

Technical Working Group on Chub Mackerel Stock Assessment

Priority list:

1. Data preparation and review of biological information
2. Conduct stock assessment of chub mackerel
3. Set biological reference points
4. Provide scientific advice on the management of chub mackerel stock to the Commission
5. Explore the influence of climate changes on chub mackerel stock
6. Regularly update and refine inputs

ITEM	2025	2026	2027	2028	2029	Progress
Regular update of inputs						
Research survey indices	Update	Update	Update	Update		Research survey indices have been finalized and used for stock assessment.
CPUE indices	Update	Update	Update	Update		CPUE standardization has been finalized and used for stock assessment.
Catch data/catch composition	Update	Update	Update	Update		Catch data and catch composition have been finalized and used for stock assessment.
Biological parameters (maturity, M, weight)	Review biological parameters	Review biological parameters	Review biological parameters	Review biological parameters		Assumptions on biological parameters have been finalized and used for stock assessment.
Quarterly fishery data (CAA, WAA,	Update	Update	Update	Update		Quarterly fishery data has been submitted.

ITEM	2025	2026	2027	2028	2029	Progress
Maturity-at-age)						
Stock assessment						
Benchmark stock assessment	Update SA	Update SA	Update SA	Update SA		Benchmark stock assessment has been conducted.
Improvement and further investigation of the selected model	Review and improve, if needed, the SA model	Review and improve, if needed, the SA model	Review and improve, if needed, the SA model	Review and improve, if needed, the SA model		Done and ongoing.
New stock assessment models	Explore new stock assessment models, if available	Explore new stock assessment models, if available	Explore new stock assessment models, if available	Explore new stock assessment models, if available		
Reference points, HCR, future projections and MSE						
Set biological reference points (limit and target)	Review and calculate reference points	Review and calculate reference points	Review and calculate reference points	Review and calculate reference points		Commonly used reference points are reviewed, and calculation with the results of SA has been completed
Develop future projections		Candidates of HCR are tested in future projections	Selection of HCR	Improvement		Results of future projection have been provided.

Scientific Committee – other priority species and marine ecosystems

Priority list

As stipulated in the Convention, Article 10, the Scientific Committee shall provide scientific advice and recommendations to the Commission which is considered the highest priority task of the SC. The following priority areas have been identified for SC:

1. Priority species summaries and stock assessments for management advice
2. Management Strategy Evaluation (MSE) for priority species
3. Ecosystem approach to fisheries management: understand ecological interactions among species and impacts of fishing on fisheries resources and their ecosystem components
4. Collaboration with other organizations
5. Regular review of the research plan and work plan
6. Data collection, management, and security

ITEM	2025	2026	2027	2028	2029	Progress
Priority Species						
Summaries of priority species	Update summary sheets as needed	Update summary sheets as needed	Update summary sheets as needed	Update summary sheets as needed	Update summary sheets as needed	Summary sheets are complete for all priority species
Assessment of Blue (Spotted) Mackerel and associated bycatch	Update data on Blue Mackerel and provide relevant data for stock assessment Compile data on the catch composition of Chub Mackerel and Blue Mackerel and provide information to TWG CMSA and SWG BM	Update data on Blue Mackerel and provide relevant data for stock assessment	Update data on Blue Mackerel and provide relevant data for stock assessment	Update data on Blue Mackerel and provide relevant data for stock assessment	Update data on Blue Mackerel and provide relevant data for stock assessment	Data on Blue Mackerel have been collated and provided for stock assessment Data on catch composition are compiled and were provided to TWG CMSA and SWG BM

ITEM	2025	2026	2027	2028	2029	Progress
	Observe Japan's stock assessment of Blue Mackerel Provide management advice to the Commission as needed.	Observe Japan's stock assessment of Blue Mackerel Provide management advice to the Commission as needed. Develop data collection templates	Observe Japan's stock assessment of Blue Mackerel Provide management advice to the Commission as needed.	Observe Japan's stock assessment of Blue Mackerel Provide management advice to the Commission as needed. Collate data on associated bycatch species	Observe Japan's stock assessment of Blue Mackerel Provide management advice to the Commission as needed. Assess impacts of fishery on dependent or associated species	The SC observed Japan's stock assessment of Blue Mackerel Stock assessment results were communicated to the Commission Data templates were developed by SWG Data
Assessment of Japanese Sardine and associated bycatch	Update data on Japanese Sardine Observe Japan's stock assessment of Japanese sardine Provide management advice to the Commission as needed.					Data on Japanese Sardine have been collated The SC observed Japan's stock assessment of Japanese Sardine Stock assessment results were communicated to the Commission
Assessment of Japanese Flying Squid and associated bycatch	Update data on Japanese Flying Squid Observe Japan's stock assessment of Japanese Flying Squid Provide management advice to the Commission as	Update data on Japanese Flying Squid Observe Japan's stock assessment of Japanese Flying Squid Provide management advice to the Commission as	Update data on Japanese Flying Squid Observe Japan's stock assessment of Japanese Flying Squid Provide management advice to the	Update data on Japanese Flying Squid Observe Japan's stock assessment of Japanese Flying Squid Provide management advice to the	Update data on Japanese Flying Squid Observe Japan's stock assessment of Japanese Flying Squid Provide management advice to the	Data on Japanese Flying Squid have been collated The SC observed Japan's domestic stock assessment of Japanese Flying Squid Stock assessment results were

ITEM	2025	2026	2027	2028	2029	Progress
	needed.	needed. Develop data collection templates	Commission as needed. Collate data on associated bycatch species	Commission as needed. Collate data on associated bycatch species	Commission as needed. Assess impacts of fishery on dependent or associated species	communicated to the Commission Data templates were developed by SWG Data
Management Strategy Evaluation (MSE)						
Pacific Saury	Support NPFC's SWG MSE PS in achieving its goals	Support NPFC's SWG MSE PS in achieving its goals	Support NPFC's SWG MSE PS in achieving its goals	Support NPFC's SWG MSE PS in achieving its goals	Support NPFC's SWG MSE PS in achieving its goals	The SSC PS worked on developing a stock assessment model that will serve as an operating model for the MSE.
Ecosystem approach to fisheries management						
Ecological Interactions	Understand ecological interactions among species in the North Pacific Ocean	Understand ecological interactions among species in the North Pacific Ocean	Understand ecological interactions among species in the North Pacific Ocean	Understand ecological interactions among species in the North Pacific Ocean	Understand ecological interactions among species in the North Pacific Ocean	Canada reported a positive relationship between the density of NPFC's VME indicator taxa – which was updated with pennatulaceans - and the species richness of benthic taxa.
Impacts of fishing on ecosystem components	Evaluate impacts of fishing on fisheries resources and their ecosystem components, including bycatch species and discards	Evaluate impacts of fishing on fisheries resources and their ecosystem components, including bycatch species and discards	Evaluate impacts of fishing on fisheries resources and their ecosystem components, including bycatch species and discards	Evaluate impacts of fishing on fisheries resources and their ecosystem components, including bycatch species and discards	Evaluate impacts of fishing on fisheries resources and their ecosystem components, including bycatch species and discards	SSC BFME endorsed a synchronized approach for assessing and managing the risk of SAI; Japan and Canada presented their draft assessments of the relative risk of SAI on VMEs and potential

ITEM	2025	2026	2027	2028	2029	Progress
						VMEs.
Climate change	Consider possible key vulnerabilities and management implications of changing oceanographic conditions resulting from climate change on NPFC fisheries resources and species belonging to the same ecosystem or dependent upon or associated with target stocks. Make recommendations to help adapt to climate change and promote resilience in NPFC fisheries	Consider possible key vulnerabilities and management implications of changing oceanographic conditions resulting from climate change on NPFC fisheries resources and species belonging to the same ecosystem or dependent upon or associated with target stocks. Make recommendations to help adapt to climate change and promote resilience in NPFC fisheries	Consider possible key vulnerabilities and management implications of changing oceanographic conditions resulting from climate change on NPFC fisheries resources and species belonging to the same ecosystem or dependent upon or associated with target stocks. Make recommendations to help adapt to climate change and promote resilience in NPFC fisheries	Consider possible key vulnerabilities and management implications of changing oceanographic conditions resulting from climate change on NPFC fisheries resources and species belonging to the same ecosystem or dependent upon or associated with target stocks. Make recommendations to help adapt to climate change and promote resilience in NPFC fisheries	Consider possible key vulnerabilities and management implications of changing oceanographic conditions resulting from climate change on NPFC fisheries resources and species belonging to the same ecosystem or dependent upon or associated with target stocks. Make recommendations to help adapt to climate change and promote resilience in NPFC fisheries	SC discussed implications of climate change for managing priority species. Canada led the analysis of relationships between environmental conditions and Japanese Sardine The SC does not have specific recommendation for the Commission at this time.
Collaboration with other Organizations						
PICES	Review implementation of NPFC-PICES Framework for Collaboration Review ICES-PICES WGSPF activities (PICES WG53) Identify other opportunities for collaboration with PICES.	Review implementation of NPFC-PICES Framework for Collaboration Review ICES-PICES WGSPF activities (PICES WG53) Identify other opportunities for collaboration with PICES.	Review implementation of NPFC-PICES Framework for Collaboration Review ICES-PICES WGSPF activities (PICES WG53) Identify other opportunities for collaboration with PICES	Review implementation of NPFC-PICES Framework for Collaboration Identify other opportunities for collaboration with PICES	Review implementation of NPFC-PICES Framework for Collaboration Identify other opportunities for collaboration with PICES	SC reviewed implementation of NPFC-PICES Framework for Collaboration SC reviewed PICES WG53 activities

ITEM	2025	2026	2027	2028	2029	Progress
FAO	Review NPFC's involvement with the ABNJ Deep-sea fisheries project Review NPFC's partnership with the Fisheries and Resources Monitoring System of FAO (FIRMS)	Review NPFC's involvement with the ABNJ Deep-sea fisheries project Review NPFC's partnership with the Fisheries and Resources Monitoring System of FAO (FIRMS)	Review NPFC's involvement with the ABNJ Deep-sea fisheries project Review NPFC's partnership with the Fisheries and Resources Monitoring System of FAO (FIRMS)	Review NPFC's involvement with the ABNJ Deep-sea fisheries project Review NPFC's partnership with the Fisheries and Resources Monitoring System of FAO (FIRMS)	Review NPFC's involvement with the ABNJ Deep-sea fisheries project Review NPFC's partnership with the Fisheries and Resources Monitoring System of FAO (FIRMS)	SC reviewed its collaboration with the ABNJ Deep-sea fisheries project SC reviewed its partnership with the Fisheries and Resources Monitoring System of FAO (FIRMS)
NPAFC	Undertake scientific activities to achieve relevant deliverables of the NPFC/NPAFC work plan	Undertake scientific activities to achieve relevant deliverables of the NPFC/NPAFC work plan	Undertake scientific activities to achieve relevant deliverables of the NPFC/NPAFC work plan	Undertake scientific activities to achieve relevant deliverables of the NPFC/NPAFC work plan	Undertake scientific activities to achieve relevant deliverables of the NPFC/NPAFC work plan	SC reviewed NPFC/NPAFC activities
Other organizations	Review collaborations with other organizations	Review collaborations with other organizations	Review collaborations with other organizations	Review collaborations with other organizations	Review collaborations with other organizations	
Research and Work Plans						
Terms of Reference	Review SC's Terms of Reference, as needed	Review SC's Terms of Reference, as needed	Review SC's Terms of Reference, as needed	Review SC's Terms of Reference, as needed	Review SC's Terms of Reference, as needed	SC reviewed and revised its TOR
Research Plan	Update SC's rolling 5-year research plan	Update SC's rolling 5-year research plan	Update SC's rolling 5-year research plan	Update SC's rolling 5-year research plan	Update SC's rolling 5-year research plan	SC updated its rolling 5-year research plan
Work Plan	Update SC's rolling 5-year work plan	Update SC's rolling 5-year work plan	Update SC's rolling 5-year work plan	Update SC's rolling 5-year work plan	Update SC's rolling 5-year work plan	SC updated its rolling 5-year work plan
Projects	Review completed and ongoing projects Identify and prioritize new projects and recommend sources of funding	Review completed and ongoing projects Identify and prioritize new projects and recommend sources of funding	Review completed and ongoing projects Identify and prioritize new projects and recommend sources of funding	Review completed and ongoing projects Identify and prioritize new projects and recommend sources of funding	Review completed and ongoing projects Identify and prioritize new projects and recommend sources of funding	SC reviewed its completed and ongoing projects, and recommended new projects and sources of funding
Data Management						
	Review data inventories and the	Review data inventories and the	Review data inventories and the	Review data inventories and the	Review data inventories and the	SC discussed data needs, data gaps, and

ITEM	2025	2026	2027	2028	2029	Progress
	status of data gaps Review data standards in relation to stock assessment of priority species Discuss need for additional sources of data for scientific analyses and associated data management policy	status of data gaps Review data standards in relation to stock assessment of priority species Discuss need for additional sources of data for scientific analyses and associated data management policy	status of data gaps Review data standards in relation to stock assessment of priority species Discuss need for additional sources of data for scientific analyses and associated data management policy	status of data gaps Review data standards in relation to stock assessment of priority species Discuss need for additional sources of data for scientific analyses and associated data management policy	status of data gaps Review data standards in relation to stock assessment of priority species Discuss need for additional sources of data for scientific analyses and associated data management policy	strategies to fill gaps SC discussed data standards in relation to stock assessment of priority species, including the establishment of a centralized data call. SC discussed the need for additional sources of data for scientific analyses and associated data management policy
Recommendations						
Advice	Develop recommendations for the Commission, TCC, and FAC	Develop recommendations for the Commission, TCC, and FAC	Develop recommendations for the Commission, TCC, and FAC	Develop recommendations for the Commission, TCC, and FAC	Develop recommendations for the Commission, TCC, and FAC	SC made recommendations for the Commission, TCC, and FAC
Media Communication						
Press Release	Prepare and publish a press release about SC activities during its meeting	Prepare and publish a press release about SC activities during its meeting	Prepare and publish a press release about SC activities during its meeting	Prepare and publish a press release about SC activities during its meeting	Prepare and publish a press release about SC activities during its meeting	SC drafted and endorsed a press release about SC activities during its SC10 meeting

Annex P:

Stock assessment report for Pacific saury

EXECUTIVE SUMMARY

Data used in the assessment modeling

Data are included from the NPFC Convention Area and Members' Exclusive Economic Zones (EEZs). Pacific saury (*Cololabis saira*) is widely distributed from the subarctic to the subtropical regions of the North Pacific Ocean. The fishing grounds are west of 180° E but differ among Members (China, Japan, Korea, Russia, Chinese Taipei, and Vanuatu). Figure 1 shows the historical catches of Pacific saury by Member. Figure 2 shows CPUE and Japanese survey biomass indices used in the stock assessment. Appendix 1 shows data used for the updated stock assessment.

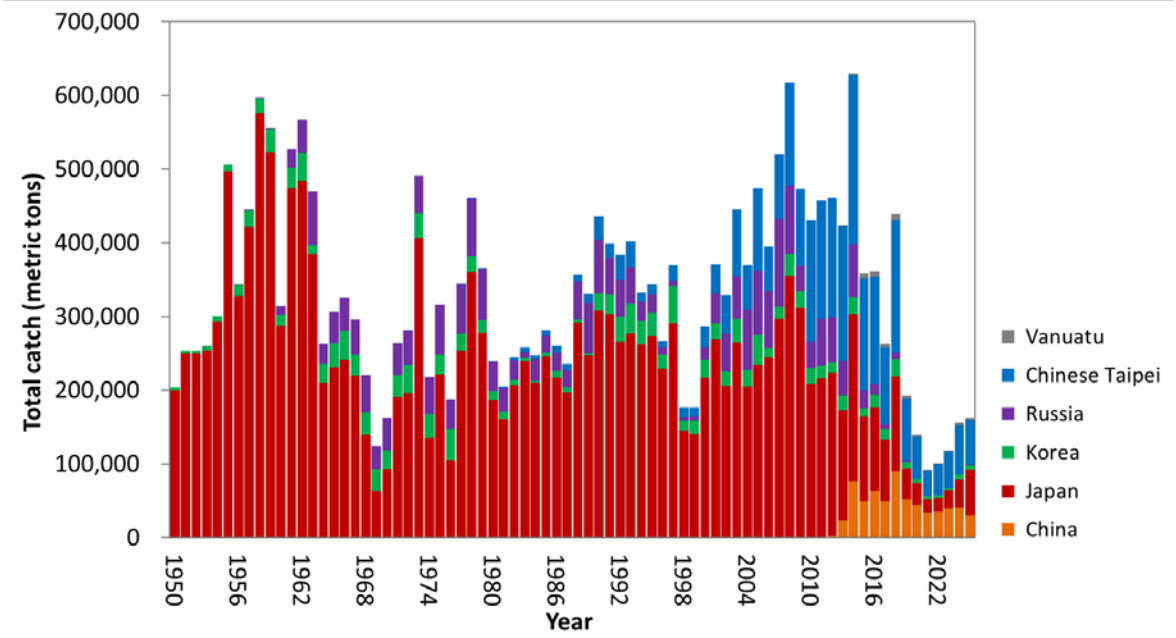


Figure 1. Time series of catch by Member during 1950-2025. The catch data for 1950-1979 are shown but not used in stock assessment modeling. Catch data in 2025 are preliminary (as of 28 November 2025) and not used in the assessment.

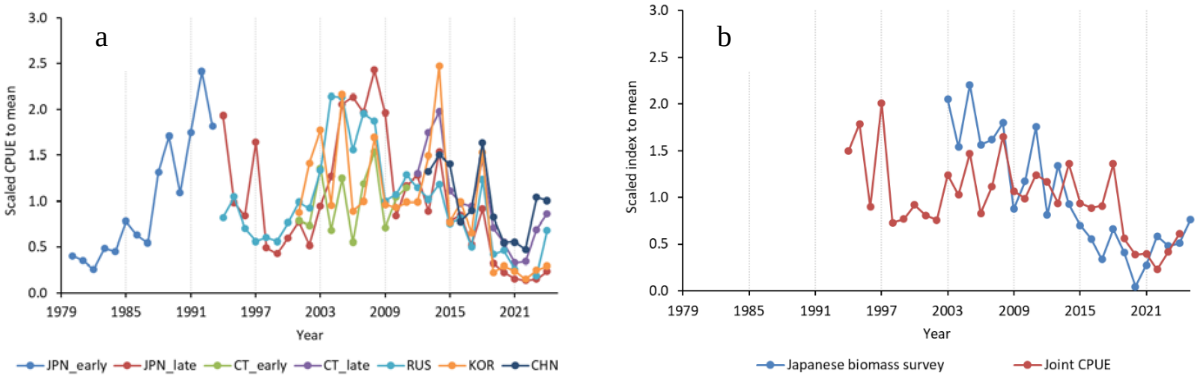


Figure 2. Time series of (a) Japanese survey biomass index and joint CPUE and (b) Member's standardized CPUE indices used in the assessment modeling.

Brief description of specification of analysis and models

A Bayesian state-space production model (BSSPM) used in previous stock assessments was employed as an agreed provisional stock assessment model for Pacific saury during 1980-2025. Scientists from two Members (Japan and Chinese Taipei) each conducted analyses following the agreed specification which called for two base case scenarios and two sensitivity scenarios (see Annex F, SSC PS15 report for more details). The two base case scenarios differ in using each Member's standardized CPUEs (base case B1) or standardized joint CPUEs (base case B2). The CPUE data were modeled as nonlinear indices of biomass. Members used similar approaches with some differences in the assumption of prior distributions for the free parameters in the model.

Summary of stock assessment results

The SSC PS considered the BSSPM results and noted the agreement in trends among Members' results for each base case model. However, there was a marked difference in the biomass level between B1 and B2 due to the different CPUE trends used. The SSC PS discussed and recognized that the results covered a wide range of uncertainties in data, model and estimation, and it therefore concluded the outcomes of MCMC runs could be aggregated over the 4 models (2 base case models x 2 Members) as in the previous assessments. The aggregated results from Japan and Chinese Taipei for assessing the overall median values and their associated 80% credible intervals are shown in Table 1a (the aggregated results for 2024 are shown in Table 1b). The graphical presentations for times series of a) biomass (B), b) B-ratio (=B/B_{MSY}), c) harvest rate (F), d) F-ratio (F/F_{MSY}) and e) B/K are shown in Figure 3. The Kobe plot with time trajectory using aggregated model outcomes is shown in Figure 4. Time series of median estimated values for biomass, harvest rate, B-ratio, F-ratio and depletion level relative to K are shown in Table 2.

Table 1. Summary of estimates of reference quantities. Medians and credible intervals for the aggregated results are presented. In addition, median values of Member's combined results (over B1 and B2) are shown.

a. 2025 assessment

	Median	Lower10%	Upper10%	Median_JPN	Median_CT
C_2024 (10000 t)	15.556	15.556	15.556	15.556	15.556
AveC_2022_2024	12.463	12.463	12.463	12.463	12.463
AveF_2022_2024	0.258	0.137	0.414	0.276	0.246
F_2024	0.272	0.150	0.431	0.292	0.258
FMSY	0.269	0.130	0.444	0.271	0.268
MSY (10000 t)	38.165	30.860	45.319	38.064	38.250
F_2024/FMSY	1.027	0.719	1.526	1.085	0.972
AveF_2022_2024/FMSY	0.971	0.712	1.371	1.015	0.927
K (10000 t)	294.397	178.813	593.103	304.173	287.900
B_2024 (10000 t)	57.200	36.107	103.568	53.309	60.330
B_2025 (10000 t)	69.460	45.090	119.897	66.099	72.620
AveB_2023_2025	58.238	37.756	103.933	54.625	61.302
BMSY (10000 t)	142.100	91.670	266.603	141.938	142.200
BMSY/K	0.486	0.385	0.617	0.470	0.503
B_2024/K	0.197	0.127	0.282	0.182	0.211
B_2025/K	0.238	0.143	0.364	0.221	0.254
AveB_2023_2025/K	0.202	0.128	0.288	0.188	0.215
B_2024/BMSY	0.403	0.280	0.562	0.383	0.423
B_2025/BMSY	0.488	0.314	0.725	0.466	0.510
AveB_2023_2025/BMSY	0.411	0.285	0.573	0.394	0.429

b. 2024 assessment

	Median	Lower10%	Upper10%	Median_CHN	Median_JPN	Median_CT
C_2023 (10000 t)	11.836	11.836	11.836	11.836	11.836	11.836
AveC_2021_2023	10.352	10.352	10.352	10.352	10.352	10.352
AveF_2021_2023	0.328	0.158	0.528	0.352	0.339	0.302
F_2023	0.297	0.155	0.469	0.313	0.307	0.277
FMSY	0.330	0.139	0.543	0.357	0.336	0.310
MSY (10000 t)	39.440	32.021	47.010	40.155	39.284	39.010
F_2023/FMSY	0.920	0.656	1.411	0.915	0.942	0.903
AveF_2021_2023/FMSY	1.008	0.755	1.435	1.013	1.026	0.988
K (10000 t)	248.067	151.766	565.726	234.100	253.396	254.500
B_2023 (10000 t)	39.875	25.214	76.394	37.830	38.599	42.720
B_2024 (10000 t)	52.763	35.130	91.631	50.920	52.120	55.155
AveB_2022_2024	41.563	27.387	77.406	39.705	40.555	44.165
BMSY (10000 t)	120.100	78.060	253.481	113.800	119.008	125.100
BMSY/K	0.485	0.392	0.604	0.480	0.471	0.505
B_2023/K	0.161	0.101	0.228	0.158	0.154	0.169
B_2024/K	0.212	0.122	0.315	0.212	0.206	0.219
AveB_2022_2024/K	0.169	0.106	0.236	0.168	0.163	0.175
B_2023/BMSY	0.328	0.225	0.452	0.323	0.322	0.339
B_2024/BMSY	0.435	0.270	0.628	0.433	0.431	0.440
AveB_2022_2024/BMSY	0.345	0.235	0.470	0.341	0.341	0.352

Table 2. Time series of median estimated values for biomass, harvest rate, B-ratio, F-ratio and depletion level relative to K. The unit of biomass is 10,000 tons.

Year	Biomass	HarvestRate	Bratio	Fratio	Depletion
1981	167.600	0.122	1.214	0.453	0.593
1982	178.358	0.137	1.310	0.504	0.641
1983	183.284	0.141	1.348	0.513	0.662
1984	186.400	0.133	1.371	0.483	0.675
1985	191.142	0.147	1.399	0.541	0.689
1986	191.001	0.136	1.395	0.500	0.687
1987	193.900	0.121	1.410	0.447	0.695
1988	198.900	0.180	1.439	0.663	0.708
1989	189.862	0.174	1.365	0.647	0.674
1990	186.600	0.234	1.342	0.872	0.660
1991	173.013	0.231	1.236	0.866	0.608
1992	165.400	0.232	1.188	0.875	0.581
1993	159.471	0.252	1.147	0.955	0.559
1994	152.100	0.219	1.091	0.836	0.529
1995	149.829	0.229	1.064	0.893	0.513
1996	142.400	0.187	1.007	0.736	0.485
1997	146.840	0.252	1.016	1.016	0.488
1998	134.022	0.132	0.928	0.530	0.446
1999	144.800	0.122	0.990	0.496	0.477
2000	158.548	0.180	1.091	0.729	0.526
2001	162.200	0.229	1.134	0.897	0.550
2002	163.300	0.201	1.156	0.772	0.563
2003	179.470	0.248	1.276	0.937	0.624
2004	173.522	0.213	1.234	0.799	0.606
2005	187.152	0.253	1.315	0.955	0.648
2006	171.900	0.229	1.209	0.864	0.596
2007	175.900	0.296	1.240	1.112	0.611
2008	166.127	0.372	1.166	1.398	0.576
2009	132.997	0.355	0.939	1.335	0.462
2010	129.900	0.331	0.912	1.249	0.449
2011	130.989	0.348	0.919	1.314	0.454
2012	118.321	0.389	0.834	1.463	0.411
2013	114.364	0.371	0.804	1.390	0.397
2014	107.500	0.586	0.765	2.163	0.377
2015	76.938	0.466	0.545	1.736	0.269
2016	68.550	0.528	0.487	1.959	0.240
2017	58.251	0.451	0.415	1.672	0.205
2018	58.691	0.743	0.422	2.701	0.208
2019	37.030	0.527	0.264	1.946	0.131
2020	31.915	0.438	0.227	1.629	0.112
2021	32.395	0.284	0.230	1.068	0.113
2022	39.852	0.251	0.282	0.944	0.139
2023	47.687	0.248	0.335	0.937	0.165
2024	57.200	0.272	0.403	1.027	0.197
2025	69.460		0.488		0.238

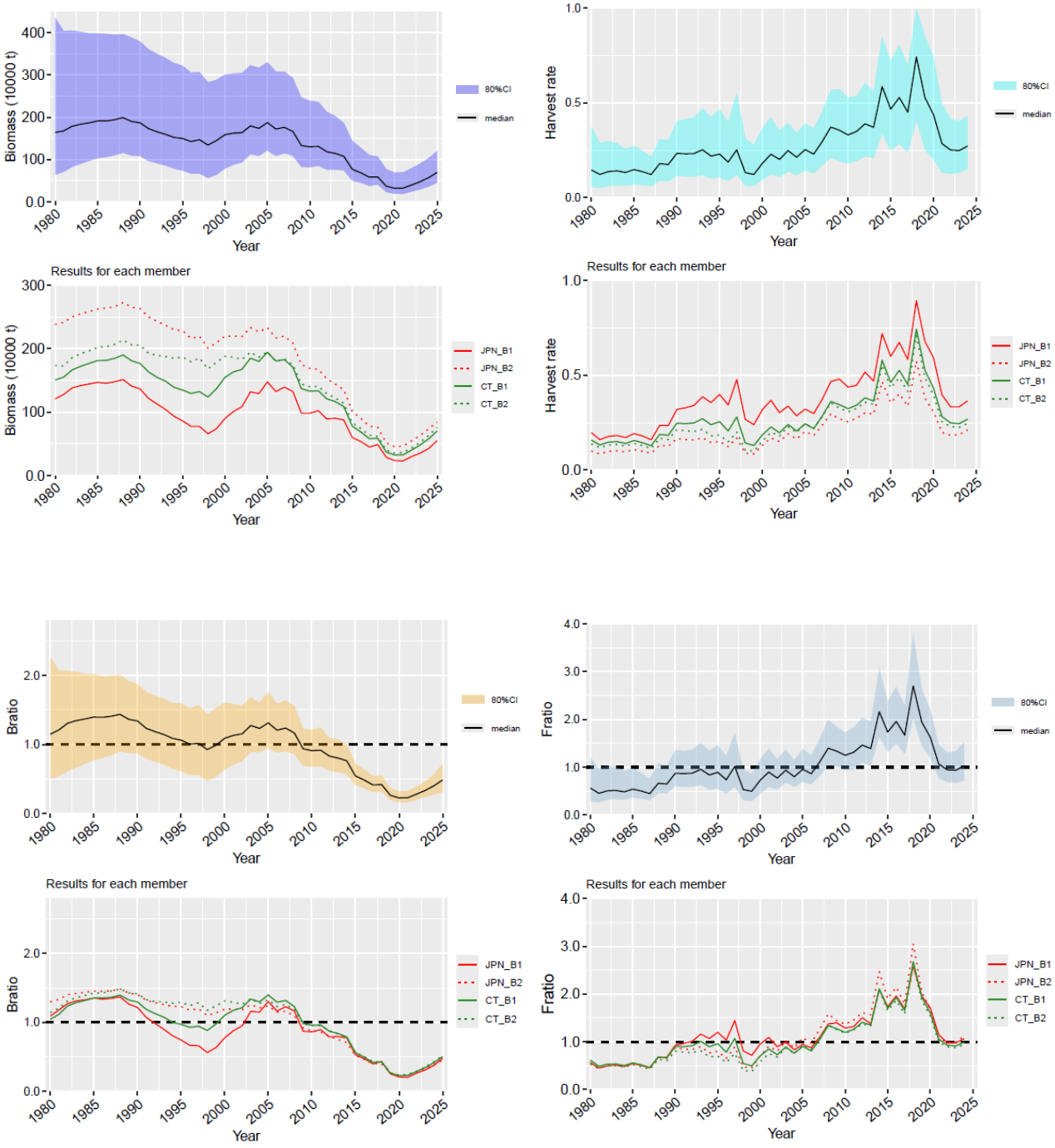


Figure 3. Time series of median estimated values of four runs for biomass, harvest rate, B-ratio, F-ratio and depletion level relative to K. The solid and shaded lines correspond to B1 and B2, respectively.

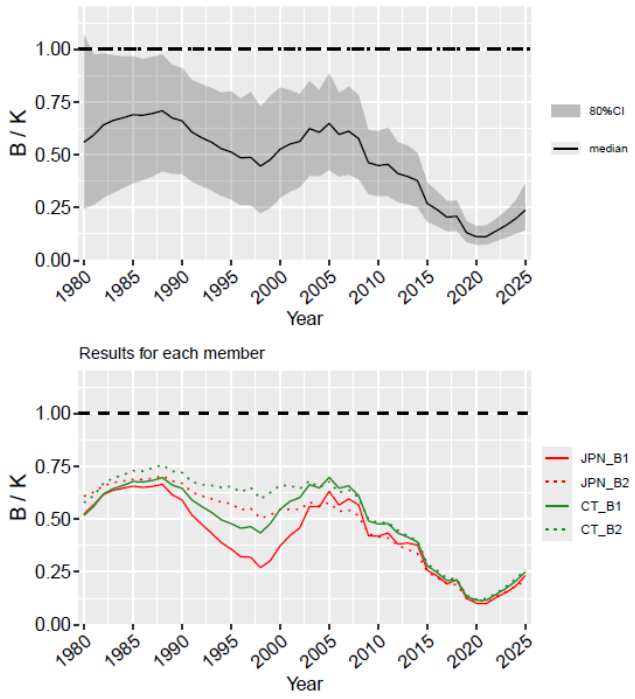
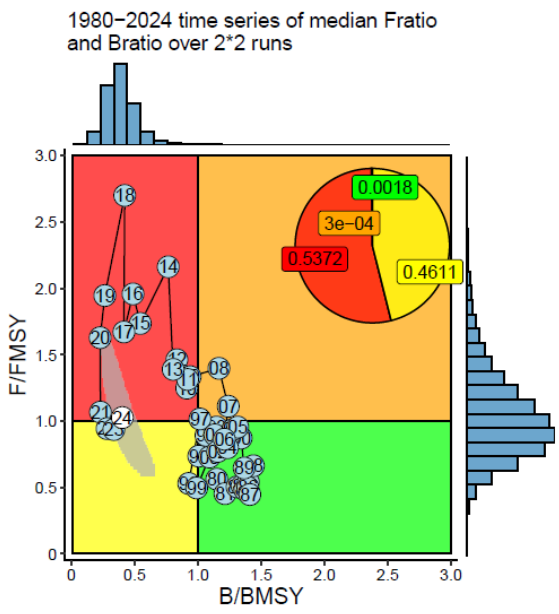


Figure 3 (Continued).

2025 assessment



2024 assessment

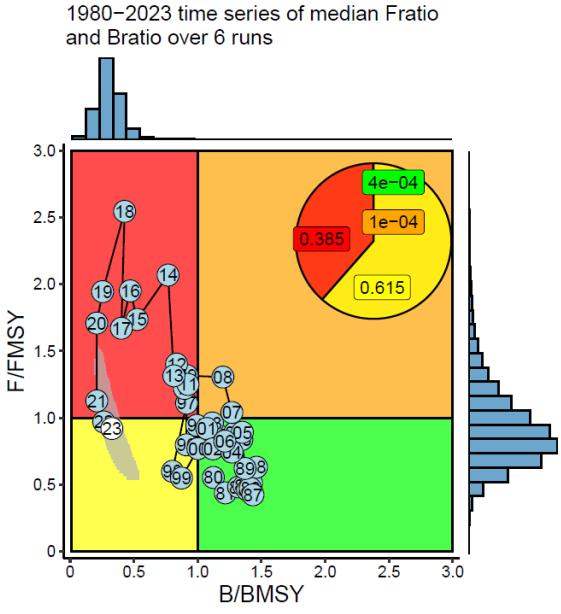


Figure 4. Kobe plot with time trajectory in 2025 (left) and 2024 (right) assessments.

Current stock condition and management advice

Summary of stock status

Results of Japan and Chinese Taipei and combined model estimates indicate the stock declined with high interannual variability from a high biomass level in the mid-2000's after a period of high productivity to the current low biomass levels. The combined results (Table 1a) show that average B was below B_{MSY} during 2023–2025 (median average B/B_{MSY} during 2023–2025 = 0.411, 80%CI = 0.285–0.573) and average F was around F_{MSY} (average F/F_{MSY} during 2022–2024 = 1.027, 80%CI = 0.719–1.526). Thus, stock biomass remained at low levels in recent years. Biomass may have increased during 2020–2025 based on the abundance indices and higher recruitment that may be evident in the Japanese fishery size composition. Based on CPUE, survey data, and model results, the condition of the Pacific saury stock and fishery improved in recent years although biomass remains below B_{MSY}. The improvement could be due at least in part to reductions in catch since 2020 and potentially due to unidentified environmental variability.

Uncertainty in assessment
See discussion in Section 8 in the main report.

Management advice

The interim HCR for Pacific saury under CMM 2025-08 For Pacific Saury was used to calculate the annual catch level in the 2026 fishing year, while noting the lack of endorsement from China. Based on assessment inputs from Japan and Chinese Taipei, the unconstrained annual catch level for 2026 = $(B_{2025}*F_{MSY}*(B_{2025}/B_{MSY})$ = 91,180 MT. Based on the adopted HCR, the constrained 2026 catch level would be 0.9 x 202,500 = 182,250 MT.

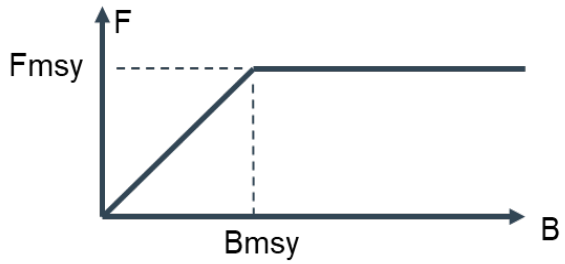


Figure 5. Shapes of the function used in the harvest control rule adopted in 2024 Commission meeting.

Special comments regarding the procedures and stock assessment results

The SSC PS worked collaboratively to produce this stock assessment, incorporating some technical improvements, while noting that China did not endorse the assessment results. This section highlights several important aspects of the stock assessment procedure and results.

1) Standardized CPUE data were assumed to be hyperstable and thus less likely to react to changes in biomass. Thus, standardized CPUE were down-weighted relative to the Japanese survey in the first base case (B1), which used CPUE from individual Members. In B1, a single non-linear parameter was used for the CPUEs for each Member.
2) Estimated trends in relative stock size measures and reference points from Chinese Taipei (CT), Japan (JPN) and combined models were similar to one another. CPUE, survey trends and model results suggest that stock size is still low but increased since 2020.
3) Oceanographic or biological factors responsible for changes in Pacific saury productivity have not yet been determined. Development of modeling procedures to incorporate environmental change is an important area for future research. The work should include refinements to stock assessment models to

better reflect and estimate environmental effects on recruitment and biology. This work should be coordinated among Members and folded into the development of age-structured and improved BSSPM models.

4) Experience with the HCR rule this year suggests that the use of more current data might improve management advice. Currently, the HCR calculation for 2026 is based on CPUE and catch data through 2024 and survey data through 2025. However, catch data are nearly complete for the most recent year when the assessment for that year is completed and reasonably precise CPUE standardization could probably be completed early as well. It would be advisable for the SSC PS to consider approaches to using the most recent data in the assessment. One approach to demonstrating potential benefits would be to do a retrospective analysis of HCR calculations based on the actual terminal year and the year before.

STOCK ASSESSMENT REPORT FOR PACIFIC SAURY

1. INTRODUCTION

1.1 Distribution

Pacific saury (*Cololabis saira* Brevoort, 1856) has a wide distribution extending in the subarctic and subtropical North Pacific Ocean from inshore waters of Japan and the Kuril Islands to eastward to the Gulf of Alaska and southward to Mexico. Pacific saury is a commercially important fish in the western North Pacific Ocean (Parin 1968; Hubbs and Wisner 1980).

1.2 Migration

Pacific saury migrates extensively between the northern feeding grounds in the Oyashio waters around Hokkaido and the Kuril Islands in summer and the spawning areas in the Kuroshio waters off southern Japan in winter (Fukushima 1979; Kosaka 2000). Pacific saury in offshore regions (east of 160°E) also migrate westward toward the coast of Japan after October every year (Suyama et al. 2012).

1.3 Population structure

Genetic evidence suggests there are no distinct stocks in the Pacific saury population based on 141 individuals collected from five distant locales (East China Sea, Sea of Okhotsk, northwest Pacific, central North Pacific, and northeast Pacific) (Chow et al. 2009).

1.4 Spawning season and grounds

The spawning season of Pacific saury is relatively long, beginning in September and ending in June of the following year (Watanabe and Lo 1989). Pacific saury spawns over a vast area from the Japanese coastal waters to eastern offshore waters (Baitaliuk et al. 2013). The main spawning grounds are considered to be located in the Kuroshio-Oyashio transition region in fall and spring and in the Kuroshio waters and the Kuroshio Extension waters in winter (Watanabe and Lo 1989).

1.5 Food and feeding

The Pacific saury larvae prey on the nauplii of copepods and other small-sized zooplankton. As they grow, they begin to prey on larger zooplankton such as krill (Odate 1977). The Pacific saury is preyed on by large fish ranked higher in the food chain, such as *Thunnus alalunga* (Nihira 1988) and coho salmon, *Oncorhynchus kisutsh* (Sato and Hirakawa 1976) as well as by animals such as minke whales *Balaenoptera acutorostrata* (Konishi et al. 2009) and sea birds (Ogi 1984).

1.6 Age and growth

Based on analysis of daily otolith increments, Pacific saury reaches approximately 20 cm in knob length (distance from the tip of lower jaw to the posterior end of the muscular knob at the base of a caudal peduncle; hereafter as body length) in 6 or 7 months after hatching (Watanabe et al. 1988; Suyama et al. 1992). There is some variation in growth rate depending on the hatching month during this long spawning season (Kurita et al. 2004) and geographical differences (Suyama et al. 2012b). The maximum lifespan is 2 years (Suyama et al. 2006). The age 1 fish grow to over 27 cm in body length in June and July when Japanese research surveys are conducted and reach over 29 cm in the fishing season between August and December (Suyama et al. 2006).

1.7 Reproduction

The minimum size of maturity of Pacific saury has been estimated at about 25 cm in the field (Hatanaka 1956) or rearing experiments (Nakaya et al. 2010). Under rearing experiments, Pacific saury begins spawning 8 months after hatching, and spawning activity continues for about 3 months (Suyama et al. 2016). Batch fecundity is about 1,000 to 3,000 eggs per saury (Kosaka 2000).

2. FISHERY

2.1 Overview of fisheries

Western North Pacific

In Japan, the stick-held dip net fishery for Pacific saury was developed in the 1940s. Since then, the stick-held dip net gears have become the dominant fishing technique to catch Pacific saury in the northwest Pacific Ocean. Since 1995, more than 97% of Japan's total catch is caught by the stick-held dip net. The annual catch of Pacific saury for stick-held dip net fishery has fluctuated. Maximum and minimum catches of 355 thousand tons and 18 thousand tons were recorded in 2008 and 2022, respectively.

Pacific saury fisheries in Korea have been operated with gillnet since the late 1950s in Tsushima Warm Current region. Korean stick-held dip net fishery started from 1985 in the Northwest Pacific Ocean. The largest catch of 50 thousand tons was recorded in 1997 (Gong and Suh 2013).

Russian fishery for Pacific saury has been conducted using stick-held dip nets in the northwest Pacific Ocean in the area that includes national waters (mainly within the Russian EEZ) and adjacent NPFC Convention Areas. Russian catch statistics for saury fishery exists, beginning from 1956, and standardized CPUE indices from that fishery were calculated since 1994. Saury fishery traditionally occurred from August to November; however, in recent years, the onset of fishing for saury shifted to the early summer period. Peak catch of saury of over 100 thousand tons was in 2007.

China commenced its exploratory saury fishing using stick-held dip nets in the high seas in 2003, but only started to develop this fishery in 2012. The fishing seasons mainly cover the period from June-November.

Chinese Taipei's Pacific saury fishery can date back to 1975 and had its first commercial catch in 1977. Over the past decade, the number of active Pacific saury fishing vessels has been increasing from 68 to 91 and the catch has fluctuated between 39,750 tons and 229,937 tons since 2001. Aside from Pacific saury fishery, most of the Pacific saury fishing vessels also conduct flying squid jigging operations in the Northwest Pacific Ocean.

Vanuatu commenced its development of Pacific saury fishery by using stick-held dip net in the high seas in 2004. Currently there are four vessels operating in the Northwest Pacific targeting saury, but the total accumulative number of its authorized Pacific saury fishing vessels from 2004 to 2020 is 16. The fishing season mainly covers the period from July to November each year.

Eastern North Pacific

Although Pacific saury occur in the Canada EEZ, there is no targeted fishery for the species. There is no historical record of Canadian participation in international fisheries for saury. Domestic fisheries sometimes capture saury as bycatch in pelagic and bottom trawls and there are a handful of records from other gear types including commercial longlines. The most recently compiled estimates indicate around 300 kg of saury were captured by Canadian commercial fisheries over 17 years from 1997-2013 (Wade and Curtis 2015; NPFC-2022-SSC PS09-IP01). There are also records of saury catches from research trawls (surface, pelagic and bottom trawls) in Canadian waters, but the catches have been minimal.

Management plans developed by the United States' National Marine Fisheries Service currently prohibit targeted fishing on marine forage species including the Pacific saury. In the 1950's to mid-1970's there were sporadic attempts to commercially fish for Pacific saury off of California with limited success using purse seines and light attraction (Kato 1992). Catches from 1969-1972 averaged 450 tons. Currently landings are only "occasionally" reported as bycatch in fisheries on the US west coast. Landings of Pacific saury as bycatch on the US west coast averaged 5.5 kg per year from 2011-2015 (NOAA Fisheries National Bycatch Report Database System, https://www.st.nmfs.noaa.gov/, accessed March 8, 2019)

Historically, Japanese and Russian vessels operated mainly within their own EEZs, but they have shifted into the Convention Area in recent years. Chinese, Korean and Chinese Taipei vessels operate mainly in the

high seas of the North Pacific https://www.npfc.int/science/gis/catch-effort/saury.

2.2 Catch records

Figure 2 shows the historical catches of Pacific saury in the northwest Pacific Ocean by Member.

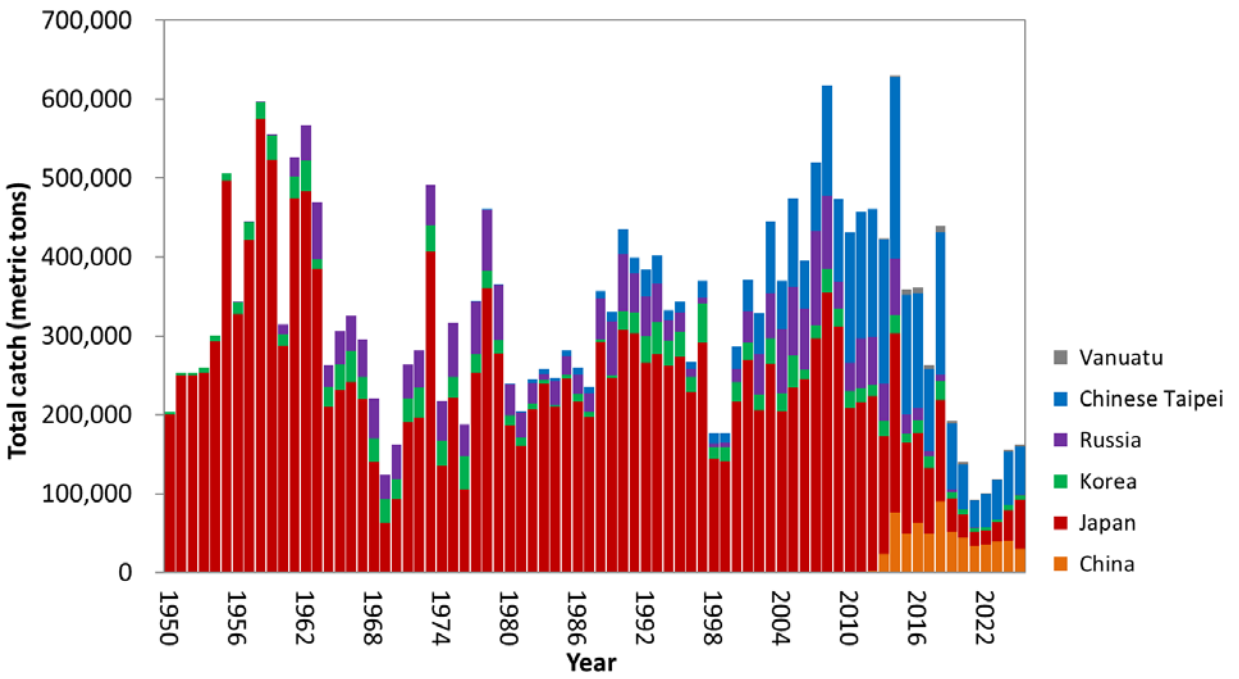


Figure 2. Time series of catch by Member during 1950-2025. The catch data for 1950-1979 are shown but not used in stock assessment modeling. Catch data in 2025 are preliminary (as of 28 November 2025) and not used in the assessment.

3. SPECIFICATION OF STOCK ASSESSMENT

A Bayesian state-space production model (BSSPM) used in previous stock assessments was employed as an agreed provisional stock assessment model for Pacific saury during 1980-2025. Scientists from two Members (Japan and Chinese Taipei) each conducted analyses following the agreed specification which called for two base case scenarios and two sensitivity scenarios (see Annex F, SSC PS15 report for more details). The two base case scenarios differ in using each Member's standardized CPUEs (base case B1) or standardized joint CPUEs (base case B2). The CPUE data were modeled as nonlinear indices of biomass. Members used similar approaches with some differences in the assumption of prior distributions for the free parameters in the model.

3.1 Bayesian state-space production model

The population dynamics is modelled by the following equations:

$$B_t = \{B_{t-1} + B_{t-1} f(B_{t-1}) - C_{t-1}\} e^{u_t}, \quad u_t \sim N(0, \tau^2)$$

$$f(B_t) = r\left[1 - \left(\frac{B_t}{K}\right)^z\right]$$

where

B_t : the biomass at the beginning of year *t*

C_t : the total catch of year *t*

u_t : the process error in year *t*

$f(B)$: the production function (Pella-Tomlinson)

r : the intrinsic rate of natural increase

K : the carrying capacity

z: the degree of compensation (shape parameter; different symbols were used by the 3 members)

The multiple biomass indices are modelled as follows:

Survey biomass estimate

$$I_{t,biomass} = q_{biomass} B_t \, exp(v_{t,biomass}), \qquad \text{where} \quad v_{t,biomass} \sim N\left(0, \sigma^2_{biomass}\right)$$

where

$q_{biomass}$: the relative bias in biomass estimate

$v_{t,biomass}$: the observation error term in year *t* for survey biomass estimate

$\sigma^2_{biomass}$: the observation error variance for survey biomass estimate

CPUE series

$$I_{t,f} = q_f B_t^b \, exp(v_{t,f}), \qquad \text{where} \quad v_{t,f} \sim N\left(0, \sigma_f^2\right)$$

where

$I_{t,f}$: the biomass index in year *t* for biomass index *f*

q_f : the catchability coefficient for biomass index *f*

b: the hyper-stability/depletion parameter

$v_{t,f}$: the observation error term in year *t* for biomass index *f*

σ_f^2: the observation error in year *t* for biomass index *f*

For the estimation of parameters, Bayesian methods were used with Member-specific differences in preferred assumptions for the prior distributions for the free parameters. MCMC methods were employed for simulating the posterior distributions. For the assumptions of uniform priors used in Japan, see documents NPFC-2025-SSC PS16-WP06; for the non-uniform priors used in Chinese Taipei, see document NPFC-2025-SSC PS16-WP05.

3.2 Agreed scenarios

Table 1. Definition of scenarios

	Base case (NB1)	**Base case (NB2)**	**Sensitivity case (NS1)**	**Sensitivity case (NS2)**
Initial year	1980	1980	1980	1980
Biomass survey	$I_{t,bio} = q_{bio}\, B_t e^{v_{t,bio}}$ $v_{t,bio} \sim N\left(0, cv_{t,bio}^2 + \sigma^2\right)$ $q_{bio} \sim$ U(0,1) (2003-2025)	Same as left	Same as left	Same as left
CPUE	CHN(2013-2024) JPN_late(1994-2024) KOR(2001-2024) RUS(1994-2024) CT(2001-2011, 2012-2024) $I_{t,f} = q_f B_t^b e^{v_{t,f}}$ $v_{t,f} \sim N(0, \sigma_f^2)$ $\sigma_f^2 = c \cdot (ave(cv_{t,bio}^2) + \sigma^2)$, where $ave(cv_{t,bio}^2)$ is computed except for 2020 survey (c = 5)	Joint CPUE (1994-2024) $I_{t,joint} = q_{joint} B_t^b e^{v_{t,joint}}$ $v_{t,joint} \sim N(0, cv_{t,joint}^2 + \sigma^2)$	CHN(2013-2024) JPN_early(1980-1993, time-varying q) JPN_late(1994-2024) KOR(2001-2024) RUS(1994-2024) CT(2001-2011, 2012-2024) $I_{t,f} = q_f B_t^b e^{v_{t,f}}$ $v_{t,f} \sim N(0, \sigma_f^2)$ $\sigma_f^2 = c \cdot (ave(cv_{t,bio}^2) + \sigma^2)$, where $ave(cv_{t,bio}^2)$ is computed except for 2020 survey (c = 6)	JPN_early(1980-1993, time-varying q) $I_{t,JE} = q_{t,JE} B_t^b e^{v_{t,JE}}$ $v_{t,JE} \sim N(0, \sigma_{JE}^2)$ $\sigma_{JE}^2 = c\ ave(cv_{t,joint}^2 + \sigma^2)$ Joint CPUE (1994-2024) $I_{t,joint} = q_{joint} B_t^b e^{v_{t,joint}}$ $v_{t,joint} \sim N(0, cv_{t,joint}^2 + \sigma^2)$
Hyper-depletion / stability	A common parameter for all fisheries with a prior distribution, $b \sim U(0, 1)$	$b \sim U(0, 1)$	A common parameter for all fisheries but JPN_early, with a prior distribution, $b \sim U(0, 1)$ [b for JPN_early is fixed at 1]	$b \sim U(0, 1)$ for joint CPUE. [b for JPN_early is fixed at 1]
Prior for other than q_{bio}	Own preferred options	Own preferred options	Own preferred options	Own preferred options

Table 2. Description of symbols used in the stock assessment

Symbol	Description
C_{2024}	Catch in 2024
$AveC_{2022\text{-}2024}$	Average catch for a recent period (2023–2024)
$AveF_{2022\text{-}2024}$	Average harvest rate for a recent period (2022–2024)
F_{2024}	Harvest rate in 2024
F_{MSY}	Annual harvest rate producing the maximum sustainable yield (MSY)
MSY	Equilibrium yield at F_{MSY}
F_{2024}/F_{MSY}	Average harvest rate in 2024 relative to F_{MSY}
$AveF_{2022\text{-}2024}/F_{MSY}$	Average harvest rate for a recent period (2022–2024) relative to F_{MSY}
K	Equilibrium unexploited biomass (carrying capacity)
B_{2024}	Stock biomass in 2024 estimated in the model
B_{2025}	Stock biomass in 2025 estimated in the model
$AveB_{2023\text{-}2025}$	Stock biomass for a recent period (2023–2025) estimated in the model
B_{MSY}	Stock biomass that will produce the maximum sustainable yield (MSY)
B_{MSY}/K	Stock biomass that produces the maximum sustainable yield (MSY) relative to the equilibrium unexploited biomass[a]
B_{2024}/K	Stock biomass in 2024 relative to K[a]
B_{2025}/K	Stock biomass in 2025 relative to K[a]
$B_{2023\text{-}2025}/K$	Stock biomass in the latest time period (2023-2025) relative to the equilibrium unexploited stock biomass[a]
B_{2024}/B_{MSY}	Stock biomass in 2024 relative to B_{MSY}[a]
B_{2025}/B_{MSY}	Stock biomass in 2025 relative to B_{MSY}[a]
$B_{2023\text{-}2025}/B_{MSY}$	Stock biomass for a recent period (2023–2025) relative to the stock biomass that produces maximum sustainable yield (MSY) [a]

[a]calculated as the average of the ratios.

4. SOME AGGREGATED RESULTS FROM JAPAN AND CHINESE TAIPEI FOR VISUALIZATION PURPOSE

4.1 Visual presentation of results

The graphical presentations for times series of biomass (B), B-ratio (B/B_{MSY}), exploitation rate (F), F-ratio (F/F_{MSY}) and B/K are shown in Figure 3.



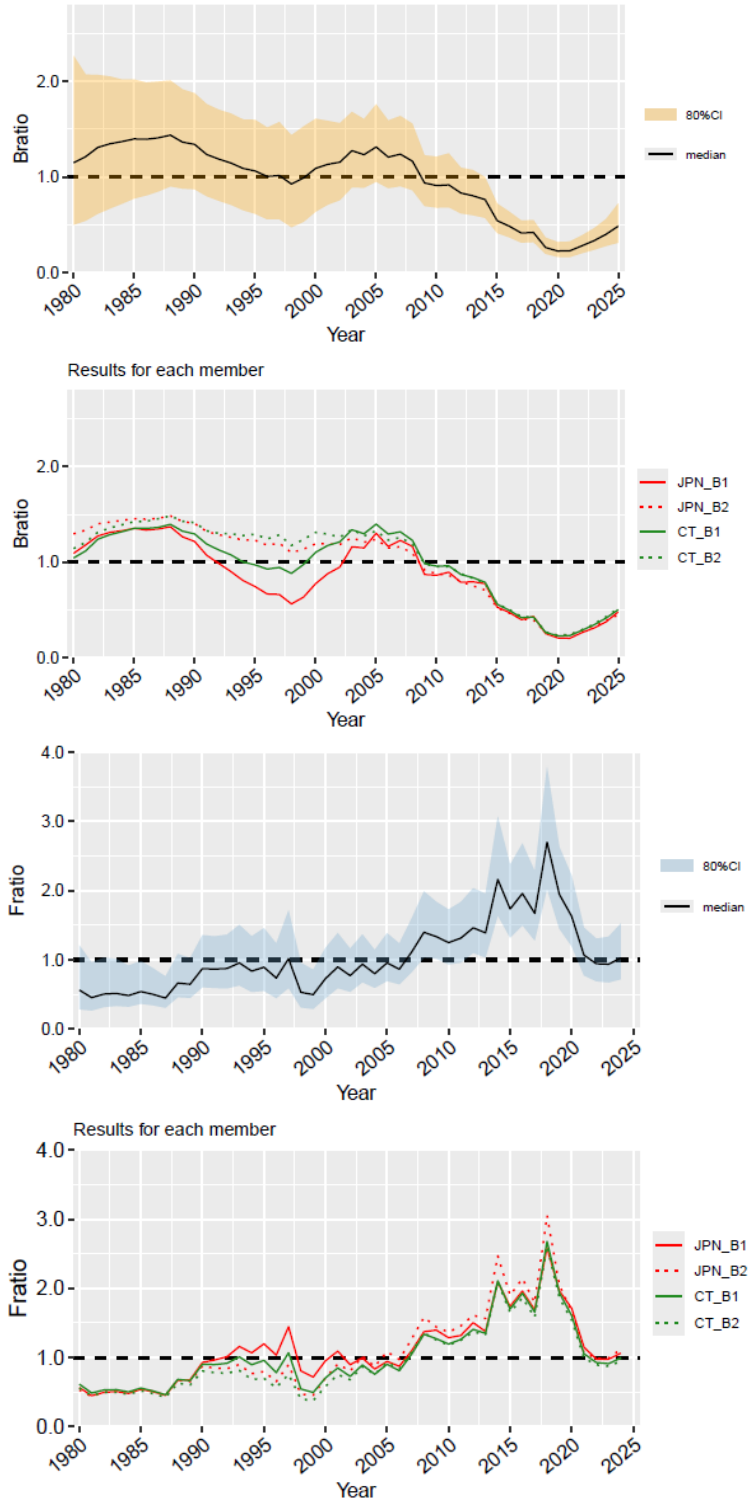


Figure 3. Time series of median estimated values of four runs for biomass, harvest rate, B-ratio, F-ratio and depletion level relative to K. The solid and shaded lines correspond to B1 and B2, respectively.

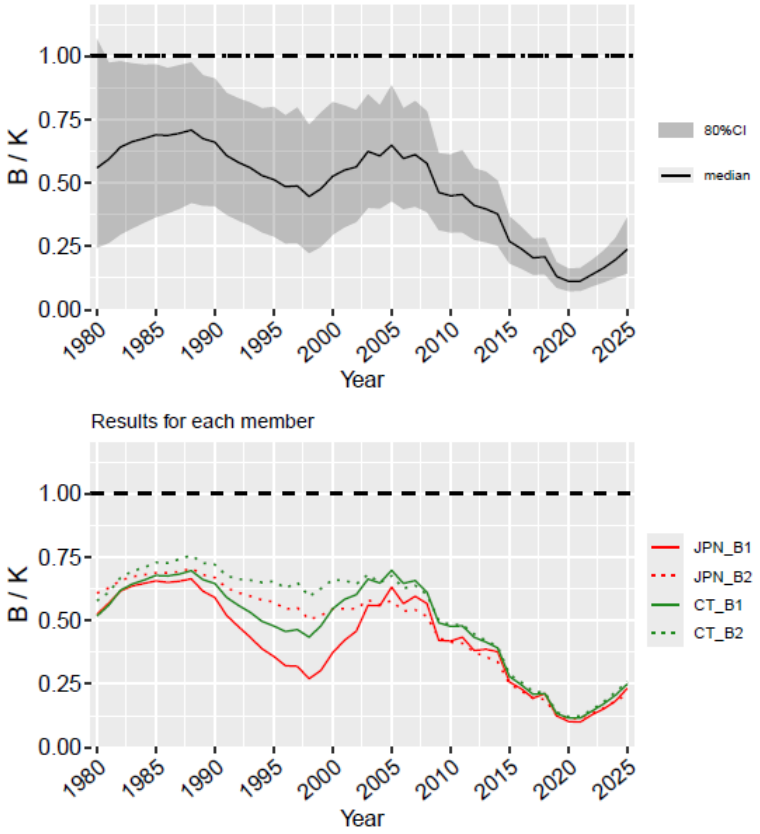


Figure 3 (Continued).

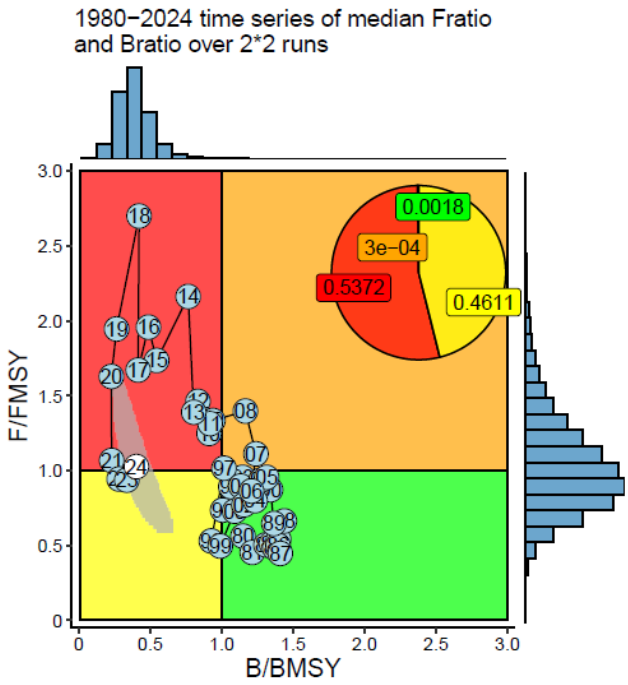


Figure 4. Kobe plot with time trajectory. The data are aggregated across 4 model results (2 base-case models by 2 Members).

4.2 Summary table

Table 3. Summary of estimates of reference quantities. Median and credible interval for the aggregated results are presented. In addition, median values of combined results (over B1 and B2) from Japanese and Chinese Taipei analyses are shown.

	Median	Lower10%	Upper10%	Median_JPN	Median_CT
C_2024 (10000 t)	15.556	15.556	15.556	15.556	15.556
AveC_2022_2024	12.463	12.463	12.463	12.463	12.463
AveF_2022_2024	0.258	0.137	0.414	0.276	0.246
F_2024	0.272	0.150	0.431	0.292	0.258
FMSY	0.269	0.130	0.444	0.271	0.268
MSY (10000 t)	38.165	30.860	45.319	38.064	38.250
F_2024/FMSY	1.027	0.719	1.526	1.085	0.972
AveF_2022_2024/FMSY	0.971	0.712	1.371	1.015	0.927
K (10000 t)	294.397	178.813	593.103	304.173	287.900
B_2024 (10000 t)	57.200	36.107	103.568	53.309	60.330
B_2025 (10000 t)	69.460	45.090	119.897	66.099	72.620
AveB_2023_2025	58.238	37.756	103.933	54.625	61.302
BMSY (10000 t)	142.100	91.670	266.603	141.938	142.200
BMSY/K	0.486	0.385	0.617	0.470	0.503
B_2024/K	0.197	0.127	0.282	0.182	0.211
B_2025/K	0.238	0.143	0.364	0.221	0.254
AveB_2023_2025/K	0.202	0.128	0.288	0.188	0.215
B_2024/BMSY	0.403	0.280	0.562	0.383	0.423
B_2025/BMSY	0.488	0.314	0.725	0.466	0.510
AveB_2023_2025/BMSY	0.411	0.285	0.573	0.394	0.429

5. CONCLUDING REMARKS

See the Executive Summary.

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Appendix 1

Updated total catch, CPUE standardizations and biomass estimates for the stock assessment of Pacific saury

Year	Total catch (metric tons)	Biomass JPN (VAST, 1000 metric tons)	CV (%)	CPUE CHN (metric tons/ vessel/ day)	CPUE JPN_early (metric tons/ net haul)	CPUE JPN_late (metric tons/ net haul)	CPUE KOR (metric tons/ vessel/ day)	CPUE RUS (metric tons/ vessel/ day)	CPUE CT_early (metric tons/ net haul)	CPUE CT_late (metric tons/ net haul)	Joint CPUE (sdmTMB)	CV (%)
1980	238510				0.72							
1981	204263				0.63							
1982	244700				0.46							
1983	257861				0.87							
1984	247044				0.81							
1985	281860				1.4							
1986	260455				1.13							
1987	235510				0.97							
1988	356989				2.36							
1989	330592				3.06							
1990	435869				1.95							
1991	399017				3.13							
1992	383999				4.32							
1993	402185				3.25							
1994	332509					4.10		16.73			1.50	0.315
1995	343743					2.09		21.33			1.79	0.314
1996	266424					1.78		14.37			0.90	0.306
1997	370017					3.49		11.46			2.01	0.337
1998	176364					1.05		12.29			0.73	0.361
1999	176498					0.91		11.43			0.77	0.312
2000	286186					1.27		15.60			0.92	0.295
2001	370823					1.65	7.94	20.19	1.44		0.81	0.269
2002	328362					1.10	12.79	18.90	1.33		0.76	0.259
2003	444642	1147.8	31.7			2.02	16.09	27.25	2.47		1.24	0.258
2004	369400	862.1	22.0			2.70	8.66	43.73	1.24		1.03	0.251
2005	473907	1234.9	33.9			4.37	19.56	43.50	2.27		1.47	0.246
2006	394093	876.2	32.9			4.54	8.07	31.79	1.00		0.83	0.236
2007	520207	905.4	34.6			4.18	9.03	39.97	2.17		1.12	0.238
2008	617509	1006.6	28.5			5.16	15.34	38.26	2.79		1.65	0.224
2009	472177	490.6	22.3			4.16	8.74	20.43	1.29		1.07	0.237
2010	429808	655.7	30.5			1.79	8.43	21.85	1.89		0.99	0.230
2011	456263	981.8	33.2			2.48	8.95	26.24	2.09		1.24	0.248
2012	460544	453.8	21.0			2.72	8.96	23.42		2.60	1.17	0.256
2013	423790	751.2	31.5	11.34		1.89	13.52	20.86		3.48	0.94	0.233
2014	629576	519.2	24.1	12.93		3.27	22.38	24.26		3.94	1.36	0.210
2015	358883	391.5	24.4	12.11		1.66	6.97	15.31		2.22	0.94	0.247
2016	361688	312.2	31.1	6.67		1.80	8.96	16.64		1.95	0.89	0.224
2017	262640	188.5	30.8	7.73		1.11	5.91	10.18		1.89	0.91	0.22
2018	435881	370.6	31.5	14.11		1.95	13.87	25.15		2.90	1.36	0.238

2019	195251	230.7	23.4	7.10	0.69	2.03	8.60	1.41	0.56	0.176
2020	139779	25.2	105.8	4.71	0.47	2.63	9.45	1.10	0.39	0.228
2021	92117	154.8	30.5	4.77	0.32	2.16	5.18	0.65	0.40	0.262
2022	100085	327.1	20.3	4.09	0.28	1.33		0.68	0.23	0.250
2023	118250	270.2	32.4	8.94	0.31	2.23	3.81	1.38	0.42	0.308
2024	155558	284.6	19.0	8.67	0.50	2.63	13.88	1.72	0.61	0.262
2025		428.0	26.5							

North Pacific Fisheries Commission

NPFC IUU FISHING VESSEL LIST FOR 2026

Commission Members adopted the attached NPFC IUU Fishing Vessel List at COM10

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
1	LIAO YUAN YU 071	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	
	j. Summary of activities				**k. subsequent sightings/Other information**			
	It was seen at 42˚15.4'N, 153˚22.8'E on 23 Aug 2016. When the Japanese patrol vessel approached, a vessel crew tried to hide the vessel name. Communication between the Japanese patrol vessel and LIAO YUAN YU 071 indicated that they hid the vessel name because they didn't want to be caught. (Port displayed on the vessel: Shidao; Vessel type; Lighted lift net vessel; Tonnage: 800t)							
	g. Photographs							
								

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
2	LIAO YUAN YU 072	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen at 42˚18.7'N, 153˚27.9'E on 23 Aug and at 42˚9.2'N, 151˚16.4'E on 11 Oct 2016. Vessel name was hidden by paint. (Port displayed on the vessel: Shidao; Vessel type; Lighted lift net vessel; Tonnage: 800t)	

g. Photographs



No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
3	LIAO YUAN YU 9	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen at 42˚3.0'N, 153˚0.8'E on 23 Aug and at 42˚10.0'N, 151˚16.8'E on 11 Oct 2016. Vessel name was hidden by paint. (Port displayed on the vessel: Shidao; Vessel type; Lighted lift net vessel; Tonnage: 800t)	

g. Photographs








No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
4	ZHOU YU 651	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen at 42˚30'2N, 152˚05'4E on 29 Sep 2016. (Port displayed on the vessel: Fungcheng; Vessel type; Lighted lift net vessel; Tonnage: 850t)	

g. Photographs







No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
5	ZHOU YU 652	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen at 42˚48.9'N, 152˚48.2'E on 7 Sep 2016. Port of registry was hidden by paint. (Vessel type; Lighted lift net vessel; Tonnage: 820t). MMSI: 412569986	

g. Photographs







No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
6	ZHOU YU 653	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen with LU RONG YU YUN 56219 and ZHOU YU 656 at 42˚11.9'N, 151˚14.6'E on 30 Sep 2016. (Port displayed on the vessel: Fungcheng; Vessel type; Lighted lift net vessel; Tonnage: 850t) Communication between Japanese patrol vessel and LU RONG YU YUN 56219 indicated ZHOU YU 653 were transshipping 1500t of mackerel together with ZHOU YU 656.	

g. Photographs



No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
7	ZHOU YU 656	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen with LU RONG YU YUN 56219 and ZHOU YU 656 at 42˚11.9'N, 151˚14.6'E on 30 Sep 2016. (Port displayed on the vessel: Fungcheng; Vessel type; Lighted lift net vessel; Tonnage: 850t) Note that the same vessel name with the different port of registry (Zhoushan) (600t) has been seen in the similar area. Communication between Japanese patrol vessel and LU RONG YU YUN 56219 indicated ZHOU YU 656 were transshipping 1500t of mackerel together with ZHOU YU 653. MMSI: 100900240 412440242	

g. Photographs (No Photographs Available)

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
8	ZHOU YU 657	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	
	j. Summary of activities				**k. subsequent sightings/Other information**			
	It was seen at 42˚35.5'N, 152˚6.7'E on 12 Sep 2016. (Port displayed on the vessel: Zhoushan; Vessel type; Lighted lift net vessel; Tonnage: 600t)							
	g. Photographs							
	 							

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
9	ZHOU YU 658	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen at 40˚12.3'N, 148˚40.5'E on 29 May 2016 and at 42˚46.7'N, 152˚41.2'E on 7 Sep 2016. (Port displayed on the vessel: Zhoushan; Vesseltype; Lighted lift net vessel; Tonnage: 600t)	

g. Photographs



No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
10	ZHOU YU 659	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	
	j. Summary of activities				**k. subsequent sightings/Other information**			
	It was seen in the NPFC area on 2, 4, 13, 17 Jun and 7 Sep 2016. On 4 Jun the vessel name on the right side was hidden by paint. (Port displayed on the vessel: Zhoushan; Vessel type: Lighted lift net vessel; Tonnage: 600t)							
	g. Photographs							
	  							

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
11	ZHOU YU 660	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen in the Japanese EEZ on 10 May 2016 and in NPFC area multiple times from May to Sep 2016. On 10 May the vessel showed Korean flag but changed the Korean to Japanese flag when the Japanese patrol vessel approached. Vessel name changed between 15 May and 12 Sep 2016 (see the photos). The vessel is not permitted in Japan nor registered in NPFC. (Port displayed on the vessel:Basuo-not apparent; Vessel type: Lightedlift net vessel; Tonnage: 600t)	

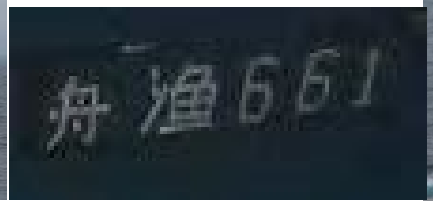
g. Photographs



No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
12	ZHOU YU 661	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen in the Japanese EEZ on 10 and 13 May 2016 and in NPFC area on 15, 29 May and 7 Sep 2016. The vessel names on the left and right side changed frequently (see the photos). The vessel showed Japanese flag in May. But the vessel is not permitted in Japan nor registered in NPFC. (Port displayed on the vessel: Shidao; Vessel type: Lighted lift net vessel; Tonnage: 600t)	

g. Photographs








No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
13	HAI DA 705	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
Communications between Japanese Patrol vessel and HAI DA 705 at 43˚10.4'N, 153˚38.6'E on 11 Sep 2016 indicated they caught squid with drift net in the high sea. (Port displayed on the vessel: 沈家们; Vessel type: Drift net vessel; Tonnage: 290t)	

g. Photographs



No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
14	LU RONG YU 1189	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen at 41˚24.9'N, 140˚32.7'E (Japan EEZ) on 14 Jun 2016. (Port displayed on the vessel: Shidao; Vessel type: Carrier vessel; Tonnage: 100t) MMSI: 412321992	

g. Photographs





No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
15	ZHE LING YU LENG 90055	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	

j. Summary of activities	k. subsequent sightings/Other information
It was seen at 40˚25.3'N, 149˚13.2'E on 29 May 2016. (Port displayed on the vessel: Wenling; Vessel type: Carrier vessel; Tonnage: 600t) MMSI: 412000000 413202046	

g. Photographs



No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
16	ZHE LING YU LENG 905	Unknown	Not known	Not known	Not known	Not known	29 Aug. 2017	
	j. Summary of activities				**k. subsequent sightings/Other information**			
	It was seen at 42˚45.6'N, 152˚45.8'E on 24 Aug 2016. (Port displayed on the vessel: Wenling; Vessel type: Carrier vessel; Tonnage: 1000t) MMSI: 412000000 412000256							
	g. Photographs (No Photographs Available)							

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
17	LU RONG YUAN YU 101	unknown	Not known	Not known	Not known	Not known	13 Nov. 2017	

j. Summary of activities	k. subsequent sightings/Other information
While LU RONG YUAN YU 101 is registered as a light PS vessel in the NPFC list, the identical name with different vessel types were seen. LU RONG YUAN YU 101 with lift net type was seen at 49˚9.2'N, 149˚19.5'E on 17 May 2016. LU RONG YUAN YU 101 with stern-trawl type was seen at 38˚0.2'N, 145˚58.5'E on 20 May 2016. (Port displayed on the vessel: Shidao; Vessel type: Stern Trawl/Light lift net vessel; Tonnage: 800t/651t) MMSI: Lift Netter 656558842 Trawler 412328753	

g. Photographs







No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
18	LU RONG YUAN YU 102	unknown	Not known	Not known	Not known	Not known	13 Nov. 2017	

j. Summary of activities	k. subsequent sightings/Other information
While LU RONG YUAN YU 102 is registered as one light PS vessel in the NPFC list, the identical name with different vessel types were seen. LU RONG YUAN YU 102 with lift net type was seen at 42˚21.3'N, 151˚ 55.5'E on 11 Oct 2016. LU RONG YUAN YU 102 with stern-trawl type was seen at 42˚ 7.3'N, 151˚13.8'E on the same day. LU RONG YUAN YU 102 was also seen with a carrier vessel “MIN FU DING YU LENG 08888” at 42˚22.2'N, 151˚19.6'E on 12 Oct 2016. (Port displayed on the vessel: Shidao; Vessel type: Stern Trawl/Light lift net vessel; Tonnage: 800t/651t) MMSI: Trawler 412328752; Lift Net 413228752	

g. Photographs





No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
19	LU RONG YUAN YU 103	unknown	Not known	Not known	Not known	Not known	13 Nov. 2017	

j. Summary of activities	k. subsequent sightings/Other information
While LU RONG YUAN YU 103 is registered as one light PS vessel in the NPFC list, the identical name with different vessel types were seen. LU RONG YUAN YU 103 with lift net type was seen at 40˚25.9'N, 150˚ 9.9'E on 1 June 2016. LU RONG YUAN YU 103 with stern-trawl type was seen at 37˚59.9'N, 145˚58.5'E on 20 May 2016. (Port displayed on the vessel: Shidao; Vessel type: Stern Trawl/Light lift net vessel; Tonnage: 651t/651t) MMSI: Lift Net & Trawler 412328751	

g. Photographs





No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
20	LU RONG YUAN YU 105	unknown	Not known	Not known	Not known	Not known	13 Nov. 2017	

j. Summary of activities	k. subsequent sightings/Other information
While LU RONG YUAN YU 105 is registered as one light PS vessel in the NPFC list, the identical name with different vessel types were seen. LU RONG YUAN YU 105 with lift net type was seen at 42˚27'N, 152˚ 5.8'E on 11 Oct 2016.LU RONG YUAN YU 105 with stern-trawl type was seen at 41˚54.8'N, 151˚17.4'E on 5 Sep 2016. (Port displayed on the vessel: Shidao; Vessel type: Stern Trawl/Light lift net vessel; Tonnage: 651t/651t) MMSI: Lift Netter 926001560 412428757 Trawler 412328749	

g. Photographs





No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
21	LU RONG YUAN YU 106	Unknown	Not known	Not known	Not known	Not known	13 Nov. 2017	

j. Summary of activities	k. subsequent sightings/Other information
While LU RONG YUAN YU 106 is registered as one light PS vessel in the NPFC list, the identical name with different vessel types were seen. LU RONG YUAN YU 106 with lift net type was seen at 40˚30.4'N, 149˚ 34'E on 29 May 2016. LU RONG YUAN YU 106 with stern-trawl type was seen at 40˚17.6'N, 148˚33'E on the same day. The two fishing vessels with duplicate names “LU RONG YUAN YU 106” were seen transshipping with a carrier vessel “MIN FU DING YU LENG 08888” at 42˚16.4'N, 151˚21.4'E on 8 Oct 2016 (see the last photo). (Port displayed on the vessel: Shidao; Vessel type: Stern Trawl/Light lift net vessel; Tonnage: 651t/651t) MMSI: Lift Netter 412328748 Trawler 412328748	

g. Photographs







No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
22	LU RONG YUAN YU 108	Unknown	Not known	Not known	Not known	Not known	13 Nov. 2017	

j. Summary of activities	k. subsequent sightings/Other information
While LU RONG YUAN YU 108 is registered as one light PS vessel in the NPFC list, the identical name with different vessel types were seen. LU RONG YUAN YU 108 with lift net type was seen at 40˚28.4'N, 149˚28.1'E on 29 May 2016. LU RONG YUAN YU 108 with stern-trawl type was seen at 40˚18.6'N, 148˚30.7'E on the same day. (Port displayed on the vessel: Shidao; Vessel type: Stern Trawl/Light lift net vessel; Tonnage: 651t/651t) MMSI: Trawler 800024754 Lift Netter 412443265 412328746 800025754	

g. Photographs





No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
23	LU RONG YUAN YU 109	Unknown	Not known	Not known	Not known	Not known	13 Nov. 2017	

j. Summary of activities	k. subsequent sightings/Other information
While LU RONG YUAN YU 109 is registered as one light PS vessel in the NPFC list, the identical name with different vessel types were seen. LU RONG YUAN YU 109 with lift net type was seen at 40˚25.1'N, 149˚ 25 'E on 29 May 2016. LU RONG YUAN YU 109 with stern-trawl type was seen at 40˚16.4'N, 148˚32.1'E on the same day. (Port displayed on the vessel: Shidao; Vessel type: Stern Trawl/Light lift net vessel; Tonnage: 651t/651t) MMSI: Trawler 412328745 800025747 Lift Netter 412328745	

g. Photographs





No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
24	LU RONG●YU 612	Unknown	Not known	Not known	Not known	Not known	19 Aug 2018	

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol vessel sighted this fishing vessel was drifting in the Convention area at 39˚50.00'N, 147˚1.8'E on July 21. The port of registry is Shidao and AIS information showed that the vessel name is “Lu Long Yuan Yu 108”, which is on the current IUU vessel list and is different from the name shown on the vessel side, and that MMSI is 412328746. The tonnage 651 t was derived from the information of “Lu Long Yuan Yu 108” in the current IUU vessel list. Ref: NPFC-2018-TCC03-WP04	

g. Photographs







No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
25	LU RONG YUAN YU 787	Unknown	Not known	Not known	Not known	Not known	19 Aug 2018	

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol vessel sighted this fishing vessel was drifting in the Convention area at 39˚49.7'N, 147˚2.8'E on July 21 2017, and Japanese patrol aircraft sighted the same vessel anchored at 41˚3.3'N, 150˚22.1'E on August 2 2017. The China flag was raised and the sign of “CHINA” was painted on the vessel side (see the photos). MMSI is 413800814 and the port of registry is Shidao. Ref: NPFC-2018-TCC03-WP04	

g. Photographs









No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
26	LU RONG YUAN YU YUN 958	Unknown	Not known	Not known	Not known	Not known	19 Aug 2018	

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol fishing vessel sighted this fishing vessel was drifting in the Convention area at 39˚50.9'N, 147˚4.3'E on July 21. The vessel raised China flag and the port of registry was Shidao. AIS information showed that the vessel name is 958 and MMSI is 412452812. Ref: NPFC-2018-TCC03-WP04	

g. Photographs






No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
27	LU RONG YUAN YU 797	Unknown	Not known	Not known	Not known	Not known	19 Aug 2018	

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol aircraft sighted this fishing vessel in the Convention area was operating at 42˚7.1'N, 151˚40.9'E on July 7 2017. China flag was raised and “CHINA” was painted on the vessel side (see the photo). MMSI is 412327980. Ref: NPFC-2018-TCC03-WP04	

g. Photographs







No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
28	LU RONG SHUI 158 (鲁荣水158)	Unknown	Not known	Not known	Not known	Not known		CMM 2017-02 para 3. a

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol vessel sighted this fishing vessel in the Convention area at 39˚59.2'N, 147˚39.7'E on July 7, 2018. There is no vessel registration of this vessel on the NPFC vessel register. MMSI 412688540	

g. Photographs






No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
29	Unknown(*)	Unknown – raised flag of China	Not known	Not known	Not known	Not known		CMM 2017-02 para 3. a

j. Summary of activities	k. subsequent sightings/Other information
A Japanese trawl vessel sighted this fishing vessel indicating its vessel name "ZHOU YU 808" MMSI 412671880, in the Koko seamount area of Convention area at 36˚44'N, 171˚27'E on August 29, 2018, allegedly conducted fishing for deep sea coral. There was a duly registered vessel with the same name "ZHOU YU 808" on the NPFC vessel registry, but it is confirmed that the sighted vessel is not the duly licensed one.	

g. Photographs





Associated Documents

Circular 030-2018 (https://www.npfc.int/system/files/2018-11/Circular%20030-2018%20Sighting%20Information%20of%20Fishing%20Vessels%20without%20Nationality.pdf)
Japanese Document (https://www.npfc.int/system/files/2018-11/Sighting%20infomation%20from%20Japan.pdf)

(*) This vessel indicated its name as " Zhou Yu 808 (舟漁 808)" when sighted.

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
30	Unknown (*)	Unknown – raised flag of China	Not known	Not known	Not known	Not known		CMM 2017-02 para 3. a

j. Summary of activities	k. subsequent sightings/Other information
A Japanese trawl vessel sighted this fishing vessel indicating its vessel name "ZHOU YU 809" MMSI 412401260, in the Koko seamount area of Convention area at 36˚44'N, 171˚27'E on August 29, 2018, allegedly conducted fishing for deep sea coral. There was a duly registered vessel with the same name "ZHOU YU 809" on the NPFC vessel registry, but it is confirmed that the sighted vessel is not the duly licensed one.	

g. Photographs



Associated Documents

Circular 030-2018 (https://www.npfc.int/system/files/2018-11/Circular%20030-2018%20Sighting%20Information%20of%20Fishing%20Vessels%20without%20Nationality.pdf)
Japanese Document (https://www.npfc.int/system/files/2018-11/Sighting%20infomation%20from%20Japan.pdf)

(*) This vessel indicated its name as "ZHOU YU 809 (舟漁809)" when sighted.

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
31	YUANDA 6 (Assumed from MMSI number)	Unknown – raised flag of China	Not known	Not known	Not known	Not known		CMM 2017-02 para 3. a

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol vessel sighted this vessel conducting fishing operation in the Convention area at 25˚45'9N, 147˚07'06E on April 15, 2019. This nameless vessel (assumed "YUANDA6" from the vessel's NMSI) was operating and running away when the Japanese patrol vessel approached.	

g. Photographs







No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
32	YUANDA 8 (Assumed from MMSI number)	Unknown – raised flag of China	Not known	Not known	Not known	Not known		CMM 2017-02 para 3. a

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol vessel sighted this fishing vessel conducting fishing operation in the Convention area at 25˚46'02N, 147˚07'08E on April 15, 2019. This nameless vessel (assumed "YUANDA8" from the vessel's NMSI) was operating and running away when the Japanese patrol vessel approached.	

g. Photographs



No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
33	ZHEXIANG YU 23029	Unknown – raised flag of China	Not known	Not known	Not known	Not known		CMM 2017-02 para 3. a

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol vessel sighted this fishing vessel in the Convention area at 25˚42'03N, 147˚11'02E on April 15, 2019. This vessel apparently had just finished as the gear was wet. the vessel name, which was not registered on the NPFC vessel registry, was erased deliberately.	

g. Photographs






No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
34	Unknown	No Nationality						CMM 2019-01 (para5)
	j. Summary of activities				**k. subsequent sightings/Other information**			
	A Japanese patrol vessel sighted this fishing vessel displaying the name LU RONGYUAN YU 581 鲁荣远渔 581 in the Convention area at 41°11.6'N, 174°17.7'W on July 15, 2020. This vessel was fishing under the name of a legally authorized vessels which was not in the Convention Area, consequently this vessel was conducting IUU fishing and did not display an IRCS.							
	g. Photographs							
	  							

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
35	Unknown	No Nationality						CMM 2019-01 (para5)

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol vessel sighted this fishing vessel displaying the name LU RONG YUAN YU 582 鲁荣远渔 582 in the Convention area at 41°11.4’N, 174°22.9’W on July 15, 2020. This vessel was fishing under the name of a legally authorized vessels which was not in the Convention Area, consequently this vessel was conducting IUU fishing and did not display an IRCS.	

g. Photographs





No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
36	Unknown	No Nationality						CMM 2019-01 (para5)

j. Summary of activities	k. subsequent sightings/Other information
A Japanese patrol vessel sighted this fishing vessel displaying the name LU RONG YUAN YU 197 鲁 荣 远 渔 197 in the Convention area at 41°11.3'N, 174°20.3'W on July 15, 2020. This vessel was fishing under the name of a legally authorized vessels which was not in the Convention Area, consequently this vessel was conducting IUU fishing and did not display an IRCS.	

g. Photographs





No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
37	AN TON (previously WAN TONG, ZHONG FU HAO 111, HUMBOLDT BAY)	Bangladesh (Comoros) (Cameroon) (Panama) (Liberia)	New Millenium Ocean Shipping Company Ltd. (FUWANTONG OCEAN SHIPPING CO., LIMITED.)	Ke Benwen	TJM0159 (previously HO4706)	8907888	26-7-23	CMM2021-01 (para1,2,3,6,9,10) CMM 2019-02 (para3)

j. Summary of activities	k. subsequent sightings/Other information
This vessel was observed conducting unauthorized transshipment activities in the NPFC Convention Area on September 6, 2021.	Information presented at March 2025 NPFC Commission meeting suggest the vessel was scrapped in Bangladesh in 2024; awaiting confirmation.

g. Photographs

Photos taken at 7:43 (JST) on September 6, 2021









No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
38	RIWA (previously GLORIWAVE)	Togo (Sierra Leone)	Salimar Limited		5VIR8 (previously T8A4017)	9017666	26-7-23	CMM 2021-01 (para1,2,3,6, 9,10), CMM 2019-02 (para3)
	j. Summary of activities				**k. subsequent sightings/Other information**			
	This vessel was observed conducting unauthorized bunkering activities in the NPFC Convention Area on June 26, 2022. NOTE: TCC06 was informed that the vessel is understood to have flagged to Palau, and later Togo, and may also be using the name RIWA.							
	g. Photographs							
								

No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
39	QIAN YUAN	UNKNOWN (Panama)	GINSIL HOLDING GROUP LIMITED	PHAM HONG NAM	H3YK (5VEZ8)	8819691	26-7-23	JAPAN: CMM 2021-01 (para1,2,3,6,9,10), CMM 2019-02 (para3), CMM 2021-09 (para38) PANAMA: As per Annex A, items i and j

j. Summary of activities	k. subsequent sightings/Other information
This vessel was observed conducting unauthorized transshipment activities in the NFPC Convention Area between June 23 and 26, 2022.	

g. Photographs





No.	a. Name of vessel (previous names)	b. Flag of vessel (previous flags)	c. Owner (previous owners)	d. Operator of vessel (previous operators)	e. Call sign of vessel (previous call signs)	f. Lloyds/IMO number	h. Date first included on NPFC IUU Vessel List	i. CMM and paragraph noting violation
40	HAN (previously SHUN HANG, VILA MOOSUN)	St Kitts & Nevis (Panama) (Tuvalu)	Trade Shipping Inc (SHUNHANG INTERNATIONAL SHIPPING CO.,LIMITED)	Machtrans Ship Management (HOWLADER MD NAJIR)	V4BK5 (previously H3DE)	8214645	26-7-23	CMM 2021-12 (para7)
	j. Summary of activities				**k. subsequent sightings/Other information**			
	This vessel was observed actively engaged in transshipment activities in the Convention Area on September 17th and a review showed it had not transmitted required VMS positional data to the NPFC Secretariat between September 16th and September 21st, 2022.							
	g. Photographs							
								

North Pacific Fisheries Commission

NPFC COMPLIANCE REPORT – 2026

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NPFC 2026 Final Compliance Report

The NPFC 2026 Final Compliance Report is presented below and should be considered alongside the CMS Executive Summary (NPFC-2026-TCC09 CMS CMM CMR Executive Summary)

C=Compliant
NC=Non-Compliant
DS=Delayed Submission
U = Unable to be assessed

		* see note below		Members/CNCP									
Measure	Paragraph Number	Description	Source	Canada	China	EU	Japan	Korea	Russia	Chinese Taipei	USA	Vanuatu	Panama
2023-01	3	Promptly update Vessel Registry	Situational										
	4	Notify active vessels	Annual Report										
	5	Mark Vessels	Questionnaire, Situational		C				C	C		C	
	7	IUU attestation	Questionnaire, Situational										
2024-02	24(a)	Remove IUU vessels from Vessel Registry	Secretariat review										
	24(b)	No transshipments, joint fishing, or support operations with IUU-listed vessels	Questionnaire, Situational										
	24(c)	No port entry for IUU-listed vessels (except force majeure)	Questionnaire, Situational										
	24(d)	No chartering of IUU-listed vessels											
	24(e)	Do not flag IUU-listed vessels unless they are proven no longer IUU-associated	Questionnaire, Situational, Check IUU listings/Vessel Registry										
	24(f)	No commercial dealings with IUU-listed vessels (imports, landings, transshipments)	Questionnaire, Situational										
2025-03	4	Only transship if both vessels are authorized and on the NPFC Vessel Registry	Questionnaire, System Analysis										
	6	Authorization required if transshipping under national jurisdiction	Questionnaire										
	8	Follow Commission reporting procedures	System Analysis										
	9	Report all marine species, including bycatch and unregulated species	Questionnaire, Situational		C				NC				
	22	Keep each offloading vessel's catch separate with a stowage plan	Questionnaire, Situational										
	24	Submit a transshipment declaration within 10 days	System Analysis										
	26	Until observer/EM program is in place, deploy independent observers	Questionnaire, Situational						U				
	28	Receiving vessel must provide safe conditions, accommodation, and comms for observers	Questionnaire, Situational										
	29	Ensure receiving vessels have an observer onboard	Questionnaire, Situational						U				
	31	Only one transshipment at a time per observer	Questionnaire, Situational, System Analysis						U				
	32	Observer must have full access and adequate workspace	Situational										
	34	Observer to record transshipment report immediately and submit a final report within 10 days post-disembarkation	System Analysis						U				
	35	Observer promptly reports any violation to Secretariat and relevant authorities	Questionnaire, Secretariat review										
	36	Flag State investigates violations and reports actions in the Annual Report	Annual report										
	46	In force majeure, notify Secretariat before transshipment ends and provide declaration within 10 days	System Analysis										
	48	Annually summarize transshipment data in the Annual Report	Annual Report										
	49	Verify all transshipment information received from vessels	Questionnaire, Situational										
	51	Investigate potential non-compliance and report results to the Commission	Questionnaire, Situational										
2025-05	4.A	Limit effort to 2007 agreed level	Note any increase in authorizations from previous year										
	4.G	Move on when encountering sponges/corals	Questionnaire, Situational										
	4.L	Japan: limit NPA to 15,000 MT	Quota monitoring										
	5	Submit impact assessments (Annex 3) and authorize bottom fishing per 4 C	Questionnaire, Situational										
	6.A	Report bottom fishing details annually	Annual Report										
	6.B	Collect and report scientific info (Annex 4); observers collect data (Annex 5)	Questionnaire, Situational										
	8	All vessels carry observers	Annual report, Situational										
2025-06	8	One month before SC, provide historical/current fishing info and observer data	Questionnaire										

2025-07	1	If substantial CA harvest, no expansion beyond historical level until assessment done #	Note any increase in authorizations from previous year											
	3	Do not exceed catch limit for fleet, or trawler limit	Quota monitoring											
	6	Record catch/discards	Questionnaire, Situational		C				NC					
	13	Provide CA/NW-separated data by end of February	Annual report											
2025-08	1	Non-NW saury fishers refrain from expanding beyond historical level #	Note increase in authorizations from previous year											
	2	NW saury fishers refrain from rapid CA expansion beyond historical level #	Note increase in authorizations from previous year											
	9	Until TAC is set, reduce 2024 saury catch to 55% of 2018 level	Quota monitoring, Situational											
	10	Provide weekly saury catches by Wednesday of following week.	Quota monitoring											
		At 90% TAC, large quota (>10,000 mt) must close within 72 hrs; smaller quota must not exceed 90% of limit	Questionnaire											
	11	Record catch/discards	Questionnaire, quota monitoring											
	12	Close fishery when catch limit reached and notify date of closure	Questionnaire, Situational											
	16	At 70% limit, SEC notifies; at 100% limit, close fishery and notify SEC	Questionnaire, Situational											
2024-09	7	Ensure vessels accept boardings	Questionnaire, Situational											
	7	Inspectors follow procedures	Questionnaire, Situational											
	26	Vessel masters facilitate safe boarding and cooperate	Questionnaire, Situational											
	28	Unless safety warrants delay, authorities must ensure compliance. If the master refuses, suspend fishing and return to port; notify inspectors and the Commission	Questionnaire, Situational											
	31	Transmit inspection report within 3 working days	Annual report						DS					
	41	Members report annually on inspections and possible violations	Annual report											
	42	Members report annually on actions taken for alleged violations, including sanctions	Annual report											
2019-10	8	All sablefish vessels: 100% observer coverage	Note increase in authorizations from previous year											
2025-11	1	Substantial harvesters: no expansion beyond historical level until assessment done #												
	6	Record catch/discards	Questionnaire		C									
	7	Submit data on 3 pelagics as required in annual report	Annual report											
2025-12	8	Vessels transmit data hourly to FMC	System Analysis											
	10	FMC auto-transmits data to SEC within 60 min	System Analysis											
	11	FMC can auto-receive and auto-transmit data to SEC	System Analysis											
	13	Provide FMC contact details (name/position/email/phone) to SEC	Secretariat review											
	23	After two transmission failures/year, investigate (examine MTU) and report to SEC	Situational											
2023-14	6	No shark finning	Questionnaire, Situational											
	7	No retention/transshipment/landing of detached shark fins	Questionnaire, Situational		C									
	8	Only remove fins if shark identifiable and allowed methods used	Questionnaire, Situational											
	9	Record all sharks	Questionnaire, Situational						C					
	10	Report sharks annually	Annual Report						C					
2024-15	4	No discarding/abandoning gear at sea	Questionnaire, Situational											
	8	No plastic release at sea (including incinerator ash)	Questionnaire Situational		C									
	11	FV prevent gear/garbage/plastic loss at sea	Questionnaire, Situational											
	12	FV retrieve lost/abandoned gear/plastic if possible	Questionnaire, Situational											
	16	Store gear/garbage/plastic onboard until port disposal	Questionnaire, Situational											
2024-16	5	No retention/ possession of anadromous fish	Questionnaire, Situational		C				C					
	7	Return anadromous fish to water quickly and with the least harm	Questionnaire, Situational											
	9	Maintain records and make available to inspectors	Questionnaire, Situational											
	11	Report incidental catch annually	Annual Report						C					

 # means this CMM assess "historical existing level," which has not been defined. Based on on-going discussions, lack of a definition, and data gaps, these CMMs were unable to be assessed this year.

9th Meeting of the Technical and Compliance Committee

FINAL REPORT

8–11 April 2026

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North Pacific Fisheries Commission
9th Meeting of the Technical and Compliance Committee

8–11 April 2026
Osaka, Japan

FINAL REPORT

Agenda Item 1. Opening of the Meeting

1a. Welcome to Participants

1. The 9th Meeting of the Technical and Compliance Committee (TCC) was held in a hybrid format, with participants attending in-person in Osaka, Japan, or online via WebEx, on 8–11 April 2026, and was attended by Members from Canada, China, the European Union (EU), Japan, the Republic of Korea, the Russian Federation, Chinese Taipei, the United States of America (USA), and Vanuatu, and Panama as a Cooperating Non-Contracting Party (CNCP). The meeting was opened by Ms. Alisha Falberg (USA), who served as the TCC Chair.

1b. Appointment of Rapporteur

2. Mr. Alex Meyer was appointed as rapporteur.

1c. Introduction of Observers

3. The Chair introduced approved observers permitted to be present. The accredited observers were the Pew Charitable Trusts (Pew), the Ocean Foundation, Ocean Governance Institute (OGI), World Wildlife Fund (WWF), and the North Pacific Anadromous Fish Commission (NPAFC). The observers were admitted without objection.

1d. Adoption of Agenda

4. The provisional agenda was adopted (Annex A). The List of Documents and List of Participants are attached (Annexes B, C).

1e. Meeting Arrangements

5. The Compliance Manager, Ms. Judy Dwyer, outlined the meeting arrangements.

Agenda Item 2. Report from Secretariat

2a. Fisheries Overview 2025

6. The Compliance Manager presented the overview of NPFC fisheries in 2025 (NPFC-2026-TCC09-IP01).

7. The Compliance Manager explained that this year's fisheries overview did not include vessel authorizations. She reminded the TCC that issues with the vessel registry data held by the Secretariat and discrepancies between these data and the data held by Members had resulted in several revisions to the fisheries overview at TCC08. The Secretariat has been investigating the issues in the vessel registry and found issues including duplicate or triplicate authorizations and the use of inconsistent vessel and gear codes. The Secretariat has been working on these issues but had not been able to resolve them in time for TCC09. The Secretariat will continue to address these issues and can work with Members individually or collectively, as appropriate, to do so.

8. Korea expressed appreciation for the new format of the fisheries overview, noting that it is more factual and simpler than previous years. The USA recognized the value of the new fisheries overview format in that it is more focused on factual information and acknowledged that there were issues with historical vessel authorization data that the Secretariat had not yet been able to resolve. However, the USA also pointed out that the more comprehensive information provided in previous years was useful for understanding the historical context. The USA also noted that other historical data besides vessel authorizations, such as historical catch, could have been presented, and requested that the Secretariat find a better balance in the kinds of information that it includes in the fisheries overview.

9. China noted that Table 2 presented chub mackerel catch for the 2025 calendar year, whereas Conservation and Management Measure (CMM) 2025-07 For Chub Mackerel applies a fishing year that runs from June 1 to May 31 and a catch limit based on fishing year. China considered the use of different time periods for reporting and for setting catch limits to be confusing and expressed its intention to propose that the Commission revert to using calendar year for setting catch limits for chub mackerel at COM10.

10. In response to a request for clarification regarding Members reporting bycatch in their Annual Report, the Secretariat explained that under the current data reporting template, Members are only required to report one amount for total catch and the Secretariat cannot verify whether or not this amount includes discards and bycatch.

11. The USA expressed concern regarding the significant increase in catch of Japanese sardine, noting the limited scientific advice and lack of an assessment for this stock at the NPFC level. The USA also requested Japan elaborate on its significant reported quantities of shark bycatch.

12. In response to the request for clarification, Japan explained that its shark bycatch was taken from its bottom fisheries and that over 80% of this bycatch consists of lantern shark.

13. The TCC requested that future annual report templates include a description of which fishery such bycatch is associated with, so this information can be included in future fisheries overviews

14. The USA pointed out that even though the fisheries overview and other papers were submitted to TCC before the mandated deadline, it can nevertheless be challenging for Members and the Secretariat to adequately prepare for the meeting if most documents are being posted around the same time towards the end of the submission period, shortly before the meeting. The USA suggested that papers be submitted and posted earlier and in a more staggered way, if possible.

15. The Compliance Manager agreed that this would be beneficial for Members and the Secretariat, while pointing out that its ability to post documents earlier depends on when it receives data and papers from Members, though for the Vessel Monitoring System (VMS) and transshipment the goal/plan is to review these throughout the year.

2b. Data Management System Update and Initiatives for 2026

16. The Data Coordinator, Mr. Sungkuk Kang, presented a summary of the status of all TCC-related data management systems and new initiatives for further development in 2026 by the Secretariat (NPFC-2026-TCC09-IP02). Updates have been made to the Members Home, Significant Dates/Events, Transshipments Map, Annual Reports, Vessel Registry, High Seas Boarding and Inspection (HSBI) Events, e-IUU, Pacific Saury Weekly Report, Chub Mackerel Monthly/Weekly Report, and Collaboration sections. New Member Reporting Dashboard and Aerial Surveillance pages were also launched. As for VMS, it is in operation and continuously monitors the positions and movements of all NPFC fishing vessels operating in the Convention Area. The Secretariat will continue to provide Members with an inspection presence with access to VMS data to support inspection activities and address any technical needs. In 2026, the Secretariat intends to advance the following key initiatives: upgrading the NPFC Vessel Registry by enhancing its authorization management functionality; updating the NPFC Annual Report module to improve data integrity; developing an e-Implementation Questionnaire module similar to the e-Annual Report; creating a Monitoring, Control, and Surveillance (MCS) page to cover HSBI Events, Air Surveillance, and related Focal Points; and regularly updating the NPFC website in line with Member requirements.

17. The Data Coordinator informed the TCC that the Secretariat had received a request from Korea to enable individual users to create their own accounts in addition to the current process of group administrators having that ability. However, he explained that this functionality has not been implemented due to security considerations, as unrestricted account creation could expose the NPFC domain to unauthorized traffic or malicious activities.

18. The Data Coordinator explained that the Secretariat recently experienced an unusually high level of traffic to the NPFC domain (npfc.int). This resulted in a deterioration of the domain's "trust rating," causing outbound emails to be flagged as spam or quarantined by many recipients. To safeguard the domain's integrity, the Secretariat was advised by its service provider not to develop functionality allowing account creation by any user; instead, the Group Administrator of each Member continues to create and manage their group users' accounts, ensuring network security and reliable email delivery.

19. The TCC noted that Members do not have permission to update the authorization period and target species of their authorized vessels and asked for an explanation from the Secretariat.

20. The Secretariat explained that this issue had previously been discussed among Members and the Secretariat, and it was concluded that Members should not have the ability to make such updates retroactively and that only the Secretariat should have that permission. The Secretariat further explained that, perhaps unintentionally, this resulted in Members also not having permission to make such updates for future authorization periods and target species. The Secretariat suggested that it would work with Members and the service provider to reintroduce that functionality as part of its work to address the aforementioned issues in the vessel registry.

21. The TCC noted that it is possible for Members to revise their annual reports after they have been submitted, including after the submission deadline. Some Members expressed concern about Members editing their reports after the deadline. The TCC agreed that information should be recorded on whether Members submitted their reports before the deadline and whether they made any changes to their reports after the deadline.

22. The Secretariat confirmed that the NPFC data management system does currently record what changes have been made, when, and by whom.

23. When asked about facilitating access for registered observers to the NPFC Collaboration site, the Secretariat explained that it is continuing to work with the service provider on facilitating this, but that there have been many unexpected technical and security issues that have prevented faster progress.

24. China pointed out that for their annual reports, Members must manually select all their active vessels from a list of all their authorized vessels, which can be very time-consuming and cumbersome. China suggested that it would be helpful if this process could be automated in some way, such as if the selection could be done automatically based on a separate list of active vessels submitted by a Member to the Secretariat or based on the VMS position reports sent to the Secretariat.

25. The USA suggested that a disclaimer be added to the Reporting Dashboard that clarifies that it is still each Member's responsibility to meet the reporting requirements under the NPFC CMMs in the case of any potential omissions or errors. The USA also suggested that a check box be added that Members must mark when submitting their annual reports that indicates that they are responsible for the accuracy of the data they are submitting.

Agenda Item 3. Review of MCS related issues from SC

3a. TCC review of SC responses on data needs for an NPFC ROP

26. The Chair reminded the TCC that she, the Scientific Committee (SC) Chair, and the SC had continued to engage in communication in the intersessional period regarding potential scientific components of an NPFC At-Sea Regional Observer Program (ROP) and explained that the responses from SC to the questionnaire from the TCC have been provided in NPFC-2026-TCC09-IP03.

27. Some Members considered the responses from the SC to be a summary of areas of scientific interest and not a conclusion on the necessities, scope, or design of a ROP. Furthermore, they noted that existing data needed for stock assessment work are already derived largely from Members' domestic programs and port sampling, that additional verification is not considered necessary, and that the level of monitoring required cannot yet be determined. They suggested that there is therefore not an urgent need to establish an ROP for scientific purposes.

28. Other Members believed that the information from the SC provided an adequate basis for beginning more full-fledged discussions on the development of an ROP, including potential components of an NPFC ROP. They also disagreed with the suggestion that the SC is already collecting all the data it needs and that additional verification is not needed, noting that there were a number of areas where the SC said it did not have enough information to answer the questions from the TCC. They further noted that the establishment of an ROP is required under the Convention, that an ROP should cover not only scientific aspects but also compliance aspects, and that the need for an ROP was reinforced by the Performance Review Panel.

29. ***Recommendation:*** That the Commission task TCC to work intersessionally through the SWG on Planning and Development (SWG PD) to develop a paper on TCC-related components of an NPFC ROP and submit the paper to TCC10. In developing the paper, the SWG PD should review other data collection methods, including current data collection methods such as Members' domestic observer programs and port sampling programs, as well as possibilities for the use of e-monitoring (EM).

30. The Ocean Foundation expressed concern at some Members' reluctance to move forward with

the establishment of an ROP when this is a commitment under the Convention. The Ocean Foundation noted the continued occurrence of data-related issues at the TCC, the SC and the Commission and expressed concern over the SC's lack of clarity regarding its level of confidence in, and uncertainties associated with, its stock assessments. The Ocean Foundation emphasized that an ROP is intended not only for collecting more data but independently verifying the data being collected, which is an instrumental part of modern fisheries management.

Agenda Item 4. SWG Reports on Progress, Priorities and Recommendations

4a. SWG Planning and Development - Report and Recommendations

31. Ms. Amber Lindstedt (Canada), Co-Lead of SWG PD, presented a summary of the work conducted by SWG PD in the 2025–2026 intersessional period. SWG PD held six meetings and advanced key files through email communication. Two priority tasks were completed: development of a three-year Compliance Monitoring Scheme (CMS) workplan and of a draft proposal to establish a CMM on Minimum Standards for Port State Measures. SWG PD began implementing the new CMS workplan and started by revising the implementation questionnaire, which was subsequently used for Members' 2025 submissions. SWG also advanced the draft ToR for SWGs for the TCC's consideration. In addition, SWG PD reviewed the SC's responses on scientific components of an NPFC ROP and the SC's input on the proposal from the EU for a CMM on Minimum Draft Standards for the Collection, Reporting, Verification, and Exchange of Data in NPFC.

4b. SWG Operations - Report and Recommendations

32. Ms. Patricia DeMille (Canada), Lead of the SWG on Operations (SWG Ops), presented a summary of the work conducted by SWG Ops in the 2025–2026 intersessional period (NPFC-2026-TCC09-IP04 (Rev.1)). SWG Ops held six meetings and prepared an amendment to CMM 2023-01 On Information Requirements for Vessel Registration to reflect accepted vessel marking practices. SWG Ops also worked with the Secretariat and a service provider to develop a reconfigured "MCS" page to replace the current HSBI page. SWG Ops advanced work on historical existing levels by holding further discussions and considered various approaches to identifying historical existing levels including: 1. using the maximum number of authorized vessels found between 2015 and the year members were to refrain from expansion for each individual species measure, 2. using one point from the year prior to CMM adoption, or 3. consider explicit recommendations from TCC08 that described the average number of vessels in various year ranges for relevant measures. With regard to the taskings related to serious violations, SWG Ops has firstly developed a voluntary Inspector's Guide to support inspectors during HSBI. Secondly, SWG Ops considered Article 17 Paragraph 4 and Member obligations where it has been established that a flag vessel has committed a serious violation, but no further progress was made.

33. The USA expressed some concerns with the voluntary inspectors guide and had questions about the intent of the document and alignment with the serious violations tasking, noting a lack of clarity regarding how it will continue to be updated and the need to ensure the potential for Members to adapt it does not lead to different interpretations.

34. The SWG Ops Lead also pointed out that meetings of SWG Ops invited participation from MCS practitioners so as to facilitate exchanges on shiprider, air surveillance and at sea patrols. She noted an online session to focus on practical issues with the online tools had been well received and expressed her intention to continue this practice going forward, noting that this would provide an opportunity to focus even more on technical considerations, including potential compliance or conservation issues that are not currently regulated by any NPFC measures.

35. The TCC held further discussions on historical existing levels under Agenda Item 8.

4c. Terms of Reference for the TCC SWGs

36. The TCC reviewed and revised the draft Terms of Reference (ToR) for the TCC SWGs prepared by SWG PD. The TCC endorsed the ToR for the TCC SWGs (Annex D).
Recommendation: That the Commission adopt the ToR for the TCC SWGs (Annex D).

Agenda Item 5. Conservation and Management Measures – Amendments or new CMMs

37. Canada presented its proposal for amendments to CMM 2024-02 To Establish a List of Vessels Presumed to Have Carried out Illegal, Unreported and Unregulated Fishing Activities in the Convention Area of the NPFC (NPFC-2026-TCC09-WP03). Canada explained that the proposed amendments are intended to clarify the timelines in paragraphs 5 and 6, as they could currently be interpreted to mean that vessels can only be proposed for listing on the NPFC IUU vessel list for violations that occurred in the previous year, which would severely limit and potentially prevent the ability to conduct post-inspection review of reporting requirements and ensure that all potential violations are considered by the TCC and the Commission.

38. Several Members acknowledged the potential need to investigate cases and propose IUU vessel listings based on activities that occurred further in the past than the current CMM allows, but they believed that five years would be too long a time period. One Member believed that the period should be the current year or previous calendar year in principle but that the period could be extended where relevant reporting information is only available after the submission of the annual reports of the Members and CNCPs. Some Members also noted that under a certain interpretation of the current CMM, there is a particular period of time in which, if a Member encountered a case of potential IUU fishing activity, it would not procedurally be

able to nominate the vessel for inclusion on the draft IUU vessel list.

39. The TCC reviewed and revised the proposal (NPFC-2026-TCC09-WP03 Rev.3).

40. The USA presented its proposal for amendments to CMM 2024-02 (NPFC-2026-TCC09-WP05). The USA explained that the proposed amendments are aimed at clarifying the implementation of certain provisions, strengthening the CMM's effectiveness as a tool to combat and deter IUU fishing in the Convention Area, and making other non-substantive edits.

41. Several Members did not support inclusion of the measure to remove fishing privileges for vessels tied to beneficial owners of vessels on the NPFC IUU Vessel List, pointing out the difficulty of defining "beneficial owners" and also disagreeing with the justification of punishing other vessels that had not engaged in IUU fishing activities. The USA recognized the difficulty of defining "beneficial owners" and explained that it had therefore sought to include such a stipulation in a flexible way that would allow Members to take such action, rather than mandating it. However, in the spirit of compromise and in the interest of reaching consensus on a strengthened CMM, the USA agreed to withdraw those proposed provisions.

42. Some Members were uncomfortable with the proposed addition of provisions on measures to be taken by Members and CNCPs towards vessels included on the IUU vessel lists of other regional fisheries management organizations (RFMOs) before the NPFC has established a cross-listing procedure.
Recommendation: That the Commission task the SWG PD to develop a proposal for a procedure for cross-listing vessels from the IUU vessel lists of other RFMOs and determining which RFMOs' IUU vessel lists should be considered.

43. During the TCC's review of the US proposal, the EU proposed the addition of text to paragraph 3c) specifying that non-recording or non-reporting of incidental catches of other NPFC species and any discards would constitute presumed IUU fishing activities. The EU explained that the addition was intended to specify obligations that are already set out in other CMMs. Some Members did not support the addition, pointing out that the NPFC has no clear guidelines on reporting of discards and that the current CMM text has been serving its purpose with regard to non-recording or non-reporting of incidental catches. The EU agreed to withdraw the proposed addition.

44. Noting that part of the US proposal (NPFC-2026-TCC09-WP05) sought to address the same issue as the Canadian proposal, Canada offered to withdraw its proposal once consensus was reached on paragraphs 5 and 6 of CMM 2024-02.

45. The TCC reviewed and revised the proposal (NPFC-2026-TCC09-WP05 Rev.2).
Recommendation: That the Commission adopt the proposed amendments to CMM 2024-02 (NPFC-2026-TCC09-WP05 Rev.2).

46. The USA and Korea presented a joint proposal for the establishment of a CMM on Scientific Research Activities (NPFC-2026-TCC09-WP04 Rev.1). They explained that the proposed CMM is aimed at considering scientific research activities separately from commercial fishing activities, clarifying related procedures around information sharing and the application of CMMs, and promoting scientific research in the Convention Area while ensuring such activities do not undermine the objectives of the Convention and CMMs.

47. Several Members expressed general support for the measure. Some Members noted the relatively novel nature of a CMM that seeks to distinguish between commercial fisheries vessels and fisheries research vessels and called for caution in developing such a measure. In particular, they cautioned against creating undue burdens that would disincentivize Members from conducting research. They also noted the potential wide-ranging impacts of such a CMM due to the broad range of species covered by the Convention. Another Member expressed concern that exemption for research vessels from most CMM obligations could introduce MCS-related loopholes.

48. Members held further productive discussions in the margins but was unable to reach a consensus. The United States and Korea expressed their intention to submit an updated proposal to the Commission.
Recommendation: That the Commission further consider the proposal for the establishment of a CMM on Scientific Research Activities, taking into account the discussions at TCC.

49. The EU presented a proposal for the establishment of a CMM On Minimum Standards for the Collection, Reporting, Verification, and Exchange of Data (NPFC-2026-TCC09-WP06). The EU explained that the proposed CMM is intended to establish a more efficient and consistent approach for the collection, reporting, verification and exchange of data in NPFC, with the aim of contributing to strengthening the capacity of the SC in fulfilling its tasks, including undertaking conclusive and robust assessments, and facilitating the monitoring and enforcement of CMMs.

50. Members recognized the importance of establishing a unified data collection system. However, several Members pointed out that the standards in the proposed measure were not feasible in light of operational realities and that the input their scientists provided to SWG Data and the SC had not been reflected.

51. The EU noted that SWG Data and SC input had been considered, and for the information, updated the proposal with background comments provided by Members to SWG Data and the SC and with recent comments from Members. The TCC reviewed the proposal and updated it further (NPFC-2026-TCC09-WP06 Rev.3). The TCC noted that several substantive issues remained unresolved despite productive discussions.
Recommendation: That the Commission further consider the proposal for the establishment of a CMM On Minimum Standards for the Collection, Reporting, Verification, and Exchange of Data (NPFC-2026-TCC09-WP06 Rev.3), taking into account the discussions at TCC.

52. The Lead of SWG Ops, Ms. DeMille, presented a proposed amendment to CMM 2023-01 On Information Requirements for Vessel Registration (NPFC-2026-TCC09-WP07), explaining that the amendment is intended to clarify that, under paragraph 4 of Annex 2, vessels are permitted to display both a name and other identification mark, rather than one or the other.

53. The TCC reviewed and endorsed the proposal.
Recommendation: That the Commission adopt the proposed amendment to CMM 2023-01

54. The Co-Lead of SWG PD, Ms. Lindstedt, presented a proposal to establish a CMM on Minimum Standards for Port State Measures (NPFC-2026-TCC09-WP08). She explained that a joint proposal by Canada, EU, and Korea to establish such a measure was discussed at COM09 and that the Commission had tasked the SWG PD to develop the proposal further. Some sections remained in square brackets because consensus had not yet been reached or because they depended on a decision about the technological solution that NPFC will use for collecting and managing the data requirements under this measure.

55. Regarding the scope and application of the measure, one Member expressed its strong preference for allowing carrier vessels with a regional observer on board for the full trip to be exempt from port inspections, pointing out the extra burden of requiring both 100% regional observer coverage and port inspections for those vessels, and the duplicative nature of the activities of the regional observers and the port inspections. Several Members disagreed with exempting such vessels from port inspections, pointing out such exemption is not in line with PSMA and the importance of the cross-verification mechanism provided by having both the transshipment observer program and port inspections, and the different and complementary functions served by each.

56. The TCC discussed the potential technological solutions for collecting and managing the data required under the proposed measure. Most Members expressed that an electronic Port State Measures (e-PSM) system adapted from, for example, the Indian Ocean Tuna Commission (IOTC) or the Pacific Islands Forum Fisheries Agency (FFA), for the NPFC would be the

preferred option. Several Members were of the view that all Members should use the same technological solution and should use an e-PSM adapted to the NPFC. One Member stated that it could accept other Members using the e-PSM but that it intends to use the Global Information Exchange System (GIES), that it is using GIES for other RFMOs, and that being required to use the e-PSM as well would be highly burdensome. The TCC noted that if some Members were to use one solution and other Members were to use another solution, it would be important to ensure that data could be transmitted bidirectionally between the two solutions. The Secretariat indicated that this would be complicated but could be feasible.

57. The TCC reviewed and revised the proposal (NPFC-2026-TCC09-WP08 Rev.2). The TCC noted that a number of substantive issues remained unresolved despite productive discussions. ***Recommendation:*** That the Commission further consider the proposal for the establishment of a CMM on Minimum Standards for Port State Measures (NPFC-2026-TCC09-WP08 Rev.2), taking into account the discussions at TCC.

58. TCC agreed that paragraph 23(g), which requires each Member and CNCP to "ensure that inspections are carried out thoroughly and in an expeditious manner, carried out in accordance with international law, and, to the extent possible, conducted within 72 hours of port entry, but not later than 5 working days," will be interpreted to mean that the time of port entry triggering the timeframe for conducting a port inspection is the time at which the vessel has berthed in port and is physically available for inspection.
Recommendation: That the Commission endorse the TCC's interpretation of paragraph 23(g) when considering the proposal to establish a CMM on Minimum Standards for Port State Measures.

Agenda Item 6. IUU Vessel List

6a. Recommendation for Provisional IUU Vessel List to the Commission

59. The Compliance Manager presented the draft IUU Vessel List (NPFC-2026-TCC09-WP01). The draft list contained five vessels nominated for inclusion on the Provisional IUU Vessel List, two nominated by Japan and three nominated by Canada.

60. Japan presented information on vessel No. 1, a Chinese vessel it nominated. The Japanese inspection vessel observed that the fishing vessel discarded what appeared to be incinerator ashes and plastic bags. Following bilateral communication with China, China sanctioned the vessel owner. Japan was therefore satisfied that China had taken effective action in response to the violation.

61. China added that it also imposed a fine on the vessel captain.

62. The TCC noted that China has taken effective measures by imposing sanctions of adequate severity on the vessel owner and vessel captain and agreed not to include vessel No. 1 on the Provisional IUU Vessel List.

63. Japan presented information on vessel No. 5, a Chinese vessel it nominated. Japan explained that the vessel recorded the mixture of Japanese sardine and chub mackerel under 40 grams as Japanese sardine in the logbook and transshipment records. The captain explained that even for a mixture that consists of mackerel (90%) and sardine (10%), he has recorded such a mixture as sardine. Japan considered this a case of serious misreporting as the vast majority of the mixture consisted of chub mackerel but was recorded as simply Japanese sardine. Furthermore, when the Japanese inspectors asked the captain to communicate with the fishing company and asked for the total catch amount of chub mackerel caught by the fishing vessel as of that date, the total amount reported did not include chub mackerel in the mixed fish bags. Since the total number of the mixed fish bags onboard was approximately 450, inspectors considered this as serious misreporting of the chub mackerel catch, which is subject to catch limit control. Japan expressed concern that there may be widespread underreporting of chub mackerel by Chinese fishing vessels.

64. China explained that its vessels can use either paper logbooks or e-logbooks, but their formats are slightly different. This is because China created a large volume of paper logbooks in 2024, prior to the establishment of an NPFC catch limit for chub mackerel. Part of the issue is also that there is no standard NPFC logbook. China's paper logbook does not include a column for recording mixed catches of chub mackerel and Japanese sardine, whereas the e-logbook does. In the e-logbook, vessels can record catches of a mixture of Japanese sardine and chub mackerel, and there is an additional column for recording the ratio of Japanese sardine to chub mackerel. In the paper logbook, the Chinese authorities have instructed vessels to record mixed catches of Japanese sardine and chub mackerel as Japanese sardine, regardless of which species constituted the majority of the catch, and to record the ratio of chub mackerel species in the "notes/remarks" column to synchronize the recording practice and avoid potential input error. The vessel in question reported the mixed catch of Japanese sardine and chub mackerel correctly in both logbook formats, so there was no misreporting of the catch. Chinese domestic regulations also require third-party verification of the catch harvested by purse seiners catching chub mackerel through the random sampling of 50 kg of each haul and determination of species composition and catch ratios, and this was done for the vessel. China did, however, find issues with the non-standardization of the vessel's fishing logbook and transshipment records and fined the vessel owner for it.

65. China and Japan informed the TCC that they had held constructive bilateral consultations regarding vessel No. 5. They explained that they had clarified some of the facts in the case,

identified some remaining problems, and noted the need for further discussions on how to prevent similar events occurring again in future. They informed the TCC that they planned to discuss this matter further at the Commission, including ways in which the implementation of the relevant measures could be improved.

66. The TCC agreed to include vessel No. 5 on the Provisional IUU Vessel List.

67. Canada presented information on vessel No. 2, a Russian vessel it nominated. Aerial surveillance indicated that the vessel's top or horizontal IRCS identifier was absent, that the side IRCS was believed to be too small to meet the size requirements, and that there were three alphanumeric identifiers instead of two.

68. Russia explained that it has sanctioned the vessel owner and the vessel has corrected its markings. It further explained that if a Russian vessel is undergoing repairs and does not include information that it will operate in the Convention Area, the vessel will be painted in a different way that is compliant with domestic legislation but not NPFC regulations. Russia also informed the TCC that it has issued instructions to the authorities that issue fishing permits to check vessels' markings before any fishing activity in the Convention Area.

69. The TCC noted that the vessel has corrected its vessel markings and that Russia has taken effective measures by imposing sanctions of adequate severity on the vessel owner and issuing instructions to prevent recurrence of such issues. The TCC agreed not to include vessel No. 2 on the Provisional IUU Vessel List.

70. Canada presented information on vessel No. 3, a Russian vessel it nominated. A HSBI event found several violations. These included catch of salmon on board, shark bycatch that was not recorded, a VMS transmitter that was not tamper-proof, and significant quantities of NPFC products that could not be inspected or identified by species because they had been rendered down into oil and fish meal. A review of catch records showed no bycatch was recorded and the weight of products was not that of the whole catch but the reduced liquefied weight. Canada was concerned that bycatch was not being correctly recorded and that catch documentation does not accurately reflect the catch weight of NPFC resources that are extracted from the Convention Area. Canada noted that the flag State did not respond to Canada's initial report but did submit a response to some of Canada's concerns once the vessel was added to the draft IUU vessel list.

71. Russia explained that it has thoroughly investigated all the alleged violations presented by Canada. Regarding the Canadian inspectors' indication that bycatch records were absent from the logbooks, Russia explained that it has recently introduced e-logbooks and it is continually

revising and enhancing these e-logbooks through the issuance of new versions. At the time the vessel was inspected in June 2025, it had been at sea since December 2024 and had therefore not been set up with a sufficiently enhanced e-logbook. Consequently, the vessel master could not provide e-logbook records of catch and bycatch. Nevertheless, all information on the catch was reported in daily paper logbooks, which are collected and analyzed by Russia's fisheries monitoring center. The translation of those logbooks has been provided to Canada and NPFC. The vessel has now also been set up with an e-logbook system that enables proper reporting of bycatch. Based on its investigation, which included close scrutiny of the vessel master, Russia believed that his failure to convey all the bycatch information to the Canadian inspectors was due to his lack of experience undergoing such an HSBI in the Convention Area. Following this incident, a meeting with the heads of the fishing companies operating in the Convention Area was held. Methodical regulations were also circulated to vessels about the correct recording of bycatch.

72. Regarding the alleged violation related to the VMS mobile transmitting unit (MTU), Russia explained that the switching off of MTUs is strictly prohibited and punishable under domestic law. It is considered one of the most serious fisheries violations and can result in the liquidation of the vessel owner's business. Russia investigated the alleged violation thoroughly and concluded that the MTU was fully compliant with the standards under Russian legislation. The investigation showed that all seals were intact and found no evidence that the MTU had been tampered with. The transmission of data was also uninterrupted. VMS data transmissions are constantly monitored and if there are any interruptions of data transmission, notification is immediately made to the monitoring authorities and this information is further transmitted to the Russian fishing ministry and coast guard authorities. Russia also pointed out that CMM 2024-12 does not contain detailed criteria for determining whether an MTU is tamper-proof.

73. Regarding the presence of salmon on board the vessel, Russia explained that based on its investigation, it found that some of these were salmon that the vessel crew had previously purchased at port for crew consumption. However, Russia also found that some pink salmon were caught in the Russian EEZ, these fell out of the net onboard, and some were taken by a crew member for personal use, in violation of the vessel rules and Russian legislation. The master of vessel, at the time of investigation, was unaware that that had occurred and naturally assumed these salmon were part of the supply purchased for crew consumption at port. The vessel owner was fined the maximum amount allowable under Russian legislation for this kind of violation. Further disciplinary measures were imposed on the vessel owner and the crew. Specifically, they have been required to culture salmon juveniles with a scientific facility for release into the wild.

74. Regarding the onboard processing of fish oil and fish meal, Russia clarified that the vessel specializes in production of such products from sardine. Russia explained there are rigorous domestic restrictions on the content of fish oil and that it could not reasonably be assumed that other species had been added to the mix. As for the fish meal, if there were any suspicion that other species had been mixed in, Russia would conduct a rigorous investigation, including genetic research, but this was not considered necessary in this case as there was no evidence of the mixing of species in production.

75. Based on the above explanations, Russia believed that it had implemented all necessary measures, as a flag Member, to mitigate the violation and prevent future violations. Furthermore, Russia noted that neither the vessel owner nor the vessel master was involved in the violations that took place and that all fines and compensatory measures have been executed by the vessel owner. Russia emphasized that there was therefore no reason to include vessel No. 3 on the Provisional IUU Vessel List.

76. Three Members were of the view that Russia had demonstrated effective action in response to all of the alleged IUU fishing activities, while three other Members held the opposite view. The TCC noted there was a lack of clarity in CMM 2024-02 on the procedure to be taken when there is such a lack of consensus. The TCC agreed, based on its reading of CMM 2024-02 and the Convention, and past practice, to include vessel No. 3 on the Provisional IUU Vessel List, while also noting that there were differing views among Members.
Recommendation: That the Commission provide guidance on the appropriate procedure to follow when there is a lack of consensus at the TCC on whether or not to include a vessel on the Provisional IUU Vessel List.

77. Canada presented information on vessel No. 4, a Russian vessel it nominated. Aerial surveillance identified a significant number of sharks onboard the vessel and verification of the 2025 annual report confirmed that the vessel failed to record this bycatch. Canada noted that in bilateral communication with Russia, Russia indicated that the sharks had been caught outside the Convention Area and towed into it. However, Canada's analysis of the vessel's AIS tracks and speed did not support that analysis.

78. Russia pointed out that the alleged incident occurred in 2024 and that it is clear, under paragraphs 5 and 6 of CMM 2024-02 To Establish A List Of Vessels Presumed To Have Carried Out Illegal, Unreported And Unregulated Fishing Activities In The Convention Area Of The North Pacific Fisheries Commission that only activities during the years from the previous meeting to the current year can be considered for listings on the NPFC IUU Vessel List. Russia stated that the alleged incident falls outside the scope of the CMM. Nevertheless, Russia conducted a thorough investigation, including analysis of trawl movements, and found

no fishing activity in the Convention Area. Russia indicated that based on the vessel's tracks and catch reports, the sharks had been caught outside the Convention Area in the Russian exclusive economic zone (EEZ) and towed into it. Furthermore, domestic regulation requires vessels to remove any gear from the water before entering the Convention Area and no fishing is allowed to be conducted when a vessel crosses from the Russian EEZ into the Convention Area. Russia therefore concluded that the sharks were caught in the Russian EEZ.

79. Several Members agreed with Russia that the activities in question fall outside the scope of CMM 2024-02 and that the vessel should not have been included on the draft IUU vessel list to begin with, although some of these Members understood the concerns raised by Canada.

80. Canada and the USA disagreed with these Members' interpretation of the scope of CMM 2024-02. They believed that paragraphs 5 and 6 are ambiguously phrased and that the intent of these paragraphs was not to exclude consideration of activities from before the period between one meeting and the next. Canada and the USA also pointed out that Canada had practical reasons for not immediately nominating the vessel and that the other Members' interpretation of the scope of CMM 2024-02 would create considerable practical issues going forward, including for example, difficulty nominating a vessel for the draft IUU vessel list for activities that occur shortly before a TCC meeting. They pointed out that if other Members insist on their current interpretation of CMM 2024-02, it would be essential to adopt a new measure that is clearer and provides a longer historical timeframe for considering potential IUU fishing activities.

81. Although Members did not have consensus on the interpretation of paragraphs 5 and 6 of CMM 2024-02, the TCC was satisfied with the effectiveness of the actions taken by Russia based on bilateral consultation between Canada and Russia in the margins and discussion in TCC. Therefore, the TCC agreed not to include vessel No. 4 on the Provisional IUU Vessel List.

82. ***Recommendation:*** That the Commission consider the Provisional NPFC IUU Vessel List, while noting that there was a lack of consensus on the inclusion of one of the two vessels on the Provisional NPFC IUU Vessel List.

6b. Recommendations for amendments to current NPFC IUU Vessel List to Commission

83. The Compliance Manager presented information concerning seven fishing vessels (Nos. 17–23) on the current NPFC IUU Vessel List (NPFC-2026-TCC09-IP08). These vessels had been added to the NPFC IUU Vessel List as unidentified IUU fishing vessels that had assumed the identities of legitimate vessels (LU RONG YUAN YU Nos. 101, 102, 103, 105, 106, 108, and 109). In 2025, the EU had noticed that the listings for these vessels contained a mix of photographs

of both the legitimate and illegitimate vessels. Subsequently, the EU had requested the Secretariat to seek clarification from China on these vessels and China had provided the additional documentation. Based on this, the TCC was requested to consider whether to amend the current NPFC List by removing the photographs of the legitimate, authorized Chinese vessels from the listings of those illegitimate vessels.

84. In response to questions for clarification, China provided additional explanations. China explained that it compared photos of the legitimate vessels in shipyards against the photos of the legitimate vessels and IUU vessels on the current NPFC IUU Vessel List to confirm which photos on the list were of the legitimate vessels. China also explained that the legitimate vessels have since changed their names, IMO certificates and International Radio Call Signs. In response to a request from one Member, China agreed to clarify the new MMSI numbers of the legitimate vessels.

85. The TCC agreed that there were photos of legitimate vessels mixed in with the photos of IUU vessels that had impersonated these vessels on the current NPFC IUU Vessel List and that the photos of the legitimate vessels should be removed.
Recommendation: That the Commission amend the current NPFC IUU Vessel List by removing the photographs of the legitimate, authorized Chinese vessels (LU RONG YUAN YU Nos. 101, 102, 103, 105, 106, 108 and 109) and task the Secretariat to amend any incorrect text descriptions on the current NPFC IUU Vessel List that were based on the photographs of the legitimate, authorized Chinese vessels.

Agenda Item 7. Compliance Monitoring Scheme

7a. Response to Chair's Letter on 2025 CMS

86. The TCC Chair introduced a Letter of Concern by the Commission Chair, Mr. Shingo Ota (Japan), to China, which was assessed as "non-compliant" at TCC08 (NPFC-2026-TCC09-IP09). The Letter of Concern was sent in accordance with paragraph 24 of CMM 2025-13 For the Compliance Monitoring Scheme and invited China to present to TCC09/COM10 an explanation of what measures it currently has in place to ensure that incidents such as those for which it was found "non-compliant" will not be repeated.

87. China explained the case of the *WanTong*, while emphasizing the unusual nature of the case. The vessel was flagged to Panama and Panama sanctioned the vessel for IUU fishing activities. It then de-listed the vessel and nominated it for inclusion on the NPFC IUU Vessel List. A new owner purchased the vessel and it was flagged to Comoros. However, Comoros did not wish to seek to get the vessel delisted from the NPFC IUU Vessel List. Ultimately, China engaged in negotiations with the vessel owner on settlement for scrapping and the vessel was scrapped at the end of 2024 in Bangladesh. China acknowledged that it had been non-

compliant because it did not fulfil its obligation to deter the vessel from entering Chinese ports nor deter Chinese vessels from conducting transshipments with the vessel. China explained that it has in place regulations to ensure that vessels on the IUU vessel lists of RFMOs for which China is a member are not allowed in Chinese ports and are not allowed to conduct transshipments with Chinese flagged vessels. China also expressed its commitment to ensure that such a situation does not occur again.

88. China submitted a letter in response to the Commission Chair's letter of concern during the meeting, while explaining that it had been unclear what, if any response, was required to the Chair's letter. China also provided English translations of its relevant domestic regulation.

89. The TCC noted that that there was a lack of clarity around the process, purpose, and expected response for Letters of Concern under CMM 2025-13 For the Compliance Monitoring Scheme and that it would be beneficial to have a clearer and more established process.
Recommendation: That the Commission endorse a process for the sending of Letters of Concern whereby Members are notified when a Letter of Concern is sent, the Letter states the expectation that the Member receiving the Letter is to provide a written response with the actions taken by the Member, and the Letter specifies a timeline for the Member's written response and actions.

90. China believed it would be important for this process to eventually be reflected in CMM 2025-13 so as to establish the requirement to provide a response to the Letter of Concern as a legal obligation that can be assessed as part of the CMS process.

7b. Draft Compliance Monitoring Reports for 2025 -presentation by Secretariat

91. The Compliance Manager presented the Draft Compliance Report, which contained data retrieved from various sources on compliance with the 85 obligations listed in Annex II of the Compliance Monitoring Scheme (CMM 2025-13). The sources included the implementation reports submitted by Members, annual reports, HSBI reports including aerial surveillance, and reviews of VMS and transshipment data.

92. The TCC reviewed each area of potential non-compliance highlighted by the Secretariat.

93. In its review of the Draft Compliance Report, the TCC noted that it was unable to assess any obligations related to historical existing levels as the NPFC has yet to agree on a method of identifying historical existing levels.

94. Regarding China's vessel marking issue (CMM 2024-01, paragraph 5), China believed that the vessel fully complied with the obligation as the measurement conducted immediately after

the HSBI activity confirmed that the markings do meet the 1 m requirement. Japan explained that its inspectors' measurements found the markings were smaller than 1 m, but the difference was marginal and Japan did not consider this to be a serious issue. Based on the information provided by China and Japan, the TCC determined this case to be "Compliant."

95. Regarding Russia's vessel marking issue, Russia noted that this case related to vessel No. 2 on the draft IUU vessel list, which was considered under agenda item 6. Russia reiterated that it has sanctioned the vessel owner, the vessel has corrected its markings, and that the issue occurred due to technical reasons relating to differences in Russian domestic legislation and NPFC regulations. Some Members pointed out that an assessment of a Member's compliance with an obligation under a NPFC CMM should be based not only on actions taken by the Member in response to a violation, but also how the Member is implementing the obligation through its domestic regulations. In response to the request from the TCC, Russia presented further information on its relevant domestic regulations. Based on the information provided by Russia, the TCC determined this case to be "Compliant."

96. Regarding Chinese Taipei's vessel marking issues (CMM 2024-01, paragraph 5), two vessels were identified through HSBI events. Chinese Taipei explained that the cases had been investigated and adequately resolved as the vessels were sanctioned with fines in accordance with its domestic law, including the Distant Water Fisheries Act. Based on the information provided by Chinese Taipei, the TCC determined this case to be "Compliant."

97. Regarding Vanuatu's vessel marking issue (CMM 2024-01, paragraph 5), Vanuatu provided a verbal explanation that upon receiving report of the issue from Japan, it conducted its own investigation and instructed the vessel owners to rectify the matter. Vanuatu explained that the vessel owners have rectified the issue and presented a photo of the updated markings. The TCC noted the explanation provided by Vanuatu but also noted that Vanuatu had not provided any written response to the Secretariat when it was notified of the potential non-compliance nor any subsequent written explanation about its response as a flag Member. Therefore, the TCC determined this case to be "Non-Compliant."

98. Regarding China's potential transshipment reporting non-compliance issue (CMM 2025-03, paragraph 9), the TCC noted that this case related to vessel No. 5 on the draft IUU vessel list, which was discussed under agenda item 6. The TCC noted the explanations provided by Japan, the nominating Member, and China, the flag Member, under agenda item 6. Given that the TCC agreed to include the vessel on the Provisional IUU Vessel List, the TCC determined this case to be "Non-Compliant."

99. Regarding Russia's potential non-compliance issue related to transshipment observer

obligations (CMM 2025-03, paragraphs 26, 29, 31, 34), Russia explained that in its view, the obligations related to the deployment of observers under CMM 2025-03 are only applicable to transshipments in the Convention Area. Russia further explained that it does not conduct any transshipments in the Convention Area, that it only conducts transshipments in its own EEZ, and that all such transshipments are subject to inspection by Russian domestic inspectors. Russia also pointed out that its inspectors conduct inspections that are of a stricter standard than the monitoring and reporting requirements of observers. Some Members disagreed with Russia's interpretation of the CMM and believed that the obligations applied to all transshipments of NPFC resources, regardless of if they take place in the Convention Area or in a Member's EEZ. Other Members considered there to be ambiguities in the applicability of paragraphs 26, 29, 31, and 34 of CMM 2025-03 and did not think they clearly applied to transshipments in Members' EEZs. Some Members also pointed out that having inspectors inspect all transshipment activities was not equivalent to ensuring onboard observers for all carrier vessels and that inspectors may not necessarily conduct the same duties as observers. Consensus could not be reached on Russia's compliance status on paragraphs 26, 29, and 31, of CMM 2025-03, with different Members suggesting statuses of "Compliant," "Non-Compliant," or "Unable to be Assessed at this time." Regarding paragraph 34 of CMM 2025-03, the TCC noted ambiguity in the drafting of the paragraph as it states, "An observer shall," which could be interpreted as meaning that the obligation is placed on the observer, rather than the Member or CNCP. The TCC therefore agreed on a compliance status of "Unable to be Assessed at this time."

100. Some Members reiterated their concerns about the interpretation that the observer deployment obligations under CMM 2025-03 apply also to Members' EEZs. They also emphasized that this would be particularly problematic when parts of CMM 2025-03 are superseded by CMM 2025-17 On Transshipment Observer Program, as the deployment of regional observers in Members' EEZs and ports would be legally challenging. Other Members expressed serious concern over those Members' views, pointing out that during the extensive discussions and negotiations held to draft CMM 2025-17, it was made clear and explicit that the scope of the measure covered both the Convention Area and EEZs, including Members' ports.

101. Regarding Russia's potential non-compliance issues related to HSBI (CMM 2024-09, paragraph 31), Russia explained that it was the first year that Russia conducted HSBI and there were some technical issues at the local level in terms of inspectors' understanding of the communication and reporting requirements. As a result, Russia submitted a number of HSBI reports later than the stipulated deadline. Russia is implementing internal measures to improve inspectors' understanding of the CMM and communication and reporting requirements. Russia expressed its commitment to make improvements and strive to comply with CMM 2024-09. Based on the information provided by Russia, the TCC determined the status of this

case to be “Delayed Submission.”

102. Regarding China’s potential non-compliance issues related to the reporting of catch, including incidental catch and discards, in its chub mackerel, sardine and squid fisheries (CMM 2025-07, paragraph 6 and CMM 2025-11, paragraph 6), the TCC noted that this related to incidents involving two vessels, one of which was vessel No. 5 on the draft IUU vessel list, which was discussed under agenda item 6. Regarding vessel No. 5, the TCC noted the explanations provided by Japan, the nominating Member, and China, the flag Member, under agenda item 6. Regarding the other vessel, China explained that it has imposed fines on the vessel owner and the vessel master, that it suspended the vessel from fishing for six months, and that the vessel did not leave port for 1 year as the fishing season had ended by the time the suspension period ended. The TCC was satisfied with China’s actions as the flag Member in response to this latter vessel. As for vessel No. 5, the TCC agreed to include the vessel on the Provisional IUU Vessel List, and it therefore determined this case to be “Non-Compliant.”

103. Regarding China’s potential non-compliance issues related to sharks (CMM 2023-14, paragraph 7) and anadromous fish (CMM 2024-16, paragraph 5), arising from violations by a Chinese vessel, China explained that it has sanctioned the vessel owner and the vessel master, that it suspended the vessel from fishing for six months, and that the vessel did not leave port for 1 year as the fishing season had ended by the time the suspension period ended. Based on the information provided by China, the TCC determined this case to be “Compliant.”

104. The TCC noted that several of Russia’s potential non-compliance issues related to vessel No. 3 on the draft IUU vessel list, which was discussed under agenda item 6. Specifically, these were issues related to reporting of transshipments of bycatch and unregulated species (CMM 2025-03, paragraph 9), chub mackerel (CMM 2025-07, paragraph 6), recording shark catch (CMM 2023-14, paragraph 9), and anadromous fish (CMM 2024-16, paragraphs 5 and 11). The TCC noted the explanations provided by Russia under agenda item 6. Consensus could not be reached on Russia’s compliance status for these issues. Some Members considered that Russia had taken effective action and suggested a status of “Compliant.” Other Members did not agree that they had enough information to support such a conclusion and suggested a status of “Non-Compliant.”

105. Regarding Russia’s potential non-compliance issues related to annual reporting of shark catches (CMM 2023-14, paragraph 10), Russia believed that paragraph 10 concerned the obligation of Russia to report shark catches to the Secretariat and was independent of the obligation in paragraph 9 to record shark catches. Russia explained that it had reported all relevant information that it had to Secretariat before the deadline and in accordance with the relevant requirements and Russia therefore considered itself to be compliant with this

provision. Some Members agreed with Russia's explanation and interpretation of paragraph 10. Other Members disagreed, pointing out that paragraphs 9 and 10 were interrelated, that HSBI events indicated that there were Russian vessels that could not correctly record shark bycatch, and that it was therefore also not possible for Russia to correctly report shark catches in its annual report. Consensus could not be reached on Russia's compliance status for this issue, with some Members suggesting a "Compliant" status and other Members suggesting a "Non-Compliant" status.

106. Regarding China's potential non-compliance issues related to marine pollution (CMM 2024-15, paragraph 7), the TCC noted that this related to vessel No. 1 on the draft IUU vessel list, which was discussed under agenda item 6. The TCC noted the explanations provided by Japan, the nominating Member, and China, the flag Member. The TCC agreed that China has taken effective measures in response to the violations by the vessel and determined this case to be "Compliant."

107. China expressed the view that inspector comments from the remarks section of HSBI reports should not be the basis for flagging cases of potential non-compliance.

108. The TCC thanked the Secretariat for making improvements to the Compliance Table in the CMR, including adding a column with responses from Members. The TCC requested that the Secretariat continue to improve the Compliance Table by providing more detailed descriptions of the cases of potential non-compliance, including the reasons that the Secretariat identified them as such.

7c. Develop Provisional Compliance Report- Annual determination of compliance status and potential responses for each obligation subject to assessment for each Member

109. Based on the above discussions, the TCC developed and adopted the Provisional Compliance Monitoring Report including the Executive Summary.
Recommendation: That the Commission consider the Provisional Compliance Monitoring Report adopted by the TCC, along with the attached Executive Summary.

7d. List of obligations for consideration for the Compliance Monitoring Scheme in 2026

110. As part of the development of the Provisional Compliance Monitoring Report and the Executive Summary, the TCC recommended the addition of a number of obligations for consideration for the Compliance Monitoring Scheme in 2026. Considering that some CMMs may become effective before others, the paragraph numbers and contents may change following decisions at the Commission meeting. The TCC agreed that the final review of obligations to be assessed under Annex 2 of the CMS CMM should occur at the Commission meeting.

Recommendation: That the Commission consider the TCC's list of obligations for consideration for the Compliance Monitoring Scheme in 2026 as described in the Executive Summary of the Provisional Compliance Monitoring Report.

Agenda Item 8. Historic Existing Level

111. The TCC considered the options prepared by SWG Ops in NPFC-2026-TCC09-IP04 Rev.1.

112. The TCC noted that the historical existing level for the Northwest bottom fishery is already set out in CMM 2025-05 as the level agreed in February 2007, and therefore focused its discussion on the remaining species under the purview of the NPFC.

113. Several Members expressed a preference for basing the historical existing level on the maximum authorizations in the relevant timeframe, rather than the average authorizations over that timeframe, to avoid disadvantaging Members for year-to-year anomalies.

114. Some Members expressed a preference for options D or E. One Member expressed its preference for C, while stating that it could accept option D for the sake of achieving consensus. Another Member believed that 1 or 3-year timeframes were too short.

115. The TCC could not reach consensus on defining historical existing levels and noted the need for further discussions at the Commission.
Recommendation: That the Commission note that the TCC was unable to reach consensus on defining historical existing levels and hold further discussions on this matter.

116. Canada and the United States expressed disappointment that the TCC could not make progress on the hard work of SWG Ops or provide further clarity. They emphasized the importance of defining historical existing levels for compliance assessments. They also suggested that if Members could not agree on how to define historical existing levels, they may need to consider establishing other effort controls based on the best available scientific information.

Agenda Item 9. Transshipment

9a. Secretariat Report on 2025 activity

117. The Compliance Manager presented the 2025 Transshipment Overview (NPFC-2026-TCC09-IP05). The number of transshipment events of fish products from the Convention Area in 2025 increased from 2024 with 2,477 reported in 2025 and 2,082 for the previous year. The volume of fish transshipped in 2025 (383,699 MT) also showed a corresponding increase over 2024 (306,503 MT). Although the overall catch in the Convention Area was down slightly in 2025, the percentage that was transshipped increased from 57.8% in 2024 to 72.7% in 2025, and the average amount of fish products transshipped per event increased from 147 MT in 2024 to

155 MT in 2025. In 2025, there were 389 more "Other Transfer Activities" (OTA) events (at 2,902) in the Convention Area than the previous year (2,513 in 2024). Fish transshipment and OTA events showed similar trends in both seasonal event counts and spatial distribution. There were 226 OTA events reported as Force Majeure activities in 2025. No potential non-compliance issues were reported in 100 random samples of observer reports, and with the implementation of the transshipment observer program in April, it is expected that enhanced analysis will be available for the 2026 season.

9b. TCC review of CMM 2025-3 (per paragraph 52)

118. The Chair noted that pursuant to paragraph 52 of CMM 2025-03 On Transshipments, the Commission will review the CMM regularly at the Annual Session, taking into account, *inter alia*, the latest advice from the TCC regarding the effectiveness of this measure in (i) providing the Commission with information about transshipments; and (ii) supporting effective MCS activities in line with the obligations of the Convention and CMMs.

119. ***Recommendation:*** That the Commission note that the TCC did not have any concerns or advice regarding the effectiveness of CMM 2025-03 On Transshipments in providing the Commission with information about transshipments and supporting effective MCS activities in line with the obligations of the Convention and CMMs.

120. The TCC held additional discussions regarding the implementation and applicability of CMM 2025-03 On Transshipments.

121. China explained that its vessels had faced difficulties with using the transshipment declaration in certain circumstances. Specifically, China explained that it has purse seiners that target both chub mackerel and Japanese sardine and they often catch a mix of both species and the two species are transshipped together in mixed bags. China noted that the transshipment declaration requires species-by-species reporting and was unsure how to record this in the case of the mixed bags, as it would be highly impractical to divide out the Japanese sardine and chub mackerel and weigh them separately. The TCC suggested that China could report the two species together using bags that have the mixed products in weight, but not in unit of number of bags, while providing the associated species codes and comments regarding the estimated proportion of each species once the online system enables such reporting. The Secretariat pointed out that it may be necessary to modify the transshipment API to enable such reporting but believed that such a modification would be feasible.

122. The TCC discussed the applicability of the provisions of CMM 2025-03 On Transshipments to Members' EEZs. Some Members were of the view that the CMM contained ambiguities in this regard, and considered that the reporting requirements under the CMM applied to both

the Convention Area and Members' EEZs, but that the observer deployment requirements only applied to the Convention Area. Other Members were of the view that the CMM did not contain ambiguities in its scope and that all provisions applied to both the Convention Area and Members' EEZs. The TCC noted that Members had different interpretations of the applicability of some of the provisions of CMM 2025-03 On Transshipments to Members' EEZs.

Agenda Item 10. Vessel Monitoring System

10a. Secretariat report on implementation

123. The Compliance Assistant, Mr. Jumpei Hinata, presented the 2025 VMS Overview (NPFC-2026-TCC09-IP06 Rev.2). Over the past four years, the NPFC VMS has progressed into a robust and reliable tool for tracking activities in the Convention Area. Cooperation from Members has been vital in addressing both anticipated and unexpected challenges, resulting in prompt resolutions to most issues. Notably, there have been an estimated 122 cases of data interruptions exceeding 4 hours across all Members, and the use of manual reporting continually helps to bridge data gaps. These developments, coupled with refinements in vessel entry/exit detection, are expected to significantly reduce the number of data interruptions in 2026. The Secretariat will continue to enhance vessel identification procedures and strengthen data security measures. Emphasizing globally recognized identifiers, timely updates to the vessel registry, and efficient communication channels will preserve the momentum built thus far.

124. The TCC noted that in previous years, the Secretariat has included an analysis comparing the actual time and location of transshipment events compared to the time and location listed in the advance notifications of said transshipments. The TCC requested that the Secretariat continue to include such analyses in future reports.

125. The Compliance Manager explained that the Secretariat intends to continue to do such analyses going forward and that this year's analysis is still ongoing as the Secretariat had been occupied with dealing with data backlogs and preparing for the transition to fully electronic transshipment reporting.

126. The TCC considered the Secretariat's suggestion that the North Atlantic Format (NAF) be annexed to CMM 2025-12 On the VMS and that the existing NAF format be updated to make the IMO number a mandatory field. Some Members noted that IMO number is the most reliable unique vessel identifier available and is effective for MCS purposes, particularly in identifying IUU fishing vessels assuming the identities of legitimate vessels. No Members opposed the suggested changes, but some expressed the need to hold further intersessional discussions on the mandatory reporting of IMO numbers, including practical aspects and the

added burden on vessel owners.

Recommendation: That the Commission task SWG Ops to hold intersessional discussions on the potential inclusion of the North Atlantic Format (NAF) as an annex to CMM 2025-12 On The VMS and the updating of the existing NAF format to make the IMO number a mandatory field.

Agenda Item 11. High Seas Boarding and Inspection

11a. Secretariat Report

127. The Compliance Assistant presented the HSBI summary for 2025 (NPFC-2026-TCC09-IP07). In 2025, five Members deployed nine patrol vessels, inspecting almost 11% of the active fishing vessels in the Convention Area. Over the May–October period, 66 inspections were carried out, with "no violations" detected in 56 (85%) of these. Of the remaining 10 events (identifying 21 violations), one of these events identified two "serious violations" involving misreporting and obstruction. As in previous years, most of the "violations" identified related to potential vessel registry offences. However, other areas of potential non-compliance were identified, including misreporting, retaining salmon, marine pollution and obstruction. While the number of "serious violations" rose in 2025, the overall number of inspections with "no violations" identified continued a three-year upward trend.

128. The TCC noted that the Secretariat has proposed updates to the Annual Report template for 2027 to improve data collection that may include possibly requesting additional HSBI and patrol-related details. The TCC was generally supportive of the suggested updates, while recognizing the concerns expressed by one Member about sharing sensitive information, such as entry and exit dates and other detailed information about patrol activities, that could potentially compromise the effectiveness of patrols.

11b. Member Reports

129. Noting that more information on HSBI is provided in Members' Annual Reports and the SWG Ops Annual Summary for 2025–2026, Canada and the USA presented brief reports of their HSBI activities for 2025.

Agenda Item 12. Review of Applications for CNCP Status

130. The TCC noted that no applications for CNCP status have been received.

Agenda Item 13. Climate Change

131. The TCC noted that climate change is a standing agenda item but that there have been no papers submitted to the TCC on this agenda item and discussions on it at recent meetings. The TCC noted that it was unclear what the TCC should discuss in relation to climate or whether it should continue to be a standing agenda item. The TCC noted that it would be useful if the

Secretariat could prepare a summary paper of climate change-related information of relevance to the TCC.

Recommendation: That the Commission provide further guidance on whether or not climate change should continue to be a standing agenda item for the TCC and, if so, to provide further guidance on the intended purpose of this agenda item and to task the Secretariat to prepare a paper that compiles climate change-related discussions and developments from the Commission and its subsidiary bodies, with a particular focus on compliance and technical considerations, of relevance to the TCC for discussion at TCC10.

Agenda Item 14. Cooperation with Other Organizations

132. The Executive Secretary explained that NPFC and the Inter-American Tropical Tuna Commission (IATTC) are developing a Memorandum of Understanding and that the latest draft text, which is scheduled to be discussed at COM10, will have relevance to the TCC's discussions on e-monitoring.

14a. MoU with SPRFMO

133. The Executive Secretary explained that there was no information regarding the MoU with South Pacific Regional Fisheries Management Organisation (SPRFMO) that was relevant to the TCC.

14b. MoU with WCPFC

134. The Executive Secretary explained that there was no information regarding the MoU with Western and Central Pacific Fisheries Commission (WCPFC) that was relevant to the TCC.

14c. NPFC-NPAFC Work Plan

135. The Executive Secretary explained that the NPFC and the North Pacific Anadromous Fish Commission (NPAFC) have continued to cooperate closely. He highlighted the holding of two NPAFC workshops alongside its annual meeting in May, which are both related to the NPAFC and the NPFC's shared ecosystem, plans to update the work plan for the implementation of the NPFC-NPAFC Work Plan, and a recent focus on the exchange of data and information between the two organizations, including through a joint NPAFC/NPFC SharePoint.

136. The NPAFC Executive Director, Mr. Yoshikiyo Kondo, provided an update on cooperation with NPFC (NPFC-2026-TCC09-OP02 Rev.1). Many items in the five-year NPFC-NPAFC Work Plan are completed or ongoing. Key remaining items are the exchange of data and information between the two organizations through a data sharing platform and the voluntary sharing of Pacific salmon bycatch data from NPFC fishing vessels. Progress is being made and expected on these tasks. NPAFC has also updated its IUU vessel list and will discuss it further at its annual meeting in May. When adopted, the list will be linked to from the NPFC

website. One of the workshops to be held alongside the annual meeting will be on Interactions Between Fisheries and Anadromous Fish in the North Pacific High Seas and is expected to produce recommendations about cooperation between NPAFC and NPFC and the five-year Work Plan. NPAFC remains committed to continuing its close cooperation with NPFC, which is essential to the NPAFC's efforts to fulfil its purpose.

14d. IMCS Network

137. The Executive Secretary reminded the TCC that the NPFC joined the International Monitoring, Control, and Surveillance (IMCS) Network in 2023. He informed the TCC that the NPFC hosted a Tuna Compliance Network and Pan Pacific Fisheries Compliance Network (TCN/PPFCN) meeting at the NPFC office in Tokyo in June 2025. He also explained that the IMCS Network will host Global Fisheries Enforcement Workshop (GFETW) 8 in March 2027 and that it is planned for the new Compliance Manager to attend, pending approval of the Secretariat Workplan by the Commission.

Agenda Item 15. Performance Review- Recommendations relevant to TCC

138. The Executive Secretary presented an update (NPFC-2026-COM10-IP02) on the status of the Performance Review Recommendations relevant to the TCC.

139. The TCC noted the ongoing work to address the recommendations from the Performance Review Panel and the progress made in the intersessional period.

Recommendation: That the Commission task the TCC to continue to review and provide updated input on the Performance Review Panel Recommendations through the intersessional process initiated in 2025–2026.

Recommendation: That the Commission task SWG Ops to work intersessionally with the Secretariat to address the issues with the vessel registry and thereby address Performance Review Panel Recommendation 5.3.1.

Agenda Item 16. Other Matters

140. The TCC noted that one SWG Ops Co-Lead position is vacant. There were no nominations to fill the vacancy.

141. The TCC thanked the outgoing Compliance Manager and acknowledged the work that she has done for the NPFC.

Agenda Item 17. Review and Endorsement of TCC Work Plan for 2026/2027

142. The TCC reviewed the TCC/SWG Work Plan for 2026/2027 (NPFC-2026-TCC09-WP10 (Rev.1)) against the progress made to date and in consideration of new items of work arising from TCC09.

Recommendation: That the Commission revise the draft Work Plan developed by the TCC, including work completed, and consider further revisions, then task TCC and relevant SWGs with the activities in the revised Work Plan

Agenda Item 18. Recommendations to the Commission

143. The TCC recommended the following to the Commission:

(Agenda Item 3)

(a) That the Commission task TCC to work intersessionally through the SWG on Planning and Development (SWG PD) to develop a paper on TCC-related components of an NPFC ROP and submit the paper to TCC10. In developing the paper, the SWG PD should review other data collection methods, including current data collection methods such as Members' domestic observer programs and port sampling programs, as well as possibilities for the use of e-monitoring.

(Agenda Item 4)

(b) That the Commission adopt the ToR for the TCC SWGs

(Agenda Item 5)

(c) That the Commission task the SWG PD to develop a proposal for a procedure for cross-listing vessels from the IUU vessel lists of other RFMOs and determining which RFMOs' IUU vessel lists should be considered.

(d) That the Commission adopt the proposed amendments to CMM 2024-02 (NPFC-2026-TCC09-WP05 Rev.2).

(e) That the Commission further consider the proposal for the establishment of a CMM on Scientific Research Activities, taking into account the discussions at TCC (NPFC-2026-TCC09-WP04).

(f) That the Commission further consider the proposal for the establishment of a CMM On Minimum Standards for the Collection, Reporting, Verification, and Exchange of Data (NPFC-2026-TCC09-WP06 Rev.3), taking into account the discussions at TCC.

(g) That the Commission adopt the proposed amendment to CMM 2023-01

(h) That the Commission further consider the proposal for the establishment of a CMM on Minimum Standards for Port State Measures (NPFC-2026-TCC09-WP08 Rev.2), taking into account the discussions at TCC.

(i) That the Commission endorse the TCC's interpretation of paragraph 23(g) when considering the proposal to establish a CMM on Minimum Standards for Port State Measures.

(Agenda Item 6)

(j) That the Commission provide guidance on the appropriate procedure to follow when there is a lack of consensus at the TCC on whether or not to include a vessel on the Provisional IUU Vessel List.

(k) That the Commission consider the Provisional NPFC IUU Vessel List while noting that

there was a lack of consensus on the inclusion of one of the two vessels on the Provisional NPFC IUU Vessel List.

(l) That the Commission amend the current NPFC IUU Vessel List by removing the photographs of the legitimate, authorized Chinese vessels (LU RONG YUAN YU Nos. 101, 102, 103, 105, 106, 108 and 109) and task the Secretariat to amend any incorrect text descriptions on the current NPFC IUU Vessel List that were based on the photographs of the legitimate, authorized Chinese vessels.

(Agenda Item 7)

(m) That the Commission endorse a process for the sending of Letters of Concern whereby Members are notified when a Letter of Concern is sent, the Letter states the expectation that the Member receiving the Letter is to provide a written response with the actions taken by the Member, and the Letter specifies a timeline for the Member's written response and actions.

(n) That the Commission consider the Provisional Compliance Monitoring Report adopted by the TCC, along with the attached Executive Summary.

(o) That the Commission consider the TCC's list of obligations for consideration for the Compliance Monitoring Scheme in 2026 as described in the Executive Summary of the Provisional Compliance Monitoring Report.

(Agenda Item 8)

(p) That the Commission note that the TCC was unable to reach consensus on defining historical existing levels and hold further discussions on this matter.

(Agenda Item 9)

(q) That the Commission note that the TCC did not have any concerns or advice regarding the effectiveness of CMM 2025-03 On Transshipments in providing the Commission with information about transshipments and supporting effective MCS activities in line with the obligations of the Convention and CMMs.

(Agenda Item 10)

(r) That the Commission task SWG Ops to hold intersessional discussions on the potential inclusion of the North Atlantic Format (NAF) as an annex to CMM 2025-12 On The VMS and the updating of the existing NAF format to make the IMO number a mandatory field.

(Agenda Item 13)

(s) That the Commission provide further guidance on whether or not climate change should continue to be a standing agenda item for the TCC and, if so, to provide further guidance on the intended purpose of this agenda item and to task the Secretariat to prepare a paper that compiles climate change-related discussions and developments from the Commission and its subsidiary bodies, with a particular focus on compliance and technical considerations, of relevance to the TCC for discussion at TCC10.

(Agenda Item 15)

(t) That the Commission task the TCC to continue to review and provide updated input on

the Performance Review Panel Recommendations through the intersessional process initiated in 2025–2026.

(u) That the Commission task SWG Ops to work intersessionally with the Secretariat to address the issues with the vessel registry and thereby address Performance Review Panel Recommendation 5.3.1.

(Agenda Item 17)

(v) That the Commission revise the draft Work Plan developed by the TCC, including work completed, and consider further revisions, then task TCC and relevant SWGs with the activities in the revised Work Plan

Agenda Item 19. Next Meeting

144. ***Recommendation:*** That the Commission hold the next TCC meeting in conjunction with the next Commission meeting.

Agenda Item 20. Adoption of the Report

145. The report was adopted by consensus.

Agenda Item 21. Close of the Meeting

146. The meeting closed at 21:35 on 11 April 2026, Osaka time.

List of Annexes to TCC09 Report

Annex A	Agenda
Annex B	List of Documents
Annex C	List of Participants
Annex D	TCC SWG Terms of Reference

North Pacific Fisheries Commission
9th Technical and Compliance Committee Meeting
8-11 April 2026
Osaka, Japan (hybrid)

Agenda

1. Opening of the Meeting
    a. Welcome to Participants
    b. Appointment of Rapporteur
    c. Introduction of Observers
    d. Adoption of Agenda
    e. Meeting Arrangements
2. Report from Secretariat
    a. Fisheries Overview 2025
    b. Data Management System Update and Initiatives for 2026
3. Review of MCS related issues from SC
    a. TCC review of SC responses on data needs for an NPFC ROP
4. SWG Reports on Progress, Priorities and Recommendations
    a. SWG Planning and Development - Report and Recommendations
    b. SWG Operations - Report and Recommendations
    c. Terms of Reference for the TCC SWGs
5. Conservation and Management Measures – Amendments or new CMMs
6. IUU Vessel List
    a. Recommendation for Provisional IUU Vessel List to the Commission
    b. Recommendations for amendments to current NPFC IUU Vessel List to Commission

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7. Compliance Monitoring Scheme
    a. Response to Chair's Letter on 2025 CMS
    b. Draft Compliance Monitoring Reports for 2025 -presentation by Secretariat
    c. Develop Provisional Compliance Report- Annual determination of compliance status and potential responses for each obligation subject to assessment for each Member
    d. List of obligations for consideration for the Compliance Monitoring Scheme in 2026
8. Historic Existing Level
9. Transshipment
    a. Secretariat Report on 2025 activity
    b. TCC review of CMM 2025-3 (per paragraph 52)
10. Vessel Monitoring System
    a. Secretariat report on implementation
11. High Seas Boarding and Inspection
    a. Secretariat Report
    b. Member Reports
12. Review of Applications for CNCP Status
13. Climate Change
14. Cooperation with Other Organizations
    a. MoU with SPRFMO
    b. MoU with WCPFC
    c. NPFC-NPAFC Work Plan
    d. IMCS Network
15. Performance Review- Recommendations relevant to TCC
16. Other Matters
17. Review and Endorsement of TCC Work Plan for 2026/2027
18. Recommendations to the Commission
19. Next Meeting
20. Adoption of the Report
21. Close of the Meeting

LIST OF DOCUMENTS

MEETING INFORMATION PAPERS

Number	Title
NPFC-2026-COM10/TCC09/FAC08-MIP01	Meeting Information
NPFC-2026-TCC09-MIP02	Provisional Agenda
NPFC-2026-TCC09-MIP03	Annotated Indicative Provisional Agenda

WORKING PAPERS

Number	Title
NPFC-2026-TCC09-WP01	NPFC 2026 DRAFT IUU VESSEL LIST
NPFC-2026-TCC09-WP02	Current NPFC IUU List (See NPFC Circular #22/2026)
NPFC-2026-TCC09-WP03 Rev.3	Proposal to Amend the Conservation and Management Measure To Establish A List of Vessels Presumed to have Carried Out Illegal, Unreported and Unregulated Fishing Activities in the Convention Area of the North Pacific Fisheries Commission
NPFC-2026-TCC09-WP04 Rev.1	Proposal for a new CMM on Scientific Research Activities
NPFC-2026-TCC09-WP05 Rev.1	Proposal for revisions to CMM 2024-02 for IUU
NPFC-2026-TCC09-WP06 Rev.2	Proposal for a new Conservation and Management Measure for minimum standards for the collection, reporting, verification and exchange of data in NPFC
NPFC-2026-TCC09-WP07	Amendment To CMM 2023-01 On Information Requirements for Vessel Registration
NPFC-2026-TCC09-WP08 Rev.2	Proposal to establish a CMM on Minimum Standards for Port State Measures
NPFC-2026-TCC09-WP09 Rev.1	NPFC Technical and Compliance Committee (TCC) Small Working Group (SWG) Terms of Reference
NPFC-2026-TCC09-WP10 Rev.2	TCC WORK PLAN 2026-2027 (including SWG OPs and PD)

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INFORMATION PAPERS

Number	Title
NPFC-2026-TCC09-IP01	NPFC 2025 Fisheries Overview
NPFC-2026-TCC09-IP02	NPFC Data Management System Update: Progress, Operational Guidelines and Initiatives
NPFC-2026-TCC09-IP03	Review of MCS related issues from SC
NPFC-2026-TCC09-IP04 Rev.1	Small Working Group on Operations Summary Report For 2025-2026 Period
NPFC-2026-TCC-IP05	NPFC 2025 Transshipment Overview
NPFC-2026-TCC09-IP06 Rev.2	NPFC 2025 Vessel Monitoring System Overview
NPFC-2026-TCC09-IP07	NPFC 2025 High Seas Boarding and Inspection Overview
NPFC-2026-TCC09-IP08	Information regarding Seven Vessels on the NPFC IUU Vessel List
NPFC-2026-TCC09-IP09	Chair's Letter of Concern to China
NPFC-2026-TCC09-IP10	List of Obligations in Annex 2 of CMM 2025-13
NPFC-2026-TCC09-IP11	SWG Ops Historic Existing Level
NPFC-2026-TCC09-IP11 Supp Doc	SWG Ops Historic Existing Level (Attachment)
NPFC-2026-TCC09-IP12	Implementation Questionnaires – Member Responses
NPFC-2026-TCC09-IP12 Rev.1	Implementation Questionnaires – Member Responses

OBSERVER PAPERS

Number	Title
NPFC-2026-TCC09-OP02 Rev.1	NPAFC Update

REPORTS

Number	Title
NPFC-2026-TCC09-Draft Report	TCC09 Draft Final Report
NPFC-2026-TCC09-Draft CR Rev.2	NPFC 2025 Draft CR
NPFC-2026-TCC09-Draft CR PDF&EXCEL Rev.1	NPFC 2026 Draft Compliance Report
NPFC-2026-TCC09-Draft CR Supp Doc.1 Rev.1	Supplementary information from China: Notification on the Handling of the Alleged Violations

NPFC-2026-TCC09-Draft CR Supp Doc.2	Official Letter from China: Update on Penalty Decisions for 3 Chinese Vessels
NPFC-2026-TCC09-Draft CR Supp Doc.3	Reply to the Letter of Concern
NPFC-2026-TCC09-Draft CR Supp Doc.4	Relevant Provisions in the Administrative Regulation on Distant Water Fisheries
NPFC-2026-TCC09-Draft CR Supp Doc.5 Rev.1	CMS CMM CMR Executive Summary
NPFC-2026-TCC09-Draft CR Supp Doc.6	Photo From Vanuatu

REFERENCES

Number	Title
NPFC-2026-COM10-IP09	NPFC 2022 Performance Review update

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NPFC Technical and Compliance Committee (TCC)
Small Working Group (SWG) Terms of Reference
April 2026

Context:
Since TCC04, TCC has advanced intersessional priorities through two SWGs: SWG Operations and SWG Planning and Development. Draft Terms of Reference (TORs) were created, but never finalized, for these groups.
This document lays out the TOR for the SWGs, and should be read in conjunction with the TCC Terms of Reference, Article 6 of the Convention, and the NPFC Rules of Transparency for TCC. Specific taskings for these two SWGs are updated annually in the TCC work plan.

Purpose:
The purpose of SWG Operations is to advise TCC and to exchange information to support the effective implementation of and compliance with existing NPFC obligations, including enforcement and monitoring, control, and surveillance (MCS) tools.

The purpose of SWG Planning and Development is to develop draft procedures, measures, and/or other documents identified by the Commission and tasked to TCC, and to provide advice to TCC on such drafts. SWG Planning and Development may also consider and/or propose other appropriate measures and approaches to implement Commission priorities or obligations for consideration by TCC, if Members agree.

Functions:
The overall functions of the SWGs are to support TCC in the implementation of its work plan, as determined by the Commission, by:

a) Providing a technical forum for the exchange of information and expertise on agreed work plan objectives and related deliverables;
b) Providing a forum for advancing TCC-related proposals and other priorities intersessionally (including, where appropriate, Member proposals for new measures or amendments to existing measures prior to submission to the TCC for consideration), and to monitor and assess progress on work plan items; and,
c) Reporting to TCC on the status of work plan deliverables, including advising on any potential recommendations to the Commission on matters related to the scale, scope, timing and budgetary implications associated with advancing related work plan items.

Responsibilities:

SWG Operations

1. Assess and provide recommendations regarding the effectiveness of MCS and/or compliance tools and measures adopted by the Commission, including but not limited to High Seas Boarding and Inspection, Vessel Monitoring System, transshipment, the Vessel Registry, and observer programs.

2. Where applicable, develop and support the development of Standard Operating Procedures for inspection reporting requirements and operational training programmes for MCS and/or compliance tools;
3. Share and coordinate information related to enforcement operations among Members, including on patrols and MCS; and,
4. Provide recommendations to TCC on the need to develop or enhance MCS and/or compliance tools, enforcement processes, and operations to support compliance consistent with the TCC work plan.

SWG Planning and Development

1. Provide recommendations to the TCC on the development or amendment of procedures, guidance, measures, and/or other tools to support effective management and MCS in the Convention Area, as well as to support the monitoring of compliance with NPFC obligations adopted by the Commission, as identified by the Commission and tasked to TCC; and,
2. Provide recommendations to TCC on the need to develop new, or enhance existing, guidelines, measures, and/or tools consistent with the TCC work plan.

Structure:

Membership in each of the SWGs shall consist of representatives of Commission Members and CNCPs. Accredited observers may also participate in SWGs consistent with Rule 9 of the Rules of Procedure and the NPFC's Rules of Transparency for TCC. Members and CNCPs may, in consultation with the Secretariat, invite participation by additional outside technical experts or consultants to participate in meetings of the SWGs if their participation would contribute to the work of the SWGs.

Representation and official contacts in each SWG shall be consistent with Rule 1 in the Commission's Rules of Procedure.

Each SWG will be managed by two Co-Leads, with the work supported and facilitated by the Compliance Manager. The Co-Leads will be responsible for developing meeting agendas, chairing meetings, and liaising with the TCC Chair where required. Co-Leads shall be nominated by the Member's Head of Delegation. The Commission shall appoint Co-Lead positions by consensus in accordance with the decision-making rules within the NPFC Rules of Procedure of the Commission, considering any relevant recommendations from the SWGs and TCC. If one or both Co-Lead positions become vacant during the intersessional period, the SWG shall designate in a timely manner, by consensus, interim Co-Lead(s) to guide the SWG's work until the next Commission meeting. If both SWG Co-Lead positions become vacant during the intersessional period, the Secretariat shall facilitate nominations for interim Co-Leads with SWG Members. Terms for each Co-Lead position are set for 2-year periods, with the option to renew.

The SWG Co-Leads' roles and responsibilities include:

- Developing the meeting agenda in consultation with Members, CNCPs and the Compliance Manager;

- Leading SWG meetings;
- Finalizing meetings summaries, in coordination with the Compliance Manager;
- Fostering constructive and active dialogue at SWG meetings;
- Providing strategic oversight to the SWG while fostering a consensus-based approach to the design and development of TCC work plan deliverables;
- Coordinating the development of specific deliverables identified in the TCC work plan and regularly reporting on their status to the TCC Chair; and,
- Liaising with the TCC Chair as appropriate.

The Compliance Manager's roles and responsibilities include:

- Coordinating SWG meeting schedules;
- Scheduling and making arrangements for SWG meetings and participating in their proceedings;
- Compiling Member input into the draft meeting agenda;
- Supporting the preparation of meeting documents with the SWG Co-Leads;
- Providing a rapporteur function at meetings and drafting the meeting summaries in coordination with the Co-Leads;
- Providing technical advice, where appropriate, on compliance matters specific to SWG deliverables;
- Monitoring and documenting the status of all SWG deliverables;
- Maintaining version control on SWG documents and deliverables unless the SWG directs otherwise;
- Ensuring information is shared between the SWGs to support integrated planning and achievement of overall TCC work plan objectives;
- Liaising with the TCC Chair, as appropriate;
- Liaising and sharing information with relevant NPFC working bodies; and,
- Tracking the terms of the Co-Leads.

SWG Member roles and responsibilities include:

- Preparing for and participating in the meetings of the SWG;
- Taking on projects to support Member-led initiatives and/or TCC assigned tasks;
- Providing input into the content, design, and preparations of SWG work plan deliverables;
- Liaising, as appropriate, with other SWGs and NPFC working/corresponding groups in support of implementing the TCC work plan, and;
- Designating interim Co-Leads, as necessary.

Meetings

SWGs shall meet online as determined by the SWG Co-Leads after consultations with Members and CNCPs, in conjunction with the TCC Chair, and meetings shall be facilitated by the Secretariat. In the interest of accommodating participation in different time zones, SWG meetings should be held at a consistent time agreed upon by the SWG.

Communications

SWGs will use the NPFC Collaboration Site as their primary platform for communications and information sharing. Email may also be used as appropriate to support timely updates, reminders,

or other relevant correspondence. Some SWG work may be completed electronically between SWG meetings to make the most efficient use of SWG meeting time.

Recommendations

Recommendations of the SWGs to TCC shall be adopted by consensus. Where consensus is not possible at the SWG, differences in opinion shall be reported to TCC.

Language

In accordance with Rule 7 in the Rules of Procedure, English shall be the working language of the SWGs. Any other language may be used on condition that persons doing so provide English interpreters.

Records and Reports

After each SWG meeting, the Compliance Manager shall draft a concise meeting summary, in consultation with the Co-Leads. This summary should include information on the status of work plan items, including any considerations that could impact the scale, scope, timing, or budgetary implications of related deliverables. Where appropriate, advice and recommendations from the SWG Members, Secretariat staff, and other experts should be included in the summaries.

Meeting summaries shall be posted to the Collaboration Site promptly following the SWG meeting. Members may request changes to the meetings summaries, in which case the Compliance Manager, in consultation with the SWG Co-Leads, shall revise the meetings summary accordingly and post a revised version to the Collaboration site. The Compliance Manager shall also send the final meeting summaries to authorized observers.

North Pacific Fisheries Commission

CMM 2026-13

(Entered into force 23 July 2026)

CONSERVATION AND MANAGEMENT MEASURE FOR THE COMPLIANCE MONITORING SCHEME

The North Pacific Fisheries Commission (NPFC),

Acknowledging the importance of compliance by Members and Cooperating Non-Contracting Parties to achieve the objective of the Convention as defined in Article 2;

Recognizing that Article 7 of the Convention directs the Commission to establish procedures for reviewing compliance with the Convention and measures adopted pursuant to the Convention;

Recalling that the Commission has adopted a wide range of conservation and management measures to give effect to the objective of the Convention;

Noting that, in accordance with Article 17 of the Convention, Members of the Commission are required to enforce the provisions of the Convention and any conservation and management measures adopted by the Commission;

Noting also that, in accordance with international law, Members and Cooperating Non-Contracting Parties have responsibilities to effectively exercise jurisdiction and control over their flagged vessels and with respect to their nationals;

Acknowledging that Article 13 of the Convention obliges Members of the Commission to take the necessary measures to ensure that fishing vessels flying their flag comply with the provisions of the Convention and the conservation and management measures adopted pursuant thereto;

Recognizing the responsibility of Members and Cooperating Non-Contracting Parties to fully and effectively implement the provisions of the Convention and the conservation and management measures adopted by the Commission, and the need to improve such implementation and ensure compliance with these commitments;

Noting that, in a responsible, open, transparent and non-discriminatory manner, the Commission should be made aware of all available information that may be relevant to the work of the Commission in identifying and addressing instances of non-compliance with conservation measures;

Also recognizing the importance of having a shared understanding of what is required to comply with an obligation thereby ensuring clear and consistent assessment of the compliance of Members and Cooperating Non-Contracting Parties with all relevant obligations

Adopts the following conservation and management measure in accordance with Article 7 of the Convention:

I. Purpose

1. The purpose of the NPFC Compliance Monitoring Scheme (CMS) is to ensure that all Members and Cooperating Non-Contracting Parties (CNCPs) implement and comply with obligations under the Convention and conservation and management measures (CMMs) adopted by the Commission. The purpose of the CMS is also to assess Members' and CNCPs' actions in response to alleged violations by their flagged vessels or nationals, not to assess compliance by individual vessels or persons.

2. The CMS is designed to improve Members' and CNCPs' implementation of and compliance with their obligations under the Convention and CMMs by:
    (a) Establishing procedures for reviewing compliance with obligations deriving from the Convention and CMMs;
    (b) Assessing compliance and identifying any trends in non-compliance;
    (c) Identifying areas in which technical assistance or capacity building may be needed to assist Members or CNCPs to attain compliance;
    (d) Identifying obligations which may require amendment for effective implementation and assessment of compliance;
    (e) Providing responses to non-compliance; and,
    (f) Monitoring and verifying corrective actions taken by a Member or CNCP to resolve outstanding instances of non-compliance.

II. Scope and Application

3. The Commission, with the assistance of the Technical and Compliance Committee (TCC), shall assess Members' and CNCPs' implementation of and compliance with the obligations arising under the Convention and the CMMs adopted by the Commission and identify trends in and instances of non-compliance.

4. For obligations relating to fishing activities, unless otherwise specified in the relevant CMM, the compliance assessment shall apply to those activities occurring in the Convention Area.

5. The CMS shall not prejudice the rights, jurisdiction and duties of any Member or CNCP to enforce its domestic laws or to take more stringent measures in accordance with its domestic laws, consistent with that Member's or CNCP's international obligations.

6. For obligations on quantitative annual limits (e.g., catch limit, effort limit), the compliance assessment period shall be the previous calendar year. For other obligations, the compliance

assessment period shall be from November 1st of year X-1 to October 31st of year X, where X is the calendar year preceding the TCC meeting.

7. The Commission, with the assistance of TCC, shall determine annually for each Member and CNCP, compliance status and potential responses for each obligation subject to assessment, in accordance with Annexes I and II.

8. Each Member and CNCP shall provide annually to the Secretariat responses to an Implementation Questionnaire, to be developed based on the obligations in Annex II, indicating how it has implemented the conservation and management measures and ensured compliance with and enforcement of obligations adopted by the Commission. The Questionnaire will be made available by the Secretariat for Member use as soon as possible annually, but at the latest 135 days before the TCC meeting. Members and CNCPs shall submit responses to the Secretariat through their Implementation Questionnaire 90 days before the TCC meeting and submit their Annual Reports by February 15th each year.

III. Draft Compliance Report

9. Prior to TCC, the Secretariat shall compile relevant data and information received from Members and CNCPs, including through their Annual Reports, any data collection source held by the Commission (e.g., reports from observers, Vessel Monitoring Systems, High Seas Boarding and Inspections, and high seas transshipments), communications with Members and CNCPs and, where appropriate, any other relevant information relating to compliance with NPFC CMMs available to the Secretariat. The Secretariat shall then prepare a Draft Compliance Report.

10. The Draft Compliance Report shall:

    (a) Present all available relevant data and information relating to each Member's or CNCP's implementation of and compliance with each obligation under the Convention or CMMs listed in Annex II and identify the data and information sources.

    (b) Identify the areas of potential non-compliance for each Member and CNCP for the obligations listed in Annex II for the current assessment year, and any areas of potential repeated non-compliance with a particular obligation for two or more consecutively assessed years where Members do not fulfill their obligations including imposed sanctions to those vessels in violation of the CMMs adopted by the Commission, or as determined by the Commission**.**

    As appropriate, the Secretariat may request any follow-up information relating to any issues of potential non-compliance identified for the current assessment year.

    (c) Report on any outstanding compliance issues for each Member or CNCP that were identified from previous years, including unresolved non-compliance issues, flag state investigations, or any corrective actions reported by the Member or CNCP, and, as appropriate, requests from the Secretariat for any follow-up information relating to the

previous compliance issues.

(d) Identify provisions/obligations that lack clarity or have inadequate reporting mechanisms or have insufficient data that make it challenging for the Secretariat and TCC to conduct compliance assessments, including factors that contribute to the lack of clarity or data gaps, and suggest means to address these issues.

11. No later than 60 days before the TCC meeting, the Secretariat shall provide each Member and CNCP its section of the Draft Compliance Report.

12. No later than 30 days before the TCC meeting, each Member and CNCP shall provide any additional information needed/requested on its section of the Draft Compliance Report to the Secretariat. This information shall, as appropriate:

(a) Provide information, clarifications, amendments, or corrections that address the potential compliance issues identified or respond to any request for additional information and/or evidence demonstrating implementation of and compliance with the relevant obligations;

(b) Propose corrective actions to be taken, along with time frames, to come into compliance;

(c) Identify any causes of the potential compliance issues or mitigating circumstances;

(d) Identify any technical assistance or capacity building that could assist with achieving compliance; and,

(e) Indicate progress of on-going flag state investigations in response to alleged violations by its flagged vessels.

13. The Secretariat shall then revise the Draft Compliance Report to add all information provided pursuant to paragraph 12 above.

14. No later than 10 days before TCC, the Secretariat shall circulate the revised Draft Compliance Report to Members and CNCPs and make it available on the non-public section of the Commission website.

IV. Provisional Compliance Report

15. TCC shall consider the Draft Compliance Report and may take into account any additional, readily verifiable information provided by Members, CNCPs, and accredited observers, including from non-governmental organizations or other organizations concerned with matters relevant to the implementation of the Convention.

16. In considering and assessing the compliance of each Member or CNCP with relevant obligations or any areas of repeated non-compliance, TCC shall also focus on clarifying the intent and purpose of each obligation to be assessed and assessing whether Members and CNCPs have adopted and/or implemented effective mechanisms to ensure the compliance with

the NPFC obligations

17. TCC shall develop a Provisional Compliance Report, which shall include an assessment for each Member's or CNCP's compliance with obligations included in Annex II and any areas of repeated non-compliance, and which shall assign a compliance status for each individual obligation based on Annex I.

18. Each compliance assessment shall be decided by consensus. If consensus cannot be reached. the Provisional Compliance Report shall indicate majority and minority views.

19. Notwithstanding paragraph 18 above, a Member or CNCP cannot block agreement on its own compliance assessment if all other Members present have concurred with the assessment. If the assessed Member disagrees with the assessment, its views shall be reflected in the Provisional Compliance Report.

20. The Provisional Compliance Report shall also include an Executive Summary with recommendations or observations from TCC regarding, as appropriate:
    (a) Non-compliance trends;
    (b) Existing obligations that should be amended or improved;
    (c) Revisions to the list of obligations to be assessed;
    (d) Obstacles to implementation identified by Members and CNCPs; and
    (e) Capacity building assistance needs.

21. TCC shall forward the Provisional Compliance Report to the Commission for consideration at the annual meeting.

V. Final Compliance Report

22. At each regular Commission meeting, the Commission shall consider the Provisional Compliance Report recommended by TCC and adopt by consensus a Final Compliance Report. If consensus cannot be reached, the Final Compliance Report shall indicate majority and minority views. A Member or CNCP cannot block consensus on its own compliance assessment.

23. The Final Compliance Report shall include:
    (a) A final compliance status for each Member and CNCP against each assessed obligation;
    (b) All identified areas of repeated non-compliance by a Member or CNCP.
    (c) All responses taken and to be taken to address areas of non-compliance; and,
    (d) An Executive Summary addressing the issues listed in paragraph 20.

24. Within 30 days following the adoption of the Final Compliance Report, the Chair of the Commission shall send a Letter of Concern to each Member or CNCP assessed as Non-Compliant or Priority Non-Compliant. Such letters shall describe the relevant compliance issue(s) and the required response(s) identified in the Final Compliance Report.

VI. Data Protection

25. The Draft and Provisional Compliance Reports, and all associated documentation, shall constitute confidential data, but the Final Compliance Report and the executive summary shall be public domain data.

VII. Identification of obligations to be Assessed

26. Annex II includes the list of obligations to be assessed as part of the annual Compliance Monitoring Report (CMR). The TCC will review Annex II annually and recommend removing or adding obligations to be assessed in the following year's CMR. Each year, upon consideration of the TCC's recommendations, the Commission shall update what obligations shall be assessed in the following year's CMR, as appropriate, taking into account factors such as:
    (a) The needs and priorities of the Commission;
    (b) The advice of TCC;
    (c) Evidence of non-compliance or repeated non-compliance with a particular obligation;
    (d) The risks posed by non-compliance to the achievement of the objectives of the Convention; and,
    (e) Whether sufficient verifiable information is available to determine compliance.

VIII. Future Work and Review of this Conservation Measure

27. The Commission tasks the TCC to establish a multi-year workplan of tasks to enhance the Compliance Monitoring Scheme with the aim of making it more efficient and effective. This workplan shall include the development of the following guidelines and operating procedures to support the implementation of the CMS, as necessary:
    (a) audit points to clarify the Commission's obligations assessed under the CMS
    (b) automatic responses for non-compliance with certain administrative obligations listed in Annex II to streamline the process;
    (c) corrective actions to encourage and incentivize Members' compliance with the Commission's obligations where non-compliance is identified; and,
    (d) any other guidelines or procedures that it deems necessary to enhance the effectiveness

and efficiency of the CMS.

28. As a matter of priority by the 9th Commission meeting, the TCC will develop and the Commission will consider revised Rules of Transparency for TCC to clarify any additional guidelines pertaining to the participation of observers in TCC meetings related to the Compliance Monitoring Scheme. Until the Commission adopts the revised Rules of Transparency for TCC, notwithstanding Paragraph 25, the consideration of the draft compliance report and the provisional compliance report, as detailed in paragraphs 15 and 22 respectively, shall be open to participation by accredited observers, in accordance with NPFC Rules of Procedure, in particular Rule 5.2.1 and Rule 9.

29. The obligations to be assessed in Annex II shall be reviewed annually by the Commission, and as necessary, the Implementation Questionnaire. The conservation and management measure as a whole shall be reviewed at Commission meetings as necessary**.**

ANNEXES

- Annex I – Compliance Status Table
- Annex II – Obligations to be Assessed

Annex I

Compliance Status Table

Compliance Status	Criteria	Potential Responses
Compliant	Member or CNCP fully compliant with obligation. Member or CNCP has taken required actions under the Convention in particular article 17 to investigate or address potential violations of its vessels.	None
Delayed Submission	Member or CNCP has fulfilled its reporting obligations (those not related to individual vessels reporting) after the mandatory deadlines, and it is not a repeated case of non-compliance.	Member or CNCP to provide the missing report and indicate any relevant actions taken.
Non-Compliant	Member or CNCP not compliant with obligation identified in Annex II and which does not meet the criteria of Delayed Submission. Member or CNCP has failed to undertake required actions under the Convention in particular article 17 to investigate or address potential violations of its vessels.	i Member or CNCP to rectify non-compliance and include in its next Annual Report all actions taken, ii Consideration of further responses.
Priority non-compliant	Member or CNCP has demonstrated non-compliance of a particular obligation listed in Annex II for two or more consecutively assessed years, non-compliance that significantly undermines the objectives of the Convention, or any other non-compliance identified as	i Member or CNCP to rectify non-compliance and include in its next Annual Report all actions taken, ii Consideration of further responses.

	Priority non-compliance by the Commission. Member or CNCP has repeatedly failed to undertake required actions under the Convention in particular article 17 to investigate or address potential violations of its vessels.	
Unable to be Assessed at this time	Ambiguity of relevant obligation, or insufficient data.	(for ambiguity) Review and potentially amend relevant provision(s) (for insufficient data) Identify how data gaps might be remedied and potentially amend relevant provision(s)
Not Applicable	Relevant obligation is not applicable to Member or CNCP	None
Flag State Action Ongoing	Flag state action currently ongoing to investigate or address potential violations of its flagged vessels.	i. Member or CNCP to report progress in its Annual Report until resolved; and, ii. Review by TCC and Commission and deadline(s) placed on Member or CNCP to provide further information to the Secretariat and/or take action(s) until resolved

Annex II

Obligations to be Assessed

As per Article 13(1) of the Convention, a Member shall take such measures as may be necessary to ensure that fishing vessels entitled to fly its flag abide by the CMMs and therefore, for the obligations listed below, it is the Member's compliance that is being assessed regardless of the wording of a specific obligation.

No.	Para to be Assessed	OBLIGATION
CMM 2026-01 **INFORMATION REQUIREMENTS FOR VESSEL REGISTRATION**		
		For the purpose of the effective implementation of the Convention, each Commission member or Cooperating non-Contracting Party shall:
1	3	Promptly update the NPFC Vessel Registry with: (a) any additions to the record; e.g., new vessel authorizations; (b) any modifications to this information with dates of such modifications; and (c) any deletions from the record, specifying which of the following reasons is applicable: (i) the voluntary relinquishment of the fishing by the fishing vessel owner or operator; (ii) the withdrawal or non-renewal of the fishing authorization issued in respect of the fishing vessel under Article 13, paragraph 2 of the Convention; (iii) the fact that the fishing vessel concerned is no longer entitled to fly its flag; (iv) the scrapping, decommissioning or loss of the fishing vessel concerned; or (v) any other grounds, with a specific explanation provided.
2	4	Provide to the Commission, as part of the annual report required pursuant to Article 16 of the Convention, the names of the fishing vessels entered in the record that conducted fishing activities during the previous calendar year.
3	5	Each Commission Member and Cooperating non Contracting Party shall ensure that every fishing vessel authorized to fly its flag bear markings that are readily identified in accordance with the *FAO Standard Specifications for the Marking and Identification of Fishing Vessels*, and recognize that non-compliance with these standards shall be considered a serious violation according to Article 17, paragraph 5 of the NPFC Convention and Article 21 Paragraph 11(f) of the United Nations Fish Stocks Agreement.
4	7	The Commission member or Cooperating non-Contracting Parties entering vessels identified in paragraph 2 on the NPFC Vessel Registry established under paragraph 1 shall attest that the vessel or vessels being added recommended are not vessels: (a) with a history of illegal, unreported or unregulated (IUU) fishing, unless the ownership of the vessel has subsequently changed and the new owner has provided sufficient evidence demonstrating that the previous owner or operator has no legal, beneficial or financial interest in, or control of the vessels, or Commission members or Cooperating non-Contracting Parties concerned is satisfied that, having taken into account all relevant facts, the vessel is no longer engaged in or associated with IUU fishing; or (b) that are currently listed on any of the IUU vessel lists adopted by regional fishery

No.	Para to be Assessed	OBLIGATION
		management organizations (RFMOs)
CMM 2026-02 **TO ESTABLISH A LIST OF VESSELS PRESUMED TO HAVE CARRIED OUT ILLEGAL, UNREPORTED AND UNREGULATED ACTIVITIES IN THE CONVENTION AREA**		
		24. Members/CNCPs shall take all necessary non-discriminatory measures under their applicable legislation, international law and each Members/CNCPs' international obligations, and pursuant to paragraphs 56 and 66 of the IPOA-IUU to:
5	(a)	Remove or withdraw vessels on the NPFC IUU Vessel List from the NPFC Vessel Registry;
6	(b)	Ensure that fishing vessels, support vessels, mother ships or cargo vessels flying their flag do not participate in any transshipment or joint fishing operations with, support or re-supply vessels on the NPFC IUU Vessel List;
7	(c)	Prohibit the entry into their ports of vessels included on the NPFC IUU Vessels List, except in the case of *force majeure*;
8	(d)	Prohibit the chartering of a vessel on the NPFC IUU Vessels List;
9	(e)	Refuse to grant their flag to vessels on the NPFC IUU Vessel List, unless the ownership of the vessel has subsequently changed and the new owner has provided sufficient evidence demonstrating that the previous owner has no legal, beneficial or financial interest in, or control of the vessels, or the member concerned is satisfied that that, having taken into account all relevant facts, the vessel is no longer engaged in or associated with IUU fishing activities;
10	(f)	Prohibit commercial transactions, imports, landings and/or transshipment of species covered by the Convention from vessels on the IUU Vessel List.
CMM 2024-09 **HIGH SEAS BOARDING AND INSPECTION PROCEDURES**		
11	7	Each Member of the Commission shall ensure that vessels flying its flag accept boarding and inspection by authorized inspectors in accordance with these procedures.
12	7	Such authorized inspectors shall comply with these procedures in the conduct of any such activities.
13	26	During the conduct of a boarding and inspection, the master of the fishing vessel shall:

No.	Para to be Assessed	OBLIGATION
		(a) follow internationally accepted principles of good seamanship so as to avoid risks to the safety of authorized inspection vessels and inspectors; (b) accept and facilitate prompt and safe boarding by the authorized inspectors; (c) provide a boarding ladder. Annex A provides guidelines for a safe boarding ladder; (d) cooperate with and assist in the inspection of the vessel pursuant to these procedures; (e) not assault, resist, intimidate, interfere with, or unduly obstruct or delay the inspectors in the performance of their duties; (f) allow the inspectors to communicate with the crew of the inspection vessel, the authorities of the inspection vessel, any embarked observers, as well as with the authorities of the fishing vessel being inspected; (g) provide the inspectors onboard with reasonable facilities, including, where appropriate, food and accommodation; and (h) facilitate safe disembarkation by the inspectors
14	28	The authorities of the fishing vessel, unless generally accepted international regulations, procedures and practices relating to safety at sea make it necessary to delay the boarding and inspection, shall direct the master to accept the boarding and inspection. If the master does not comply with such direction, the Member shall suspend the vessel's authorization to fish and order the vessel to return immediately to port. The Member shall immediately notify the authorities of the inspection vessel and the Commission of the action it has taken in these circumstances.
15	31	Authorized inspectors shall prepare a full report on each boarding and inspection they carry out pursuant to these procedures in accordance with a format specified by the Commission. The authorities of the inspection vessel from which the boarding and inspection was carried out shall transmit a copy of the boarding and inspection report to the authorities of the fishing vessel being inspected, as well as the Secretariat, within 3 (three) full working days of the completion of the boarding and inspection. Where it is not possible for the authorities of the inspection vessel to provide such report to the authorities of the fishing vessel within this timeframe, the authorities of the inspection vessel shall inform the authorities of the fishing vessel and shall specify the time period within which the report will be provided.
16	34	Upon receipt of a notification under paragraph 33, the authorities of the fishing vessels shall without delay: a) assume their obligation to investigate and, if the evidence warrants, take enforcement action against the fishing vessel in question and so notify the authorities of the inspection vessel, as well as the Commission; or b) authorize the authorities of the inspection vessel to complete investigation of the possible violation and so notify the Commission.

No.	Para to be Assessed	OBLIGATION
17	37	Upon receipt of a notification pursuant to paragraph 33, the authorities of the fishing vessel shall make best effort to respond without delay and in any case no later than within 3 (three) full working days.
18	41	Contracting Parties that authorize inspection vessels to operate under these procedures shall report annually to the Commission on the boarding and inspections carried out by its authorized inspection vessels, as well as upon possible violations observed.
19	42	Contracting Parties shall include in their annual statement of compliance within their Annual Report to the Commission under Article 16 of the Convention action that they have taken in response to boarding and inspections of their fishing vessels that resulted in observation of alleged violations, including any proceedings instituted and sanctions applied.
CMM-2025-05 BOTTOM FISHERIES AND PROTECTION OF VULNERABLE MARINE ECOSYSTEMS IN THE NORTHWESTERN PACIFIC OCEAN		
		4. Members of the Commission shall take the following measures in order to achieve sustainable management of fish stocks and protection of VMEs in the western part of the Convention Area:
20	A	Limit fishing effort in bottom fisheries on the western part of the Convention Area to the level agreed in February 2007 in terms of the number of fishing vessels and other parameters which reflect the level of fishing effort, fishing capacity or potential impacts on marine ecosystems.
21	G	Further, considering accumulated information regarding fishing activities in the western part of the Convention Area, in areas where, in the course of fishing operations, cold water corals more than 50Kg or sponges more than 350Kg are encountered in one gear retrieval, Members of the Commission shall require vessels flying their flag to cease bottom fishing activities in that location. In such cases, the vessel shall not resume fishing activities until it has relocated a sufficient distance, which shall be no less than 1 nautical mile, so that additional encounters with VMEs are unlikely. All such encounters, including the location, gear type, date, time and name and weight of the VME indicator species, shall be reported to the Secretariat, through the Member, within one business day. The Executive Secretary shall, within one business day, notify the other Members of the Commission and at the same time implement a temporary closure in the area to prohibit fishing vessels from contacting the sea floor with their fishing gear. Members shall inform their fleets and enforcement operations within one business day of the receipt of the notification from the Executive Secretary. It is agreed that the VME indicator taxa include five groups of cold water corals, specifically black corals (Antipatharia), gorgonians, pennatulaceans, stony coral (Scleractinia), and soft corals. The VME indicator taxa also include the classes of Hexactinellida and Demospongiae in the phylum Porifera.

No.	Para to be Assessed	OBLIGATION
22	L	Limit annual catch of North Pacific armorhead consistent with the precautionary approach. In years when strong recruitment of North Pacific armorhead is not detected by the monitoring survey (Annex 6), Japan shall limit the catch of North Pacific armorhead by vessels flying its flag to 500 tons, and Korea shall limit its catch of North Pacific armorhead by vessels flying its flag to 200 tons. When a strong recruitment of North Pacific armorhead is detected by the monitoring survey (Annex 6), Japan shall limit its annual catch of North Pacific armorhead by vessels flying its flag to 10,000 tons, and Korea shall limit its annual catch of North Pacific armorhead by vessels flying its flag to 2,000 tons. The catch overages for any given year shall be subtracted from the applicable annual catch limit in the following year, and catch underages during any given year shall not be added to the applicable annual catch limit during the following year.
23	5	Members of the Commission shall submit to the SC their assessments of the impacts of fishing activity on marine species or any VMEs, including the proposed management measures to prevent such impact. Such submissions shall include all relevant data and information in support of any such assessment. Procedures for such reviews including procedures for the provision of advice and recommendations from the SC to the submitting Member are attached (Annex 3). Members will only authorize bottom fishing activity pursuant to paragraph 4 (C).
		6. To facilitate the scientific work associated with the implementation of these measures, each Member of the Commission shall undertake:
24	A	Reporting of information for purposes of defining the footprint Members of the Commission shall provide, for each year, the number of vessels by gear type, size of vessels (tons), number of fishing days or days on the fishing grounds, total catch by species, and areas fished (names of seamounts) to the Secretariat. The Secretariat shall circulate the information received to the other Members consistent with the approved Regulations for Management of Scientific Data and Information. To support assessments of the fisheries and refinement of conservation and management measures, Members of the Commission are to provide updated information on an annual basis.
25	B	Collection of information (i) Members shall ensure each bottom fishing vessel operating in the western part of the Convention Area collects the following scientific information. Members shall provide the scientific information to the Secretariat. (a) Catch and effort data (b) Related information such as time, location, depth, temperature, etc. (ii) As appropriate, Members should encourage the collection of information from research vessels operating in the western part of the Convention Area and provide updates to the Commission to the extent possible. (a) Physical, chemical, biological, oceanographic, meteorological, etc. (b) Ecosystem surveys. (c) Seabed mapping (e.g. multibeam or other echosounder); seafloor images by drop

No.	Para to be Assessed	OBLIGATION
		camera, remotely operated underwater vehicle (ROV) and/or autonomous underwater vehicle (AUV). (iii) Collection of observer data Duly designated observers from the flag member shall collect information from bottom fishing vessels operating in the western part of the Convention Area. Observers shall collect data in accordance with Annex 5. Each Member of the Commission shall submit the reports to the Secretariat in accordance with Annex 4. The Secretariat shall compile this information on an annual basis and make it available to the Members of the Commission.
26	8	Members shall ensure that all vessels authorized to bottom fish in the western part of the Convention Area shall carry an observer on board. Members shall ensure that observers are independent, impartial, and qualified to fulfill the requirements of this measure and to enhance data collection. An observer is deemed to be independent, impartial, and qualified if the observer: (a) is deployed from a Commission Member's, or Cooperating non-Contracting Party's, national observer program, and familiar with NPFC fisheries resources, fishing activities, and CMMs; (b) is neither part of the crew, nor has any employment or family relationship to the ownership or operator of the fishing vessel; and (c) does not have any shared business interests with the owner or operator of the fishing vessel. An observer shall be provisioned, accommodated, and provided safe working conditions and access to independent communications in accordance with the Commission requirements and the Member's domestic laws and regulations.
CMM 2025-06 BOTTOM FISHERIES AND PROTECTION OF VULNERABLE MARINE ECOSYSTEMS IN THE NORTHEASTERN PACIFIC OCEAN		
27	8	The Members shall provide all available information as required by the Commission for any current or historical fishing activity by their flag vessels, including the number of vessels by gear type, size of vessels (tons), number of fishing days or days on the fishing grounds, total catch by species, areas fished (names or coordinates of seamounts), and information from scientific observer programmes (see Annexes 4 and 5) to the NPFC Secretariat as soon as possible and no later than one month prior to SC meeting. The Secretariat will make such information available to SC.
CMM 2026-07 CHUB MACKEREL		
28	1	Members of the Commission and Cooperating non-Contracting Parties (CNCPs) with substantial harvest of chub mackerel in the Convention Area shall refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their

No.	Para to be Assessed	OBLIGATION
		flags and authorized to fish for chub mackerel from the historical existing level.
29	3	As a provisional measure, Members shall take necessary measures to ensure that the fishing activities for chub mackerel in the Convention Area shall be undertaken in accordance with the following provisions: (a) The annual total allowable catch of chub mackerel and blue mackerel in the Convention Area, excluding the amount in paragraph 13, shall be set at 47,940 tonnes for 2026 and at 42,300 tonnes for 2027. (b) Of this annual total allowable catch, the catch for trawlers shall not exceed 5,703 tonnes for 2026 and 5,032 tonnes for 2027. (c) Of this annual total allowable catch, the catch for purse seiners shall not exceed 42,237 tonnes for 2026 and 37,268 tonnes for 2027. (d) An unused portion of the catch limit in subparagraphs (b) and (c) for 2026 may be carried over to the catch limit for 2027, up to 10% of the original catch limit for 2026. (e) An unused portion of the original catch limit in a single year for the EU in paragraph 13 may be transferred to the catch limit in that year in subparagraphs (b) and (c) of this paragraph. For this, the EU shall notify the Executive Secretary 30 days in advance of the intended transfer, specifying the tonnage and effective date of the transfer. The Executive Secretary shall promptly notify Members and CNCPs of the transfer. This transferred portion may not be used for carry over in subparagraph (d) of this paragraph. (f) China shall not authorize more than 3 trawlers to conduct fishing operations at the same time. (g) The EU shall not authorize more than 1 trawler to conduct fishing operations at the same time.
30	6	Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag that fish for chub mackerel in the Convention Area record their catches, including incidental catches of other NPFC species, and any discards and report them to the relevant flag state authorities in accordance with their national data recording and reporting requirements.
31	15	Members of the Commission and CNCPs shall provide their data on chub mackerel and blue mackerel separated by the Convention Area and the areas under national jurisdiction adjacent to the Convention Area in accordance with the data requirements adopted by the Commission in the Annual Report every year. The Commission shall review such information at the annual meeting every year.
CMM 2026-08 **PACIFIC SAURY**		
32	1	Members of the Commission, not described under Paragraph 2, and that are currently fishing for Pacific saury shall refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for Pacific

No.	Para to be Assessed	OBLIGATION
		saury from the historical existing level.
33	2	Members fishing for Pacific saury in areas of their jurisdiction that are adjacent to the Convention Area shall refrain from rapid expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for Pacific saury from the historical existing level.
34	11	As a provisional measure until the Commission decides allocation of the TAC, each Member of the Commission shall reduce the annual total catch of Pacific saury by the fishing vessels entitled to fly its flag in 2026 by 57.8% from its reported catch in 2018 (Annex II), and shall take necessary measures so that the total catch in the Convention Area will not exceed the TAC set out in paragraph 9. Members of the Commission and CNCPs shall ensure that discards of Pacific saury count against their catch limits.
35	12	To comply with the TAC, the following measures shall be in place in 2026: a) Members of the Commission shall report to the Executive Secretary, in the electronic format, weekly catches of Pacific saury in the Convention Area by fishing vessels flying their flags by Wednesday of the next week. The Executive Secretary shall make publicly available the compiled catch of Pacific saury in the Convention Area on the Commission's website as well as share each Member's catch of Pacific saury in the Convention Area on the Member's page of Commission's website without delay; and b) In the event that the total reported catch of all Members reaches 90% of the TAC set out in paragraph 9, the Executive Secretary shall notify all Members without delay. Those Members with more than 10,000 mt of catch limits shall close the fishery within 72 hours from the receipt of the notification. Those Members with less than 10,000 mt of catch limits may continue operations, but their total catch shall not exceed 90% of their catch limits. c) If any Members commit to reduce its annual total catch of Pacific Saury by fishing vessels entitled to fly its flag in 2026 by 67.22% from its reported catch in 2018, it shall be exempted from the requirements stipulated in Paragraph 12 (b). In case of that, the TAC for the rest of the member referred in the paragraph 12 (b) shall be 115,425 metric tons minus the catch limit of member(s) that make such commitment. Such commitment shall be submitted to the Secretariat no later than May 1st, 2026, and be circulated to all Members, as well as TAC applied to those Members subject to paragraph 12 (c).
36	13	Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag that fish for Pacific saury in the Convention Area record their catches, including incidental catches of other NPFC species, and any discards and report them to the relevant flag state authorities in accordance with their national data recording and reporting requirements.
37	14	In the event that a Member reaches 70% of its catch limit set out in paragraph 11, the Executive Secretary shall inform that Member of that fact, with a copy to all other Members. That Member shall close the fishery for its flagged vessels when the total catch of its flagged vessels is equivalent to 100% of its catch limit. Such Member shall notify promptly the Executive Secretary of the date of the closure, except as described in

No.	Para to be Assessed	OBLIGATION
		paragraph 15. Upon receipt of the notification, the Executive Secretary shall circulate it to all the Members.
38	18	In order to prevent discards and contribute to the proper stock assessment, Members of the Commission shall take necessary measures to ensure that fishing vessels flying their flags in the Convention Area fishing for Pacific saury retain all the catch of Pacific saury on board.
CMM 2019-10 SABLEFISH		
39	8	All vessels authorized to fish sablefish in the eastern part of the Convention Area shall have 100% observer coverage.
CMM 2026-11 NEON FLYING SQUID AND JAPANESE FLYING SQUID		
40	1	Members of the Commission and Cooperating non-Contracting Parties (CNCPs) with substantial harvest of any of neon flying squid and Japanese flying squid (hereinafter referred to as "the two Pelagic Species") in the Convention Area shall refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for such species from the historical existing level until the stock assessment for such species by the SC has been completed.
41	6	Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag that fish for the two Pelagic Species in the Convention Area record their catches, including incidental catches of other NPFC species, and any discards and report them to the relevant flag state authorities in accordance with their national data recording and reporting requirements.
42	7	Members of the Commission and CNCPs shall provide their data on the two Pelagic Species in accordance with the data requirements adopted by the Commission in the Annual Report every year. The Commission shall review such information at the annual meeting of every year.
CMM 2025-12 VESSEL MONITORING SYSTEM		
43	8	All Members or CNCPs shall ensure that its flagged vessels that are authorized under NPFC and present in the Convention Area transmit VMS data every hour to their FMC.
44	10	Each Member or CNCP shall ensure that their FMC automatically transmits VMS data to the Secretariat, which shall be received no later than 60 minutes upon receipt of the data at their FMC.

No.	Para to be Assessed	OBLIGATION
45	11	Each Member or CNCP shall ensure that its authorized NPFC fishing vessels conducting or planning to conduct fishing activities notify the Secretariat of their intention to enter and exit the Convention Area (Annex 2). The procedure used for such notification may be chosen by Members based on a list of options created by the Secretariat and approved by the Commission. Members shall inform the Secretariat of their preferred notification procedure.
46	13	Each Member or CNCP shall provide the Secretariat with VMS contact points in their FMCs including the name, position, email address and phone number of their VMS contact points. The Secretariat will make a list of VMS contact points available to all Members and Cooperating non-Contracting Parties.
47	23	If a failure to transmit occurs more than two times within a period of one year, the flag Member or CNCP of the fishing vessel shall investigate the matter, including having an authorized official examine the MTU on board the vessel. The outcome of this investigation shall be forwarded to the Secretariat within fifteen (15) days of its completion.
CMM 2025-03 **TRANSSHIPMENTS**		
48	4	A fishing vessel shall only engage in a transshipment, or other transfer activity in the Convention Area, if both the offloading and receiving vessel are duly authorized by its Flag State and included in the NPFC Vessel Registry
49	6	If a fishing vessel intends to engage in a transshipment in an area under national jurisdiction, including a port, the fishing vessel shall receive an authorization from the relevant coastal or port State before engaging in the transshipment.
50	8	All reporting shall comply with the procedures to be adopted by the Commission.
51	9	All reporting related to a transshipment shall include all marine species taken in the Convention Area, including bycatch and unregulated species, recorded by species using the FAO code.
52	10	A fishing vessel shall maintain an electronic or physical record on board the fishing vessel of each transshipment it has engaged in during the current trip. The record shall include each transshipment declaration and daily activity records, such as those in a navigation logbook.
53	12	A fishing vessel, or a Commission Member or Cooperating non-Contracting Party on behalf of the vessel, shall provide an advance notification to the authorities listed in paragraph 13 as soon as possible, and at least 24 hours in advance of the intended

No.	Para to be Assessed	OBLIGATION
		transshipment. The advance notification form is included in Annex I.
54	14	A receiving vessel, or a Commission Member or Cooperating non-Contracting Party on behalf of the receiving vessel, shall provide an advance notification to the authorities listed in paragraph 13 as soon as possible, and at least 24 hours in advance of the intended other transfer activity. The advance notification form is included in Annex I.
55	15	If the transshipment does not start after 72 hours of the estimated start time, or within 50 nautical miles of the estimated start location, as contained in the advance notification, the fishing vessels involved in the transshipment, or Commission Members or Cooperating non-Contracting Parties on their behalf, shall modify the submitted advance notification.
56	16	If the other transfer activity does not start after 72 hours of the estimated start time, or within 50 nautical miles of the estimated start location, as contained in the advance notification, the receiving vessel, or Commission Member or Cooperating non-Contracting Party of the receiving vessel, shall modify the submitted advance notification.
57	18	If a transshipment is cancelled before it is undertaken, a fishing vessel intending to engage in the transshipment, or the Commission Member or Cooperating non-Contracting Party whose fishing vessel intended engage in the transshipment, shall notify the Secretariat of the cancellation as soon as possible.
58	20	If a Commission Member, or Cooperating non-Contracting Party, receives suitably documented information that its flagged fishing vessel is, or appears to be, non-compliant with the Convention, or a conservation and management measure, the Commission Member, or Cooperating non-Contracting Party, shall conduct an investigation.
59	21	The investigating Commission Member, or Cooperating non-Contracting Party, shall provide a report on the progress of the investigation, including an attestation of the fishing vessel's status under paragraph 19, no later than 60 days after receiving the information, to: (a) The Secretariat (b) The Commission Member, or Cooperating non-Contracting Party that provided this information. Following the investigation process, information shall be provided about any appropriate enforcement action taken in line with its national laws.
60	22	If a fishing vessel receives catch from more than one offloading vessel, the fishing vessel shall ensure that the catch from each offloading vessel is stored separately and readily identifiable. The receiving vessel shall have a stowage plan available on

No.	Para to be Assessed	OBLIGATION
		board at all times.
61	24	A fishing vessel having engaged in, or a Commission Member or Cooperating non-Contracting Party whose fishing vessel has engaged in, a transshipment shall provide a transshipment declaration to the authorities listed in paragraph 25 as soon as possible, and no later than 10 days after the transshipment. The transshipment declaration form is included in Annex II.
62	26	The Commission shall establish a regional observer and/or electronic monitoring program no later than its 9th Commission meeting. Until the Transshipment Observer Program enters into force, a Commission Member, or Cooperating non-Contracting Party, is responsible for the deployment of independent, impartial, and qualified observers to fulfill the requirements of this measure. Once this program enters into force, paragraphs 27, 28, 32-34 of this measure shall be superseded by the provisions of the new program.
63	28	An observer shall be provisioned, accommodated, including access to independent communications, and provided safe working conditions by the receiving vessel in accordance with the Commission Member's, or Cooperating non-Contracting Party's, domestic laws and regulations.
64	29	A Commission Member, or Cooperating non-Contracting Party, shall take necessary measures to ensure that its receiving vessels engaging in a transshipment have an observer on board.
65	31	A Commission Member or CNCP shall take necessary measures to ensure that a fishing vessel may only engage in one transshipment at a time for each observer that is available to monitor and report on the transshipment. If there are two vessels seeking to transship concurrently, but only one observer is present, one vessel must stand off and wait until the first vessel has finished. Only one offloading vessel may be secured to the receiving vessel unless a second observer is performing observer duties for a second transshipment.
66	32	An observer shall have: (a) full, unobstructed, and safe access to each fishing vessel involved in the transshipment, including, inter alia, access to crew, gear, equipment, records, electronic means of communication, and fish holds; and (b) adequate and appropriate space to undertake their responsibilities pursuant to this measure.
67	34	An observer shall record an observer report immediately after each transshipment and keep the report onboard, and provide an observer transshipment report, as specified in Annex III, as soon as possible, but no later than 10 days from the disembarkation of the observer, to:

No.	Para to be Assessed	OBLIGATION
		(a) the Commission Member, or Cooperating non-Contracting Party, of the flags of the receiving vessel and the offloading vessel; and (b) the Secretariat
68	35	If an observer observes an activity or condition that is not consistent with conservation and management measures, the observer shall report the finding, and provide documented evidence, to the extent possible, without delay or upon disembarkation to the Secretariat. Once the Transshipment Observer Program enters into force, the observer will notify and transmit the report to the Observer service provider as well as the Secretariat. The Secretariat will then transmit the report to the authorities of the Commission Member or Cooperating non-Contracting Party of the flags of the receiving and offloading vessels.
69	36	Upon receipt of an observer report with documented evidence in particular Annex III indicating potential non-compliance, or instances of obstruction, intimidation, interference with, or otherwise prevention of the observer from performing their duties, concerning a vessel entitled to fly its flag, the Commission Member or Cooperating non-Contracting Party shall: a) treat the report with utmost sensitivity and discretion, in accordance with NPFC Data Sharing and Data Security Protocol b) make best efforts to respond to this notification through the Secretariat without delay and; c) undertake investigation on any condition or activity that is not consistent with conservation and management measures as per Article 17 of the Convention. The Commission Member or CNCP shall report any findings and/or relevant actions taken, in their Annual Report, and in the CMS Implementation Questionnaire (if applicable).
70	46	In the case of force majeure, the fishing vessel, or Commission Member or Cooperating non-Contracting Party, shall: (a) notify the Secretariat prior to the completion of the transshipment, or other transfer activity, as well as the circumstances giving rise to the force majeure; and (b) provide a transshipment declaration on the transshipment as soon as possible, but within 10 days of the transshipment.
71	48	Each Commission Member, and Cooperating non-Contracting Party, shall provide an annual summary of the data and information collected from all authorized fishing vessels having undertaken a transshipment, including each year's transshipment declarations, to the Commission at the Technical and Compliance Committee meeting. The summary shall be included in the Annual Report, as per Article 16(3) of the Convention. The template for this summary is included in Annex V.
72	49	A Commission Member, or Cooperating non-Contracting Party, shall take all

No.	Para to be Assessed	OBLIGATION
		reasonable steps to verify the information received from fishing vessels having engaged in a transshipment.
73	51	Commission Members and Cooperating non-Contracting Parties shall investigate instances of potential non-compliance with this measure, and report the results of those investigations to the Commission.
CMM 2023-14 **SHARKS**		
74	6	No fishing vessel shall engage in shark finning.
75	7	No fishing vessel shall: (a) retain on board, or otherwise possess or control, a shark fin that is not naturally attached to the corresponding shark; or (b) transship, or land, a shark fin that is not naturally attached to the corresponding shark unless the fishing vessel complies with paragraph 8.
76	8	A fishing vessel may only remove a shark fin from the corresponding shark if the shark is incidentally caught, taken, or harvested, and if: (a) the shark fin and the corresponding shark can be readily identified; and (b) one of the following methods is used: i the shark fin is stored in the same bag, preferably a biodegradable one, as the corresponding shark; ii the shark fin is bound to the corresponding shark using rope or wire; or iii the shark fin and the corresponding shark are identically, uniquely, and numerically tagged in a manner that an authorized inspector can readily identify the matching of the shark fin to the corresponding shark.
77	9	A fishing vessel shall record, and maintain a record of, any shark catch in the Convention Area, to the extent possible by species, in its logbook on board the fishing vessel.
78	10	A Commission Member, or Cooperating non-Contracting Party, shall annually report all shark catches, to the extent possible by species, from their fishing vessels to the Secretariat.

No.	Para to be assessed	OBLIGATION
CMM 2024-15 POLLUTION		
79	4	No fishing vessel shall discard or abandon fishing gear at sea. A Commission Member, or Cooperating non-Contracting Party (Member or CNCP) shall take necessary measures to ensure that its fishing vessels do not discard or abandon fishing gear at sea.
80	8	A Member or CNCP shall take necessary measures to ensure that its fishing vessels do not release any plastics, including synthetic ropes, synthetic fishing nets, plastic garbage bags, or incinerator ashes from plastics products, at sea
81	11	A Member or CNCP shall take necessary measures to ensure that its fishing vessels take all reasonable precautions to prevent: a) the abandonment, loss, or discard of fishing gear at sea; and b) the release of garbage, and plastics, at sea.
82	12	A Member or CNCP shall take necessary measures to ensure that its fishing vessels make every reasonable effort to retrieve any abandoned, lost, or discarded gear, garbage, or plastics that it has released as soon as possible and if safe to do so.
83	16	A Member or CNCP shall take necessary measures to ensure that its fishing vessels, to the extent possible, safely store and retain on board all fishing gear, garbage, and plastics until they can be disposed of at an adequate port reception facility.
CMM 2024-16 ANADROMOUS FISH		
84	5	Members and CNCPs shall take necessary measures to ensure their fishing vessels do not retain on board or otherwise possess anadromous fish.
85	7	Members and CNCPs shall take necessary measures to ensure that if a fishing vessel incidentally captures anadromous fish, those fish shall be returned to the water without delay, in a manner that causes the least harm.
86	9	Members and CNCPs shall take necessary measures to ensure their fishing vessels maintain a record on board the vessel of incidentally caught and released anadromous fish in the Convention Area, to the extent possible by species. This record shall be made available to authorized inspectors. A species identification aid is in Annex 2.
87	11	Notwithstanding paragraph 10, a Commission Member or CNCP shall annually report all incidentally caught and released anadromous fish in the Convention Area to the Secretariat, to the extent possible by species.

NPFC
North Pacific Fisheries Commission

TCC WORK PLAN 2026-2027 (including SWG OPs and PD)

No.	ISSUE	LEAD	ACTION / TIMELINE
1	**Transshipment**		
	Transshipment and TOP implementation	SWG OPs/Secretariat	Continue to track issues related to implementation of transshipment and TOP measure.
		SWG PD	Review CMMs to consider application of Transshipment and Transshipment Observer Program inside EEZ
2	**Observer program / EM**		
	Broader NPFC observer program	TCC/ SWG PD	Task SWG PD with development of a white paper/information paper on what TCC might want from a ROP, including consideration of other data collection methods-such as EM, Members Observer programs, port sampling. Bring reccommendation to TCC10
3	**Vessel Registry**		
	Update Vessel registry to address errors in current and historic data	Secretariat/Members	Secretariat to work with Members to confirm data in Registry
	Address Information gaps, Vessel and gear coding and systemic issues in Vessel Registry	Secretariat/SWG Ops	Secretariat to continue "cleanup" of VR, removing and identifying "information gaps" in Registry.
			SWG Ops to review and identify gaps,coding and systemic issues and recommend cooperation from Members to update the Registry with current details
4	**CMS**		
	Multi year work plan in para. 27 of CMS CMM	SWG PD	Auto- responses, corrective actions, develop audit points, and consider Executive Summary feedback on improvements to the CMS
5	**HSBI/MCS**		
	Technical support to HSBI	SWG Ops	SWG Ops to work with Sec to develop and deliver a workshop or series of workshops to support MCS program managers and inspectors with implementation of the HSBI cmm and associated reporting requirements and online tools. Over the past few years, NPFC Members have increased their participation in compliance monitoring and inspection work and SWG Ops would be an appropriate forum to promote cooperation and exchange of best practices amongst technical experts and MCS representatives of inspection authorities.
	Enhancements to the HSBI Events page are required to facilitate data analysis	Secretariat	
			Work with service provider to seek options/costs of enhancing the data entry process for HSBI reports to enable direct entry of reports by Members and automated report generation by Secretariat.
7	**Performance Review**		
	Consideration of TCC relevant recommendations consistent with direction from Commission	Secretariat/COM/SC/TCC/ FAC Chairs	1. The Commission agreed to work intersessionally to continue to update the matrix by:
			(a) tasking the Secretariat, in consultation with the Chairs of the Commission and its subsidiary bodies, to update the matrix based on the outcomes of the meetings of the Commission and its subsidiary bodies,
			(b) circulating the updated matrix among Members to seek comments on the priority and suggested way forward for each recommendation,
			(c) compiling comments from Members and circulating the revised matrix,
			(d) repeating this process to the extent possible during the intersessional period.

8	**Effort Controls**		
	Continue historic existing levels discussion	Secretariat/SWG OPs	All Members will submit data to the Secretariat 1 week prior to first SWG Ops meeting. If Members have already submitted data, they do not need to re-submit, but may update/supplement. Data will be for those years in the table presented at COM10; Members may submit additional data, if they want. SWG OPs will use that data to continue discussing a definition of historic existing level, taking into account those options presented at COM10 by the SWG OPs, definitions submitted by Members at COM10, and dicussions held at COM10.
9	**VMS**		
	NAF Format	SWG OPs	Review options for incorporation of NAF format in VMS CMM, including consideration of Member issues regarding inclusion of mandatory reporting of IMO number
10	**IUU Vessel List**		
	Consideration of Cross-Listing	SWG PD	Consider amendment to IUU CMM for cross-listing of other RFMO IUU Vessel Lists, including the process/procedures for doing so.
	Review CMM 2024-02	SWG PD	Review the entire measure, taking into account the practices of other RFMOs.

Proposed budgets for 2026/2027 and associated assessed contributions

	Year 2026/27 FAC08 Proposed	Year 2027/28 Proposed	Year 2028/29 Estimated	Year 2029/30 Estimated
Items	Cost (JPY)	Cost (JPY)	Cost (JPY)	Cost (JPY)
1. PERSONNEL COSTS				
1.1 Executive Secretary	21,882,510	22,259,466	22,927,250	23,615,068
1.2 Professional Category CM	15,796,927	15,373,330	15,834,530	16,309,566
1.3 Professional Category SM	17,585,375	17,811,375	18,345,716	18,896,087
1.4 General Services Category EA	8,790,020	9,016,020	9,242,020	9,468,020
1.5 General Services Category DC	8,322,400	8,548,400	8,774,400	9,000,400
1.6 Temporary Services		0	0	
1.7 (a) Social Security & Insurance	2,310,000	2,425,500	2,546,775	2,674,114
1.7 (b) Pension Costs	11,146,094	11,243,323	11,569,083	11,902,528
1.8 Overtime	1,000,000	1,100,000	1,100,000	1,200,000
1.9 (a) Staff Allowances - Home Leave	1,500,000	1,500,000	2,000,000	1,500,000
1.9 (b) Staff Allowances – Relocation		0	0	
1.9 (C) Staff Allowances – Repatriation	3,000,000	3,000,000	3,000,000	3,000,000
1.9 (d) Staff Allowances - Accommodation Subsidy	9,300,000	9,100,000	9,282,000	9,467,640
1.10 Professional Development / Training	1,200,000	1,200,000	1,200,000	1,200,000
1.11 Education Fee	1,500,000	1,500,000	1,500,000	1,500,000
1.12 Separation Allowances		0	0	
TOTAL PERSONNEL	103,333,326	104,077,414	107,321,774	109,733,422
2. OTHER SERVICE COSTS				
2.1 Office Equipment & Furniture	1,000,000	1,050,000	1,100,000	1,150,000
2.2 Office Supplies	900,000	1,000,000	1,050,000	1,100,000
2.3 Rentals		0	0	
2.4 Communications	1,300,000	1,300,000	1,300,000	1,300,000
2.5 Printing	400,000	400,000	420,000	420,000
2.6 Duty Travel	4,000,000	4,000,000	4,000,000	4,000,000
2.7 Auditing and Bank fees	1,800,000	1,800,000	1,800,000	1,800,000
2.8 Contractual Services	4,000,000	4,000,000	4,000,000	4,000,000
2.9 Database Management	15,000,000	15,300,000	15,606,000	15,918,120
2.10 MCS Costs	16,800,000	16,800,000	16,800,000	17,640,000
2.11a Meeting Costs COM/FAC/TCC	20,000,000	20,000,000	20,000,000	20,000,000
2.11b Meeting Costs - SWG MSE PS	6,560,000	6,560,000	1,000,000	1,000,000
2.12 Science Support	26,292,000	26,817,840	27,354,197	27,901,281
2.13 Staff Repatriation and Recruitment	8,500,000	-	-	-
2.14 To / From Working Capital Fund COM	-20,000,000	-20,000,000	-15,000,000	-10,000,000
2.14 To / From Working Capital Fund SC mtgs	-2,000,000	-	-	-
2.14 bis To/From Special Project Fund SSC BFME	-2,477,000	-	-	-
2.14 To / From Working Capital Fund Japan				
2.14 To / From VCF Panama MSE PS	-6,560,000	-6,560,000	-	-
2.14 bis To/From Repatriation Fund - CM relocation	-8,500,000			
2.15 Representation Expenses	250,000	250,000	250,000	250,000
2.16 Miscellaneous	500,000	500,000	500,000	500,000
TOTAL OTHER SERVICE COSTS	67,765,000	73,217,840	80,180,197	86,979,401
TOTAL	**171,098,326**	**177,295,254**	**187,501,971**	**196,712,823**

Members' Annual contributions for 2026/2027

Member\Rule	a)	b)	c)	Fixed Contribution	Total	%
Canada	5,560,552	0	2,426,932		7,987,483	4.7
China	5,560,552	59,116,040	592,543		65,269,134	38.1
EU	5,560,552	0	1,925,451		7,486,003	4.4
Korea	5,560,552	648,619	1,612,817		7,821,988	4.6
Russia	5,560,552	1,620,955	661,854		7,843,361	4.6
Chinese Taipei	5,560,552	8,288,124	1,515,841		15,364,516	9.0
USA	5,560,552	0	3,833,913		9,394,464	5.5
Vanuatu	5,560,552	230,342	140,482		5,931,376	3.5
Japan				44,000,000	44,000,000	25.7
Total	44,484,414	69,904,079	12,709,833	44,000,000	171,098,326	100.0

a) 35 % of the budget shall be divided equally among members of the Commission except Japan.
b) 55 % of the budget shall be divided proportionally among members of the Commission based on the three-year average, 2022-2024, of the total catches by weight in the Convention Area of the species covered by the Convention; and
c) 10 % of the budget shall be divided proportionally among members of the Commission based on each member's Gross Domestic Product (GDP) per capita in 2024.

Note per Rules of Procedure 10.5: Panama as CNCP: 5,742,875

Proposed budgets for 2027/2028 and associated assessed contributions

	Year 2026/27 FAC08 Proposed	Year 2027/28 Proposed	Year 2028/29 Estimated	Year 2029/30 Estimated
Items	Cost (JPY)	Cost (JPY)	Cost (JPY)	Cost (JPY)
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1.5 General Services Category DC	8,322,400	8,548,400	8,774,400	9,000,400
1.6 Temporary Services		0	0	
1.7 (a) Social Security & Insurance	2,310,000	2,425,500	2,546,775	2,674,114
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1.9 (a) Staff Allowances - Home Leave	1,500,000	1,500,000	2,000,000	1,500,000
1.9 (b) Staff Allowances – Relocation		0	0	
1.9 (C) Staff Allowances – Repatriation	3,000,000	3,000,000	3,000,000	3,000,000
1.9 (d) Staff Allowances - Accommodation Subsidy	9,300,000	9,100,000	9,282,000	9,467,640
1.10 Professional Development / Training	1,200,000	1,200,000	1,200,000	1,200,000
1.11 Education Fee	1,500,000	1,500,000	1,500,000	1,500,000
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TOTAL PERSONNEL	103,333,326	104,077,414	107,321,774	109,733,422
2. OTHER SERVICE COSTS				
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2.3 Rentals		0	0	
2.4 Communications	1,300,000	1,300,000	1,300,000	1,300,000
2.5 Printing	400,000	400,000	420,000	420,000
2.6 Duty Travel	4,000,000	4,000,000	4,000,000	4,000,000
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2.10 MCS Costs	16,800,000	16,800,000	16,800,000	17,640,000
2.11a Meeting Costs COM/FAC/TCC	20,000,000	20,000,000	20,000,000	20,000,000
2.11b Meeting Costs - SWG MSE PS	6,560,000	6,560,000	1,000,000	1,000,000
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2.13 Staff Repatriation and Recruitment	8,500,000	-	-	-
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2.14 To / From Working Capital Fund SC mtgs	-2,000,000	-	-	-
2.14 bis To/From Special Project Fund SSC BFME	-2,477,000	-	-	-
2.14 To / From Working Capital Fund Japan				
2.14 To / From VCF Panama MSE PS	-6,560,000	-6,560,000	-	-
2.14 bis To/From Repatriation Fund - CM relocation	-8,500,000			
2.15 Representation Expenses	250,000	250,000	250,000	250,000
2.16 Miscellaneous	500,000	500,000	500,000	500,000
TOTAL OTHER SERVICE COSTS	67,765,000	73,217,840	80,180,197	86,979,401
TOTAL	**171,098,326**	**177,295,254**	**187,501,971**	**196,712,823**

Members' Annual contributions for 2027/2028 using the 2-year average

Member\Rule	a)	b)	c)	Fixed Contribution	Total	%
Canada	5,831,667	0	2,545,262		8,376,929	4.7
China	5,831,667	59,905,235	621,434		66,358,336	37.4
EU	5,831,667	0	2,019,330		7,850,998	4.4
Korea	5,831,667	751,298	1,691,453		8,274,418	4.7
Russia	5,831,667	2,592,824	694,124		9,118,616	5.1
Chinese Taipei	5,831,667	9,771,515	1,589,749		17,192,931	9.7
USA	5,831,667	0	4,020,843		9,852,510	5.6
Vanuatu	5,831,667	291,518	147,332		6,270,516	3.5
Japan				44,000,000	44,000,000	24.8
Total	46,653,339	73,312,389	13,329,525	44,000,000	177,295,254	100.0

a) 35 % of the budget shall be divided equally among members of the Commission except Japan.
b) 55 % of the budget shall be divided proportionally among members of the Commission based on the two-year average, 2023-2024, of the total catches by weight in the Convention Area of the species covered by the Convention; and
c) 10 % of the budget shall be divided proportionally among members of the Commission based on each member's Gross Domestic Product (GDP) per capita in 2024. Members' Contributions for 2027/2028 shall be adjusted in early 2027 according to 2025 catch reports and GDP.

Note per Rules of Procedure 10.5: Panama as CNCP: 6,022,881

8th Meeting of the Meeting of the Finance and Administration Committee REPORT

13 April 2026

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North Pacific Fisheries Commission
8th Meeting of the Finance and Administration Committee

13 & 15 April 2026
Osaka, Japan

FINAL REPORT

Agenda Item 1. Opening of the Meeting

1. The 8th Meeting of the Finance and Administration Committee (FAC) was held in a hybrid format, with participants attending in-person in Osaka, Japan, or online via WebEx, on 13 April 2026, and was attended by Members from Canada, China, the European Union (EU), Japan, the Republic of Korea, the Russian Federation, Chinese Taipei, the United States of America (USA), and Vanuatu. The Pew Charitable Trusts (Pew) attended as an observer. The meeting was opened by Mr. Haruo Tominaga (Japan), who served as the FAC Chair.

2. The Executive Secretary, Dr. Robert Day, outlined the logistical arrangements for the meeting.

Agenda Item 2. Appointment of Rapporteur

3. Mr. Alex Meyer was selected as rapporteur.

Agenda Item 3. Adoption of Agenda

4. The agenda was adopted (Annex A). The List of Documents and List of Participants are attached (Annexes B, C).

Agenda Item 4. Financial Statement

4a. Audit Report for 2024/2025 fiscal years

5. The NPFC Auditor's Report for the 2024/2025 Financial Year (NPFC-2026-FAC08-IP01) was taken as read, with supplementary comments from the Executive Secretary regarding efforts to improve the timeliness with which the Secretariat assembles audit data, the shift to tracking separate funds in QuickBooks, and the transfer of the overall Commission surplus to the Working Capital Fund.
   Recommendation: That the Commission adopt the NPFC Auditor's Report for the 2024/2025 Financial Year.

4b. Status of Member Contributions

6. The Executive Secretary reported on the status of Member contributions for 2025/2026

(NPFC-2026-FAC08-WP01 Rev.1). All Member contributions have been received. Panama has been invited to make a voluntary contribution as a Cooperating Non-Contracting Party (CNCP), and Panama has indicated that it will make a payment when its vessels are able to operate starting in FY2026/2027.

7. The FAC accepted the report from the Secretariat on Member contributions.

4c. Secretariat financial update to 31 January 2026

i. for 2025/2026 fiscal year (General Fund)

8. The Executive Secretary presented the Statement of Income and Expenditure for the year ending 31 March 2025 (2024/2025 fiscal year) and unaudited values for 2025/2026 (NPFC-2026-FAC08-WP01 Rev.1). He noted that for the 2025/2026 fiscal year, there were no Commission and related meetings held as COM09 was held in March of the previous fiscal year and COM10 in the next fiscal year, resulting in significant savings on duty travel. There were also modest savings related to monitoring, control, and surveillance costs. For the current fiscal year, the expenditures continue to be affected by the low value of the Japanese yen (with numerous contracts in US dollars). There are also a number of expenditures still pending for various service costs and credit card bills.

   Recommendation: That the Commission adopt the financial update to 31 January 2026 for the 2025/2026 fiscal year, including the statement of income and expenditure for the year ending 31 March 2025 (2024/2025 fiscal year) and unaudited values for 2025/2026.

ii. Working Capital Fund

iii. Voluntary Contribution

iv. Special Project Fund

v. Repatriation Fund

vi. Transshipment Observer Program Fund

9. The Executive Secretary reported on the status of the other funds, including the Working Capital Fund, the Voluntary Contribution, the Special Project Fund, the Repatriation Fund, and the Transshipment Observer Program Fund (NPFC-2026-FAC08-WP01 Rev.1).

10. The FAC thanked Canada, China, the EU, the United States, and Panama for their voluntary contributions.

11. The FAC noted the status of other funds.

Agenda Item 5. Administration Matters

5a. Staffing considerations

12. No paper was submitted under this agenda item.

5b. Pay and benefits system

13. Discussions under Agenda Item 5b were carried out in a closed session due to the confidential nature of personnel matters.

14. The Executive Secretary presented a report on the implementation of the updated NPFC Staff Regulation 8.1 and the NPFC Social Security Policy (NPFC-2026-FAC08-IP03).

15. The FAC noted the report on the implementation of the updated NPFC Staff Regulation 8.1 and the NPFC Social Security Policy.

i. General Service Staff

1. Pay

16. No papers were submitted under these sub-agenda items.

2. Benefits

17. The Executive Secretary presented a request from the NPFC Executive Assistant (NPFC-2026-FAC08-WP08).

18. The FAC considered the request.
Recommendation: That the Commission accommodate the request from the NPFC Executive Assistant described in NPFC-2026-FAC08-WP08 using the Working Capital Fund, while noting that this retroactive application should not set a precedent for the future.

ii. Manager and Executive Secretary Staff

1. Pay

2. Benefits

19. No papers were submitted under these sub-agenda items.

5c. Consideration of list of contracted work

20. The Executive Secretary presented a report on contractual services engaged and outputs received (NPFC-2026-FAC08-IP02).

21. The FAC noted the report on contractual services engaged and outputs received.

22. One of the Members that had originally requested that the Secretariat provide such a report explained that the reason for its request, besides seeking greater transparency, was that there had been instances in the past where Members had been notified after the fact that the Secretariat had contracted services to conduct work that Members had not agreed was a

priority. This Member suggested that in the future, the Secretariat should consult Members whenever it is considering contracting services of a substantial financial size to conduct work that has not been specifically tasked by Members.

23. The FAC suggested a number of improvements to the report:
(a) indicating the total payment for each contractual service rather than just the rate.
(b) adding columns indicating the total amount contracted and the amount already expended.
Recommendation: That the Commission direct the Secretariat to continue to provide reports on contractual services engaged and outputs received to future meetings of the FAC, while incorporating the improvements suggested by FAC08.

5d. Consideration of the Working Capital Fund

24. The Executive Secretary presented an analysis of past discussions by the FAC and options for the Working Capital Fund cap consistent with the Financial Regulations, as requested by FAC08 (NPFC-2026-FAC08-WP05). The Executive Secretary presented options and recommendations based on advice from the auditor on the size of the Working Capital Fund, the role for excess funds in the Working Capital Fund, the approach for future surpluses, potential future performance review, and use of other reserve funds to offset costs, for further consideration by the FAC.

25. The FAC considered the appropriate the size of the Working Capital Fund, taking into account the auditor's advice that while a six-month buffer would be reasonable, a larger buffer would be sensible given the small number of Members at NPFC, the uneven timing of payments, and past instances of delayed contributions. Several Members were flexible on setting the balance of the Working Capital Fund at an amount ranging from six months to nine months, noting the prudence of a nine-month buffer as recommended by the Secretariat. One Member expressed a strong preference for a six-month buffer, believing that this would be sufficient, but noted the views of other Members and stated that it could accept a nine-month buffer in the interest of achieving consensus.
Recommendation: That the Commission establish nine months of operating expenses as the balance for the Working Capital Fund.

26. The FAC endorsed the Secretariat's recommendation on the role for excess funds and the method to reduce the Working Capital Fund.
Recommendation: That the Commission reduce the Working Capital Fund down to a nine-month floor gradually by offsetting some costs on an ongoing basis over a number of years at the current rate of attrition.

27. Regarding how to approach future surpluses in the Working Capital Fund above the nine-

month level, the FAC noted that a number of options may be appropriate and agreed to continue to discuss this matter in the future based on the actual situation.

28. The FAC considered the suggestion from the Secretariat to set aside a reserve for a future Performance Review. The FAC agreed to defer discussion of this matter, including how to fund a future Performance Review, noting that this is not an immediate priority. One Member noted that other regional fisheries management organizations (RFMOs) have tended to implement performance reviews regularly on a 4–5-year cycle and highlighted the value of the recommendations from the previous NPFC Performance Review.

29. Another Member noted that, in other RFMOs, performance reviews are usually funded by voluntary contributions.

30. The FAC discussed the use of other reserve funds to offset costs as part of its consideration of the budget under agenda item 7.

5e. Proposed revisions to the Staff Regulations

31. Discussions under Agenda Item 5e were carried out in a closed session due to the confidential nature of personnel matters.

32. The Chair introduced a draft proposal for how to consider the Staff salary scale and schedule going forward and a summary of discussion points arising from his informal inter-sessional discussions with Members (NPFC-2026-FAC08-WP02 Rev.1.)

33. The FAC considered the proposal and provided further feedback to the Chair. The FAC requested that the Chair continue to develop the proposal intersessionally in consultation with Members.

i. Draft NPFC Social Security Policy

34. This matter was discussed under agenda item 5b.

5f. Potential revisions to the Financial Regulations

35. The Executive Secretary presented proposed revisions to the Financial Regulations to extend the timelines for the audit process, as well as to clarify the nature of the payments for the operation of the Transshipment Observer Program (TOP) and to provide authority to the Executive Secretary to continue to manage costs related to the TOP (NPFC-2026-FAC08-WP06).

36. The FAC endorsed the proposed extension of the timelines for the audit process.

Recommendation: That the Commission update the NPFC Financial Regulations with extended timelines for the audit process as outlined in Annex 1 of NPFC-2026-FAC08-WP06.

37. The FAC noted that there is a lack of clarity regarding the treatment and execution of payments to cover the costs for the operation of the TOP. The FAC considered potential amendments to the Financial Regulations that would provide greater clarity but could not reach consensus. Some Members supported amending paragraph 27 of the Financial Regulations by changing all instances of "voluntary contributions" to "voluntary contributions and other payments," as a partial solution. One Member did not support the amendment, pointing out that creating any link between payments for programs such as the TOP with the budget and contributions would create confusion.

    Recommendation: That the Commission consider potential amendments to the Financial Regulations to address the lack of clarity regarding the treatment and execution of payments to cover costs such as those for the operation of the TOP.

    Recommendation: That the Commission authorize the Executive Secretary to execute payments of up to 2,312,631 USD for the TOP for its second year of operations and to be able to execute payments for that purpose beyond the end of the 2025/2026 fiscal year if necessary.

5g. 2026 Internship and Secondment programs

38. The Executive Secretary reported on the outcomes of the 2025/2026 Intern and Secondment Program (NPFC-2026-FAC06-WP04). He noted the valuable contributions of the interns, Mr. Shinnosuke Kato (Japan) and Mr. Jiyu Wang (China), and the secondee, Mr. Jumpei Hinata (Japan) in 2025/26. He informed the FAC that there were no new applications for interns and there was one application for the secondment program for the 2026/2027 fiscal year. The Executive Secretary informed the FAC that there was interest expressed in the internship position by an individual, but because they were not from a Member, a formal application process could not be initiated.

39. The FAC reviewed the application for the secondment program.

    Recommendation: That the Commission accept the secondment application from Ms. Yume Kawai for a 12-month period commencing in June 2026.

Agenda Item 6. Performance Review and items of relevance to FAC

40. The Executive Secretary presented an update (NPFC-2026-COM10-IP02) on the status of the Performance Review Recommendations relevant to the FAC.

41. The FAC noted the ongoing work to address the recommendations from the Performance Review Panel and the progress made in the intersessional period.

Agenda Item 7. Secretariat's Work Plan; Budget Estimates for 2025/2026 to 2028/2029

7a. Secretariat Work Plan 2025/2026 including staffing

42. The Executive Secretary presented the Secretariat's Work Plan for the 2026/2027 fiscal year (NPFC-2026-SR).

43. The FAC endorsed the work plan.
Recommendation: That the Commission adopt the Secretariat's Work Plan for 2026/2027 (Annex D), in addition to tasking the Secretariat with other necessary work identified by FAC08.

7b. Budget estimates for 2026/2027 and 2027/2028 and indicative budget estimates for 2028/2029 and 2029/2030

44. The Executive Secretary presented the proposed budget for 2026/2027 (NPFC-2026-FAC08-WP01 Rev.1) for the review of the FAC.

45. The FAC noted that whereas Members may indicate the intended purpose of use when making voluntary contributions, to date, the purpose of use for voluntary contributions from CNCPs has been determined by the Commission.

46. The FAC supported the use of the voluntary contribution from Panama, as a CNCP, for advancing the work of the Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS) as described in the proposed budget for 2026/2027.

47. The FAC noted the need for more clarity regarding how voluntary contributions from CNCPs should be treated financially and what purposes they can be used for under the Financial Regulations. Members had different views regarding whether such contributions should be used for specific projects/purposes or for offsetting general operational expenditures, and whether such contributions could be transferred to the Special Project Fund, the Working Capital Fund, or the Special Purpose Fund.
Recommendation: That the Commission task the Secretariat to submit a paper to FAC09 that outlines possible options, based on the Financial Regulations, for how voluntary contributions from CNCPs should be treated financially and what kinds of purposes they can be used for.

48. The FAC endorsed the proposed budget for 2026/2027.
Recommendation: That the Commission adopt the proposed budget for 2026/2027 (Annex E).
Recommendation: That the Commission adopt the proposed Member contributions for 2026/2027 (Annex F).

Agenda Item 8. Other matters

49. The Science Manager, Dr. Aleksandr Zavolokin, presented a progress report on a special project to assist the SWG NPA-SA with stock assessments for splendid alfonsino (SA) and North Pacific armorhead (NPA) in 2025/2026 and a request for continued funding in 2026 (NPFC-2026-FAC08-WP03). The Commission had approved the allocation of 2,142,700 (JPY) from the Special Project Fund for the 2025/2026 work, 2,102,372 JPY of which was used to hire two experts (who worked collaboratively under a single contract). The invited experts worked with Members to assess the NPA stock using a depletion model and conduct a preliminary Stock Synthesis 3 (SS3) model analysis for SA. 2,477,000 (JPY) is requested from the Special Project Fund to continue to assist the SWG NPA-SA with the SA and NPA stock assessments in 2026. Specifically, in this final phase of the project, with the help of the invited experts, the SWG NPA-SA intends to conduct an assessment of the SA stock using an integrated model and to improve the depletion model for the assessment of the NPA stock.

50. The FAC endorsed the proposal and recommended funding from the Special Project Fund. ***Recommendation:*** That the Commission approve the allocation of 2,477,000 (JPY) from the Special Project Fund for hiring external experts to assist with stock assessments for SA and NPA in 2026/2027.

51. The Chair noted that the policy for the use of the Special Project Fund provides for a detailed evaluation process including the establishment of a Special Working Group (SWG). He explained that he had determined that such a detailed evaluation process was not necessary for the above project, as it was the continuation of an existing, ongoing project. Nevertheless, he posited that when the policy for the use of the Special Project Fund was established, it was envisioned that there would be many projects being considered, but the reality is that there have been very few. He suggested that the Secretariat could be tasked with reviewing the policy based on the current reality and provide information to the FAC for further discussion. ***Recommendation****:* That the Commission task the Secretariat to review whether the policy for the use of the Special Project Fund is fit for purpose and submit a paper to FAC09 for further discussion.

52. The Executive Secretary presented a proposal for the establishment of a formal side-event policy (NPFC-2026-FAC08-WP07). The Chair noted that in the past few years, side events have been held at COM09 and SC10, and he explained that the draft policy has been used to guide the Secretariat as an internal policy to date but could be adopted as a more general policy for NPFC going forward.

53. The FAC reviewed the proposal but did not consider it necessary to establish a formal side-event policy.

Agenda Item 9. Next Meeting

54. ***Recommendation:*** That the Commission consider holding the next FAC meeting in conjunction with the next Commission meeting.

Agenda Item 10. Recommendations to the Commission

55. The FAC recommended the following to the Commission:

(Agenda Item 4)

(a) That the Commission adopt the NPFC Auditor's Report for the 2024/2025 Financial Year.

(b) That the Commission adopt the financial update to 31 January 2026 for the 2025/2026 fiscal year, including the statement of income and expenditure for the year ending 31 March 2025 (2024/2025 fiscal year) and unaudited values for 2025/2026.

(Agenda Item 5)

(c) That the Commission accommodate the request from the NPFC Executive Assistant described in NPFC-2026-FAC08-WP08 using the Working Capital Fund, while noting that this retroactive application should not set a precedent for the future.

(d) That the Commission direct the Secretariat to continue to provide reports on contractual services engaged and outputs received to future meetings of the FAC, while incorporating the improvements suggested by FAC08.

(e) That the Commission establish nine months of operating expenses as the balance for the Working Capital Fund.

(f) That the Commission reduce the Working Capital Fund down to a nine-month floor gradually by offsetting some costs on an ongoing basis over a number of years at the current rate of attrition.

(g) That the Commission update the NPFC Financial Regulations with extended timelines for the audit process as outlined in Annex 1 of NPFC-2026-FAC08-WP06.

(h) That the Commission consider potential amendments to the Financial Regulations to address the lack of clarity regarding the treatment and execution of payments to cover costs such as those for the operation of the TOP.

(i) That the Commission authorize the Executive Secretary to execute payments of up to 2,312,631 USD for the TOP for its second year of operations and to be able to execute payments for that purpose beyond the end of the 2025/2026 fiscal year if necessary.

(j) That the Commission accept the secondment application from Ms. Yume Kawai for a 12-month period commencing in June 2026.

(Agenda Item 7)

(k) That the Commission adopt the Secretariat's Work Plan for 2026/2027 (Annex D), in addition to tasking the Secretariat with other necessary work identified by FAC08.

(l) That the Commission task the Secretariat to submit a paper to FAC09 that outlines possible options, based on the Financial Regulations, for how voluntary contributions

from CNCPs should be treated financially and what kinds of purposes they can be used for.

(m) That the Commission adopt the proposed budget for 2026/2027 (Annex E).

(n) That the Commission adopt the proposed Member contributions for 2026/2027 (Annex F).

(Agenda Item 8)

(o) That the Commission approve the allocation of 2,477,000 (JPY) from the Special Project Fund for hiring external experts to assist with stock assessments for SA and NPA in 2026/2027.

(p) That the Commission task the Secretariat to review whether the policy for the use of the Special Project Fund is fit for purpose and submit a paper to FAC09 for further discussion.

(Agenda Item 9)

(q) That the Commission consider holding the next FAC meeting in conjunction with the next Commission meeting.

Agenda Item 11. Adoption of the Report

56. The report was adopted by consensus.

Agenda Item 12. Close of the Meeting

57. The meeting closed at 14:15 on 15 April 2026, Osaka time.

List of Annexes to FAC08 Report

Annex A	Agenda
Annex B	List of Documents
Annex C	List of Participants
Annex D	Secretariat Work Plan
Annex E	2026/2027 Budget
Annex F	2026/2027 Assessed Contributions

North Pacific Fisheries Commission

8th Meeting of the Finance and Administration Committee

13 April 2026

Osaka, Japan (hybrid)

Agenda

1. Opening of the Meeting

2. Appointment of Rapporteur

3. Adoption of Agenda

4. Financial Statement
    a. Audit Report for the 2024/2025 fiscal year
    b. Status of Member Contributions
    c. Secretariat financial updates to 31 January 2026:
        i. for 2025/2026 fiscal year (General Fund)
        ii. Working Capital Fund
        iii. Voluntary Contribution Funds
        iv. Special Project Fund
        v. Repatriation Fund
        vi. Transshipment Observer Program Fund
5. Administration Matters
    a. Staffing considerations
    b. Pay and benefits system
        i. General Service Staff
            1. Pay
            2. Benefits
        ii. Manager and Executive Secretary Staff
            1. Pay
            2. Benefits
    c. Consideration of list of contracted work
    d. Consideration of Working Capital Fund
    e. Proposed revisions to the Staff Regulations

i. Draft NPFC Social Security Policy

f. Potential revisions to the Financial Regulations

g. 2026 Internship and Secondment programs

6. Performance Review updates and items of relevance to FAC

7. Secretariat's Report and Work Plan: Budget Estimates for 2026/2027 to 2029/2030
    a. Secretariat Work Plan 2026/2027 including staffing
    b. Budget estimates for 2026/2027 and 2027/2028 and indicative budget estimates for 2028/2029 and 2029/2030

8. Other matters

9. Next meeting

10. Recommendations to the Commission

11. Adoption of the Report

12. Close of the Meeting

LIST OF DOCUMENTS

MEETING INFORMATION PAPERS

Number	Title
NPFC-2026-COM10/TCC09/FAC08-MIP01	Meeting Information
NPFC-2026-FAC08-MIP02	Provisional Agenda
NPFC-2026-FAC08-MIP03	Annotated Indicative Agenda

WORKING PAPERS

Number	Title
NPFC-2026-FAC08-WP01 Rev.1	Draft Commission Budgets 2026/2027 to 2029/2030
NPFC-2026-FAC08-WP02 Rev.1	Consideration of the NPFC staff regulations
NPFC-2026-FAC08-WP03	Funding request for 2026 and update on the special project to conduct an assessment for Splendid Alfonsino and North Pacific Armorhead
NPFC-2026-FAC08-WP04	NPFC Secondment and Intern Program Fiscal Year 2026/2027
NPFC-2026-FAC08-WP05	Consideration of the Working Capital Fund
NPFC-2026-FAC08-WP06	Consideration of the NPFC financial regulations
NPFC-2026-FAC08-WP07	Consideration of a formal side-event policy
NPFC-2026-FAC08-WP08	Consideration of payment to the Executive Assistant

INFORMATION PAPERS

Number	Title
NPFC-2026-FAC08-IP01	NPFC Auditor’s Report for 2024/2025 Financial Year
NPFC-2026-FAC08-IP02	Consideration of NPFC Contracts
NPFC-2026-FAC08-IP03	Implementation of Staff Regulations – Internal Policies

REPORTS

Number	Title
NPFC-2026-SR	Secretariat Report for 2025/2026 and Work Plan for 2026/2027
NPFC-2026-FAC08-Draft Report	Draft Report of the 8th Meeting of the Meeting of the Finance and Administration Committee

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Secretariat Report for 2025/2026 and Work Plan for 2026/2027

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Secretariat Report for 2025/2026 and Work Plan for 2026/2027

Abstract: This paper summarizes the activities of the NPFC Secretariat since COM09 (April 2025) to February 2026 and proposes a Secretariat work plan for the 2026 operational year. The paper is presented in a new format to implement the COM09 decision to allow for a more informative reporting process. In accordance with Rule 6 of the Rules of Procedure, this report highlights the Commission's intersessional activities and work programs carried out during the 2025/2026 period.

Overview: For 2025 there were a few major milestones achieved:

1. **Development and implementation of regional Transshipment Observer Program -** This involved the Secretariat working with Members to define the specific requirements, seeking expressions of interest from contractors, identifying a candidate service provider, developing the contract specifications and working with them to develop the implementation approach. It is anticipated that the first observer will be deployed as of 3 April 2026, shortly after the mandated implementation of the TOP. In its first partial year of implementation, this will be a major commitment in 2026 to integrating the various transshipment components along with VMS.
2. **Development of a prototype science database –** Making use of funds provided by the European Union, the Secretariat, working with Members and our database service provider, has developed a prototype science database to support ongoing stock assessment work. This work will be further developed in 2026 to allow for greater ease in use of the database and integration within the NPFC data warehouse. It will allow for standardized collection, management and use of data.
3. **Denial of Service attack –** the Secretariat has experienced significant issues due to a seeming malicious denial of service (DNS) attack. This has caused recipient spam filters to treat email from the Secretariat as spam as well as posing challenges to sending of email to multiple recipients (e.g., Circulars). Similar to other RFMO (e.g., WCPFC) we are further deploying a mailing system that is designed to avoid email being seen as spam using industry standard technology. This technique is already deployed on the collaboration website and will likely be further developed in 2026 as the problem of spam email seems to be an ongoing issue.

Secretariat Report for 2025/2026

I. Coordination and support to the Scientific Committee (SC)

The Secretariat coordinated scientific activities and supported the SC in the implementation of its work plan and projects as follows:

a. Implementation of the Scientific Committee rolling Five-Year Research Plan and Work Plan for each Priority Area

The Secretariat assisted SC Chairs in delivering the tasks from SC09 to SC's subsidiary groups and tracking progress in addressing them. The Secretariat also assisted in organizing intersessional work to respond to COM09 taskings.

b. Implementation of the scientific projects conducted in 2025/2026

SC09 identified 12 scientific projects for 2025. Note that there is suggestion from SC10 that these be considered as core work and not be seen as individual projects. The Secretariat provided administrative and logistical support for the projects, coordinated selection and/or extension of invited experts.

c. Organizing informal virtual meetings to facilitate intersessional work and providing rapporteur services

Intersessional work plays an important role for facilitating SC work. In 2025, the SC and its SSCs maintained seven small working groups (SWG) to conduct specific technical analyses as directed by the SC workplan. These SWGs held 18 informal meetings coordinated by the Secretariat.

d. Organizing formal meetings of SC, SSCs and TWGs to finalize outputs, formalize recommendations and develop scientific advice

In 2025, the SC had four standing subsidiary groups: SSC BF-ME, SSC PS, SSC NFS and TWG CMSA. They held 7 formal meetings, including 4 hybrid and 3 virtual meetings. In 2026 it is anticipated that an additional SSC will be created and this will create scheduling, budgetary and workload pressures for Members and the Secretariat.

e. Providing infrastructure services for data collection, sharing and dissemination

In 2025, the most important development in this area of work was creation of a new database for scientific data. The European Union (EU) provided a voluntary contribution that supported the SWG Data in the development of the database. The Secretariat coordinated integration of the new database into the NPFC data management system, tracked progress and provided a report on the implementation of the project to the EU. The Secretariat also managed data shared by Members and updated data inventories. The Secretariat compiled catch and effort statistics, updated summary footprints and made them available to Members on the website. The Secretariat assisted SWG Observer

Program in identifying science related data gaps which can be fulfilled by a regional observer program.

f. Liaising with TCC on issues of common interest

The Secretariat presented to TCC08 on the matters of common interest, in particular SC proposed revisions to CMMs on bottom fisheries and marine ecosystems and responses from SC to the TCC questions on an observer program. The Secretariat coordinated standardization of FAO 3-alpha species codes and vessel type nomenclature across SC and TCC databases to ensure data integrity of the NPFC data management system.

g. Secretariat initiatives

The Secretariat, in consultation with SC Chairs, came up with several initiatives to improve efficiency and cost-effectiveness of the SC work.

Streamlined SC workflow: In response to the substantial increase of the SC workload and growing budgetary pressure, the Secretariat reviewed SC structure and workflow that have been developed over the past ten years, identified potential issues and proposed improvements to SC workflow for consideration by Members. SC10 reviewed the proposal, made amendments and endorsed the streamlined SC workflow.

Revised SC SWG Guidelines: In relation to the changes in the SC workflow, the Secretariat proposed revisions to the Guidelines for Scientific Committee's Small Working Groups. SC10 reviewed and endorsed the revised Guidelines.

SC meeting report format: Following up with feedback from SC Members, the Secretariat improved the readability of SC reports including adding a table of contents, re-organizing the report text and removing some annexes that are now available on the NPFC website.

New meeting schedule: The Secretariat developed options for a new meeting schedule of science meetings with the goal to reduce the time lag between data used in stock assessments and management actions in place. As a result, SC10 recommended to COM to move SC stock assessment meetings from December to January and hold data preparation meetings for PS and CM at the end of the year.

Scientific Activities and Projects: In consultation with the Chairs of SC and FAC, the Secretariat revised the format of scientific projects that SC annually submits to COM for endorsement. The new format separates core scientific activities (i.e. assessments of priority stocks and VMEs) from other projects.

II. Coordination and support to the joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS)

The Secretariat supported the SWG MSE PS by coordinating its meeting schedule, organizing its meetings, posting meeting documents and formatting and circulating meeting reports. The Secretariat also assisted Members in selecting a new invited expert for the SWG MSE PS, arranging a contract with the selected expert and paying a consultancy fee. It is anticipated that

the activity level in 2026 will be increased, including potentially 2 hybrid meetings prior to COM11.

III. Coordination and support to the Technical and Compliance Committee (TCC)

The Secretariat coordinates compliance activities of the Commission including:

a. *Support to TCC SWGs*: The Secretariat provided support to three TCC small working groups, organizing 15 online meetings throughout the intersession. Following are some of the areas in which the Secretariat compliance team (Compliance manager and Secondee) contributed to deliverables to support the TCC and improve the compliance monitoring program in NPFC.

b. *Transshipment Observer Program*: The contract for the provision of observer services on carrier vessels operating in the Convention Area has been finalized and will take effect in April 2026. Following the signing of the contract on 2 December 2025, ongoing coordination with the Observer Service Provider supported the development of training materials, procurement of necessary equipment, and organization of training sessions to prepare 40 observers for deployment in April. In parallel, work continues with the NPFC web and database service provider to ensure that all systems are ready to integrate observer reports seamlessly into our data infrastructure.

c. *Transshipment API: I*n 2025, an application programming interface (API) data-transfer process was finalized to enable automated transmission of transshipment reports from a Member's server to the NPFC transshipment database. The Secretariat played a coordinating and testing role throughout the project, working with the database service provider and the Member to facilitate the implementation of the system, which was completed in August. This approach has shifted the transshipment reporting program from a situation in 2023 where approximately 40,0000 report forms were being emailed to the Secretariat in PDF format for manual entry to today when 98% of forms are being automatically transferred via this API, significantly reducing administrative workload and improving data accuracy and timeliness.

d. *MCS Program:* The Secretariat provides support to Members conducting MCS activities in the Convention Area in a number of ways, including organizing access to VMS data for surveillance missions, maintaining the inspection vessel registry, processing reports and tracking responses and correspondence. In 2025 a new page was added to the secure website for Members to allow Members to input results when potential non-compliance is detected through aerial surveillance (**as directed by TCC08**). These events are visualized on an interactive map and provided in a tabulated list, with full data export capabilities (CSV) for Member analysis. In 2025, the Secretariat also hosted an online HSBI workshop with Members with an inspection presence to review technical issues with the HSBI Events page and inform future updates.

e. *Vessel Registry: I*n 2025, several significant anomalies were identified in the vessel registry that were affecting the accuracy of data extraction and analysis. In response, a project has been initiated to determine the root causes of these anomalies and to develop solutions to restore the integrity and reliability of the registry data.
f. *Port State Measures:* The Secretariat has been supporting Members in making an informed decision on the implementation method for a potential CMM by researching existing electronic data-reporting and management systems, including those that could be adapted for NPFC use. This analysis will continue in anticipation of ongoing discussions in the Commission regarding possible approaches.

IV. Data management and security and Information technology

The NPFC Data Management System (DMS) supports the storage and analysis of scientific and compliance data to facilitate the Commission's decision-making process. The NPFC relational database is designed to provide a secure, user-friendly, accessible, and reliable platform for compiling information to meet the Commission's evolving needs. This section highlights the updates made to the DMS by the Secretariat working with Members since the COM09.

During the 2025–2026 period, significant progress in data management has occurred by releasing and upgrading various online systems. The key updates are as follows:

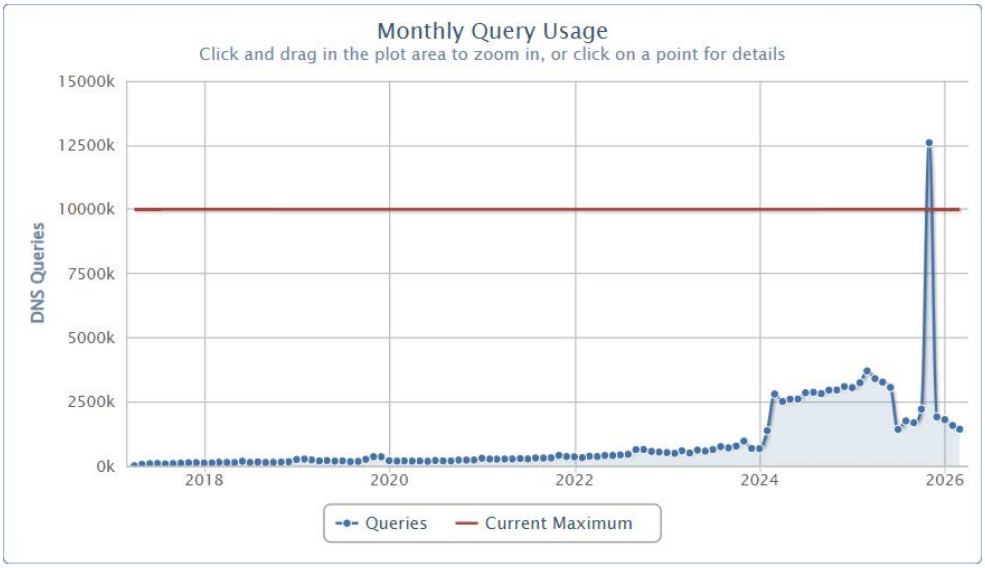
a. *Website Updates:* Regular maintenance and updates are made to the NPFC website. These efforts aim to enhance public transparency and ensure Members have seamless access to the essential digital tools required for Commission operations.
b. *Member Account Management*: The Secretariat has updated the NPFC Contact List interface by integrating it with the upgraded Member Account Management System. This update introduces enhanced search filters and a self-service administrative environment, enabling Group Administrators to manage and update user roles within their respective groups directly. The Secretariat remains committed to further optimization and welcomes Member feedback to guide future enhancements.
c. *Member Reporting Dashboard:* The Secretariat has recently launched an NPFC Reporting Dashboard to streamline Members' submission procedure and tracking records. The dashboard displays tailored requirements for each Member, highlighting pending requirements and confirming completed ones with specific dates. This provides Members with real-time visibility into their reporting status and outstanding obligations. The dashboard can also be configured to track other obligations triggered by specific events, such as VMS data deletion following completion of MCS activities in the Convention Area.

d. *Annual Reporting System:* The Secretariat successfully received annual reports from most Members through the e-Annual Reporting System. To ensure full participation, the Secretariat provided tailored technical guidance and training to Members, facilitating their successful submission. Moving forward, the Secretariat will continuously update the system to align with newly adopted Conservation and Management Measures (CMMs) and develop the Implementation Questionnaires as a web-based tool as well.

e. *Transition to Microsoft 365* - With the Secretariat's successful transition to Microsoft 365, the organization can now fully leverage the Microsoft Teams environment to enhance internal and external collaboration. This includes streamlined document management and secure real-time sharing through SharePoint Online, significantly improving operational efficiency.

f. NPFC Email Delivery and Domain Reputation Issue

- **The Issue:** Since November 2025, the Secretariat's domain (npfc.int) has faced persistent email delivery problems. Many official emails have been incorrectly flagged as spam or held in quarantine by major providers like Microsoft 365 and Google.
- **The Cause:** This situation was triggered by an unusual surge in external DNS traffic toward our domain in late 2025, coinciding with a significant increase in the sensitivity of security filters implemented by major service providers like Microsoft and Google. These automated systems temporarily adjusted the "trust rating" of our domain as a defensive measure. It is important to clarify that this is a global filtering issue and not a breach of the NPFC internal network or security.
- **Current Status & Solution:** The Secretariat has updated the domain's security authentication protocols (SPF and DMARC) to the latest industry standards. Additionally, Members' domains have been added to our Tenant Allow List to ensure reliable communication. The Secretariat will continue to monitor delivery rates and coordinate with major service providers to maintain a high trust rating for the npfc.int domain.



V. Finance and Administration

Some aspects to highlight are the ongoing implementation of effective oversight of the financial resources of the Commission, providing administrative support through engaged staff, and coordinating corporate activities such as communication to Members via Circulars, and collating Member perspectives such as for the NPFC Performance Review.

Provision of financial services

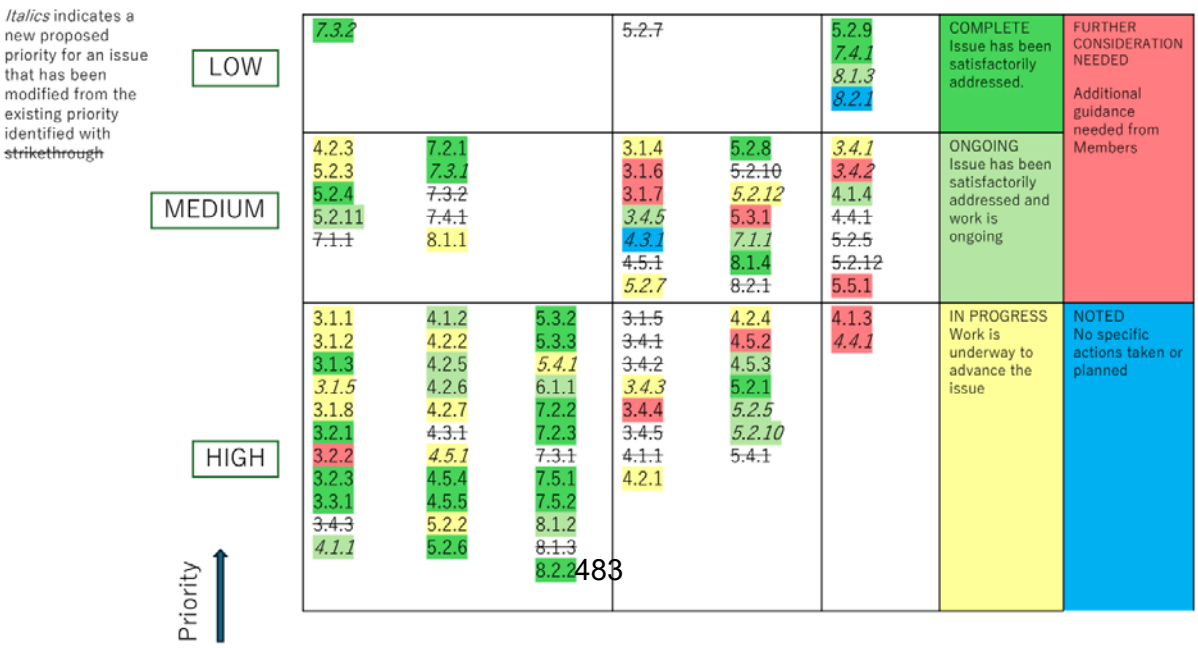
a. The Secretariat continues to develop its ability to manage the financial resources using professional accounting software (QuickBooks). All funds received are tracked and managed in separate funds depending on their purpose. The most significant update in 2025 was the development and implementation of the Transshipment Observer Program and its related funding considerations. Currently all of these funds are held in and expended in USD.

b. Time was spent working with the FAC Chair on range of FAC related issues including the FAC Chair's process for staff pay, development of options related to the Working Capital Fund, and consideration of updates to the Financial Regulations.

Provision of administrative services

a. An ongoing and expanding activity is supporting the range of hybrid meetings that are occurring. As well, the number of virtual meetings is also increasing.

b. The Secretariat integrated data from Members into a spreadsheet for the NPFC performance review and this is attached as an excel spreadsheet. During this iterative process with Members, a heat map was developed to provide an overview. Details are provided in NPFC-2026-COM10-IP09. Some areas for ongoing consideration are identified.



Management of human resources

a. The contract for the Data Coordinator was renewed.
b. Planning was undertaken to repatriate the current Compliance Manager to their home country and a process was undertaken to recruit a new Compliance Manager. This individual will start in June 2026 and overlap for two weeks with the incumbent.

VI. Cooperation and outreach

The Secretariat currently liaises with other organizations including RFMOs by attending their meetings for information sharing and for developing other joint or reciprocal activities of mutual interest as well as specific outreach:

a. Outreach was undertaken throughout the year with the IATTC to develop draft language for an MOU based on direction from COM09. Revised text is provided to COM10.
b. In May 2025 the Executive Secretary attended the NPAFC Annual Meeting, the open component of the Committee on Enforcement (ENFO) and the Committee on Scientific Research and Statistics. Meetings with the Secretariat allowed for discussion of joint interests including the MOC and joint workplan.
c. In June 2025 the Secretariat hosted a joint meeting of the Tuna Compliance Network and the Pan Pacific Fisheries Compliance Network (TCN/PPFCN) at the NPFC office in Tokyo. This meeting brought together the compliance managers from around the Pacific and all the tuna RFMOs to discuss areas of common concern and identified a number of areas for potential collaboration, such as data sharing arrangements for transshipments, development of electronic monitoring standards, and development of the Combined Vessel Registry.
d. In November the Secretariat (ES and SM) attended the PICES annual meeting in Yokohama, Japan in November 2025, presented an update on NPFC-PICES joint activities at the Science Board meeting and took part in business meetings of the Fishery Science Committee, Biological Oceanography Committee and Governing Council in accordance with the NPFC-PICES Framework for Enhanced Scientific Collaboration in the North Pacific.
e. The Secretariat continued to cooperate with the FAO’s Deep-sea fisheries project, including hosting a joint NPFC-FAO workshop on science-based management options available for operationalizing the precautionary approach (Nagoya, Japan), participating in the FAO workshop on Ecosystem Approach to Fisheries

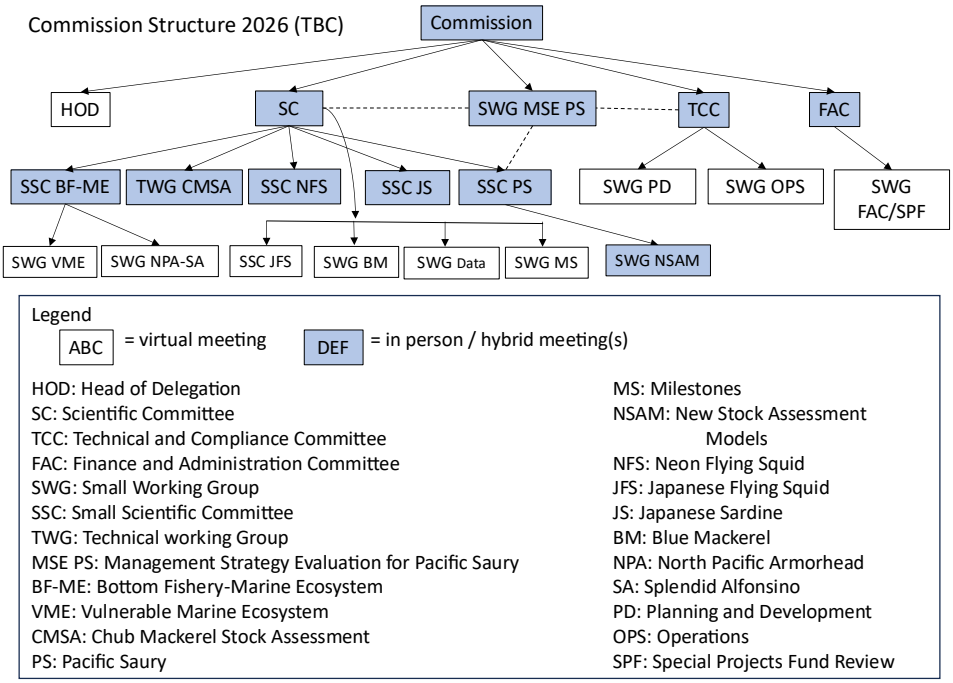
Management, contributing to data-limited stock assessments methods development, reviewing the report on climate change impacts on BF stocks and developing a shark ID guide.

f. In March 2026 the FAO Deep Sea Fisheries Project Steering Committee met at the Secretariat office. This meeting helped shape the final stage of the project and also identified approaches to consider for a potential next phase. NPFC is one of the partner organizations with commitment of an in-kind contribution to the project
g. The Secretariat provided updated fisheries inventories and marine resources inventories to the FAO FIRMS in accordance with the Partnership Arrangement between NPFC and FIRMS.
h. The Secretariat liaised with Basin-Scale Events & Coastal Impacts (BECI) to support the implementation of the NPFC Resolution on Climate Change.
i. A draft Memorandum of Cooperation is being reviewed by the Tokyo University of Marine Science and Technology to support exchanges with staff and students as well as administrative engagement.
j. Regular communication occurs with comparable RFMO to exchange best practices (e.g., WCPFC, SPRFMO).

Secretariat Work Plan for 2026/2027

The function of the NPFC Secretariat is the provision of services to, and representation of, the Commission as determined by its Members in accordance with the Convention and relevant rules and regulations. As identified by the Secretariat and shared with Members, six key areas highlighted below provide the Secretariat and the Commission guidance with regard to the Commission's activities in 2026/2027 operational year. The structure of Commission related entities is provided in Figure 1.

Figure 1: Commission related entities supported by the Secretariat



Some key aspects for 2026 will carry over from 2025 as priority areas of focus on incremental activities. The implementation of the Transshipment Observer Program will coincide with the next fiscal year and the period between COM10 and COM11. This will occur as we transition to a new Compliance Manager. The development and implementation of the science database will conclude and thus should be fully operational in support of the range of stock assessment processes underway by COM11. The Secretariat will also be more engaged in the logistical arrangements for science meetings as no Member has identified an interest in hosting SC11. This requirement is also reflected in COM10-WP11. The SWG MSE PS is also expected to be more active in 2026 and draw upon Secretariat resources more significantly than in the past. The Secretariat will be supporting Members through further development of its website/database in general as well as considering means to employ artificial intelligence in the work of the Commission while

respecting confidentiality requirements. The NPFC performance review process will continue to be updated and circulated to Members periodically as outlined at COM09.

I. Coordination and support to the Scientific Committee (SC)

The Secretariat will coordinate scientific activities and support the SC in the implementation of its work plan and projects. A key aspect will be the further development of the SC database and have it more easily accessible and integrated within the NPFC data warehouse. This will benefit from an anticipated voluntary contribution from the European Union. Other areas of focus include:

a. *Implementation of the Scientific Committee rolling Five-Year Research Plan and Work Plan for each Priority Area*
    - *Stock assessments for target fisheries and bycatch species*
    - *Ecosystem approach to fisheries management*
    - *Data collection, management, and security*
    - *Climate change impact*
b. *Implementation of the scientific projects to be conducted in 2026/2027*
c. *Organizing informal virtual meetings to facilitate intersessional work and providing rapporteur services*
d. *Organizing formal meetings of SC, SSCs and TWGs to finalize outputs, formalize recommendations and develop scientific advice, including optimizing SC meeting schedule*
e. *Providing infrastructure services for data collection, sharing and dissemination, including SC data call*
    - *Continuing developing SC database for scientific data, including documentation and transparency, visualization and reporting, system integration, traceability and version control and accessibility enhancements*
    - *Developing/updating data collection standards and data provision templates*
    - *Developing/updating data sharing and security policies*
f. *Conducting data analyses: NPA monitoring survey, PS weekly catch, annual catch and effort trends for NPFC priority species, etc.*
g. *Liaising with TCC on issues of common interest*
h. *Secretariat initiatives: user-friendly webpages with key documents by SC expert group, tables of activities and timelines of SC expert groups, other initiatives developed in consultation with SC Chairs*

II. Coordination and support to the joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS)

It is anticipated that the SWG MSE PS will be active in 2026 and potentially seek to have two hybrid meetings before COM11 in order to advance its work. Some expected elements are:

a. Organizing joint SC-TCC-COM SWG MSE PS meetings to develop an MSE for Pacific saury: 1-2 meetings per year
b. Assisting Members in selection, contracting and managing an invited expert
c. Supporting SWG MSE PS's intersessional activities including informal virtual meetings and liaison with SSC PS

III. Coordination and support to the Technical and Compliance Committee (TCC)

The Secretariat will continue to support the TCC by providing administrative support (agendas, meeting notes, Webex) for TCC's Small Working Groups and will advance ongoing initiatives and launch some new projects to improve compliance monitoring and reporting in 2026. Key elements include:

a. Transshipment Observer program - With the implementation of the Transshipment Observer program in April, the Secretariat will be providing support in a variety of ways, such as reviewing and processing invoices, maintaining the list of authorized observers, acting as liaison and providing advice on technical matters. The contract requires a review after the first year of operation and the Secretariat will ensure that Members are updated throughout the year on the program's progress.

b. MCS program - an ongoing project to update the NPFC website with a new "MCS" page will be completed in the coming year and should provide MCS practitioners with a more efficient and secure space to locate supporting materials.

c. Vessel Registry - the Vessel Registry project will be completed in 2026 to identify and correct outstanding issues that are impacting the integrity of the data (inconsistent use of vessel and gear codes and systemic issues that are generating multiple authorizations).

d. Port Inspection – the Secretariat will continue to support Members work on considering a CMM for port inspection including options and related costings to allow for implementation of an electronic data reporting and management system in a timely and efficient manner.

IV. Data management and security and Information Technology

The data management system supports the storing and analysis of scientific and compliance data for the Commission's decision-making process. The NPFC relational database is designed to provide a secure, user-friendly, accessible, and reliable platform for compiling information to meet the Commission's scientific and compliance needs. The database is structured to integrate all data modules within the Commission, ensuring a streamlined, efficient decision-making process for Members. In addition, enhancing the efficiency of electronic services provided by the Secretariat to Members and other stakeholders is a key priority. To this end, the Secretariat is

continuously working on database improvements and will undertake several initiatives to further develop the Commission's data management system, including:

a. *Annual Report Template - The need for changes to the annual report template has been identified by multiple Members as they struggle to complete the electronic template each year. With the introduction of the annual questionnaire in 2025—currently collected through an Excel spreadsheet—it is hoped that a joint project to update the annual reporting template and transition this questionnaire to an online reporting portal will make the entire process more efficient, user-friendly, and streamlined*
b. *The Secretariat will continue to find ways to render our email system more trustworthy and avoid being considered as spam.*
c. *The Secretariat will evaluate ways to make use of artificial intelligence in delivering projects. This assessment will take into account the need to manage confidential aspects of our work. The Secretariat plans to further advance the development of email SendGrid solution to Spam*
d. *The transition to a new Compliance Manager will allow for a review of compliance related processes but also the functioning of the data warehouse more generally.*
e. *Support to the science and compliance programs in delivering their data intensive work including ensuring maintenance and updates are made in a timely way to our data infrastructure.*

V. Finance and Administration

Ongoing implementation of effective oversight of the financial resources of the Commission, providing administrative support through engaged staff, and coordinating corporate activities such as communication to Members via Circulars, and collating Member perspectives such as for the NPFC Performance Review.

Provision of financial services

a. Maintaining effective oversight of an increasingly complex financial system with multiple funds, significant new programs (i.e., TOP) and more expansive Commission work program (e.g., additional stock assessment processes) is key and is a major focus for the ES and EA.

Provision of administrative services

a. The Secretariat will provide logistical support to the Commission and subsidiary bodies. This includes a more intensive schedule for the SSC meetings, SWG MSE PS and SC11.
b. The Secretariat will continue to track the implementation of the 2022 NPFC Performance Review using the existing approach of outreach via Circulars on a more regular basis.

Management of human resources

a. Ensuring effective repatriation of existing and transition of the new Compliance Manager will be a key activity including knowledge transfer and ensuring ongoing implementation of ongoing projects.

VI. Cooperation with other organizations

The Secretariat currently liaises with other organizations including RFMOs by attending their meetings for information sharing and for developing other joint or reciprocal activities of mutual interest. In 2025/2026, the meetings scheduled to be represented by Secretariat staff are as follows:

Meeting	Date and place	Purpose	Expected outcomes
ICES Workshop on the Development of Methodologies based on life-history traits, exploitation characteristics, and other relevant parameters for deep-sea data-limited stocks	20-24 April 2026 NPFC Secretariat office	Range of pelagic species will be considered. Secretariat is providing meeting space.	NPFC Members will attend and have ability to discuss species of interest and access range of relevant technical expertise.
33rd NPAFC Annual Meeting	11-15 May 2026 Vancouver, Canada	Secretariat to virtually attend workshops on the margins of the annual meeting of NPAFC	Facilitation of cooperation with NPAFC based on the work plan to be agreed by both Commissions to implement MOC established in 2019
FAO RSN and COFI	4-5 and 11 September 7-11 September 2026	Ability to meet with other RFMO Secretariats and discuss shared issues and priorities. Secretariat to attend and understand roles for Secretariats in supporting Members objectives.	Global recommendations and policy advice to governments, other regional fishery bodies, civil society organizations, and actors from the private sector and international community

PICES Annual meeting	November 2026, Nanaimo, Canada	Secretariat to attend annual meeting of PICES and intersessional meetings of its committees and working groups (virtually or in-person)	Enhancing scientific cooperation between NPFC and PICES as specified in the Framework for cooperation, including such key areas as Stock assessment support, VMEs and Ecosystem Approach to Fisheries.
PPFCN	31 July – 1 August, Bali	The Pan Pacific Fisheries Compliance Network (PPFCN) will meet immediately prior to the GFETW in Bali	The PPFCN was established in 2020 to promote communication and cooperation between the RFMOs that have overlapping waters in the Pacific Ocean region. The PPFCN is an informal forum to share information about MCS processes and compliance best practice.
GFETW 8	3-7 August, Bali, Indonesia	Secretariat to attend the Global Fisheries Enforcement Workshop 8 (GFETW), hosted by IMCS Network, planned for 3-7 August, 2026 in Bali.	The GFETW is a biennial workshop that brings together the global fisheries community to discuss priority and emerging MCS challenges and opportunities to exchange information and share lessons learned.

Other cooperation with organizations includes:

a. *PICES: PICES-ICES SPF Working Group, new PICES Working Group on Seamount Connectivity, guest editor for the special issue of the Canadian Journal of Fisheries and Aquatic Sciences for the PICES SPF symposium*
b. *NPAFC: discuss updates to five-year Work Plan to implement the NPAFC/NPFC Memorandum of Cooperation*
c. *BECI: following up with the developments of the Basin Scale Events and Coastal Impacts (BECI) project*

d. FAO DSF project: collaborative activities on climate change impact, data-limited stock assessment, shark ID guide, and ecosystem approach to fisheries management, hosting DSF project steering committee meeting
e. FAO FIRMS: providing stock and fisheries information in accordance with the partnership agreement
f. SPRFMO, ISC/WCPFC: participate virtually in meetings and implementation of MOUs
g. IMCS Network: continue to work with them on best practices and vessel registry – CRAVT

Further representation will be determined at TCC, FAC and the Commission Meetings.

Enhancing public awareness

The Secretariat will enhance public awareness through various means:

a. Finalize a cooperative mechanism with the Tokyo University of Marine Science and Technology (the location of the NPFC Secretariat) to allow for increased engagement (e.g., lectures and outreach, education opportunities for TUMSAT students, administrative cooperation).
b. If feasible, host small meetings in Secretariat offices with related organizations.
c. Publish the NPFC Yearbook to entail activities of the Commission for 2025.
d. Receive visitors from international organizations, local government, embassies, and universities.

Proposed budgets for 2026/2027 and 2027/2028

	Year 2026/27 FAC08 Proposed	Year 2027/28 Proposed	Year 2028/29 Estimated	Year 2029/30 Estimated
Items	Cost (JPY)	Cost (JPY)	Cost (JPY)	Cost (JPY)
1. PERSONNEL COSTS				
1.1 Executive Secretary	21,882,510	22,259,466	22,927,250	23,615,068
1.2 Professional Category CM	15,796,927	15,373,330	15,834,530	16,309,566
1.3 Professional Category SM	17,585,375	17,811,375	18,345,716	18,896,087
1.4 General Services Category EA	8,790,020	9,016,020	9,242,020	9,468,020
1.5 General Services Category DC	8,322,400	8,548,400	8,774,400	9,000,400
1.6 Temporary Services		0	0	
1.7 (a) Social Security & Insurance	2,310,000	2,425,500	2,546,775	2,674,114
1.7 (b) Pension Costs	11,146,094	11,243,323	11,569,083	11,902,528
1.8 Overtime	1,000,000	1,100,000	1,100,000	1,200,000
1.9 (a) Staff Allowances - Home Leave	1,500,000	1,500,000	2,000,000	1,500,000
1.9 (b) Staff Allowances – Relocation		0	0	
1.9 (C) Staff Allowances – Repatriation	3,000,000	3,000,000	3,000,000	3,000,000
1.9 (d) Staff Allowances - Accommodation Subsidy	9,300,000	9,100,000	9,282,000	9,467,640
1.10 Professional Development / Training	1,200,000	1,200,000	1,200,000	1,200,000
1.11 Education Fee	1,500,000	1,500,000	1,500,000	1,500,000
1.12 Separation Allowances		0	0	
TOTAL PERSONNEL	103,333,326	104,077,414	107,321,774	109,733,422
2. OTHER SERVICE COSTS				
2.1 Office Equipment & Furniture	1,000,000	1,050,000	1,100,000	1,150,000
2.2 Office Supplies	900,000	1,000,000	1,050,000	1,100,000
2.3 Rentals		0	0	
2.4 Communications	1,300,000	1,300,000	1,300,000	1,300,000
2.5 Printing	400,000	400,000	420,000	420,000
2.6 Duty Travel	4,000,000	4,000,000	4,000,000	4,000,000
2.7 Auditing and Bank fees	1,800,000	1,800,000	1,800,000	1,800,000
2.8 Contractual Services	4,000,000	4,000,000	4,000,000	4,000,000
2.9 Database Management	15,000,000	15,300,000	15,606,000	15,918,120
2.10 MCS Costs	16,800,000	16,800,000	16,800,000	17,640,000
2.11a Meeting Costs COM/FAC/TCC	20,000,000	20,000,000	20,000,000	20,000,000
2.11b Meeting Costs - SWG MSE PS	6,560,000	6,560,000	1,000,000	1,000,000
2.12 Science Support	26,292,000	26,817,840	27,354,197	27,901,281
2.13 Staff Repatriation and Recruitment	8,500,000	-	-	-
2.14 To / From Working Capital Fund COM	-20,000,000	-20,000,000	-15,000,000	-10,000,000
2.14 To / From Working Capital Fund SC mtgs	-2,000,000	-	-	-
2.14 bis To/From Special Project Fund SSC BFME	-2,477,000	-	-	-
2.14 To / From Working Capital Fund Japan				
2.14 To / From VCF Panama MSE PS	-6,560,000	-6,560,000	-	-
2.14 bis To/From Repatriation Fund - CM relocation	-8,500,000			
2.15 Representation Expenses	250,000	250,000	250,000	250,000
2.16 Miscellaneous	500,000	500,000	500,000	500,000
TOTAL OTHER SERVICE COSTS	67,765,000	73,217,840	80,180,197	86,979,401
TOTAL	**171,098,326**	**177,295,254**	**187,501,971**	**196,712,823**

Assessed Contributions for 2026/2027 and 2027/2028

Members' Annual contributions for 2026/2027

Member\Rule	a)	b)	c)	Fixed Contribution	Total	%
Canada	5,560,552	0	2,426,932		7,987,483	4.7
China	5,560,552	59,116,040	592,543		65,269,134	38.1
EU	5,560,552	0	1,925,451		7,486,003	4.4
Korea	5,560,552	648,619	1,612,817		7,821,988	4.6
Russia	5,560,552	1,620,955	661,854		7,843,361	4.6
Chinese Taipei	5,560,552	8,288,124	1,515,841		15,364,516	9.0
USA	5,560,552	0	3,833,913		9,394,464	5.5
Vanuatu	5,560,552	230,342	140,482		5,931,376	3.5
Japan				44,000,000	44,000,000	25.7
Total	44,484,414	69,904,079	12,709,833	44,000,000	171,098,326	100.0

a) 35 % of the budget shall be divided equally among members of the Commission except Japan.
b) 55 % of the budget shall be divided proportionally among members of the Commission based on the three-year average, 2022-2024, of the total catches by weight in the Convention Area of the species covered by the Convention; and
c) 10 % of the budget shall be divided proportionally among members of the Commission based on each member's Gross Domestic Product (GDP) per capita in 2024.

Note per Rules of Procedure 10.5: Panama as CNCP: 5,742,875

Members' Annual contributions for 2027/2028 using the 2-year average

Member\Rule	a)	b)	c)	Fixed Contribution	Total	%
Canada	5,831,667	0	2,545,262		8,376,929	4.7
China	5,831,667	59,905,235	621,434		66,358,336	37.4
EU	5,831,667	0	2,019,330		7,850,998	4.4
Korea	5,831,667	751,298	1,691,453		8,274,418	4.7
Russia	5,831,667	2,592,824	694,124		9,118,616	5.1
Chinese Taipei	5,831,667	9,771,515	1,589,749		17,192,931	9.7
USA	5,831,667	0	4,020,843		9,852,510	5.6
Vanuatu	5,831,667	291,518	147,332		6,270,516	3.5
Japan				44,000,000	44,000,000	24.8
Total	46,653,339	73,312,389	13,329,525	44,000,000	177,295,254	100.0

a) 35 % of the budget shall be divided equally among members of the Commission except Japan.
b) 55 % of the budget shall be divided proportionally among members of the Commission based on the two-year average, 2023-2024, of the total catches by weight in the Convention Area of the species covered by the Convention; and
c) 10 % of the budget shall be divided proportionally among members of the Commission based on each member's Gross Domestic Product (GDP) per capita in 2024. Members' Contributions for 2027/2028 shall be adjusted in early 2027 according to 2025 catch reports and GDP.

Note per Rules of Procedure 10.5: Panama as CNCP: 6,022,881

North Pacific Fisheries Commission

CMM 2026-07

(Entered into forced 1 June 2026)

CONSERVATION AND MANAGEMENT MEASURE FOR CHUB MACKEREL

The North Pacific Fisheries Commission (NPFC),

Recognizing that outcomes of the small ad hoc workshop for the scientific analysis of chub mackerel stock were presented to the Scientific Committee (SC) in April 2017 and the SC recommended to establish the Technical Working Group on Chub Mackerel Stock Assessment (TWG CMSA);

Noting that CMM 2016-07 states the SC will complete the stock assessment of chub mackerel as soon as practicable, even if such assessment is provisional, and provide advice and recommendations to the Commission in accordance with Article 10, paragraph 4(b) of the Convention;

Reaffirming the General Principles provided in Article 3 of the Convention, in particular, paragraph (h) stipulating that any expansion of fishing effort does not proceed without prior assessment of the impacts of those fishing activities on the long-term sustainability of fisheries resources;

Noting paragraph 1(a) of Article 7 of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 December 1995 (hereinafter, "1995 Agreement"), stipulating that the relevant coastal States and the States whose nationals fish for straddling fish stocks in the adjacent high seas area shall seek to agree upon the measures necessary for the conservation of these stocks in the adjacent high seas area;

Recognizing paragraph 2(a) of Article 7 of the 1995 Agreement stipulating that the conservation and management measures adopted and applied in accordance with article 61 of the United Nations Convention on the Law of the Sea in respect of the same stocks by coastal States within areas under national jurisdiction and ensure that measures established in respect of such stocks for the high seas do not undermine the effectiveness of such measures;

Reaffirming paragraph (i) of Article 3 of the Convention, stipulating in accordance with Article 7 of the 1995 Agreement, that conservation and management measures established for straddling fish stocks on the high seas and those adopted for areas under national jurisdiction are compatible in order to ensure conservation and management of these fisheries resources in their entirety;

Recalling that concern was expressed on an adverse impact on the stock of chub mackerel given the rapid increase in vessels that appear to be fishing for chub mackerel in the Convention Area, as articulated in paragraphs 9 and 10 of Report of the 1st Meeting of the Technical and Compliance Committee;

Noting that the NPFC Catch/Effort statistics shows a significant fall in chub mackerel catch in 2022, 2023, 2024 and 2025 from those in previous years;

Recognizing that the 10th meeting of the Scientific Committee in December 2025 recommended the reduction of fishing mortality to recover SSB to the interim reference levels, 25th percentile, 50th percentile, and 70th percentile of estimated historical SSB, based on the stock assessment of Chub mackerel conducted by the Technical Working Group on Chub Mackerel Stock Assessment and the advice of the Scientific Committee of NPFC;

Recognizing that chub mackerel is often harvested mixed with blue mackerel in fishing operations in the Convention Area.

Further recognizing the urgent need to take responsible actions to prevent further degradation and to ensure recovery of the chub mackerel stock:

Adopts the following conservation and management measure in accordance with Article 7 of the Convention:

1. Members of the Commission and Cooperating non-Contracting Parties (CNCPs) with substantial harvest of chub mackerel in the Convention Area shall refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for chub mackerel from the historical existing level.

2. Members of the Commission and CNCPs without substantial harvest of chub mackerel in the Convention Area are encouraged to refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for chub mackerel from the historical existing level.

3. As a provisional measure, Members shall take necessary measures to ensure that the fishing activities for chub mackerel in the Convention Area shall be undertaken in accordance with the following provisions:

   (a) The annual total allowable catch of chub mackerel and blue mackerel in the Convention Area, excluding the amount in paragraph 13, shall be set at 47,940 tonnes for 2026 and at 42,300 tonnes for 2027.

   (b) Of this annual total allowable catch, the catch for trawlers shall not exceed 5,703 tonnes for 2026 and 5,032 tonnes for 2027.

   (c) Of this annual total allowable catch, the catch for purse seiners shall not exceed 42,237 tonnes for 2026 and 37,268 tonnes for 2027.

   (d) An unused portion of the catch limit in subparagraphs (b) and (c) for 2026 may be carried over to the catch limit for 2027, up to 10% of the original catch limit for 2026.

   (e) An unused portion of the original catch limit in a single year for the EU in paragraph 13 may be transferred to the catch limit in that year in subparagraphs (b) and (c) of this paragraph. For this, the EU shall notify the Executive Secretary 30 days in advance of the intended transfer, specifying the tonnage and effective date of the transfer. The Executive Secretary shall promptly notify Members and CNCPs of the transfer. This transferred portion may not be used for carry over in subparagraph (d) of this paragraph.

   (f) China shall not authorize more than 3 trawlers to conduct fishing operations at the same time.

(g) The EU shall not authorize more than 1 trawler to conduct fishing operations at the same time.

4. Members of the Commission participating in chub mackerel fisheries in areas under national jurisdiction adjacent to the Convention Area are requested to take compatible measures in paragraph 1 and 3. Such Members[1] may divert part of their catch limit for areas under their jurisdiction to their own catch of chub mackerel in the Convention Area by vessels entitled to fly their flags and authorized to fish for chub mackerel provided that: (i) the Member has established a catch limit for chub mackerel in its jurisdiction; (ii) the Member has notified promptly the Executive Secretary of the starting date of the diversion and annually reported the catch limit that they diverted in accordance with this paragraph in their Annual Report; and (iii) the total catch of the Member in the Convention Area and the areas under their jurisdiction adjacent to the Convention Area will not exceed the Member's total catch limit for its jurisdiction.

5. Members of the Commission and CNCPs shall prohibit fishing vessels over 10,000 Gross Tonnage that are flying their flag and authorized to fish for chub mackerel, from fishing in the Convention Area.

6. Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag that fish for chub mackerel in the Convention Area record their catches, including incidental catches of other NPFC species, and any discards and report them to the relevant flag state authorities in accordance with their national data recording and reporting requirements.

7. Members and CNCPs shall take necessary measures to ensure that their fishing vessels that catch chub mackerel using trawl gear transmit electronically to the Secretariat via its FMC, and keep on board the vessel and available for inspection, an accurate and unaltered original copy of the following report in accordance with the content prescribed in Annex 1:

   a. catch on entry (COE): quantity of all catch and bycatch of species currently managed by the NPFC, as well as bycatch of shark and salmon, on board or contained by a vessel's fishing gear, by species FAO code upon entry into the Convention Area, transmitted before or at the time of the vessel's entry.

[1] Paragraph 4 applies to Russia and Japan.

8. Without prejudice to its responsibility as a flag Member, a Member or CNCP may require its fishing vessels to transmit COE directly to the Secretariat, in accordance with paragraph 7.

9. To comply with the provisional measure stipulated in paragraph 3, Members of the Commission shall report to the Executive Secretary, in electronic format, monthly catches of chub mackerel and blue mackerel in the Convention Area by fishing vessels flying their flags, as follows:
   a) For trawlers: By the 10th of the next month, until the total accumulated catch by Members in a year reaches 60% of the catch limit set out in paragraph 3 (b). After the total accumulated catch by Members reaches 60% of the annual catch limit set out in paragraph 3 (b), Members of the Commission shall report to the Executive Secretary, in electronic format, weekly catches of chub mackerel and blue mackerel in the Convention Area by trawlers flying their flags, by Wednesday of the next week.
   b) For purse seiners: By the 10th of the next month, until the total accumulated catch by Members in a year reaches 60% of the catch limit set out in paragraph 3 (c). After the total accumulated catch by Members reaches 60% of the annual catch limit set out in paragraph 3 (c), Members of the Commission shall report to the Executive Secretary, in electronic format, weekly catches of chub mackerel and blue mackerel in the Convention Area by purse seiners flying their flags, by Wednesday of the next week.

10. The Executive Secretary shall make publicly available the compiled catch of chub mackerel and blue mackerel in the Convention Area on the Commission's website, as well as each Member's catch of chub mackerel and blue mackerel in the Convention Area, on the Member's page of Commission website without delay.

11. In the event that the total accumulated catch by Members reaches 95% of the annual catch limit set out in paragraph 3 (b) or (c), the Executive Secretary shall notify Members of that fact without delay, and each Member participating in the chub mackerel fishery in the Convention Area shall close the fishery for its flagged vessels within 2 days from the above notification by the Secretariat until the end of the year.

12. Development of new fishing activity for the chub mackerel fishery in the Convention Area by Members of the Commission without documented historical catch for chub mackerel in the Convention Area shall be determined in accordance with relevant provisions, including but not

limited to, as appropriate, Article 3, paragraph (h) and Article 7, subparagraphs 1(g) and (h) of the Convention.

13. In accordance with paragraph 12, and in addition to the fishing opportunities under paragraph 3 (b), once the annual total allowable catch under 3 (b) has been exhausted the EU shall be entitled to fish an additional 3,060 tonnes of chub mackerel and blue mackerel for 2026 and 2,700 tonnes of them for 2027, without prejudice to future discussions on chub mackerel and blue mackerel allocation in the Convention Area. In case the EU does not harvest any chub mackerel and blue mackerel in the Convention Area by the end of May in 2026, 2,500 tonnes shall be carried over to the catch limit in this paragraph for 2026. An unused portion of the catch limit in this paragraph for 2026 may be carried over to the catch limit for 2027, up to 10% of the original catch limit for 2026.

14. Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag operating in the Convention Area to fish chub mackerel are to be equipped with an operational vessel monitoring system that is activated at all times.

15. Members of the Commission and CNCPs shall provide their data on chub mackerel and blue mackerel separated by the Convention Area and the areas under national jurisdiction adjacent to the Convention Area in accordance with the data requirements adopted by the Commission in the Annual Report every year. The Commission shall review such information at the annual meeting every year.

16. Members of the Commission and CNCPs shall cooperate to take necessary measures including sharing information, in order to accurately understand the situation and eliminate IUU fishing for chub mackerel.

17. After the chub mackerel stock assessment has been completed, the provisions in Paragraph 1, 3 and 13 shall be reviewed by the Commission and those provisions shall not be a precedent to hinder those Members who are not harvesting substantial amounts of chub mackerel in the Convention Area to develop their own chub mackerel fisheries in the Convention Area, noting the Commission shall regularly review chub mackerel harvests in the Convention Area by all

Members.

18. The Commission tasks the TWG CMSA and SC to annually update their advice in accordance with Annex T of NPFC-2025-COM09-Final Report.

19. This management measure enters into force on 1 June 2026. The Commission shall review and revise, as appropriate, this CMM based on the advice and recommendations from the SC, but no later than at the 12th Commission meeting.

20. This CMM is an amendment of the NPFC CMM 2025-07.

ANNEX 1

Minimum standards for Catch on Entry (COE) Report

#	Fishing Information	Format / Notes	Details
1	Date of entry into Convention Area	YYYY-MM-DD	
2	Time of entry into the Convention Area	HH:MM UTC (24 hour clock)	
3	Area where reported catch was harvested	National waters/other jurisdiction	

4- List all species, including bycatch, onboard at time of entry into the Convention Area					
FAO Code					Total weight (kg)

North Pacific Fisheries Commission

CMM 2026-08

(Entered into force 1 May 2026)

CONSERVATION AND MANAGEMENT MEASURE FOR PACIFIC SAURY

The North Pacific Fisheries Commission (NPFC),

Reaffirming the General Principles, Article 3 of the Convention, in particular, paragraph (b) stipulating that measures are adopted, based on the best scientific information available, to ensure that fisheries resources are maintained at or restored to levels capable of producing maximum sustainable yield, and paragraph (f) stipulating that preventing or eliminating overfishing and excess fishing capacity and ensuring that levels of fishing effort or harvest levels are based on the best scientific information available and do not exceed those commensurate with the sustainable use of the fisheries resources;

Recalling Conservation and Management Measure 2025-08 for Pacific saury, including the interim harvest control rule set out in Annex I;

Taking into account the work of the Scientific Committee on Pacific saury, including the outcomes of the 10th Meeting of the Scientific Committee;

Noting that, while the Scientific Committee at its 10th meeting could not reach consensus on the treatment of the Pacific saury stock assessment results, it nevertheless provided, for the purposes of CMM 2025-08, a calculated annual catch level to the Commission as described in paragraphs 84 to 86 of the SC10 Final Report.

Recognizing the progress made in the Joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury toward the development of a management procedure for the stock;

Recognizing further the need to maintain an effective, predictable and practicable interim management framework for Pacific saury pending further development of the management procedure and related scientific work;

Mindful of the importance of ensuring the conservation and sustainable use of the Pacific saury stock, while facilitating the implementation of this measure by Members participating in the fishery;

Adopts the following conservation and management measure in accordance with Article 7 of the Convention:

EFFORT MANAGEMENT

1. Members of the Commission, not described under paragraph 2, and that are currently fishing for Pacific saury shall refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for Pacific saury from the historical existing level.

2. Members fishing for Pacific saury in areas of their jurisdiction that are adjacent to the Convention Area shall refrain from rapid expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for Pacific saury from the historical existing level.[1]

3. Members of the Commission participating in Pacific saury fisheries in areas under national jurisdiction adjacent to the Convention Area are, in accordance with relevant provisions of Article 3 of the Convention, requested to take compatible measures in paragraph 2.

4. Each Member of the Commission participating in Pacific saury fisheries shall implement either of the following measures:

   a) to reduce the number of fishing vessels flying its flag and fishing for Pacific saury in the Convention Area by 10% from the number of its fishing vessels that fished for Pacific saury in the Convention Area in 2018; or

   b) to prohibit fishing vessels flying its flag from engaging in fishing for Pacific saury in the Convention Area outside its designated fishing period of no longer than 180 consecutive days each year.

   Each Member shall notify the Secretariat of the measure it implements and its designated fishing period in case of b. above no later than May 1st each year. The Secretariat shall summarize

[1] Paragraph 2 applies to Russia and Japan

the notifications from Members and make it available to all Members and CNCPs. This Paragraph does not apply to Members whose fishing vessels that fished for Pacific saury in the Convention Area in 2018 were less than five (5).

CATCH MANAGEMENT

5. The interim harvest control rule (HCR) for Pacific saury is as attached in Annex I.

6. The interim HCR is applied until the establishment of a management procedure to be recommended through an MSE process by the Joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS), or unless otherwise decided by the Commission. The SWG MSE PS and the SC shall review the performance of the interim HCR every year based on the best scientific information available, particularly the latest stock assessment results, and provide a recommendation for the Commission, as necessary.

7. For 2026, Members of the Commission agreed that the annual catch of Pacific saury in the entire area (the Convention Area and the areas under their jurisdiction adjacent to the Convention Area) should not exceed 192,375 metric tons.

8. For 2027, the Commission agreed that the annual catch of Pacific saury in the entire area (the Convention Area and the areas under their jurisdiction adjacent to the Convention Area) will be based on the interim HCR in Annex I and should not exceed 90% of the 2026 level unless the Commission decides otherwise based on the best available scientific information or unless otherwise provided for under the interim HCR.

9. In 2026, the annual total allowable catch (TAC) of Pacific saury in the Convention Area shall be limited to 60% of the annual catch limit in the entire area in paragraph 7[2].

10. For 2027, the annual total allowable catch (TAC) of Pacific saury in the Convention Area shall be limited to 60% of the annual catch limit according to paragraph 8.

11. As a provisional measure until the Commission decides allocation of the TAC, each Member of

[2] 115,425 metric tons in 2026

the Commission shall reduce the annual total catch of Pacific saury by the fishing vessels entitled to fly its flag in 2026 by 57.8% from its reported catch in 2018 (Annex II), and shall take necessary measures so that the total catch in the Convention Area will not exceed the TAC set out in paragraph 9. Members of the Commission and CNCPs shall ensure that discards of Pacific saury count against their catch limits.

12. To comply with the TAC, the following measures shall be in place in 2026:
    a) Members of the Commission shall report to the Executive Secretary, in the electronic format, weekly catches of Pacific saury in the Convention Area by fishing vessels flying their flags by Wednesday of the next week. The Executive Secretary shall make publicly available the compiled catch of Pacific saury in the Convention Area on the Commission's website as well as share each Member's catch of Pacific saury in the Convention Area on the Member's page of Commission's website without delay; and
    b) In the event that the total reported catch of all Members reaches 90% of the TAC set out in paragraph 9, the Executive Secretary shall notify all Members without delay. Those Members with more than 10,000 mt of catch limits shall close the fishery within 72 hours from the receipt of the notification. Those Members with less than 10,000 mt of catch limits may continue operations, but their total catch shall not exceed 90% of their catch limits.
    c) If any Members commit to reduce its annual total catch of Pacific Saury by fishing vessels entitled to fly its flag in 2026 by 67.22% from its reported catch in 2018, it shall be exempted from the requirements stipulated in Paragraph 12 (b). In case of that, the TAC for the rest of the members referred to in paragraph 12 (b) shall be 115,425 metric tons minus the catch limit of member(s) that make such commitment. Such commitment shall be submitted to the Secretariat no later than May 1st, 2026, and be circulated to all Members, as well as TAC applied to those Members subject to paragraph 12 (c).

13. Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag that fish for Pacific saury in the Convention Area record their catches, including incidental catches of other NPFC species, and any discards and report them to the relevant flag state authorities in accordance with their national data recording and reporting requirements.

14. In the event that a Member reaches 70% of its catch limit set out in paragraph 11, the Executive

Secretary shall inform that Member of that fact, with a copy to all other Members. That Member shall close the fishery for its flagged vessels when the total catch of its flagged vessels is equivalent to 100% of its catch limit. Such Member shall notify promptly the Executive Secretary of the date of the closure, except as described in paragraph 15. Upon receipt of the notification, the Executive Secretary shall circulate it to all the Members.

15. Notwithstanding paragraph 11, 12 b) and c), Members fishing for Pacific saury in areas of their jurisdiction[3] that are adjacent to the Convention Area may divert part of their catch limit for areas under their jurisdiction to their own catch of Pacific saury in the Convention Area by vessels entitled to fly their flags and authorized to fish for Pacific saury[4]. Such Members shall notify promptly the Executive Secretary of the starting date of the diversion and annually report the catch limit that they diverted in accordance with this paragraph in their Annual Report.

OTHER MEASURES

16. Development of new fishing activity for the Pacific saury fishery in the Convention Area by Members without documented historical catch for Pacific saury in the Convention Area shall be determined in accordance with relevant provisions, as appropriate, including but not limited to Article 3, paragraph (h) and Article 7, subparagraphs 1(g) and (h) of the Convention.

17. Members of the Commission shall ensure that fishing vessels flying their flags operating in the Convention Area to fish Pacific saury be equipped with an operational vessel monitoring system that is activated at all times.

18. In order to prevent discards and contribute to the proper stock assessment, Members of the Commission shall take necessary measures to ensure that fishing vessels flying their flags in the Convention Area fishing for Pacific saury retain all the catch of Pacific saury on board.

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[3] Paragraph 15 applies to Russia and Japan

[4] The diverted portion used in the Convention Area shall count toward the Members' catch limits within the EEZ, both for future discussions and for calculating TAC utilization in the Convention Area.

19. In order to protect juvenile fish, Members of the Commission shall take measures for fishing vessels flying their flags to refrain from fishing for Pacific saury in the areas east of 170°E from June to July. The SC and its subsidiary Small Scientific Committee on Pacific Saury will submit to the Commission relevant scientific information on geographical distribution of juvenile fish in the Convention Area, and its migration patterns.

20. The SWG MSE PS shall endeavor to consider the establishment of a management procedure to be formulated through an MSE process by the 12th Commission Meeting in 2028. The Commission shall continue to fund an external expert to support the process.

21. This CMM shall in no case be a basis for any future CMM for Pacific saury.

22. The Commission shall review and revise, as appropriate, this CMM based on the advice and recommendations from the SC and the SWG MSE PS, at its every Commission meeting.

23. Consideration should be given to development aspirations of small island developing States in accordance with international law in revising this CMM.

24. This CMM shall enter into force on May 1st,2026, replacing CMM 2025-08 and will be reviewed on a regular basis.

Annex I

Interim Harvest Control Rules (HCR) for Pacific saury

1. Management Objectives for the Pacific saury fisheries

Interim Management Objectives

(a) Recovery of the stock (prioritized objective):

- *i. The stock biomass is rebuilt to B_{tar} within 5 years with 50% probability;*
- *ii. The stock biomass is maintained above the B_{tar} level in each of years 6-10 with 50% probability.*

2. Avoiding unsustainable state of the stock (secondary objective):

- *i. The annual probability in each of years 6-10 that the stock drops below B_{lim} should not exceed 10%;*
- *ii. The annual probability in each of years 6-10 that fishing mortality is above F_{lim} should not exceed 10%.*

3. Achieving high and stable catch (tertiary objective):

- *i. Average catch over years 6-10 is as high as possible;*
- *ii. Catch in each of years 6-10 is as stable as possible.*

Interim Biological reference points

Interim biological reference points used the interim HCR for Pacific saury are as follows:

Reference point
$B_{tar} = B_{MSY}$
$B_{lim} = 0.35B_{MSY}$
$F_{tar} = F_{MSY}$
$F_{lim} = 1.35F_{MSY}$

2. Interim Harvest Control Rules (HCRs)

Based on the latest base-case results of stock assessment of Pacific saury, annual catch level in the entire area $_y = a_{y-1} * F_{MSY} * \hat{B}_{y-1}$, where $a_{y-1}=\min(1, \hat{B}_{y-1}/\hat{B}_{MSY})$

(as shown in Figure 1).

It reduces fishing intensity at biomass levels below B_{MSY}. Maximum allowable change of the annual catch level in the entire area is restricted to 10%.

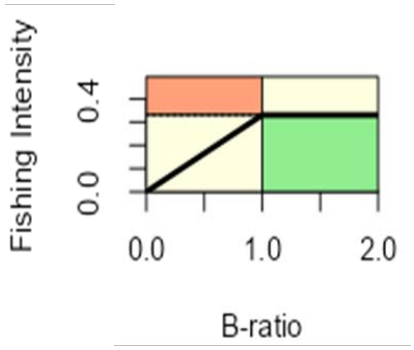


Figure 1. Illustration of the interim HCR.

3. Management cycle

The SC annually advises the Commission of the calculated annual catch level in the entire area of Pacific saury for the following year in accordance with the interim HCR as described in paragraph 2, based on the latest stock assessment results.

Annex II

Reported Pacific saury catch in 2018

Member	Catch (metric ton)
China	90,365
Japan	46,859
Korea	20,759
Russia	5,459
Chinese Taipei	180,466
Vanuatu	8,231

North Pacific Fisheries Commission

CMM 2026-18

(Entered into force 1 June 2026)

CONSERVATION AND MANAGEMENT MEASURE FOR JAPANESE SARDINE

The North Pacific Fisheries Commission (NPFC),

Recalling that the NPFC has adopted the CMMs as provisional measure on three species – Japanese sardine, neon flying squid and Japanese flying squid – to restrict the number of fishing vessels authorized to fish for such species;

Reaffirming the General Principles provided in Article 3 of the Convention, in particular, Paragraph (h) stipulating that any expansion of fishing effort does not proceed without prior assessment of the impacts of those fishing activities on the long-term sustainability of fisheries resources;

Noting paragraph 1(a) of Article 7 of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 December 1995 (hereinafter, "1995 Agreement"), stipulating that the relevant coastal States and the States whose nationals fish for straddling fish stocks in the adjacent high seas area shall seek to agree upon the measures necessary for the conservation of these stocks in the adjacent high seas area;

Recognizing paragraph 2(a) of Article 7 of the 1995 Agreement stipulating that the conservation and management measures adopted and applied in accordance with Article 61 of the United Nations Convention on the Law of the Sea in respect of the same stocks by coastal States within areas under national jurisdiction and ensure that measures established in respect of such stocks for the high seas do not undermine the effectiveness of such measures;

Recognizing further coastal Members of the Commission have been implementing conservation and management measures for Japanese sardine in areas under their national jurisdiction adjacent to the Convention Area;

Reaffirming paragraph (i) of Article 3 of the Convention, stipulating in accordance with Article 7 of the 1995 Agreement, that conservation and management measures established for straddling fish stocks on the high seas and those adopted for areas under national jurisdiction are compatible in order to ensure conservation and management of these fisheries resources in their entirety;

Noting that the NPFC Catch/Effort statistics show a significant increase in Japanese sardine catches in recent years;

Adopts the following conservation and management measure in accordance with Article 7 of the Convention:

1. Members of the Commission and Cooperating non-Contracting Parties (CNCPs) with substantial harvest of Japanese sardine in the Convention Area shall refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for such species from the historical existing level until the stock assessment for such species by the SC has been completed.

2. Members of the Commission and CNCPs without substantial harvest of Japanese sardine in the Convention Area are encouraged to refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for such species from the historical existing level until the stock assessment for such species by the SC has been completed.

3. In 2026, each Member of the Commission and CNCP with substantial harvest of Japanese sardine shall take necessary measures to ensure that its total annual catch of Japanese sardine in the Convention Area shall not exceed the level of its annual reported catch in 2025.

4. Members of the Commission participating in fishing for the Japanese sardine in areas under their jurisdiction adjacent to the Convention Area are requested to take compatible measures in paragraph 1. Such Members [1] may divert part of their catch limit for areas under their jurisdiction to their own catch of the species in the Convention Area by vessels entitled to fly their flags and authorized to fish for the species, provided that: (i) the Member has established a catch limit for the species in its jurisdiction; (ii) the Member has notified the Commission of the catch limit; and (iii) the total catch of the species in the Convention Area and the areas under their jurisdiction adjacent to the Convention Area will not exceed the Member's total catch limit for its jurisdiction respectively.

5. Development of new fishing activity for Japanese sardine in the Convention Area by Members of the Commission without documented historical catch for such species in the Convention Area shall be determined in accordance with relevant provisions, as appropriate, including but not limited to Article 3, paragraph (h) and Article 7, subparagraphs 1(g) and (h) of the Convention.

6. Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag operating in the Convention Area authorized to fish for Japanese sardine are to be equipped with an operational vessel monitoring system that is activated at all times.

7. Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag that fish for Japanese sardine in the Convention Area record their catches, including incidental catches of other NPFC species, and any discards and report them to the relevant flag state

[1] Paragraph 4 applies to Russia and Japan

authorities in accordance with their national data recording and reporting requirements.

8. Members of the Commission and CNCPs shall provide their data on Japanese sardine in accordance with the data requirements adopted by the Commission in the Annual Report every year. The Commission shall review such information at the annual meeting of every year.

9. Members of the Commission and CNCPs shall cooperate to take necessary measures including sharing information, in order to accurately understand the situation and eliminate IUU fishing for Japanese sardine.

10. After a stock assessment for Japanese sardine has been completed, the provisions in Paragraph 1 and 3 shall be reviewed by the Commission and those provisions shall not be a precedent to hinder those Members who are not harvesting substantial amounts of Japanese sardine assessed in the Convention Area to develop their own fisheries in the Convention Area noting the Commission shall regularly review the harvests of Japanese sardine in the Convention Area by all Members.

11. This management measure shall expire and be replaced by the measure to be adopted by the Commission based on the advice and recommendations from the Scientific Committee. This management measure enters into force on 1 June 2026 and replaces CMM 2025-11 (for Japanese sardine).

CMM 2026-11

(Entered into force 1 June 2026)

CONSERVATION AND MANAGEMENT MEASURE FOR NEON FLYING SQUID AND JAPANESE FLYING SQUID

The North Pacific Fisheries Commission (NPFC),

Recalling that six pelagic species – Pacific saury, chub mackerel, blue mackerel, Japanese sardine, neon flying squid, and Japanese flying squid – are identified as priority species;

Also recalling that the NPFC has adopted the CMMs on three species – Pacific saury, chub mackerel and Japanese sardine;

Noting that specific measures for the remaining three species have yet to be introduced while those species have been subject to extensive fishing practices, whether they are target or bycatch species;

Reaffirming the General Principles provided in Article 3 of the Convention, in particular, Paragraph (h) stipulating that any expansion of fishing effort does not proceed without prior assessment of the impacts of those fishing activities on the long-term sustainability of fisheries resources;

Adopts the following conservation and management measure in accordance with Article 7 of the Convention:

1. Members of the Commission and Cooperating non-Contracting Parties (CNCPs) with substantial harvest of any of neon flying squid and Japanese flying squid (hereinafter referred to as "the two Pelagic Species") in the Convention Area shall refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for such species from the historical existing level until the stock assessment for such species by the SC has been completed.

2. Members of the Commission and CNCPs without substantial harvest of the two Pelagic Species in the Convention Area are encouraged to refrain from expansion, in the Convention Area, of the number of fishing vessels entitled to fly their flags and authorized to fish for such species from the historical existing level until the stock assessment for such species by the SC has been completed.

3. Members of the Commission participating in fishing for the two Pelagic Species in areas under their jurisdiction adjacent to the Convention Area are requested to take compatible measures in paragraph 1. Such Members [1] may divert part of their catch limit for areas under their

[1] Paragraph 3 applies to Russia and Japan

jurisdiction to their own catch of the species in the Convention Area by vessels entitled to fly their flags and authorized to fish for the species, provided that: (i) the Member has established a catch limit for the species in its jurisdiction; (ii) the Member has notified the Commission of the catch limit; and (iii) the total catch of the species in the Convention Area and the areas under their jurisdiction adjacent to the Convention Area will not exceed the Member's total catch limit for its jurisdiction respectively.

4. Development of new fishing activity for the two Pelagic Species in the Convention Area by Members of the Commission without documented historical catch for such species in the Convention Area shall be determined in accordance with relevant provisions, as appropriate, including but not limited to Article 3, paragraph (h) and Article 7, subparagraphs 1(g) and (h) of the Convention.

5. Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag operating in the Convention Area authorized to fish the two Pelagic Species are to be equipped with an operational vessel monitoring system that is activated at all times.

6. Members of the Commission and CNCPs shall ensure that fishing vessels flying their flag that fish for the two Pelagic Species in the Convention Area record their catches, including incidental catches of other NPFC species, and any discards and report them to the relevant flag state authorities in accordance with their national data recording and reporting requirements.

7. Members of the Commission and CNCPs shall provide their data on the two Pelagic Species in accordance with the data requirements adopted by the Commission in the Annual Report every year. The Commission shall review such information at the annual meeting of every year.

8. Members of the Commission and CNCPs shall cooperate to take necessary measures including sharing information, in order to accurately understand the situation and eliminate IUU fishing for the two Pelagic Species.

9. After a stock assessment for any of the two Pelagic Species has been completed, the provisions in Paragraph 1 shall be reviewed by the Commission and those provisions shall not be a precedent to hinder those Members who are not harvesting substantial amounts of the two Pelagic Species assessed in the Convention Area to develop their own fisheries in the Convention Area noting the Commission shall regularly review the harvests of such species in the Convention Area by all Members.

10. This management measure shall expire and be replaced by the measure to be adopted by the Commission based on the advice and recommendations from the Scientific Committee. This management measure enters into force on 1 June 2026 and replaces CMM 2025-11 (for Squids).

North Pacific Fisheries Commission

CMM 2026-02

(Entered into force 23 July 2026)

CONSERVATION AND MANAGEMENT MEASURE TO ESTABLISH A LIST OF VESSELS PRESUMED TO HAVE CARRIED OUT ILLEGAL, UNREPORTED AND UNREGULATED FISHING ACTIVITIES IN THE CONVENTION AREA OF THE NORTH PACIFIC FISHERIES COMMISSION

The North Pacific Fisheries Commission (NPFC):

Recalling that the FAO Council adopted on 23 June 2001 an International Plan of Action to prevent, deter and eliminate illegal, unreported and unregulated fishing (IPOA-IUU). This plan stipulates that the identification of the vessels carrying out illegal, unreported and unregulated (IUU) fishing activities should follow agreed procedures and be applied in an equitable, transparent and non- discriminatory way;

Concerned that IUU fishing activities in the Convention Area undermine the effectiveness of the conservation measures adopted by the NPFC;

Recalling the Convention on the Conservation and Management of the High Seas Fisheries Resources in the North Pacific Ocean ("NPFC Convention") Article 7.2(d) and (g) states that the Commission shall establish appropriate cooperative mechanisms for effective monitoring, control and surveillance to ensure enforcement of the conservation and management measures adopted by the Commission including mechanisms to prevent, deter and eliminate IUU fishing and establish, where appropriate, non-discriminatory market-related measures consistent with international law to prevent, deter and eliminate IUU fishing;

Further concerned that there is a possibility that vessel owners engaged in such fishing activities may have re-flagged their vessels to avoid compliance with NPFC measures;

Determined to address the challenge of an increase in IUU fishing activities by way of measures to be applied in respect to vessels, without prejudice to further measures adopted in respect of Members, Cooperating Non-Contracting Parties (CNCPs) and non-Contracting Parties under the relevant NPFC instruments;

Considering the action undertaken in other regional fisheries organizations to address this issue;

Conscious of the need to address, as a matter of priority, the issue of vessels conducting IUU fishing activities;

Noting that efforts to prevent, deter and eliminate IUU fishing must be addressed in the light of all relevant international fisheries instruments and in accordance with other international obligations, including the rights and obligations established under the World Trade Organization (WTO) Agreement; and

Recalling Articles 13, 14, 15 and 17 of the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean (hereinafter called the "Convention") regarding the flag State duties, port State duties, duties of fishing entities and provisions for

compliance and enforcement;

Adopts the following conservation and management measure in accordance with Article 7 of the Convention:

Identification of IUU fishing activities

1. At each meeting, the Commission will identify those vessels which have engaged in fishing activities for species covered by the Convention within the Convention Area in a manner which has undermined the effectiveness of the Convention and the NPFC measures in force, and shall establish, and, as necessary amend, a list of such vessels (the IUU Vessel List), in accordance with the procedures and criteria set out in this conservation measure.

2. This identification shall be suitably documented, *inter alia*, on reports from Members/CNCPs relating to NPFC Conservation measures in force, trade information obtained on the basis of relevant trade statistics such as Food and Agriculture Organization of the United Nations (FAO) data, statistical documents and other national or international verifiable statistics, as well as any other information obtained from port States and/or gathered from the fishing grounds that is suitably documented. Information from Members/CNCPs should be provided in the format approved by the Commission.

3. For the purposes of this conservation measure, vessels fishing for species covered by the Convention are presumed to have carried out IUU fishing activities, as described in the IPOA on IUU fishing, in the Convention Area when a Member/CNCP presents suitably documented information that such vessels, *inter alia*:

   (a) Harvest species covered by the Convention in the Convention Area and are not on the NPFC record of authorized vessels or

   (b) Engage in fishing for fishery resources when the Member or CNCP, under whose flag the vessel is sailing, has exhausted or has no quotas, catch limit or effort allocation, including, if applicable, those received from another Member/CNCP under relevant NPFC conservation measures, or

   (c) Do not record or report their catches made in the Convention Area consistent with NPFC measures, or make false reports, or

   (d) Take and land undersized fish in contravention of relevant NPFC conservation measures, or

   (e) Fish in a closed area or during a closed season in contravention of relevant NPFC conservation measures, or

   (f) Use prohibited fishing gear in contravention of relevant NPFC conservation measures, or

   (g) Transship with, participate in joint fishing operations with, support or re-supply vessels included in the IUU Vessel List, or

(h) Are without nationality and harvest species covered by the Convention in the Convention Area, or

(i) Engage in any other fishing activities that undermine the provisions of the Convention or any other NPFC conservation measures.

4. If a Member/CNCP has not taken such measures as may be necessary so that fishing vessels entitled to fly its flag avoid conducting unauthorized fishing activities within areas under national jurisdiction of another State adjacent to the Convention Area in accordance with Article 13, the Member/CNCP, within whose areas under national jurisdiction the unauthorized fishing activities were conducted, may submit a proposal for listing the vessels on the draft IUU List if consultation with the Member/CNCP has not resolved the matter. Relevant procedures set out in paragraph 6 below shall apply for proposals under this paragraph.

5. If a Member/CNCP has information that a vessel is or was presumed to be carrying out IUU fishing activities in the Convention Area, the Member/CNCP with such information is encouraged to provide that information as soon as possible to, and consult with, any Member/CNCP or non-Contracting Party that may have a vessel presumed to be carrying out IUU fishing activities for clarification before providing that information to the Executive Secretary under the provisions of paragraph 6.

Information on alleged IUU fishing activities

6. At least 70 days before the meeting of the Technical and Compliance Committee (TCC), Members/CNCPs shall transmit to the Executive Secretary their list of vessels presumed to be carrying out IUU fishing activities in the Convention Area since the beginning of the previous calendar year or during the timeframe covered by the most recent available final Annual Report, accompanied by suitably documented information, as provided in paragraph 2, concerning the presumption of this IUU fishing activity.

7. Before or at the same time as transmitting a list of presumed IUU vessels to the Executive Secretary, the Member/CNCP shall notify, either directly or through the Executive Secretary, the relevant Member/CNCP/Non-Contracting Party of a vessel's inclusion on this list and provide a copy of the pertinent suitably documented information. The receiving Member/CNCP/Non-Contracting Party shall promptly acknowledge receipt of the notification. If no acknowledgement is received within 10 days of the date of transmittal, the Executive Secretary, Member/CNCP shall retransmit the notification through an alternative means of communication.

Draft IUU Vessel List

8. The Executive Secretary shall draw up a draft IUU Vessel List incorporating the lists of vessels submitted by Members and CNCPs and suitably documented information received pursuant to para 6, and may add any other suitably documented information at the Executive Secretary's disposal, and shall transmit it, together with all the supporting information provided, to all Members/CNCPs, as well as to non-Contracting Parties with vessels on the list, at least 55 days before the TCC's meeting unless otherwise decided by the TCC.

9. The Executive Secretary shall request each Member/CNCP/non-Contracting Party with vessels on the draft IUU Vessel List to notify the owner of the vessels of their inclusion in that list, and the consequences if their vessel is included on the final NPFC IUU Vessel List.

10. Upon receipt of the draft IUU Vessel List, Members/CNCPs shall closely monitor the vessels included in that list in order to follow their activities and possible changes of name, flag, or registered owner.

11. Members/CNCPs/non-Contracting Parties with vessels on the draft list may transmit, at least 10 days before the TCC's meeting, comments to the Executive Secretary including suitably documented information showing that the vessels have fished in a manner consistent with NPFC conservation measures, fished exclusively for species not covered by the Convention, and/or effective action has been taken in response to the IUU fishing activities in question.

12. The Executive Secretary shall re-circulate the draft IUU Vessel List, 7 days in advance of the TCC's meeting, to the Members/CNCPs/non-Contracting Parties concerned, together with all the suitably documented information provided pursuant to paragraphs 6 and 11 above.

13. Members/CNCPs/non-Contracting Parties may at any time submit to the Executive Secretary any additional suitably documented information regarding any vessels on the draft IUU Vessel List. The Executive Secretary shall circulate this additional information to all Members/CNCPs and to the non-Contracting Parties concerned immediately upon receipt of such information.

Provisional and current IUU Vessel List

14. The Executive Secretary shall transmit the NPFC's IUU Vessel List adopted at the previous meeting of the Commission, any new suitably documented information regarding this list, and any updates made by the Executive Secretary under paragraphs 29 or 34, to Members/CNCPs and the non-Contracting Parties concerned 55 days before the meeting of the TCC.

15. Members/CNCPs/non-Contracting Parties with vessels on the current NPFC IUU Vessel List should transmit at least 30 days before the meeting of the TCC, but may submit at any time, to the Executive Secretary suitably documented information regarding any of the vessels on the current NPFC IUU Vessel List, including, where appropriate, suitably documented information as provided for in paragraph 29 or in paragraph 34. The Executive Secretary shall re-circulate the current NPFC IUU Vessel List two weeks in advance of the meeting of the TCC to the Members/CNCPs and non-Contracting Parties concerned, together with all the information provided pursuant to paragraph 14 and this paragraph.

16. At its meeting, the TCC shall:

    (a) following consideration of the draft IUU Vessel List and the suitably documented information circulated under paragraphs 8, 12, and 13, adopt a Provisional IUU Vessel List; and

(b) following consideration of the current NPFC IUU Vessel List and the suitably documented information circulated under paragraphs 14 and 15, recommend to the Commission which, if any, vessels should be removed from the current NPFC IUU Vessel List, if such vessels have not already been removed pursuant to the procedures in paragraphs 29-32.

17. The TCC shall not include a vessel on the Provisional IUU Vessel List if the Member/CNCP/non-Contracting Party, under whose flag the vessel is sailing, demonstrates that:

(a) The vessel fished in a manner consistent with the Convention and NPFC Conservation Measures or fished exclusively for species not covered by the NPFC Convention, or

(b) Effective action has been taken in response to the IUU fishing activities in question, such as, *inter alia*, prosecution and/or the imposition of sanctions of adequate severity.

18. The TCC shall not include a vessel on the Provisional IUU Vessel List if the notifying Member/CNCP did not follow the provisions of paragraph 7.

19. The TCC shall recommend removal of a vessel from the current NPFC IUU Vessel List only if the Member/CNCP/Non-Contracting Party, under whose flag the vessel is sailing, submits to the Executive Secretary the information provided in paragraph 29 of this measure.

20. Following the examination referred to in paragraph 16, the TCC shall submit the Provisional IUU Vessel List to the Commission for its consideration, and as appropriate, recommend any proposed changes to the current NPFC IUU Vessel List.

21. The draft IUU Vessel List, Provisional IUU Vessel List, and the NPFC IUU Vessel List shall contain the following details for each vessel:

(a) name and previous names, if any;

(b) flag and previous flags, if any;

(c) owner and previous owners, including beneficial owners, if any;

(d) operator and previous operators, if any;

(e) call sign and previous call signs, if any;

(f) Lloyds/IMO number, if any;

(g) photographs, where available;

(h) date first included on the NPFC IUU Vessel List;

(i) CMM and paragraph noting violation;

(j) summary of activities which justify inclusion of the vessel on the list, together with references to all relevant documents informing of and evidencing those activities; and

(k) the date(s) and subsequent sightings of the vessels, if any, and any other related activities.

NPFC IUU Vessel List

22. At its meeting, the Commission shall review the Provisional IUU Vessel List, taking into account any new suitably documented information related to vessels on the Provisional IUU Vessel List, and any recommendations to amend the current NPFC IUU Vessel List made pursuant to paragraph 20 above, and adopt a new NPFC IUU Vessel List. To the maximum extent possible Members/CNCPs/non-Contracting Parties concerned shall provide any new suitably documented information at least two weeks before the meeting of the Commission.

23. Upon adopting the new NPFC IUU Vessel List, the Commission shall request Members/CNCPs/non-Contracting Parties with vessels on the NPFC IUU Vessel List to:

(a) notify the owner(s) of the vessel(s) of the vessel's inclusion on the NPFC IUU Vessel List and the consequences that result from being included in the list, and

(b) take all the necessary measures to eliminate these IUU fishing activities, including, if necessary, the withdrawal of the registration or the fishing licenses of these vessels, and to inform the Commission of the measures taken in this respect.

24. Members/CNCPs shall take all necessary non-discriminatory measures under their applicable legislation, international law and each Members/CNCPs' international obligations, and pursuant to paragraphs 56 and 66 of the IPOA-IUU to:

(a) remove or withdraw vessels on the NPFC IUU Vessel List from the NPFC Vessel Registry;

(b) ensure that fishing vessels, support vessels, mother ships or cargo vessels flying their flag do not participate in any transshipment or joint fishing operations with, support or re-supply vessels on the NPFC IUU Vessel List;

(c) prohibit the entry into their ports of vessels included on the NPFC IUU Vessel List, except in the case of investigation or *force majeure*;

(d) prohibit the chartering of a vessel on the NPFC IUU Vessel List;

(e) refuse to grant their flag to vessels on the NPFC IUU Vessel List, unless the ownership of the vessel has subsequently changed and the new owner has provided sufficient evidence demonstrating that the previous owner or operator has no legal, beneficial or financial interest in, or control of the vessels, or the Member concerned is satisfied that, having taken into account all relevant facts, the vessel is no longer engaged in or associated with IUU fishing activities;

(f) prohibit commercial transactions, imports, landings and/or transshipment of species covered by the Convention from vessels on the IUU Vessel List;

(g) encourage traders, importers, transporters and others involved, to refrain from transactions in, and transshipment of, species covered by the Convention caught by vessels on the NPFC IUU Vessel List;

(h) collect, and exchange with other Members/CNCPs, any appropriate information with the aim of searching for, controlling and preventing false import/export certificates for species covered by the Convention from vessels on the NPFC IUU Vessel List.

25. Members/CNCPs should cooperate with each other and other flag States to strengthen their legal, operational, and institutional capacity to take action against their flagged vessels that have engaged in IUU fishing in the Area, including the imposition of adequate sanctions, as an alternative to de-flagging such vessels, thereby rendering such vessels without nationality.

26. The Executive Secretary shall take any measure necessary to ensure publicity of the NPFC IUU Vessel List, in a manner consistent with any applicable confidentiality requirements, including placing it on the NPFC website. Furthermore, the Executive Secretary shall transmit the NPFC IUU Vessel List to the FAO and to other regional fisheries organizations for the purposes of enhancing cooperation between the NPFC and these organizations aimed at preventing, deterring and eliminating IUU fishing.

27. Upon receipt of the final IUU vessel list adopted by another Regional Fisheries Management Organization (RFMO) and any other information regarding the list including its modification, the Executive Secretary shall circulate it to Members/CNCPs and shall place a link on the NPFC website.

28. Without prejudice to the rights of Members/CNCPs and coastal states to take proper action, consistent with international law, including applicable WTO obligations, the Members/CNCPs shall not take any unilateral trade measures or other sanctions against vessels on the draft or Provisional IUU Vessel Lists, pursuant to paragraphs 8 or 16, or that have been removed from the NPFC IUU Vessel List, pursuant to paragraphs 19 and 22, on the grounds that such vessels are involved in IUU fishing activities.

Removal of a Vessel from the NPFC IUU Vessel List

29. Member/CNCPs/non-Contracting Parties with a vessel on the NPFC IUU Vessel List may request the removal of the vessel from the list at any time during the intersessional period by submitting to the Executive Secretary suitably documented information demonstrating that:

(a) It has adopted measures that will seek to ensure that the vessel complies with all NPFC measures, it will be able to assume effectively its duties with regards to the monitoring and control of the vessel's fishing activities in the Convention Area, and it has taken effective action in response to the IUU fishing activities that resulted in the vessel's inclusion in the NPFC IUU Vessel List, including prosecution or the imposition of sanctions of adequate severity; or

(b) The vessel has changed ownership and that the new owner can establish that the previous

owner no longer has any legal, financial or real interests in the vessel or exercises control over it, and that the new owner has not participated in IUU fishing activities; or

(c) The vessel has been sunk or scrapped.

30. The Executive Secretary will transmit the removal request, with all the supporting information, to the Members/CNCPs within 15 days following the receipt of the removal request. Members/CNCPs shall promptly acknowledge receipt of the removal request. If no acknowledgement is received within 10 days of the date of transmittal, the Executive Secretary shall retransmit the removal request and shall use additional means available to ensure the request has been received.

31. Each Commission Member shall examine the removal request and notify the Executive Secretary in writing of its decision, and the rationale therefore, regarding the removal of the vessel within 30 days following the notification by the Executive Secretary. Decisions on the request to remove the vessel shall be made in accordance with Rule 2 of the Rules of Procedure.

32. If Commission Members agree to the removal of the vessel from the NPFC IUU Vessel List within the period stipulated in paragraph 31, the Executive Secretary will inform Members/CNCPs, and non-Contracting Parties concerned, FAO and other regional fisheries management organizations, and will immediately remove the vessel from the NPFC IUU Vessel List, as published on the NPFC website.

33. If Commission Members disagree with the request for the removal of the vessel from the IUU Vessel List, the vessel will be maintained on the NPFC IUU Vessel List and the Executive Secretary will inform the Members/CNCPs/non-Contracting Parties that made the removal request.

Updating Information about Vessels on the NPFC IUU Vessel List

34. At any time, a Member/CNCP with information indicating a change in details listed in Annex B (a) through (g) and (k) of a vessel appearing on the NPFC IUU Vessel List shall, as soon as practicable, transmit such information to the Executive Secretary. The Executive Secretary shall communicate such information to all Members/CNCPs. The Executive Secretary shall verify the information. After verification, the Executive Secretary will update the current NPFC IUU Vessel List on the NPFC website to reflect such information.

35. If the Secretariat, after reasonable efforts or other input received, is unable to verify the information submitted by the Member/CNCP, the IUU Vessel List will not be updated and the proposed changes will be discussed at the next TCC and Commission meeting.

Review

36. This Conservation and Management Measure shall be subject to review and, as appropriate, revision by the TCC and acceptance by the Commission.

Annex A

NPFC Reporting Form for Illegal Activity

Recalling NPFC CMM 2016 - 02 on *Establishing a list of vessels presumed to have carried out illegal, unreported and unregulated fishing activities in the Convention Area of North Pacific Fisheries Commission*, attached are details of illegal activity recorded in ……..

Details of Vessel

a. Name of vessel and previous names, if any;
b. Flag of vessel and previous flags, if any;
c. Owner and previous owner, including beneficial owners, if any;
d. Operator of vessel and previous operators, if any;
e. Call sign of vessel and previous call sign, if any;
f. Lloyds/IMO number, if any;
g. Photographs of the vessel, where available;
h. Date vessel was first included on the IUU List;
i. CMM and paragraph noting violation;
j. Summary of activities which justify inclusion of the vessel on the list, together with references to all relevant documents informing of and evidencing those activities (more detail in section 2);
k. the date(s) and subsequent sightings of the vessels, if any, and any other related activities.

Details of elements contravened

(*Indicate with an "X" the individual elements of CMM contravened, and provide relevant details including date, location, source of information. Additional information can be provided in an attachment, if necessary, and listed under section 3*).

Item	Definition	Indicate
a	Harvest species covered by the Convention in the Convention Area and are not on the NPFC record of authorized vessels	

b	Engage in fishing for fishery resources, when the Member or CNCP, under whose flag the vessel is sailing, has exhausted or has no quotas, catch limit or effort allocation, including, if applicable, those received from another Member/CNCP, under relevant NPFC conservation	
c	Do not record or report their catches made in the Convention Area consistent with NPFC Measures, or make false reports	
d	Take and land undersized fish in contravention of relevant NPFC conservation measures	
e	Fish in a closed area or during a closed season in contravention of relevant NPFC conservation measures	
f	Use prohibited fishing gear in contravention of relevant NPFC conservation measures	
g	Transship with, participate in joint fishing operations with, support or re-supply vessels included in the IUU vessels list	
h	Are without nationality and harvest species covered by the Convention in the Convention Area	
i	Engage in any other fishing activities that is in contravention of relevant NPFC conservation measures	
j	Are related to paragraph 4 of this conservation and management measure	

Associated documents

(*List here the associated documents that are appended e.g. boarding reports, court proceedings, photographs*).

Recommended actions

Item	Recommended actions	Indicate
A	Notification to NPFC Executive Secretary only. No further action is recommended	
B	Notification of illegal activity to NPFC Executive Secretary. Recommend notification of activity to flag Member/CNCP/non-Contracting Party	
C	Recommended for inclusion on NPFC IUU Vessel List	

Annex B

Information to be included in all NPFC IUU Vessel Lists (Draft, Provisional, and Final)

The Draft IUU Vessel List, as well as the Provisional and final NPFC IUU Vessel Lists shall contain the following details, where available:

a. Name of vessel and previous names, if any;
b. Flag of vessel and previous flags, if any;
c. Owner and previous owners, including beneficial owners, if any;
d. Operator of vessel and previous operators, if any;
e. Call sign of vessel and previous call signs, if any;
f. Lloyds/IMO number, if any;
g. Photographs of the vessel, where available;
h. Date vessel was first included on the IUU Vessel List;
i. CMM and paragraph noting violation;
j. Summary of activities which justify inclusion of the vessel on the List, together with references to all relevant documents informing of and evidencing those activities;
k. the date(s) and subsequent sightings of the vessels, if any, and any other related activities.

CMM 2026-01
(Entered into force 23 July 2026)

CONSERVATION AND MANAGEMENT MEASURE ON INFORMATION REQUIREMENTS FOR VESSEL REGISTRATION

The North Pacific Fisheries Commission (NPFC),

Recalling Article 4 of the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas of 24 November 1993 that stipulates to maintain a record of fishing vessels entitled to fly its flag and authorized to be used for fishing on the high seas, and to take such measures as may be necessary to ensure that all such fishing vessels are entered in that record,

Recognizing Article 7, paragraph 2 (d) of the Convention regarding the establishment of appropriate cooperative mechanisms for effective monitoring, control and surveillance to ensure enforcement of the conservation and management measures adopted by the Commission including mechanisms to prevent, deter and eliminate IUU fishing,

Reaffirming that Article 13, paragraph 1 of the Convention that members of the Commission or Cooperating non-Contracting Parties shall take necessary measures to ensure that fishing vessels entitled to fly its flag operating in the Convention Area comply with the provisions of the Convention and measures adopted pursuant to the Convention and such vessels do not engage in any activities that undermine the effectiveness of such measures and do not conduct unauthorized fishing activities within areas under national jurisdiction of another State adjacent to the Convention Area,

Also reaffirming that Article 13, paragraph 2 of the Convention that no members or Cooperating non-Contracting Parties of the Commission shall allow any fishing vessel entitled to fly its flag to be used for fishing activities in the Convention Area unless it has been authorized to do so by the appropriate authority or authorities of that member of the Commission or Cooperating non-Contracting Parties. Each member of the Commission, or Cooperating non-Contracting Parties, shall authorize the use of vessels entitled to fly its flag in the Convention Area only where it is able to exercise effectively its responsibilities in respect of those vessels under this Convention, the 1982 Convention and the 1995 Agreement,

Also recognizing that members of the Commission or Cooperating non-Contracting Parties have the need to conduct transshipment with carrier vessels that are flagged to Commission members, Cooperating non-Contracting Parties,

Noting the decision by the IMO Assembly in its 30th session to expand eligibility for IMO numbers to fishing vessels less than 100 gross tons down to a size limit of 12 meters in length overall authorized to operate outside waters under national jurisdiction of the flag State to assist in identifying and tracking fishing vessels and to tackle illegal, unreported and unregulated fishing,

Adopts the following conservation and management measures in accordance with Article 7, Article 13, paragraph 8 and Article 15 of the Convention:

NPFC Vessel Registry

For the purpose of the effective implementation of the Convention, each Commission member or Cooperating non-Contracting Party shall:

1. Maintain a record of fishing vessels entitled to fly its flag and authorized to be used for fishing activities in the Convention Area in accordance with the information requirements in the Annex.

2. Update pertinent information required from paragraph 1 in the NPFC Vessel Registry established under Article 13, paragraph 10 of the Convention, noting that vessel submissions which do not include the initial data elements as indicated in the Annex will not be accepted by the database.

3. Promptly update the NPFC Vessel Registry with:

    a) any additions to the record; e.g. new vessel authorizations;

    b) any modifications to this information with dates of such modifications; and

    c) any deletions from the record, specifying which of the following reasons is applicable:

        i) the voluntary relinquishment of the fishing authorization by the fishing vessel owner or operator;

        ii) the withdrawal or non-renewal of the fishing authorization issued in respect of the fishing vessel under Article 13, paragraph 2 of the Convention;

        iii) the fact that the fishing vessel concerned is no longer entitled to fly its flag;

        iv) the scrapping, decommissioning, or loss of the fishing vessel concerned; or

        v) any other grounds, with a specific explanation provided.

4. Provide to the Commission, as part of the annual report required pursuant to Article 16 of the Convention, the names of the fishing vessels entered in the record that conducted fishing activities during the previous calendar year.

Vessel Marking

5. Each Commission Member and Cooperating non Contracting Party shall ensure that every fishing vessel authorized to fly its flag bear markings that are readily identified in accordance with the FAO Standard Specifications for the Marking and Identification of Fishing Vessels, and recognize that non-compliance with these standards shall be considered a serious violation according to Article 17, paragraph 5 of the NPFC Convention and Article 21 Paragraph 11(f) of the United Nations Fish Stocks Agreement.

General

6. Commission Members and Cooperating non-Contracting Parties shall ensure they have maintained the NPFC Vessel Registry of the vessels based on the information provided to it and make the record publicly available as appropriate and subject to any legal confidentiality regulations of the individual Commission member and Cooperating non-Contracting Party.

7. The Commission member or Cooperating non-Contracting Parties entering vessels identified in paragraph 2 on the NPFC Vessel Registry established under paragraph 1 shall attest that the vessel or vessels being added recommended are not vessels:

    a) with a history of illegal, unreported or unregulated (IUU) fishing, unless the ownership of the vessel has subsequently changed and the new owner has provided sufficient evidence demonstrating that the previous owner or operator has no legal, beneficial or financial interest in, or control of the vessels, or Commission members or Cooperating non-Contracting Parties concerned is satisfied that, having taken into account all relevant facts, the vessel is no longer engaged in or associated with IUU fishing; or

    b) that are currently listed on any of the IUU vessel lists adopted by regional fishery management organizations (RFMOs)

8. If a fishing vessel with such an IUU history or on an RFMO IUU Vessel list as noted in paragraph 7 without the appropriate justification noted therein, is uploaded to, or found on the NPFC Vessel Registry, the Executive Secretary shall remove the vessel from the appropriate vessel registry with notification of such action to the flag member.

9. Each Commission Member and Cooperating non-Contracting Party entering vessels on the NPFC Vessel Registry must enter the required data for its vessels, immediately after it has so authorized the vessel to conduct fishing activities.

10. An authorized vessel cannot conduct fishing activities in the Convention Area until the vessel has been accepted in the NPFC Vessel Registry.

11. The Commission shall also provide to any Commission Member or Cooperating non-Contracting Party, upon request, information about any vessel entered on the Commission record that is not otherwise publicly available, as appropriate.

12. This CMM shall replace the NPFC CMM 2023-01.

Annex 1

List of Fields in the NPFC Vessel Registry and their Format and Content

"Asterisks (*) denote 'initial data elements' required to commence fishing activities in the Convention Area."

	Field	Field Name	Field Format	Field Description/ Instructions	Example	Ref.
		NPFC ID	Number (integer)	This number is assigned automatically upon entry of vessel information.	1099	
*	(a)	Flag State	Text	The registered flag state – in UPPER CASE.	CANADA	
*	(b)	Authorizing Member	Text	Country/Member name – in UPPER CASE.	CHINA	
*	(c)	Name of fishing vessel	Text	Name of the fishing vessel as indicated on flag State registration – in UPPER CASE.	HAPPY NO. 123	CMM 2019-01
(where applicable)	(d)	Previous name(s) of fishing vessel	Text	List of the previous name(s) of the fishing vessel in UPPER CASE. • If the Member/CNCP knows the vessel has no previous names, use "N/A".	UNHAPPY NO. 1; IMHERE NO. 2	CMM 2019-01

				• If the Member/CNCP does not know if the vessel has any previous names, use “NONE KNOWN”. If multiple previous vessel names, separate entries with “;” (semi-colon).		
*	(e)	Registration number	Text	Alphanumeric registration identifier assigned by the flag country/Member, as indicated on flag country/Member registration – in UPPER CASE.	ABCD1234	CMM 2019-01
(where applicable)	(f)	Previous registration number(s)	Text	Alphanumeric registration identifier assigned by the flag country, as indicated on flag State registration – in UPPER CASE. If multiple previous registration numbers, separate entries with “;” (semi-colon).	EFGH5678; IJKL0109	CMM 2019-01
	(g)	Port of registry	Text	Country/Member name – in UPPER CASE.	PANAMA	CMM 2019-01
(where applicable)	(h)	Previous port(s) of registry	Text	Country/Member name – in UPPER CASE, If multiple previous ports of registry,	CANADA; JAPAN	CMM 2019-01

				separate entities with “; (semi-colon).		
*	(i)	IMO number* *Required for vessels which are eligible to receive IMO numbers	Number (integer)	A seven-digit number assigned to all vessels by HIS. All fishing vessels are required to have an IMO number.	1234567	CMM 2019-01
*	(j)-1	Name of owner(s)	Text	All in UPPER CASE. If multiple owners, separate entries with “;”. If company, enter full name of the company. If personal name, enter last/family name, first/given name(s) (separated by a comma).	DOE, JANE; GOOD CATCH INC.;	CMM 2019-01
*	(j)-**2**	Address of owner(s)	Text	All in UPPER CASE. Separate components of each address with a comma. If more than one address, separate addresses with “;” (semi-colon).	2F, HAKUYO HALL, TOKYO UNIVERSITY OF MARINE AND TECHNOLOGY, 4-5-7 KONAN, MINATO-KU TOKYO 108-8477 JAPAN.	CMM 2019-01

*	(k)-**1**	Name of master	Text	All in UPPER CASE. Enter last/family name, first/given name(s).	DOE, JANE	CMM 2019-01
*	(k)-**2**	Citizenship of master	Text	All in UPPER CASE. If multiple masters, separate entries with ";" (semi-colon).	RUSSIA	CMM 2019-01
(if any)	(l)	Previous flag	Text	List previous flag(s) of the vessel, if any. • If vessel has no previous flag, enter "N/A". If multiple previous flags, separate entries with ";" (semi-colon).	JAPAN; REPUBLIC OF KOREA	CMM 2019-01
* (where applicable)	(m)	International Radio Call Sign (IRCS)	Text	Alphanumeric code. All in CAPS without space.	BZ1VK	CMM 2019-01
(where applicable)	(n)	Maritime Mobile Service Identity (MMSI)	Number (integer)	A nine-digit number.	123456789	CMM 2019-01
	(o)	Vessel communication types and numbers, including when available: satellite-based telephony or data services/devices.	Number	Enter description of each of any communication devices on board the vessel that use Inmarsat A, B, or C, or that have a satellite telephone number.	C:123344556	CMM 2019-01

				If no such communication devices are on board, enter "NONE".		
*	(p)	Vessel Photo Full length color photograph(s) showing Side view including IRCS. Photographs must show clear and unobstructed views that demonstrate compliance with vessel marking requirements to be accepted by the Secretariat for addition to the database; Provision of additional photographs showing bow and stern view are encouraged	PNG JPEG	Upload file containing vessel photo. Enter the name of the electronic data file, using the following format: [NPFC ID #]_[Vessel Name]_[Date of Photograph: dd.mm.yyyy]	1551_JOY NO. 345_06.12 .2019	CMM 2019-01
*	(q)-**1**	Where (country/Member) built.	Text	Country/Member name – in UPPER CASE.	JAPAN	CMM 2019-01
*	(q)-2	When built (year).	Number (integer)	Enter the year the vessel was built in.	1996	CMM 2019-01
*	(r)	Type of vessel, as specified in	Text		JIGGER VESSELS	CMM 2019-01

		standard abbreviations under the current *FAO International Standard Statistical Classification of Fishery Vessels by Vessel Type*s (ISSCFV).		Enter vessel type(s) as listed under the FAO ISSCFV.		
	(s)	Normal crew complement	Number (integer)	The number of crew members normally on board the vessel, including officers.	35	CMM 2019-01
	(t)	Type of gear Type of fishing method or methods, as specified in standard abbreviations under the current *FAO International Standard Statistical Classification of Fishing Gear* (ISSCFG) and additions as requested by Members to accommodate gear not in the ISSCFG.	Text	Enter gear type(s) as listed under the FAO ISSCFG.	LIFT NETS (NEI)	CMM 2019-01

*	(u)**-1**	Type of length [Length*, including type of length* and unit of measurement.*]	Text	Enter length overall (LOA), length between perpendiculars, waterline length, or registered length.	Length overall (LOA)	CMM 2019-01
*	(u)**-2**	Length	Number (decimal)		109.00	CMM 2019-01
*	(u)**-3**	Length measurement unit	Text	Enter metres or feet.	Metres	CMM 2019-01
	(v)**-1**	Type of Depth [Depth, including type of depth and unit of measurement.]	Text	Enter draft/draught or moulded depth.	Draft/draught Moulded depth	CMM 2019-01
	(v)**-2**	Depth	Number (decimal)		10.50	
	(v)**-3**	Depth measurement unit	Text	Enter metres or feet.	Metres	CMM 2019-01
*	(w)**-1**	Type of beam [Beam*, including type of beam* and unit of measurement.*]	Text	Enter moulded breadth or extreme breadth.	Moulded breath.	CMM 2019-01
*	(w)**-2**	Beam	Number (decimal)		18.00	CMM 2019-01
*	(w)**-3**	Beam measurement unit	Text	Enter metres or feet.	Metres	CMM 2019-01
*	(x)**-1**	Tonnage	Number (decimal)		5005.00	CMM 2019-01

		[Gross register tonnage*, or gross tonnage* (specify which)]				
*	(x)-**2**	Tonnage type	Text	Enter gross register tonnage (GRT) or gross tonnage (GT).	GRT	CMM 2019-01
	(y)-1	Power of main engine or engine(s) [Power of main engine or engines, including unit of measurement.]	Number (decimal)		3000.00	CMM 2019-01
	(y)-2	Engine measurement unit	Text	Enter kilowatts (kW), horsepower (hp), or pferdestärke.	Kilowatts (kW)	CMM 2019-01
*	(z)	Domestic Licence Authorization The nature of authorization to fish granted by the flag state in its domestic licence, such as type or method of fisheries authorized and main target species, and	Text and/or number. For date - DAY/ MONTH/ YEAR	Enter start and end dates of domestic licence authorization, target species, and authorization number.	12-05-2019 – 11-10-2020 Pacific Saury 1135	CMM 2019-01

		authorized periods.				
*	(z)-1	NPFC Commission Authorization period – the dates for the authorization to operate in the NPFC Convention Area by the Member commencing on the date of notification of the authorization to extend to the date of the domestic authorization period up to a maximum of five years from the notification date. Gear and species will be same as 'Domestic Licence', but identified according to the drop down list of individual target species (see example).	For date – DAY/ MONTH/ YEAR	System automatically enters notification date for commencement of authorization; Member enters end date, e.g., date of licence period if within 5 years from notification date, OR maximum of 5-year period from notification date. The target species for each authorization period must be listed separately	28 November 2020 – 27 November 2025 and species from drop down list – one of: Bottom fish; Mackerel; Japanese flying squid; neon flying squid; Japanese sardine, etc.. (maximum authorization period)	CMM 2019-01
	(aa)	Fish hold capacity, in cubic metres.	Number (decimal)	The total amount of fish capable of being stored on the vessel,	7151.00 m^3	CMM 2019-01

				excluding bait and fish kept for crew consumption.		
	(bb)	Freezer: number of freezers, type(s), capacity, and unit of measurement. [Freezer type and capacity, including unit of measurement.]	Text; Number (decimal)	Freezer type: enter ice, brine, air blast, air coil, and/or plate freezer. Capacity unit: enter tons/day, metric ton/day, lbs/day, cubic metres, and/or cubic feet.	2-Air blast-55 cubic metres	CMM 2019-01

Annex 2

Specifications for the Marking and Identification of Fishing Vessels

Purpose

1. These specifications are intended to implement the *FAO Standard Specifications for the Marking and Identification of Fishing Vessels* for the North Pacific Fisheries Commission (NPFC).

General Provisions

2. Each Commission Member and Cooperating non-Contracting Party shall ensure that each fishing vessel entitled to fly its flag and authorized to be used for fishing in the Convention Area is:

    a) marked and identifiable with their International Telecommunication Union Radio Call Sign (IRCS); and

    b) where an IRCS has not been assigned, the vessel shall be marked and identifiable with the characters allocated by the International Telecommunication Union (ITU) to the flag State and followed by, as appropriate, the licence or registration number assigned by the flag State. In such cases, a hyphen shall be placed between the nationality identification characters, and the licence or registration number identifying the vessel.

3. In order to avoid confusion with the letters I and O, it is recommended that the numbers 1 and 0, which are specifically excluded from the ITU call signs, be avoided by national authorities when allocating licence or registration numbers.

4. Apart from the fishing vessel's name and identification mark, and the port of registry as required by international practice or national legislation, the marking system as specified shall, in order to avoid confusion, be the only other vessel identification mark consisting of letters and numbers to be painted on the hull or superstructure.

Application of Markings

5. Each Commission Member and Cooperating non-Contracting Party shall ensure that the markings are prominently displayed at all times:

    a) on the vessel's side or superstructure, port and starboard; fixtures inclined at an angle to the vessel's side or superstructure are permitted provided that the angle of inclination does not prevent sighting of the sign from another vessel or from the air; and

b) on a deck, except as provided for in paragraph 7. Should an awning or other temporary cover be placed so as to obscure the mark on a deck, the awning or cover shall also be marked. These marks should be placed athwartships with the top of the numbers or letters towards the bow.

6. Each Commission Member and Cooperating non-Contracting Party shall ensure that markings are:

a) placed as high as possible above the waterline on both sides, and that such parts of the hull as the flare of the bow and the stern shall be avoided;

b) so placed as to not be obscured by the fishing gear whether it is stowed or in use;

c) clear of flow from scuppers or overboard discharges including areas which might be prone to damage or discolouration from the catch of certain types of species; and

d) not extended below the waterline.

7. Undecked vessels shall not be required to display the markings on a horizontal surface. However, owners should be encouraged, where practical, to fit a board on which the markings may be clearly seen from the air.

8. Vessels fitted with sails may display the markings on the sail in addition to the hull.

9. Boats, skiffs, and craft carried by the vessel for fishing operations shall bear the same mark as the vessel concerned.

Specifications for Markings

10. Each Commission Member and Cooperating non-Contracting Party shall ensure that:

a) block lettering and numbering is used throughout;

b) the width of the letters and numbers is in proportion to the height;

c) the height (*h*) of the letters and the numbers shall be in proportion to the size of the vessel in accordance with the following:

i) for marks to be placed on the hull, superstructure, and/or inclined surfaces:

Length of vessel overall (LOA) in metres (m)	Height of letters and numbers in metres (m) is not less than:
25 m and over	1.0 m

20 m but less than 25 m	0.8 m
15 m but less than 20 m	0.6 m
12 m but less than 15 m	0.4 m
5 m but less than 12 m	0.3 m
Under 5 m	0.1 m

ii) for marks to be placed on deck: the height shall not be less than 0.3 metres (m) for all classes of vessels of 5 metres (m) and over.

d) the length of the hyphen shall be half the height of the letters and numbers;

e) the width of the stroke for all letters, numbers, and the hyphen shall be *h*/6;

f) the space between letters and/or numbers shall not exceed *h*/4, nor be less than *h*/6; and

g) the space between adjacent letters having sloping sides shall not exceed *h*/8, nor be less than *h*/10, for example A V.

Specifications for Painting of Markings

11. Each Commission Member and Cooperating non-Contracting Party shall ensure that:

a) the markings are either white on a background, or black on a white background;

b) the background shall extend to provide a border around the mark of not less than *h*/6;

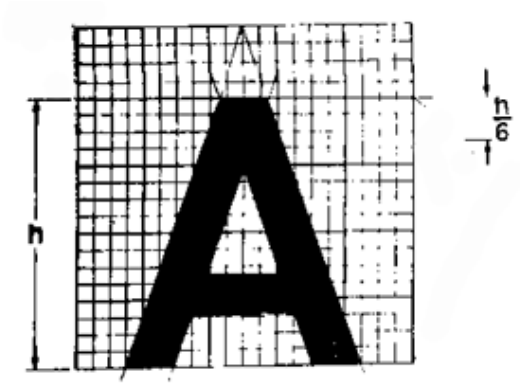
c) good quality marine paint is used throughout;

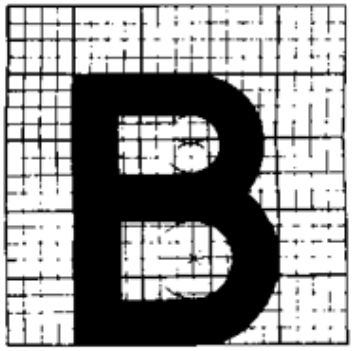
d) where retro-reflective or heat generating substances are used, the markings meet the requirements of this Annex; and

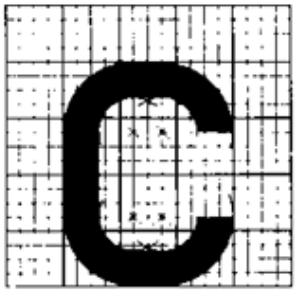
e) the markings and background are maintained in good condition at all times.

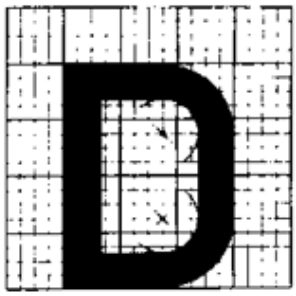
Review and Amendment of Specifications

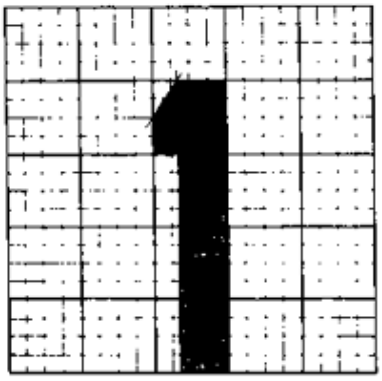
12. The Commission shall keep these specifications under review, and may amend them as appropriate.


A
h
h/6


B

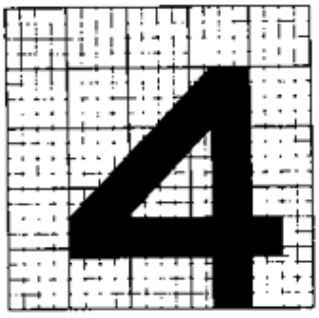

C


D





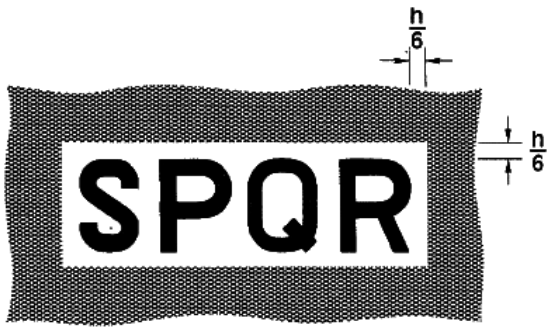




Examples of placement of the marks
Exemples d'emplacement des marques
Ejemplos de colocación de las marcas

CONTRAST / CONTRASTE / CONTRASTE

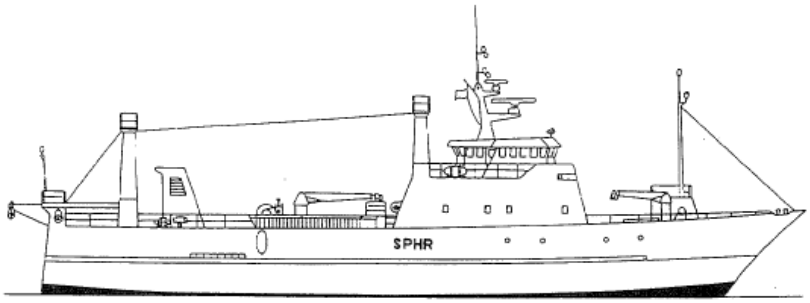


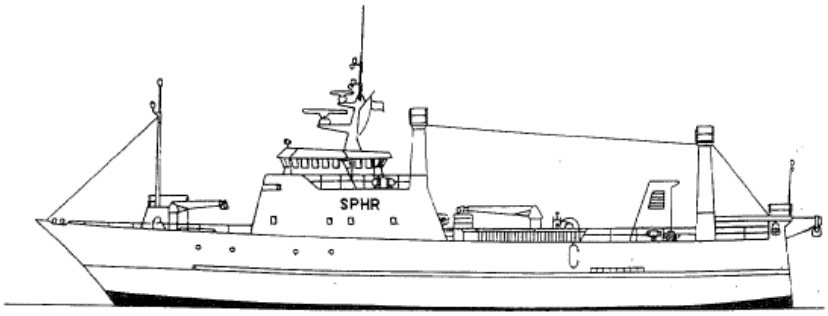


COLOURED BACKGROUND / FOND COLORE / FONDO EN COLOR

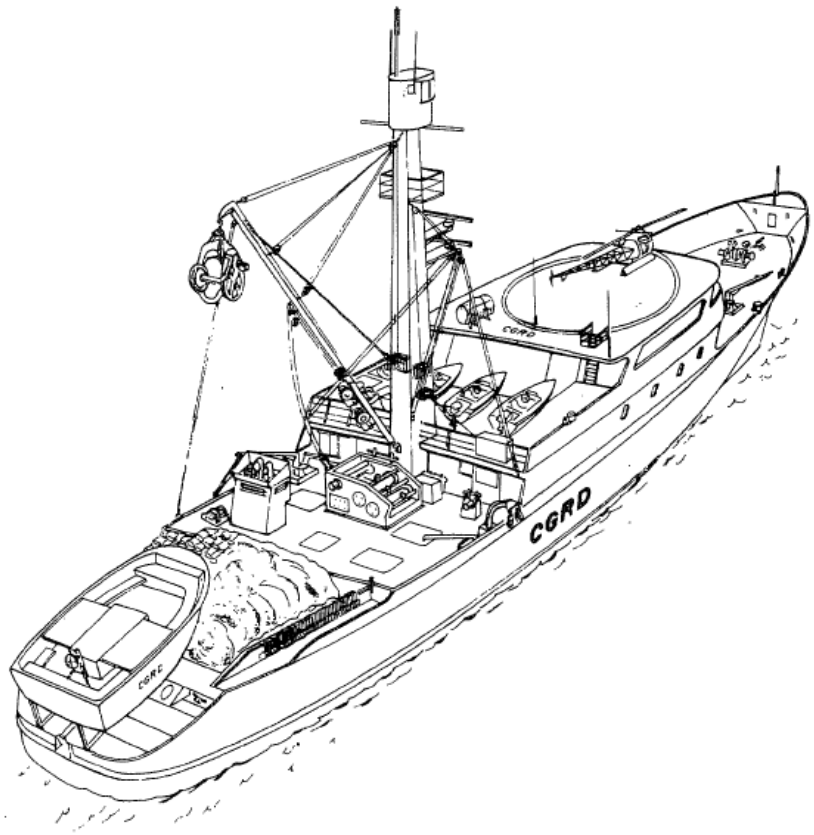


Group No. 1	Groupe N° 1	Grupo N° 1
FACTORY TRAWLER	CHALUTIER-USINE	ARRASTRERO FACTORIA
Length over all: 68 m	Longueur hors tout: 68 m	Eslora máxima: 68 m
Call sign: POLAND	Indicatif d'appel: POLOGNE	Distintivos de llamado: POLONIA
Letter height: 1 m	Hauteur des lettres: 1 m	Altura de letra: 1 m

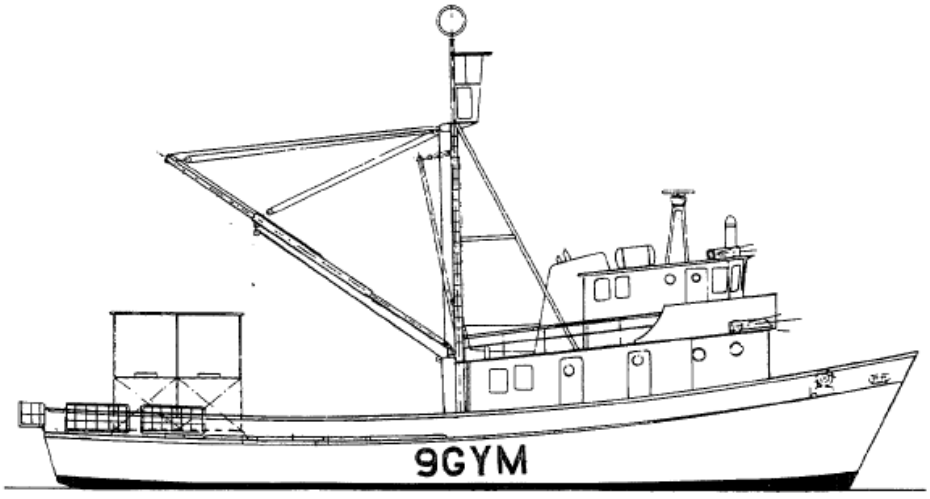




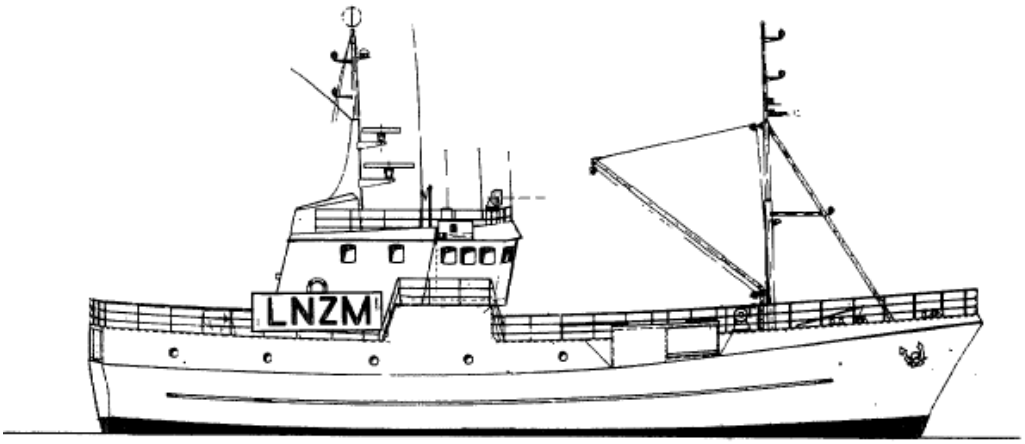
Group No. 1 TUNA PURSE SEINER	Groupe N° 1 THONIER-SENNEUR	Grupo N° 1 CERQUERO ATUNERO
Length over all: 64 m Call sign: CANADA Letter height: 1 m - on superstructure: 0.40 m - on skiff: 0.40 m	Longueur hors tout: 64 m Indicatif d'appel: CANADA Hauteur des lettres: 1 m - sur les superstructures: 0,40 m - sur le bateau annexe: 0,40 m	Eslora máxima: 64 m Distintivos de llamado: CANADA Altura de letra: 1 m - sobre la suberstructura: 0,40 m - sobre la barca auxiliar: 0,40 m



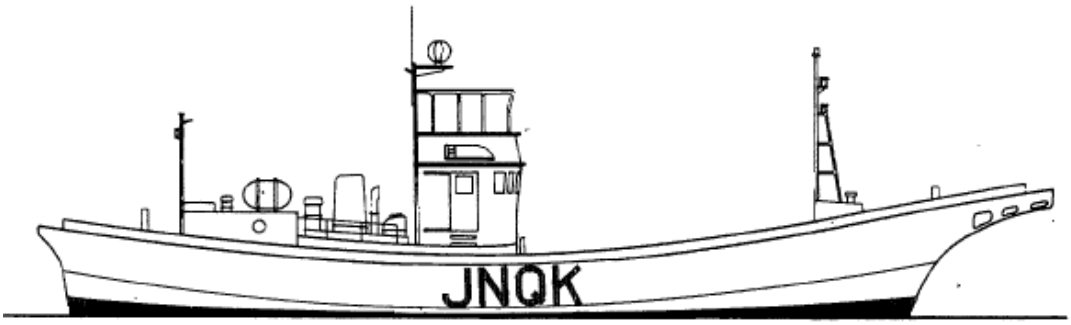
Group No. 1	Groupe N° 1	Grupo N° 1
POLE AND LINE VESSEL/ AMERICAN TYPE	CANNEUR, TYPE AMERICAIN	EMBARCACION PARA LA PESCA CON LINEA Y CAÑA, TIPO AMERICANO
Length over all: 28 m	Longueur hors tout: 28 m	Eslora máxima: 28 m
Call sign: GHANA	Indicatif d'appel: GHANA	Distintivos de llamado: GHANA
Letter height: 1 m	Hauteur des lettres: 1 m	Altura de letra: 1 m



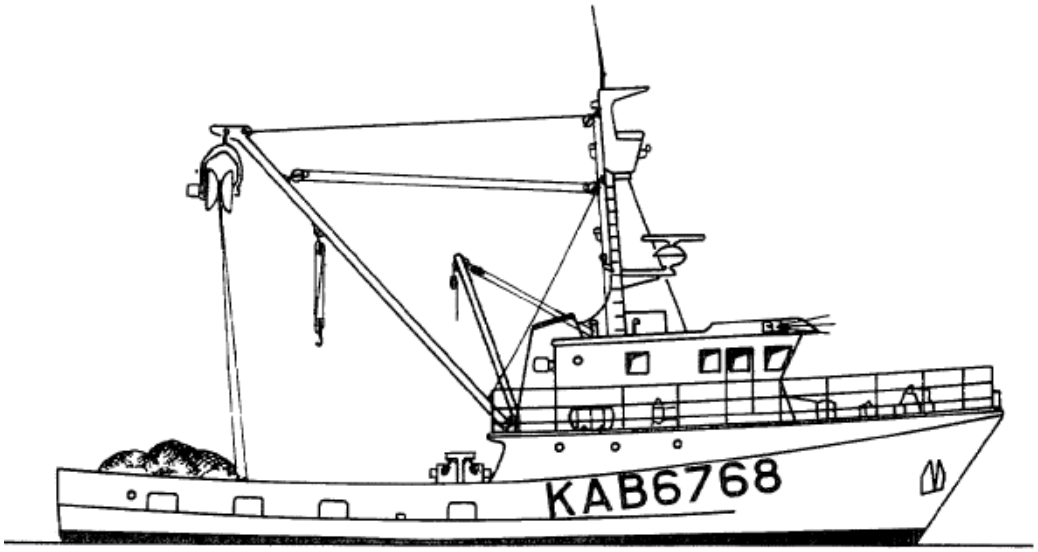
Group No. 1	Groupe N° 1	Grupo N° 1
LONGLINER	PALANGRIER	PALANGRERO
Length over all: 33.50 m	Longueur hors tout: 33,50 m	Eslora máxima: 33,50 m
Call sign: NORWAY	Indicatif d'appel: NORVEGE	Distintivos de llamado: NORUEGA
Letter height: 1 m	Hauteur des lettres: 1 m	Altura de letra: 1 m



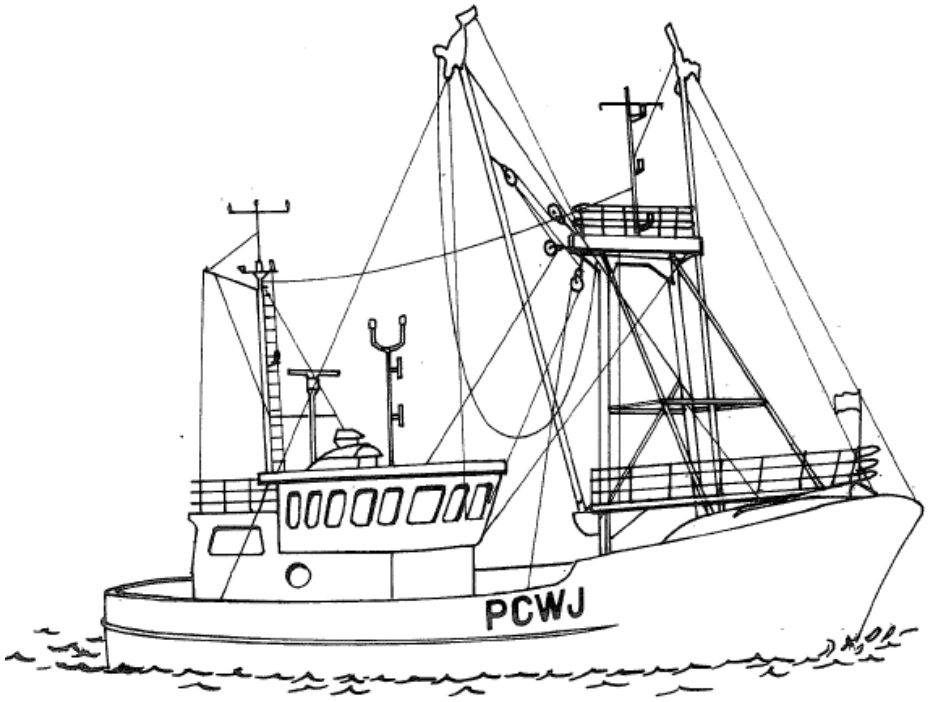
Group No. 2 POLE AND LINE, JAPANESE TYPE	Groupe N° 2 CANNEUR, TYPE JAPONAISE	Grupo N° 2 EMBARCACION, PARA LA PESCA CON LINEA Y CANA, TIPO JAPONES
Length over all: 21.55 m Call sign: JAPAN Letter height: 0.8 m	Longueur hors tout: 21,55 m Indicatif d'appel: JAPON Hauteur des lettres: 0,8 m	Eslora máxima: 21,55 m Distintivos de llamado: JAPON Altura de letra: 0,8 m



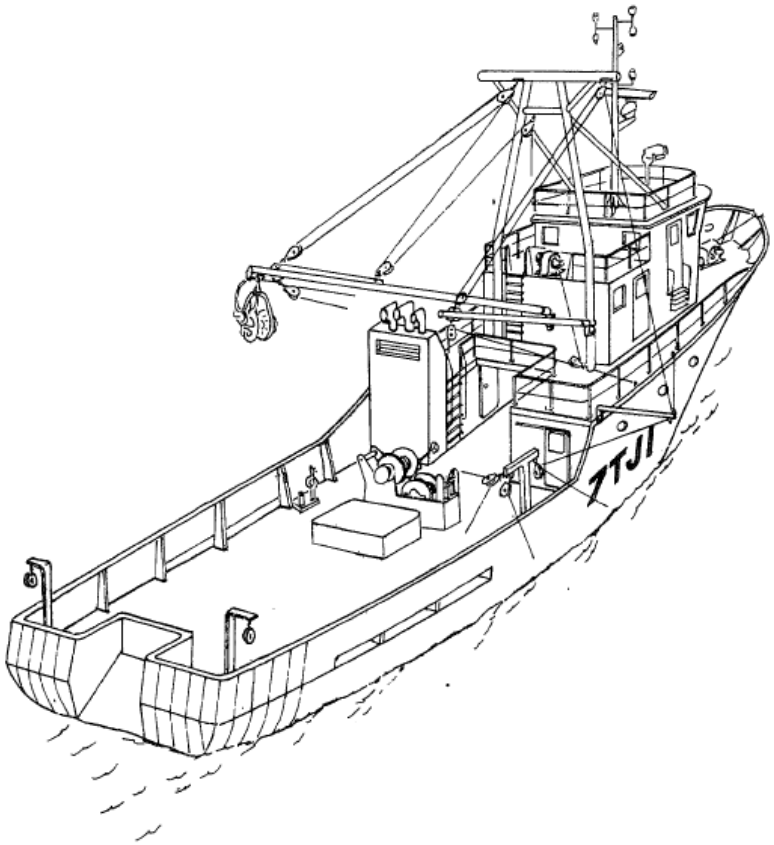
Group No. 2	Groupe N° 2	Grupo N° 2
PURSE SEINER	SENNEUR	CERQUERO
Length over all: 22 m	Longueur hors tout: 22 m	Eslora máxima: 22 m
Call sign: U.S.A.	Indicatif d'appel: ETATS-UNIS	Distintivos de llamado: ESTADOS UNIDOS
Letter height: 0.8 m	Hauteur des lettres: 0,8 m	Altura de letra: 0,8 m



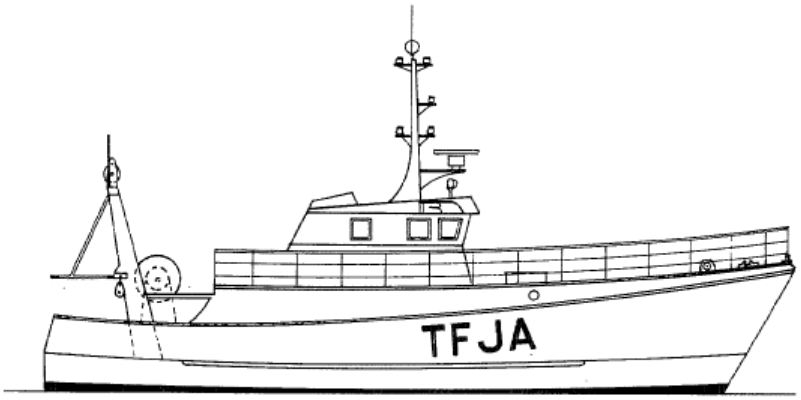
Group No. 2	Groupe N° 2	Grupo N° 2
SCALLOP DREDGER	DRAGUEUR	RASTRERO
Length over all: 22 m	Longueur hors tout: 22 m	Eslora máxima: 22 m
Call sign: NETHERLANDS	Indicatif d'appel: PAYS-BAS	Distintivos de llamado: PAISES BAJOS
Letter height: 0.8 m	Hauteur des lettres: 0,8 m	Altura de letra: 0,8 m

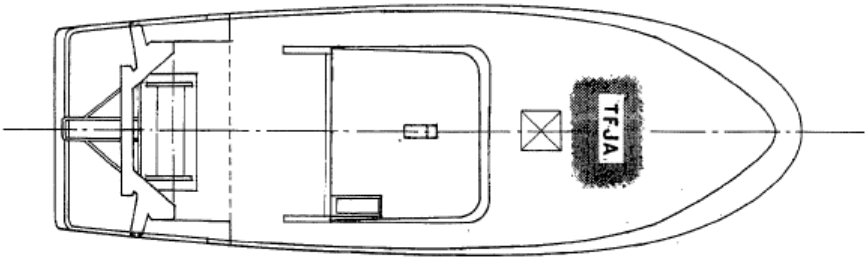


Group No. 2	Groupe N° 2	Grupo N° 2
TRAWLER/SEINER	CHALUTIER-SENNEUR	ARRASTRERO-CERQUERO
Length over all: 20 m	Longueur hors tout: 20 m	Eslora máxima: 20 m
Call sign: ALGERIA	Indicatif d'appel: ALGERIE	Distintivos de llamado: ARGELIA
Letter height: 0.8 m	Hauteur des lettres: 0,8 m	Altura de letra: 0,8 m

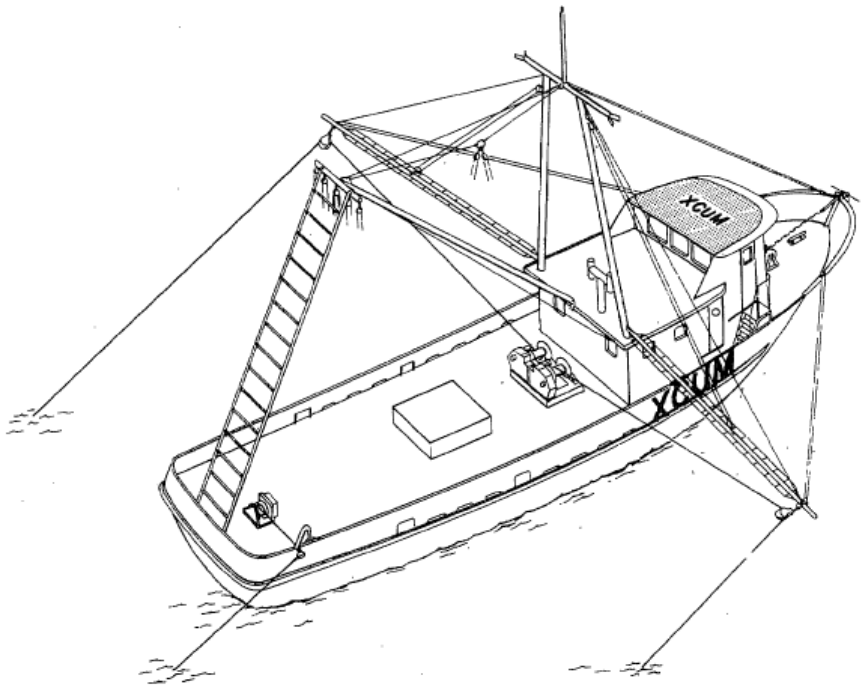


Group No. 2	Groupe N° 2	Grupo N° 2
MEDIUM-SIZED SHELTER DECK STERN TRAWLER	CHALUTIER PECHE ARRIERE DE TAILLE MOYENNE A PONT COUVERT	ARRASTRERO POR LA POPA MEDIANO CON CUBIERTA PROTEGIDA
Length over all: 22 m	Longueur hors tout: 22 m	Eslora máxima: 22 m
Call sign: ICELAND	Indicatif d'appel: ISLANDE	Distintivos de llamado: ISLANDIA
Letter height: 0.8 m	Hauteur des lettres: 0,8 m	Altura de letra: 0,8 m
- on deck: 0.3 m	- sur le pond: 0,3 m	- sobre la cubierta: 0,3 m

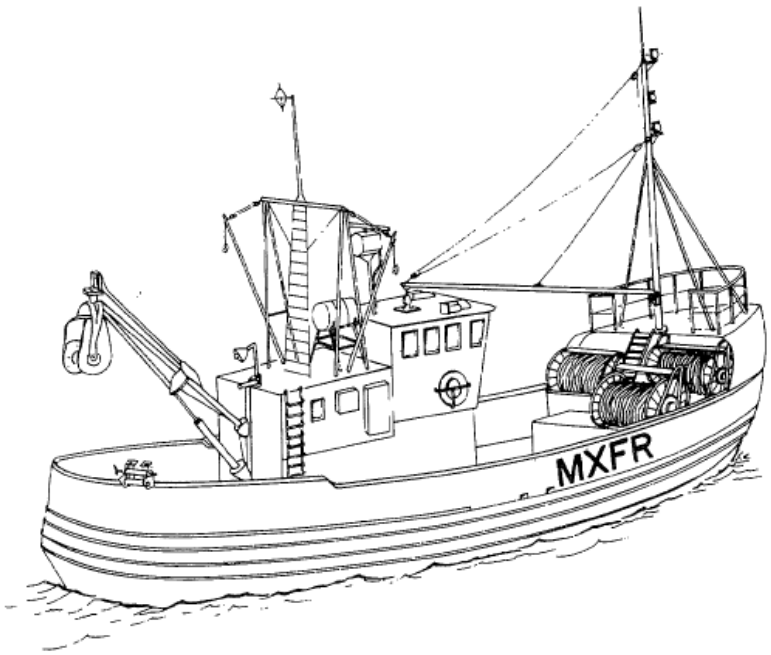




Group No. 3 OUTRIGGER TRAWLER	Groupe N° 3 CHALUTIER A TANGONS	Grupo N° 3 ARRASTRERO CON HORQUETA
Length over all: 18 m Call sign: MEXICO Letter height: 0.6 m - on wheelhouse top: 0.3 m	Longueur hors tout: 18 m Indicatif d'appel: MEXIQUE Hauteur des lettres: 0,6 m - sur le timonerie: 0,3 m	Eslora máxima: 18 m Distintivos de llamado: MEXICO Altura de letra: 0,6 m - sobre caseta de gobierno: 0,3 m

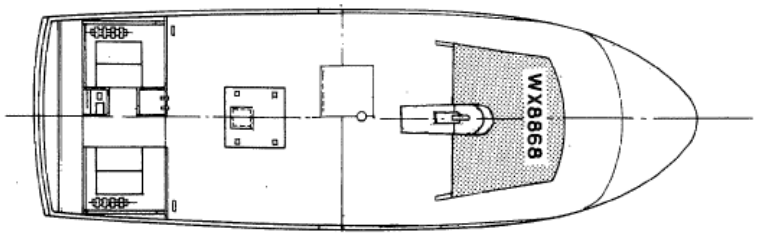


Group No. 3 SEINE NETTER	Groupe N° 3 SENNEUR A SENNE DE FOND	Grupo N° 3 CERQUERO DE RED DE TIRO
Length over all: 16 m Call sign: U.K. Letter height: 0.6 m	Longueur hors tout: 16 m Indicatif d'appel: ROYAUME-UNI Hauteur des lettres: 0,6 m	Eslora máxima: 16 m Distintivos de llamado: REINO UNIDO Altura de letra: 0,6 m

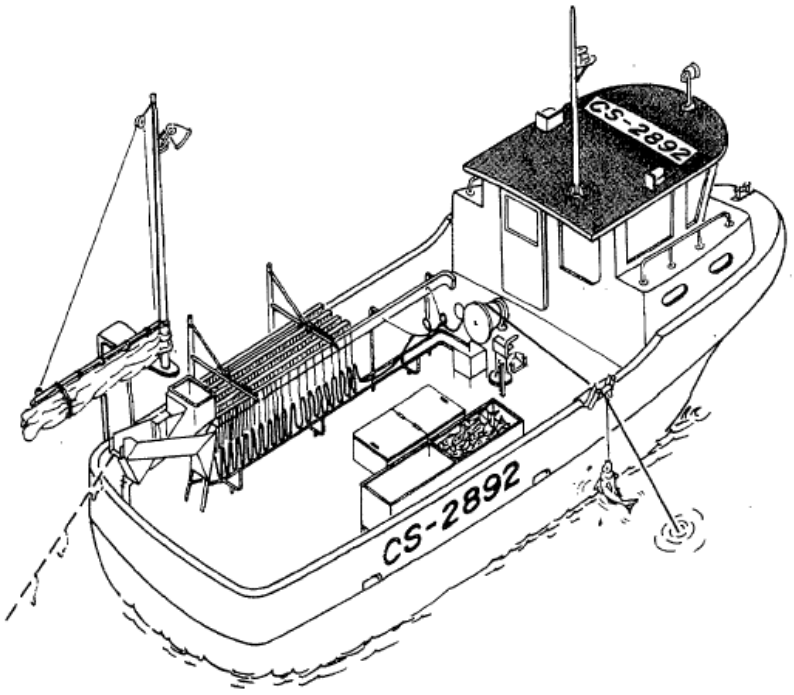


Group No. 3 TROLLER	Groupe N° 3 LIGNEUR A LIGNES DE TRAINE	Grupo N° 3 CURRICANERO
Length over all: 16.80 m Call sign: U.S.A. Letter height: 0.6 m - on wheelhouse: 0.3 m	Longueur hors tout: 16,80 m Indicatif d'appel: ETATS-UNIS Hauteur des lettres: 0,6 m - sur le timonerie: 0,3 m	Eslora máxima: 16,80 m Distintivos de llamado: ESTADOS UNIDOS Altura de letra: 0,6 m - sobre caseta de gobierno: 0,3 m





Group No. 4 SMALL LONGLINER	Groupe N° 4 PALANGRIER DE PETITE TAILLE	Grupo N° 4 PALANGRERO PEQUEÑO
Length over all: 14 m Call sign: PORTUGAL + No. Letter height: 0.4 m - on wheelhouse: 0.3 m	Longueur hors tout: 14 m Indicatif d'appel: PORTUGAL + N° Hauteur des lettres: 0,4 m - sur la timonerie: 0,3 m	Eslora máxima: 14 m Distintivos de llamado: PORTUGAL + N° Altura de letra: 0,4 m - sobre la caseta de gobierno: 0,3 m



Group No. 4
SMALL STERN TRAWLER

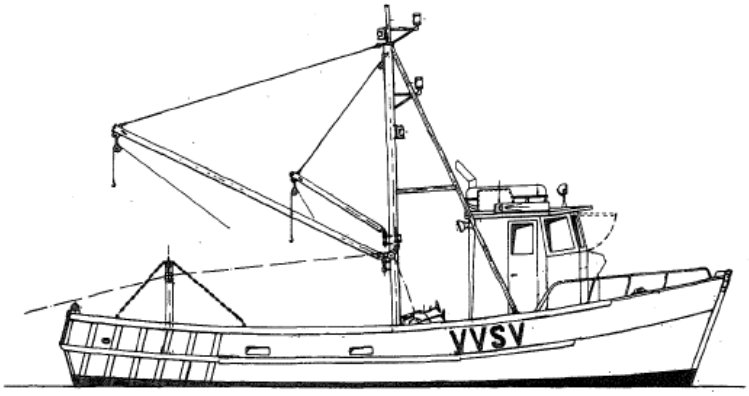
Length over all: 13 m
Call sign: INDIA
Letter height: 0.4 m
- on wheelhouse top: 0.3 m

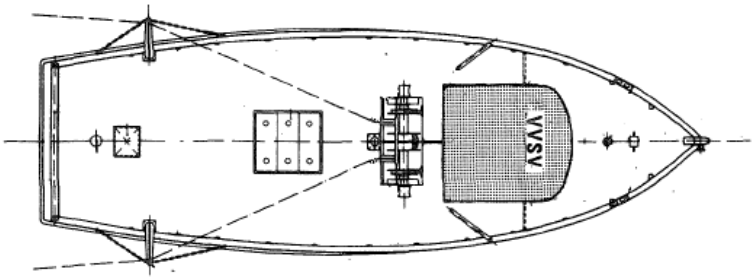
Groupe N° 4
CHALUTIER PECHE ARRIERE DE PETITE TAILLE

Longueur hors tout: 13 m
Indicatif d'appel: INDE
Hauteur des lettres: 0,4 m
- sur le timonerie: 0,3 m

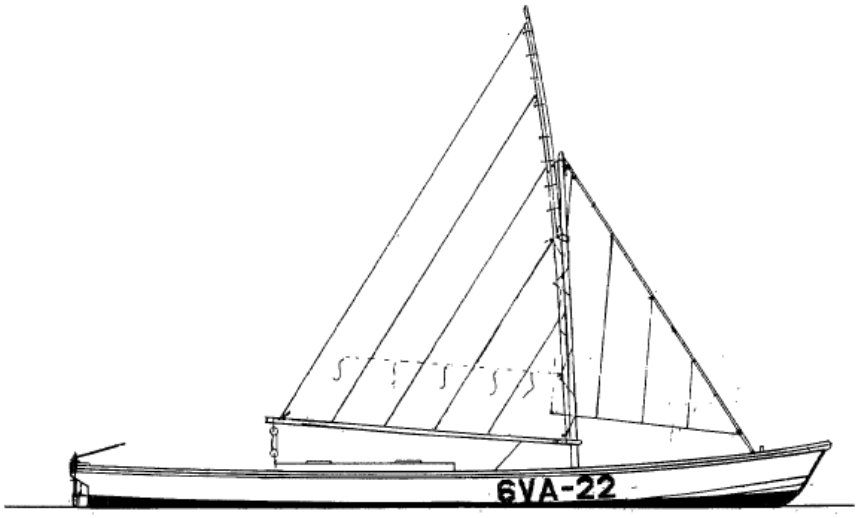
Grupo N° 4
ARRASTRERO POR LA POPA PEQUEÑA

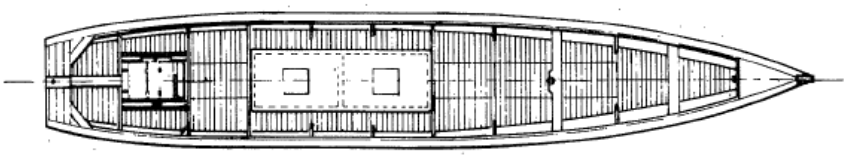
Eslora máxima: 13 m
Distintivos de llamado: INDIA
Altura de letra: 0,4 m
- sobre caseta de gobierno: 0,3 m



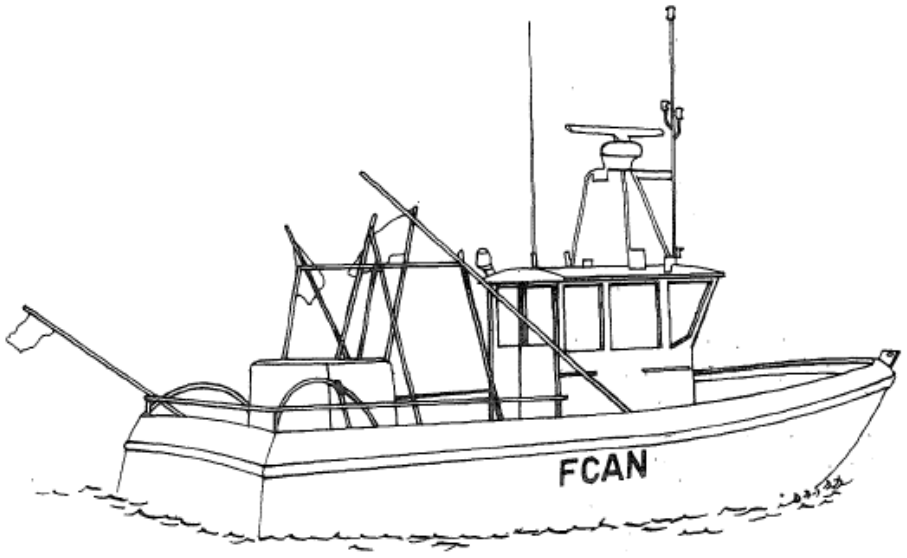


Group No. 4 HANDLINER	Groupe N° 4 LIGNEUR A LIGNES A MAIN	Grupo N° 4 EMBARCACION PARA LA PESCA CON LINEAS DE MANO
Length over all: 14.80 m	Longueur hors tout: 14,80 m	Eslora máxima: 14,80 m
Call sign: SENEGAL + No.	Indicatif d'appel: SENEGAL + N°	Distintivos de llamado: SENEGAL + N°
Letter height: 0.4 m	Hauteur des lettres: 0,4 m	Altura de letra: 0,4 m

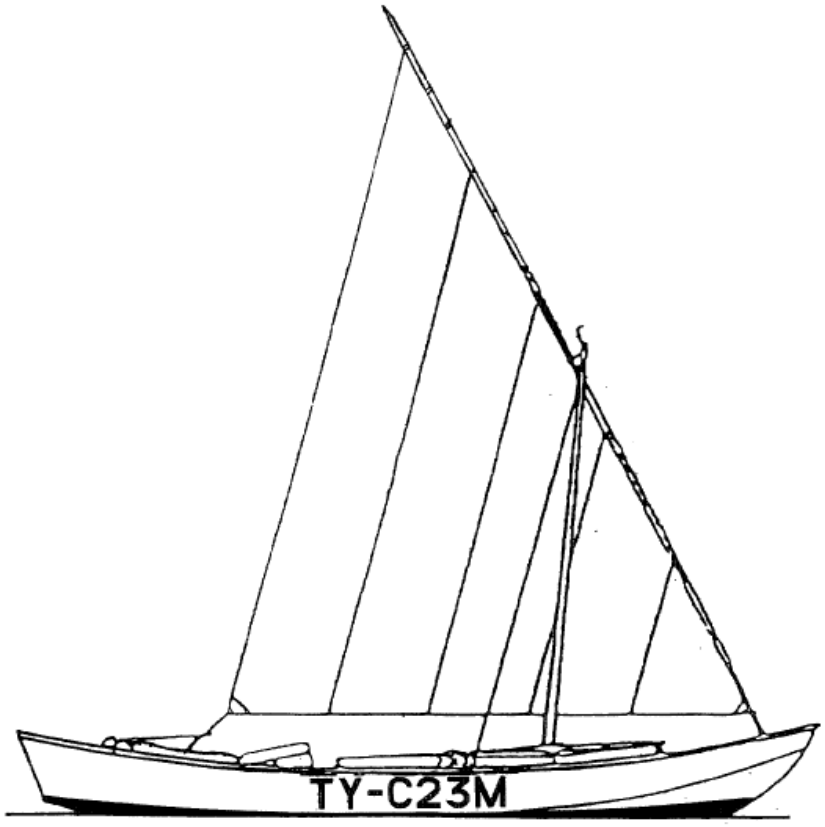




Group No. 5 MULTIPURPOSE VESSEL	Groupe N° 5 NAVIRE POLYVALENT	Grupo N° 5 EMBARCACION POLYVALENT
Length over all: 9 m Call sign: FRANCE Letter height: 0.30 m	Longueur hors tout: 9 m Indicatif d'appel: FRANCE Hauteur des lettres: 0,30 m	Eslora máxima: 9 m Distintivos de llamado: FRANCIA Altura de letra: 0,30 m



Group No. 5 VESSEL WITH SAIL	Groupe N° 5 BATEAU AVEC VOILE	Grupo N° 5 BARCO CON VELA
Length over all: 7.4 m Call sign: BENIN + No. Letter height: 0.30 m	Longueur hors tout: 7,4 m Indicatif d'appel: BENIN + N° Hauteur des lettres: 0,30 m	Eslora máxima: 7,4 m Distintivos de llamado: BENIN + N° Altura de letra: 0,30 m



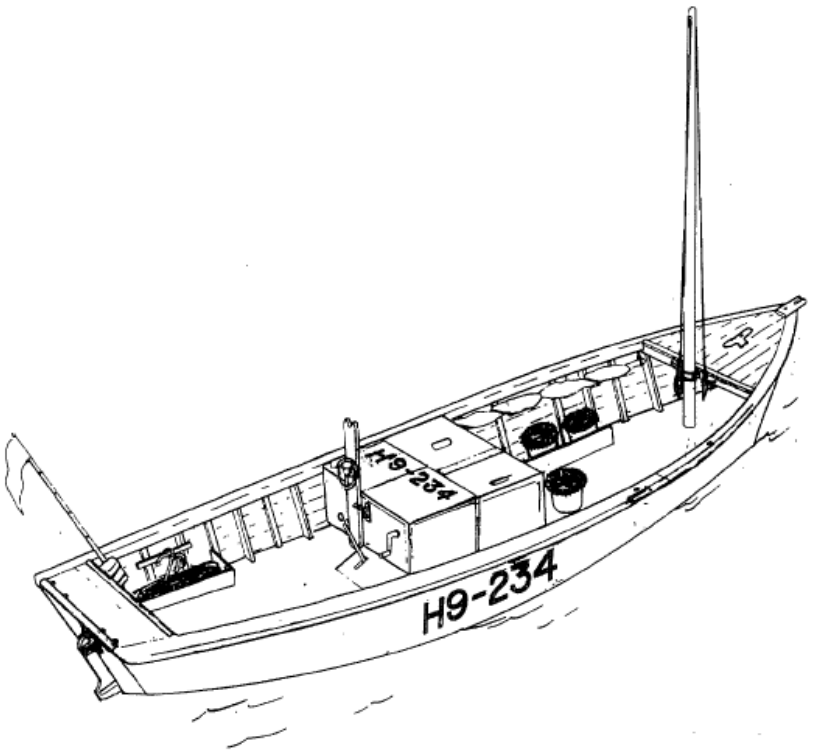
Group No. 5
HANDLINER

Length over all: 7.60 m
Call sign: PANAMA + No.
Letter height: 0.3 m
- on engine box: 0.10 m

Groupe N° 5
LIGNEUR A LIGNES A MAIN

Longueur hors tout: 7,60 m
Indicatif d'appel: PANAMA + N°
Hauteur des lettres: 0,3 m
- sur coffe du moteur: 0,10 m

Grupo N° 5
EMBARCACION PARA LA PESCA CON LINEAS DE MANO
Eslora máxima: 7,60 m
Distintivos de llamado: PANAMA + N°
Altura de letra: 0,3 m
- sobre alojamiento del motor: 0,10 m



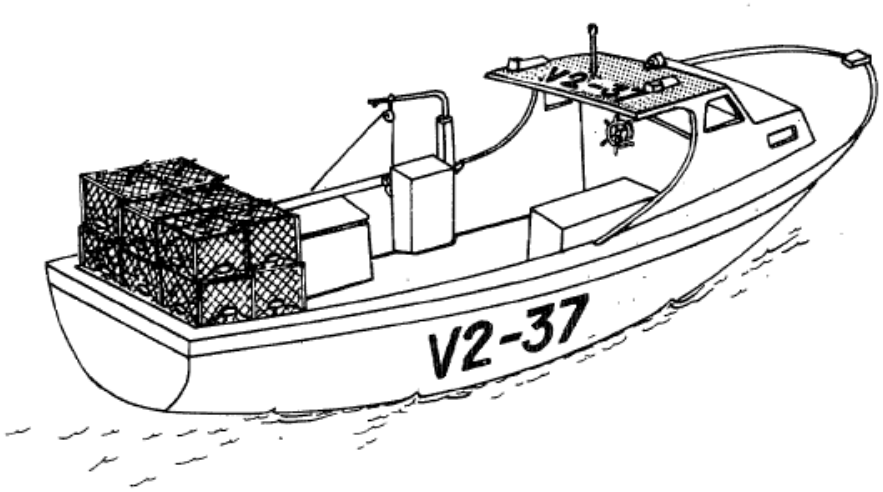
Group No. 5
SMALL POT FISHING VESSEL

Length over all: 6 m
Call sign: ANTIGUA
Letter height: 0.3 m
- on the cuddy: 0.10 m

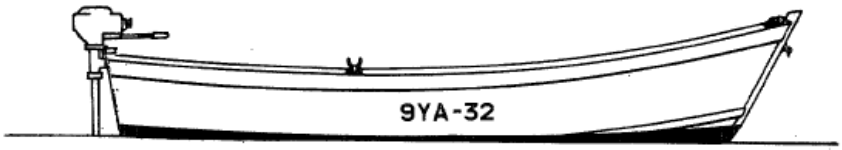
Groupe N° 5
CASEYEUR DE PETITE TAILLE

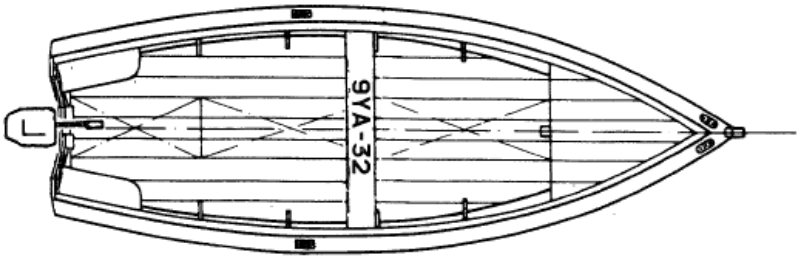
Longueur hors tout: 6 m
Indicatif d'appel: ANTIGUA
Hauteur des lettres: 0,3 m
- sur la tille: 0,10 m

Grupo N° 5
EMBARCACION PARA LA PESCA CON NASAS PEQUEÑA
Eslora máxima: 6 m
Distintivos de llamado: ANTIGUA
Altura de letra: 0,3 m
- sobre la camarote de proa: 0,10 m



Group No. 6 OUTBOARD POWERED BOAT	Groupe N° 6 BATEAU A MOTEUR HORS-BORD	Grupo N° 6 LANCHA CON MOTOR FUERA DE BORDA
Length over all: 4.80 m Call sign: TRINIDAD AND TOBAGO + No. Letter height: 0.10 m - on seat: 0.10 m	Longueur hors tout: 4,80 m Indicatif d'appel: TRINITE-ET-TOBAGO + N° Hauteur des lettres: 0,10 m - sur le banc: 0,10 m	Eslora máxima: 4,80 m Distintivos de llamado: TRINIDAD Y TABAGO + N° Altura de letra: 0,10 m - sobre banco: 0,10 m





North Pacific Fisheries Commission

CMM 2026-19
(*Entered into force 1 January 2027*)

CONSERVATION AND MANAGEMENT MEASURE ON MINIMUM STANDARDS FOR THE COLLECTION, REPORTING, VERIFICATION AND EXCHANGE OF DATA

The North Pacific Fisheries Commission (NPFC),

Recalling Article 3 (g) of the Convention on the Conservation and Management of High Seas Fisheries resources in the North Pacific Ocean (Convention) requiring to ensure that complete and accurate data concerning fishing activities, including with respect to all target and non-target species within the Convention Area, are collected and shared in a timely and appropriate manner;

Recalling Article 16 of the Convention on Data Collection, Compilation and Exchange;

Mindful that Articles 5 (j) and 6 (3d) of the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 December 1995 (1995 Agreement) call for the collection and sharing, in a timely manner, of complete and accurate data concerning fishing activities, including for assessing impacts of fishing on non-target species and associated or dependent species and the ecosystem;

Noting the requirements in Article 7 of the 1995 Agreement, which requires that conservation and management measures established for straddling fish stocks on the high seas and those adopted for areas under national jurisdiction are compatible in order to ensure conservation and management of these fisheries resources in their entirety;

Emphasising that complete and accurate data from fishing vessels is required to adequately inform stock assessment and other scientific evaluation;

Further noting that operational level catch and effort data provides significant value to scientific assessments;

Recognizing the critical role of flag States in recording, maintaining and sharing accurate, complete and timely data on fishing activities in order to support monitoring, control and surveillance activities and ensure compliance with conservation and management measures;

Adopts the following Conservation and Management Measure (CMM) in accordance with Article 7 of the Convention:

1. For the NPFC managed fisheries, Commission Members and Cooperating non-Contracting Parties (CNCPs) shall, as appropriate, take necessary measures to ensure that vessels flying their flag and operating in the Convention area:
    a. complete an accurate log, preferably via electronic means of every fishing day that it spends fishing for fisheries resources managed by the NPFC;
    b. include in the log the information required on incidental catch of non-target and associated or dependent species, in accordance with relevant CMMs;

c. enter in the log at the end of the day the main activity of the day, including for days with no catches.

2. Commission Members and CNCPs shall, as appropriate, ensure that data referred to in paragraph 1 are collected by their vessels in accordance with the operational characteristics of each fishing method as described in Annexes 1 to 8 as minimum standards. Commission Members and CNCPs shall make the relevant data available to the NPFC Scientific Committee for scientific purposes, in accordance with NPFC's Data Sharing and Data Security Protocol.

3. Commission Members and CNCPs shall require each vessel referred to in paragraph 1 to provide the information referred to in paragraph 2 to their relevant authority or designated institution in accordance with their laws and regulations.

4. Commission Members and CNCPs shall require each vessel referred to in paragraph 1 to keep an accurate original or copy with marked change, if any, of the required information pertaining to the current trip on board the vessel at all times during the course of a trip.

5. Commission Members and CNCPs fishing for fisheries resources managed by the NPFC shall ensure that for each calendar year, annual catch totals raised to live weight (the weight of the whole fish as caught, prior to any processing, i.e. before gutting, heading, or removal of other part) for all species/species groups caught in the Convention Area during that year are collated as described in Annex 8. Commission Members and CNCPs shall provide by 30th June, their previous year's (January to December) annual catch totals raised to "live" weight for all species/ species groups caught.

6. Commission Members and CNCPs are encouraged to provide annual catch data for the NPFC priority species caught in the area under their jurisdiction adjacent to the Convention Area.

7. Data collected shall be stored, accessed, used and disseminated by the Secretariat of NPFC in accordance with the NPFC Data Sharing and Data Security Protocol.

8. The Scientific Committee and Technical and Compliance Committee will advise the Commission, if necessary, on annual basis regarding existing or emerging needs for further improving NPFC data collection, verification, reporting and exchange processes needed to strengthen the robustness of scientific assessments or to reduce uncertainties in scientific advice for NPFC stocks.

9. This CMM is without prejudice to existing or additional reporting requirements.

10. This CMM enters into force on 1 January 2027 and will be reviewed on a regular basis.

ANNEX 1

Minimum Standards for data to be recorded for all fishing activities regardless the fishing gear

Data to be collected on a fishing trip basis.

#	Variable Name	Description	Requirement	Unit	Format / Notes
1	Year	Calendar year of trip	Mandatory	–	Integer (e.g., 2026)
2	Trip number this year	Unique trip ID within year	Mandatory	–	
3	Vessel name	Registered vessel name	Mandatory	–	
4	Current vessel flag	Flag State at time of trip	Mandatory	–	
5	Unique Vessel Identifier / IMO number	IMO or official UVI	Mandatory	–	Numeric (7-digit IMO) or alphanumeric
6	Registration number	National vessel registration number	Optional	–	
7	External identification	External hull marking	Optional	–	
8	International radio call sign	IRCS	Optional	–	
9	Fishing permit/license number(s)	Authorisation number(s)	Optional	–	
10	Name of master	Registered name of master	Mandatory	–	
11	Address of master	Registered address of master	Mandatory	–	
12	Port of departure	Port where trip started	Mandatory	–	UN/LOCODE
13	Date of departure	Departure date	Optional	–	YYYY-MM-DD (ISO 8601, UTC)
14	Port of arrival	Port where trip ended	Optional	–	UN/LOCODE
15	Date of arrival	Arrival date	Optional	–	YYYY-MM-DD (ISO 8601, UTC)
16	Port of landing	Landing port (if different from port of arrival)	Optional	–	UN/LOCODE
17	Date of landing	Landing date	Optional	–	YYYY-MM-DD (ISO 8601, UTC)
18	Species	Species caught	Mandatory	–	NPFC species list
19	Amount of fish onboard at start of trip	“Live” weight equivalent onboard at departure	Optional	Metric tonnes (mt)	
20	Amount of fish onboard after unloading	Remaining onboard after landing	Optional	Metric tonnes (mt)	
21	Total amount of fish kept	Total retained catch	Mandatory	Metric tonnes (mt)	
22	Total amount of fish discarded	Total discards	Optional	Metric tonnes (mt)	

ANNEX 2

Minimum standards for data to be recorded for trawl fishing activities

Data to be collected on an un-aggregated (tow by tow) or on a daily basis.

#	Variable Name	Description	Requirement	Unit	Format / Notes
1	Date of fishing activity	Calendar date of the fishing activity	Mandatory	–	YYYY-MM-DD (ISO 8601, UTC)
2	Fishing gear	Fishing gear used during the tow	Optional	–	
3	Type of trawl	Classification of trawl gear	Mandatory	–	Bottom or mid-water trawl
4	Mesh size	Mesh size used in the tow	Optional	Millimeters (mm)	
5	Height of net opening	Vertical opening of the net	Optional	Meters (m)	
6	Width of net opening	Horizontal opening of the net	Optional	Meters (m)	
7	Gear depth at start of fishing	Depth of gear at beginning of tow	Optional	Meters (m)	
8	Bottom depth at start of fishing	Seafloor depth at tow start location	Optional	Meters (m)	
9	Tow start date and time	Date and time when tow began	Optional	–	YYYY-MM-DD hh:mm:ss (UTC)
10	Tow end date and time	Date and time when tow ended	Optional	–	YYYY-MM-DD hh:mm:ss (UTC)
11	Tow start position	Starting coordinates of tow or the daily fishing activity	Optional	1/100th degree resolution for bottom fishing, 1/10th degree resolution for pelagic trawl-decimal format	Latitude and longitude recorded separately
12	Tow end position	Ending coordinates of tow	Optional	1/100th degree resolution for bottom fishing, 1/10th degree resolution for pelagic trawl-decimal format	Latitude and longitude recorded separately
13	Configuration of trawl	Configuration of trawl gear	Optional	–	Single (S), double (D) or triple (T)
14	Intended target species	Intended target species of the tow or the daily fishing activity	Mandatory	–	NPFC species code list
15	Incidental captures of species of concern (marine mammals, seabirds, reptiles or or VME indicator taxa, as defined in CMMs 2025-05 and 2025-06)	Indicator whether incidental capture occurred during the tow or the daily fishing activity	Optional	–	Yes / No / Unknown

16	Species	Species caught in the tow or the daily fishing activity	Mandatory		NPFC species code list
17	Estimated weight or numbers of catch retained on board for all species caught including target, bycatch and species of concern. (marine mammals, seabirds, reptiles or VME indicator taxa as defined in CMMs 2025-05 and 2025-06).	Retained catch amount for the species in field 16	Optional	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole or live weight of other taxa	
18	Estimation of the amount of all marine resources discarded by species, to the extent practicable, including any species of concern (marine mammals, seabirds, reptiles, or VME indicator taxa, as defined in the CMMs 2025-05 and 2025-06).)	Discarded catch amount for the species in field 16	Optional	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole weight of other taxa.	

ANNEX 3

Minimum standards for data to be recorded for purse seine fishing activities

Data to be collected on an un-aggregated (set-by-set) or on a daily basis.

#	Variable Name	Description	Requirement	Unit	Format / Notes
1	Date of fishing activity (UTC date)	Calendar date of the fishing activity	Mandatory	–	YYYY-MM-DD (ISO 8601, UTC)
2	Fishing gear	Fishing gear used during the set	Optional	–	NPFC species code list
3	Mesh size	Mesh size used in the gear	Optional	Millimeters (mm)	
4	Net length	Total length of net deployed	Optional	Meters (m)	
5	Net height	Vertical height of net	Optional	Meters (m)	
6	Total deck light power	Total deck lighting power used	Optional	Kilowatt(kW)	
7	Set start date and time	Date and time when gear deployment started	Optional	–	YYYY-MM-DD hh:mm:ss (UTC)
8	Set end date time	Date and time when gear retrieval ended	Optional	–	YYYY-MM-DD hh:mm:ss (UTC)
9	Set start position	Starting coordinates of the set or the daily fishing activity	Mandatory	1/10th degree resolution - decimal format	Latitude and longitude recorded separately
10	Intended target species	Target species for the set or the daily fishing activity	Mandatory	–	NPFC species code list
11	Incidental captures of species of concern (marine mammals, seabirds, reptiles)	Indicator whether incidental capture occurred during the set or the daily fishing activity	Optional	–	Yes / No / Unknown
12	Species	Species caught in the set or the daily fishing activity	Mandatory	–	NPFC species code list
13	Estimated weight or numbers of catch retained on board for all species caught including target, bycatch and species of concern	Retained catch amount for the species in field 12	Optional	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole or live weight of other taxa	
14	Estimation of the amount of all marine resources discarded by species, to the extent practicable, including any species of concern (marine mammals, seabirds or reptiles) and benthic	Discarded catch amount for the species in field 12	Optional	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole weight of other taxa	

ANNEX 4

Minimum standards for data to be recorded for jigging fishing activities

Data to be collected on a daily basis.

#	Variable Name	Description	Requirement	Unit	Format / Notes
1	Date of fishing activity (UTC date)	Calendar date of the fishing activity	Mandatory	–	YYYY-MM-DD (ISO 8601, UTC)
2	Fishing gear	Fishing gear used during the operation	Optional	–	
3	Number of crew	Total crew onboard during fishing activity	Optional	Count	
4	Number of single jig machines	Total number of single jig machines deployed	Optional	Count	
5	Number of double jig machines	Total number of double jig machines deployed	Optional	Count	
6	Number of jigs per line	Number of jigs attached per line	Optional	Count	
7	Maximum Operating depth	Maximum fishing depth during operation	Optional	Meters (m)	
8	Total deck light power	Total deck lighting power used	Optional	Kilowatt (kW)	
9	Total hours fished	Total duration of fishing effort	Optional	Hours (h)	
10	Position at start of first drift	Starting coordinates at the start of the first drift or the daily fishing activity	Optional	1/10th degree resolution – decimal format	Latitude and longitude recorded separately
11	Position at end of last drift	Ending coordinates at the end of the last drift of the day	Optional	1/10th degree resolution – decimal format	Latitude and longitude recorded separately
12	Echo Sounder	Whether echo sounder equipment was used	Optional	–	Yes / No
13	Intended target species	Target species for the fishing activity	Optional	–	NPFC species code list
14	Incidental captures of species of concern (marine mammals, seabirds or reptiles)	Indicator whether incidental capture occurred	Optional	–	Yes / No / Unknown
15	Species	Species caught in the daily fishing activity	Optional	–	NPFC species code list

16	Estimated weight or numbers of catch retained on board for all species caught including target, bycatch and species of concern (marine mammals, seabirds, or reptiles)	Retained catch amount for the species in field 15	Optional	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole or live weight of other taxa	
17	Estimation of the amount of all living marine resources discarded by species, to the extent practicable, including any species of concern (marine mammals, seabirds, or reptiles)	Discarded catch amount for the species in field 15	Optional	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole weight of other taxa	

ANNEX 5

Minimum standards for data to be recorded for stick-held dip net fishing activities

Data to be collected on a daily basis.

#	Variable Name	Description	Requirement	Unit	Format / Notes
1	Date of fishing activity	Calendar date of the fishing activity	Mandatory	–	YYYY-MM-DD (ISO 8601, UTC)
2	Start of fishing activity	Start time of the fishing activity	Optional	-	00:00 UTC (ISO 8601, UTC)
3	Fishing gear	Fishing gear used during the fishing activity	Optional	–	
4	Number of crew	Total crew onboard during fishing activity	Mandatory	Count	
5	Mesh size	Mesh size used in the net	Optional	Millimeters (mm)	
6	Net length	Total length of net deployed	Optional	Meters (m)	
7	Maximum operating depth	Vertical height of the net	Optional	Meters (m)	
8	Total deck light power	Total deck lighting power used	Optional	Kilowatt (kW)	
9	Total hours fished	Total fishing effort duration	Optional	Hours (h)	
10	Number of hauls	Total number of hauls	Optional	–	
11	Intended target species	Target species of the daily fishing activity	Optional	–	NPFC species code list

12	Incidental captures of species of concern (marine mammals, seabirds, or reptiles)	Indicator whether incidental capture occurred	Optional	–	Yes / No / Unknown
13	Species	Species caught in the daily fishing activity	Optional	–	NPFC species code list
14	Estimated weight or numbers of catch retained on board for all species caught including target, bycatch and species of concern	Retained catch amount for the species in field 13	Optional	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole or live weight of other taxa	
15	Estimation of the amount of all marine resources discarded by species, to the extent practicable, including any species of concern (marine mammals, seabirds or reptiles)	Discarded catch amount for the species in field 13	Optional	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole weight of other taxa	

ANNEX 6

Minimum standards for data to be recorded for bottom gillnets fishing activities

Data to be collected on an un-aggregated (set by set) basis.

#	Variable Name	Description	Requirement	Unit	Format / Notes
1	Date of fishing activity	Calendar date of the fishing activity	Mandatory	–	YYYY-MM-DD (ISO 8601, UTC)
2	Fishing gear	Fishing gear used during the operation	Mandatory	–	NPFC gear code list
3	Total net length	Total length of net deployed	Optional	Meters (m)	
4	Total length of net lost	Total length of net lost during operation	Optional	Meters (m)	
5	Net height	Vertical height of the net	Optional	Meters (m)m	
6	Mesh size	Mesh size used in the net	Mandatory	Millimeters (mm)	
7	Minimum and maximum depth of the set	Depth range of gear during set	Optional	Meters (m)	Record as two numeric fields (minimum depth, maximum depth)
8	Set start date and time	Date and time when haul began	Mandatory	–	YYYY-MM-DD hh:mm:ss (UTC)
9	Set end date and time	Date and time when haul ended	Mandatory	–	YYYY-MM-DD hh:mm:ss (UTC)
10	Set start position	Starting coordinates of the haul	Mandatory	1/100th degree resolution – decimal format	Latitude and longitude recorded separately; WGS84
11	Set end position	Ending coordinates of the haul	Mandatory	1/100th degree resolution – decimal format	Latitude and longitude recorded separately; WGS84
12	Intended target species	Target species for the fishing operation	Optional	–	NPFC species code list
13	Incidental captures of species of concern (marine mammals,	Indicator whether incidental capture occurred	Mandatory	–	Yes / No / Unknown

	seabirds, reptiles or VME indicator species as defined in CMMs 2025-05 and 2025-06)				
14	Species	Species caught in the haul	Mandatory	–	NPFC species code list
15	Estimated numbers or weight of catch retained on board for all species caught including target, bycatch and species of concern (marine mammals, seabirds, reptiles or VME indicator species as defined in CMMs 2025-05 and 2025-06)	Retained catch amount for the species in field 14	Mandatory	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole or live weight of other taxa	
16	Estimation of the amount of all living marine resources discarded by species, to the extent practicable, including any species of concern (marine mammals, seabirds, reptiles, or VME indicator species as defined in CMMs 2025-05 and 2025-06)	Discarded catch amount for the species in field 14	Optional	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole weight of other taxa	

ANNEX 7

Minimum standards for data to be recorded for bottom traps

#	Variable Name	Description	Requirement	Unit	Format / Notes
1	Date of fishing activity	Calendar date of the fishing activity	Mandatory	–	YYYY-MM-DD (ISO 8601, UTC)
2	Fishing gear	Fishing gear used during the operation	Mandatory	–	
3	Number of traps deployed	Total number of traps set	Mandatory	Meters (m)	
4	Number of traps retrieved	Total number of traps hauled	Mandatory	Meters (m)	
5	Trap type	Type/Design of trap	Mandatory	Meters (m)	Text (e.g., conical, rectangular, collapsible)
6	Trap dimensions	Length × width × height of trap	Mandatory	Meters (m)	
7	Total trap set length	The total horizontal length of the trap line on the seabed.	Mandatory	Meters (m)	
8	Bait type	Type of bait used	Mandatory	–	
9	Deployment date and time	Date and time traps were set	Mandatory	–	YYYY-MM-DD hh:mm:ss (UTC)
10	Retrieval date and time	Date and time traps were hauled	Mandatory	–	YYYY-MM-DD hh:mm:ss (UTC)
11	Deployment position	Coordinates where traps were deployed	Mandatory	1/100th degree resolution – decimal format	Latitude and longitude recorded separately; WGS84
12	Retrieval position	Coordinates where traps were retrieved	Mandatory	1/100th degree resolution – decimal format	Latitude and longitude recorded separately; WGS84
13	Intended target species	Target species for the fishing	Mandatory	–	NPFC FAO code list

		operation			
14	Incidental captures of species of concern (marine mammals, seabirds, reptiles, or VME indicator species as defined in CMMs 2025-05 and 2025-06)	Indicator whether incidental capture occurred	Mandatory	–	Yes / No / Unknown
15	Species	Species caught	Mandatory	–	NPFC species code list
16	Estimated numbers or weight of catch retained on board for all species caught including target, bycatch and species of concern (marine mammals, seabirds, reptiles, benthic taxa, or VME indicator species as defined in CMMs 2025-05 and 2025-06)	Retained catch amount for the species in field 15	Mandatory	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole or live weight of other taxa	
17	Estimation of the amount of all living marine resources discarded by species, to the extent practicable, including any species of concern (marine mammals, seabirds, reptiles or VME indicator species as defined in CMMs 2025-05 and 2025-06)	Discarded catch amount for the species in field 15	Mandatory	Number of marine mammals, seabirds, or reptiles, Metric tonnes (mt) whole weight of other taxa	

ANNEX 8

Minimum standards for Annual Catch Data reporting

Annual catch summaries should list all NPFC species caught in the Convention Area during the Calendar year.

For a calendar year and for each distinct combination of Sea Type, FAO statistical area, and priority species (FAO 3-alpha code) provide the following data:

#	Variable Name	Description	Requirement	Unit	Format / Notes
1	Calendar year	Reporting year	Mandatory	–	YYYY (e.g., 2026)
2	Sea Type	Maritime jurisdiction of fishing activity	Mandatory	–	Either “HS” – High Seas - or “EEZ” – Exclusive Economic Zone
3	FAO Statistical Area	FAO major fishing area code	Optional	–	Numeric or standard FAO code (e.g., 27, 61)
4	Species	Species reported	Mandatory	–	NPFC species code list
5	Fishing gear	Fishing gear classification	Mandatory	–	NPFC gear code list
6	Annual catch total tonnes raised to “live” weight	Total annual catch converted to live weight equivalent	Mandatory	Metric tonnes (mt)	
7	Number of vessels	Total distinct vessels participating in fishery	Mandatory	Count	
8	Number of active days fished	Total fishing days (Total time spent actively fishing (excludes transit, searching, or any other non-fishing activities) expressed in days)	Mandatory	Days	

North Pacific Fisheries Commission

CMM 2026-20

(*Entered into force 1 April 2028*)

CONSERVATION AND MANAGEMENT MEASURE ON MINIMUM STANDARDS FOR PORT STATE MEASURES

The North Pacific Fisheries Commission (NPFC),

Deeply concerned about illegal, unreported and unregulated (IUU) fishing in the NPFC Convention Area and its detrimental effect upon fish stocks, marine ecosystems and the livelihoods of legitimate fishers;

Conscious of the role of the port State in the adoption of effective measures to promote the sustainable use and the long-term conservation of living marine resources;

Recognising that measures to combat IUU fishing should build on the primary responsibility of flag States and use all available jurisdiction in accordance with international law, including port State measures, coastal State measures, market related measures and measures to ensure that nationals do not support or engage in IUU fishing;

Recognising that port State measures provide a powerful and cost-effective means of preventing, deterring and eliminating IUU fishing;

Aware of the need for increasing coordination at the regional and interregional levels to combat IUU fishing through port State measures;

Acknowledging the rapidly developing communications technologies, databases, networks and global records that support port State measures;

Bearing in mind that, in the exercise of their sovereignty over ports located in their territory, Members and Cooperating non-Contracting Parties (CNCPs) may adopt more stringent measures, in accordance international law;

Recalling the relevant provisions of the *United Nations Convention on the Law of the Sea of 10 December 1982;*

Recalling the Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks of 4 December 1995, the Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas of 24 November 1993, and the 1995 FAO Code of Conduct for Responsible Fisheries;

Recalling Article 7(2)(d) of the NPFC Convention which calls on the Commission to develop mechanisms to prevent, deter and eliminate IUU fishing, as well as Article 14(2)(a) requiring Contracting Parties to give effect of port state measures adopted by the Commission;

Recalling the 2009 FAO Port State Measures Agreement (PSMA);

Recalling the recommendation of the NPFC Performance Review Panel that the Commission adopt, as a matter of priority, a conservation and management measure specifying minimum standards for port inspections consistent with the PSMA;

Adopts the following conservation and management measure (CMM), in accordance with Articles 7(2)(d) and 14 of the Convention:

Scope and Application

1. In view to preventing, deterring and eliminating IUU fishing, as well as reinforcing the effective monitoring of compliance with NPFC CMMs, each Member and cooperating non-Contracting Party (CNCP) shall maintain through the implementation of this CMM an effective system of inspections in its ports with respect to vessels not entitled to fly their flags carrying fisheries resources managed by NPFC caught in the NPFC Convention Area and/or fish products originating from such species caught in the Convention Area that have not been previously landed. For the purposes of this measure, these vessels are hereinafter referred to as "foreign fishing vessels".

2. Each Member and CNCP may decide not to apply this CMM to:

    a) foreign fishing vessels chartered by its nationals exclusively for fishing in areas under its jurisdiction and operating under its authority therein. Such chartered fishing vessels shall be subject to measures by that Member or CNCP which are as effective as measures applied in relation to vessels entitled to fly its flag

    b) vessels of a neighbouring State that are engaged in artisanal fishing for subsistence, provided that the port State and the flag State cooperate to ensure that such vessels do not engage in IUU fishing or fishing related activities in support of such fishing;

    c) container vessels that are not carrying fish or, if carrying fish, only fish that have been previously landed, provided that there are no clear grounds for suspecting that such vessels have engaged in fishing related activities in support of IUU fishing.

Integration and Coordination at the National Level

3. Each Member and CNCP should, to the greatest extent possible:
    a) integrate or coordinate fisheries related port State measures with the broader system of port State controls;

    b) integrate port State measures with other measures to prevent, deter, and eliminate IUU fishing and fishing related activities in support of such fishing taking into account, as appropriate, the 2001 FAO International Plan of Action to Prevent, Deter, and Eliminate Illegal, Unreported, and Unregulated Fishing;

    c) take measures to exchange information among relevant Members and CNCPs agencies and to coordinate the activities of such agencies in the implementation of this Agreement**.**

Contact Points

4. Each Member and CNCP shall:

    a) designate a contact point for the purposes of receiving notifications pursuant to paragraph 9 of this CMM;

    b) designate a contact point for the purpose of receiving inspection reports pursuant to paragraph 23.i) of this CMM.

    c) if the contact points are not recorded in the FAO Global Information Exchange System (GIES), transmit the name and contact information for its contact points to the NPFC Secretariat no later than 30 days following the entry into force of this CMM. For any subsequent changes, each Member and CNCP shall notify the NPFC Secretariat at least 7 days before such changes take effect.

5. The NPFC Secretariat shall establish and maintain a record of contact points based on the lists submitted by the Members and CNCPs and the information collected through the GIES in line with paragraph 36. The record and any subsequent changes shall be published promptly on the NPFC website.

Designated Ports

6. Each Member and CNCP shall designate its ports to which foreign fishing vessels may request entry pursuant to this CMM, no later than 30 days following the entry into force of this CMM either through the GIES or by notification to the Secretariat. If a Member or CNCP cannot designate its ports by the deadline, that Member shall inform the Commission of the reason and the timeframe by which the designation will be completed. Any subsequent changes to port designations shall be reflected in the GIES or the Member or CNCP shall notify the NPFC Secretariat of such a change at least 30 days before the change takes place.

7. Each Member and CNCP shall ensure that it has sufficient capacity to conduct inspections in every designated port pursuant to this CMM.

8. The NPFC Secretariat shall establish and maintain a record of designated ports based on the lists submitted by the Members and CNCPs and the information of designated ports collected through the GIES in line with paragraph 36. The Secretariat shall promptly publish the record and any subsequent changes to the NPFC website.

Advance Request for Port Entry

9. Each Member and CNCP shall require foreign fishing vessels seeking to use its ports for any purpose, to submit the information requested in Annex A, as a minimum standard. This information shall be provided to its contact point indicated on the record of contact points established under paragraph 5 of this CMM, at least 48 hours before the estimated time of arrival of the foreign fishing vessel at the port.

10. Each Member and CNCP may also request additional information as it may require to determine whether the foreign fishing vessel seeking to use its ports has engaged in IUU fishing, or related activities.

Port Entry, Authorisation or Denial

11. After receiving the relevant information pursuant to paragraphs 9 and 10 of this CMM, the Member or CNCP shall decide whether to authorise or deny the entry of the vessel into its port and shall communicate this decision to the fishing vessel or its representative as soon as possible.

12. Notwithstanding paragraph 11 of this CMM, when a Member or a CNCP has sufficient proof that a foreign fishing vessel seeking entry into its port has engaged in IUU fishing, fishing related activities in support of such fishing, or is identified on the NPFC IUU vessel list or that of another regional fisheries management organization (RFMO), the Member or the CNCP shall deny that foreign fishing vessel entry into its ports.

13. In the case of denial of entry, the Member or CNCP shall communicate its decision taken to the contact point of the flag State of the foreign fishing vessel and upload the decision to the GIES (including notification to the Secretariat via the GIES), or transmit it directly to the NPFC Secretariat, who shall promptly post this information on the NPFC members only secure website. The Member or CNCP shall also communicate its decision, as appropriate and to the extent possible, to relevant coastal States, regional fisheries management organizations and other relevant international organizations.

14. Notwithstanding paragraphs 12 and 13 of this CMM, a Member or CNCP may allow the entry into its ports of a foreign fishing vessel referred to in those paragraphs exclusively for the purpose of inspecting it and taking other appropriate actions in conformity with international law which are at least as effective as denial of port entry in preventing, deterring and eliminating IUU fishing and fishing related activities in support of such fishing.

Use of Ports

15. Where a foreign fishing vessel has entered one of its ports, a Member or CNCP shall deny, pursuant to its domestic laws and regulations and consistent with international law, that foreign fishing vessel the use of the port for landing, transshipping, packaging and processing of fishery resources that have not been previously landed, and the use of other port services, including, *inter alia*, refuelling and resupplying, maintenance and dry-docking, if:

    a) the Member or CNCP finds that the foreign fishing vessel does not have a valid and applicable authorisation to engage in fishing or fishing related activities required by its flag State;

    b) the flag State of the foreign fishing vessel does not confirm within a reasonable period of time, on the request of the port State, that the fishery resources on board were taken in accordance with the NPFC CMMs;

    c) the Member or CNCP receives clear evidence that the fisheries resources on board were taken in contravention of NPFC conservation and management measures; or

d) the Member or CNCP has reasonable grounds to believe that the foreign fishing vessel has otherwise engaged in IUU fishing or fishing related activities in support of such fishing as described in paragraph 12.

16. In the case of denial of port services, the Member or CNCP shall communicate its decision taken to the contact point of the flag State of the foreign fishing vessel and to the NPFC Secretariat, who shall promptly post this information on the NPFC Members-only secure website. The Member or CNCP should also communicate its decision, as appropriate, to relevant Coastal States, RFMOs, and other relevant international organizations.

17. A Member or CNCP shall withdraw its denial of the use of its ports referred to in paragraph 15 of this CMM, only if there is sufficient proof that the grounds on which use was denied were inadequate or erroneous or that such grounds no longer apply.

18. Where a Member or CNCP has withdrawn its denial pursuant to paragraph 17, it shall notify those to whom a notification was issued pursuant to paragraph 16.

Force majeure

19. Nothing in this CMM affects the entry of foreign fishing vessels to port in accordance with international law for reasons of force majeure or distress, or prevents a Member or CNCP from permitting entry into port to a foreign fishing vessel exclusively for the purpose of rendering assistance to persons or ships in danger or distress.

Port Inspections

20. Members or CNCPs shall ensure that inspections are carried out by the competent authority of the port Members or CNCPs.

21. Each year Members and CNCPs shall inspect at least 5% of landing and transshipment operations in their designated ports made by foreign fishing vessels providing notice under paragraph 9.

22. In determining which foreign fishing vessels to inspect, Members and CNCPs shall, in accordance with their domestic laws and regulations, give priority to:

a) requests from other Members, CNCPs, or relevant RFMOs that a particular foreign fishing vessel be inspected, particularly where such requests are supported by evidence of IUU fishing or fishing related activities in support of such fishing by the foreign fishing vessel in question;

b) foreign fishing vessels that have failed to provide complete information as required in paragraph 9 and/or 10 of this CMM;

c) foreign fishing vessels that have been denied entry or use of a port in accordance with this CMM or another RFMOs provisions; or

d) other foreign fishing vessels for which there are clear grounds for suspecting that they have engaged in IUU fishing activities or related fishing activities in support of such fishing.

Inspection Procedure

23. Each Member and CNCP shall, in carrying out inspections of any foreign fishing vessel in its ports:

a) ensure that inspections of any foreign fishing vessels are carried out by inspectors duly authorised, trained and familiar with the Convention and relevant CMMs adopted by the Commission, in accordance with Annex B.

b) ensure that its inspectors carry an approved identity card issued by the Member or CNCP that identifies the inspector as authorised to carry out the inspection.

c) ensure that as a minimum standard its inspectors carry out the functions listed in Annex C of this CMM.

d) ensure that inspectors examine all relevant areas of the foreign fishing vessel, its license, gear, equipment, records (both physical and electronic), facilities, fish and fish products and any documents necessary to verify compliance with the Convention and CMMs in force. Inspectors may take copies (physical or electronic) of any documents considered relevant, and they may also question the master and any other person on the foreign fishing vessel being inspected.

e) ensure that, in case the vessel is landing or transshipping NPFC species caught in the Convention Area, inspections involve the monitoring of the landing or transshipment and include a cross-check between any transshipment declarations, the estimated quantities by species notified in the prior notification message in paragraph 9 of this CMM above and those held on board the foreign fishing vessel.

f) ensure that all efforts are made, to the extent possible, to avoid unduly delaying the foreign fishing vessel to minimize interference and inconvenience, and that degradation of the quality of the catch is avoided to the extent practicable.

g) ensure that inspections are carried out thoroughly and in an expeditious manner, carried out in accordance with international law, and to the extent possible, conducted within 72 hours of port entry, but not later than 5 working days.[1]

h) ensure that, on completion of the inspection, the port State inspector shall provide the master of the foreign fishing vessel a copy of the inspection report containing the findings of the inspection, to be signed by the inspector and the master. The master's signature shall serve only as acknowledgement of the receipt of a copy of the report. The master shall be given the opportunity to add any comments or objection to the report, and to contact the competent authority of the flag Member or CNCP.

i) transmit a copy of the inspection report to the contact point of the flag State of the inspected foreign fishing vessel and upload the report to the GIES (including

[1] For the purpose of this paragraph, the time of port entry triggering the timeframe for conducting a port inspection is the time at which the vessel has berthed in port and is physically available for the inspection.

notification to the Secretariat via the GIES) or transmit it directly to the NPFC Secretariat no later than 15 working days following the date of completion of the inspection, using the information in the Port Inspection Report in Annex D. If the inspection report cannot be transmitted within 15 working days, the port State shall notify the flag State and the NPFC Secretariat, prior to the end of the 15 working day time period, the reasons for the delay and when the report will be submitted.

j) make all possible efforts to facilitate communication with the master or senior crew members of the foreign fishing vessel, including where possible and where needed that the inspector is accompanied by an interpreter.

k) ensure that inspections are conducted in a fair, transparent and non-discriminatory manner, would not constitute harassment of any foreign fishing vessel and shall not interfere with the master's ability, in conformity with international law, to communicate with the authorities of the flag State.

24. Each port Member or CNCP may in accordance with its domestic laws and regulations, invite officials (such as inspectors) from the flag Member or CNCP to observe or take part in the inspection of a foreign fishing vessel of that flag based on appropriate agreements or arrangements.

Procedure in the Event of Potential Violations

25. If the information collected during the inspection provides evidence that a foreign fishing vessel has violated one or more NPFC CMMs, the Member or CNCP shall ensure that the inspector:

a) records the alleged violation in the inspection report;

b) transmits the inspection report and the evidence collected to the port State competent authorities, who shall transmit the report to the NPFC Secretariat in accordance with paragraph 23(i); and

c) to the extent practicable, ensures safekeeping of the evidence pertaining to such alleged violation.

26. If an inspection report provides evidence that a foreign fishing vessel has committed a violation of a NPFC CMM, upon receiving the copy of the inspection report, the flag Member or CNCP shall promptly investigate the potential violation and shall, upon sufficient evidence, take enforcement action without delay in accordance with its domestic laws and regulations and Article 17 of the NPFC Convention.

27. Flag Members or CNCPs shall notify the port State and the NPFC Secretariat of the status of the investigation and of any enforcement action that may have been taken, within 90 days of receipt of an inspection report notifying the flag Member or CNCP of a potential violation. If the flag Member or CNCP cannot provide the NPFC Secretariat this status report within 90 days of such receipt, the flag Member or CNCP should notify the NPFC Secretariat within the 90-day time period the reasons for the delay and when the status report will be submitted.

28. The Secretariat shall promptly circulate the information received under paragraph 27 to Members, and shall present an annual summary of the status of all investigations to the Technical Compliance Committee (TCC).

29. Members and CNCPs shall collaborate, in accordance with their domestic laws and regulations, in order to facilitate judicial or other proceedings arising from inspection reports as set out in this CMM.

Role of Members and CNCPs in relation to vessels flying their flags

30. Flag Members and CNCPs shall require their fishing vessels to cooperate with port State inspections carried out pursuant to this CMM and shall take necessary action to ensure that masters facilitate safe access to their fishing vessels, facilitate the inspection and communication and not obstruct, intimidate or interfere, or cause other persons to obstruct, intimidate or interfere with port State inspectors in the execution of their duties.

31. When a flag Member or CNCP has clear grounds to believe that one of its fishing vessels has engaged in IUU fishing or related activities in support of such fishing, and is seeking entry to or is in another Member's or CNCP's port, it shall, as appropriate, request that the Member or CNCP inspect the vessel or take other adequate measures.

32. Flag Members and CNCPs shall provide a report to each ordinary meeting of the TCC on any actions taken pursuant to paragraph 26.

General Provisions

33. Nothing in this CMM shall prejudice the rights, jurisdiction and duties of Members and CNCPs under international law. In particular, nothing in this CMM shall be construed to affect:

    a) the sovereignty of Members or CNCPs over their internal, archipelagic, and territorial waters, or their sovereign rights over their continental shelves and/or exclusive economic zones;

    b) the exercise by Members and CNCPs of their authority over their ports in accordance with international law, including their right to deny entry thereto as well as to adopt more stringent measures than those provided for in this CMM.

34. In the implementation of this CMM and in accordance with the Commission's Data Sharing and Data Security Protocol, and with their own domestic laws and regulations, Members and CNCPs shall cooperate and exchange information with the NPFC Secretariat, relevant States, international organisations, RFMOs and other entities, including, as appropriate, by:

    a) Requesting information from, and providing information to, relevant information systems; and

    b) Requesting and providing cooperation to promote the effective implementation of this recommendation.

35. In order to facilitate the implementation of this CMM, Members and CNCPs shall, as appropriate, ensure that national information systems allow for the direct electronic exchange of information on port State measures between them and with the NPFC Secretariat, with due regard to appropriate confidentiality requirements.

36. Members and CNCPs may choose to use the GIES for the requirements under paragraphs 4(a), 4(b), 6, 13 and 23(i). These Members and CNCPs shall notify this choice to the NPFC Secretariat before the entry into force of this CMM. The NPFC Secretariat shall contact the GIES to collect this information and post it as indicated in the paragraphs referenced above. Members and CNCPs are encouraged to use the GIES to facilitate the information exchange requirements set out in this measure. If a Member or CNCP chooses to use the GIES after entry into force of this CMM, that Member or CNCP shall notify the NPFC Secretariat of its intent and the date it plans to start using the GIES.

37. Members and CNCPs are encouraged to enter into bilateral agreements/arrangements that allow for joint inspections and an inspector exchange programme designed to promote cooperation, share information, and educate each participating Member's or CNCP's inspectors on inspection strategies and methodologies which promote compliance with NPFC CMMs.

38. The NPFC Secretariat will report annually on the implementation of this CMM.

39. This CMM shall enter into force on 1 April 2028**.**

40. Notwithstanding paragraph 39, a Member or CNCP may implement this CMM before the entry into force on a voluntary basis.

ANNEX A

INFORMATION TO BE PROVIDED IN NOTIFICATIONS BY FOREIGN VESSELS REQUESTING PORT ENTRY

INSTRUCTIONS

As per paragraph 9 of the CMM on Port State Measures, each Member or CNCP shall require foreign fishing vessels seeking to use its ports for any purposes, to submit the information requested in this Annex as a minimum standard. The foreign fishing vessel shall provide this information to the contact point indicated on the record of contact points established under paragraph 5 of this CMM, at least 48 hours before the estimated time of arrival of the foreign fishing vessel at the port. In completing the advance notification, the fishing vessel shall ensure that:

1. the information is as **accurate** as possible, and legible; and
2. the information is provided in **clear, legible print** in accordance with the clarifications below.

CLARIFICATIONS

To assist in the accurate and clear completion of this notification**:**

- Throughout the form:
  - For “Validity,” state the date by which the relevant fishing authorization will expire (date format: YYYY-MM-DD). ;
  - For “Species,” utilize the FAO 3-alpha codes found at www.npfc.int/priority-species, or Fisheries and Aquaculture - All Information Collections - ASFIS List of Species for Fishery Statistics Purposes (fao.org);
    - all species, including bycatch, must be recorded by species, using their specific FAO code.
    - the Codes for major NPFC species are; SAP (Pacific saury), MAS (chub mackerel), MAA (blue mackerel), JAP (Japanese sardine), OFJ (neon flying squid) and SQJ (Japanese flying squid).
  - For “Quantity,” state the number and type of units,
  - For “Catch area,” state “National waters” or the “NPFC Convention Area”
- For question 3, use the YYYY-MM-DD format to specify the date (e.g. 2022-11-02) and the HH:MM format, and the 24-hour clock (UTC, or specify time zone) to specify the time (e.g. 23:15);
- For question 15, for “RFMO ID,” state the NPFC Vessel Registry Number; For question 20, for “Identifier,” include all NPFC Transshipment Event IDs;
- For question 21, ““donor vessels,” is synonymous with “offloading vessels;”

INFORMATION TO BE PROVIDED IN ADVANCE NOTIFICATIONS BY FOREIGN VESSELS REQUESTING PORT ENTRY

[format indicative]

1. Intended port of call						
2. Port State						
3. Estimated date and time of arrival						
4. Purpose(s)						
5. Port and date of last port call						
6. Name of the vessel						
7. Flag State						
8. Type of vessel						
9. International Radio Call Sign						
10. Vessel contact information						
11. Vessel owner(s)						
12. Certificate of registry ID						
13. IMO ship ID, if available						
14. External ID, if available						
15. NPFC ID, if applicable						
16. VMS	No	Yes: National	Yes: NPFC	Type:		
17. Vessel dimensions	Length		Beam		Draft	

18. Vessel master name and nationality	

19. Relevant fishing authorisation(s)

Identifier	*Issued by*	*Validity*	*Fishing area(s)*	*Species*	*Gear*

20. Relevant transhipment authorisation(s)

Identifier		*Issued by*		*Validity*	
Identifier		*Issued by*		*Validity*	

21. Transhipment information concerning donor vessels

Date	*Location*	*Name*	*Flag State*	*ID no.*	*Species*	*Product form*	*Catch area*	*Quantity*

22. Total catch onboard				23. Catch to be offloaded
Species	*Product form*	*Catch area*	*Quantity*	*Quantity*

ANNEX B
GUIDELINES FOR INSPECTORS' TRAINING

Training programs for port State inspectors should include at least the following elements:

1. Ethics;

2. Health, safety and security issues;

3. Applicable domestic laws and regulations, area of competence and conservation and management measures of NPFC, and applicable international law;

4. Collection, evaluation and preservation of evidence;

5. General inspection procedures, including reporting and interview techniques;

6. Analysis of information sources, such as logbooks, electronic documentation and vessel history (name, ownership and flag State), required for the validation of information provided by the master of the fishing vessel inspected;

7. Fishing vessel boarding and inspection, including hold inspections and calculation of vessel hold volumes;

8. Verification and validation of information related to landings, transshipments, processing and fishery resources remaining onboard, including utilizing conversion factors for the various species and products;

9. Identification of fish species, and the measurement of length and other biological parameters;

10. Identification of vessels and gear, and techniques for the inspection and measurement of gear;

11. Equipment and operation of VMS and other electronic tracking systems; and

12. Actions to be taken following an inspection.

ANNEX C
PORT STATE INSPECTION PROCEDURES

During port inspections inspectors shall:

a) verify, to the extent possible, that the vessel identification documentation onboard and information relating to the owner of the vessel is true, complete and correct, including through appropriate contacts with the flag State or international records of vessels if necessary;

b) verify that the vessel's flag and markings (e.g. name, external registration number, International Maritime Organization (IMO) ship identification number, international radio call sign and other markings, main dimensions) are consistent with information contained in the documentation;

c) verify, to the extent possible, that the authorisations for fishing and fishing related activities are true, complete, correct and consistent with the information provided in accordance with Annex A;

d) review all other relevant documentation and records held onboard, including, to the extent possible, those in electronic format and vessel monitoring system (VMS) data from the flag State, NPFC and where relevant other RFMOs. Relevant documentation may include logbooks, catch, transshipment and trade documents, crew lists, stowage plans and drawings, descriptions of holds, and documents required pursuant to the Convention on International Trade in Endangered Species of Wild Fauna and Flora;

e) examine, to the extent possible, all relevant areas, fishing gear onboard, including any gear stowed out of sight as well as related devices, and to the extent possible, verify that they are in conformity with the conditions of the authorisations. The fishing gear shall, to the extent possible, also be checked to ensure that features such as the mesh and twine size, devices and attachments, dimensions and configuration of nets, pots, dredges, hook sizes and numbers are in conformity with applicable regulations and that the markings correspond to those authorised for the vessel;

f) determine, to the extent possible, whether the fishery resources on board were harvested in accordance with the applicable authorisations;

g) examine the fishery resources, including by sampling, to determine their quantity and composition. In doing so, inspectors may open containers where the fishery resources have been pre-packed and move the catch or containers to ascertain the integrity of holds. Such examination may include inspections of product type and determination of nominal weight;

h) evaluate whether there is evidence of any potential contraventions of the NPFC Convention or CMMs

i) provide the master of the vessel with the report containing the result of the inspection, including possible measures that could be taken, to be signed by the inspector and the master. The master's signature on the report shall serve only as acknowledgment of the receipt of a copy of the report. The master shall be given the opportunity to add any comments or objection to the report, and, as appropriate, to contact the relevant authorities

of the flag State in particular where the master has serious difficulties in understanding the content of the report. A copy of the report shall be provided to the master;

j) transmit the inspection report and the evidence collected to the port State competent authorities as per paragraph 23.i) and 25.b of the CMM; and

k) arrange, where necessary and possible, for translation of relevant documentation.

ANNEX D
TEMPLATE FOR PORT INSPECTION REPORTS

INSTRUCTIONS

As per paragraph 23(i) of the CMM on Port State Measures, each Member and CNCP conducting a port inspection of a foreign vessel shall transmit a copy of the inspection report to the contact point of the flag State of the inspected foreign fishing vessel and upload the report to the GIES with notification to the NPFC Secretariat, or transmit it directly to the NPFC Secretariat, no later than 15 working days following the date of completion of the inspection. If the inspection report cannot be transmitted within 15 working days, the port State shall notify the flag State and the NPFC Secretariat, prior to the end of the 15 working day time period, the reasons for the delay and when the report will be submitted. In completing the inspection report, the port State shall ensure that:

1. the information is as **accurate** as possible, and legible; and
2. the information is provided in **clear, legible print** in accordance with the clarifications below.

CLARIFICATIONS

To assist in the accurate and clear completion of this notification**:**

- Throughout the form:
  - For "Validity," state the date by which the relevant fishing authorization will expire (date format: YYYY-MM-DD);
  - For "Species," utilize the FAO 3-alpha codes found at www.npfc.int/priority-species, or Fisheries and Aquaculture - All Information Collections - ASFIS List of Species for Fishery Statistics Purposes (fao.org);
    - all species, including bycatch, must be recorded by species, using their specific FAO code.
    - the Codes for major NPFC species are; SAP (Pacific saury), MAS (chub mackerel), MAA (blue mackerel), JAP (Japanese sardine), OFJ (neon flying squid) and SQJ (Japanese flying squid).
  - For "Quantity" state the number and type of units
  - For "Catch area," state "National waters" or the "NPFC Convention Area"
- For question 17, for "External ID," state the NPFC Vessel Registry number; For question 28, for "Identifier," use include all NPFC Transshipment Event IDs;
- For question 29, "donor vessels," is synonymous with "offloading vessels;"
- For question 32, "Examination of logbook(s), and other documentation" should include electronic or paper catch records and transshipments records.

TEMPLATE FOR PORT INSPECTION REPORTS

[format indicative]

1. Inspection report no		**2. Port State**			
3. Inspecting authority					
4. Name of principal inspector		**ID**			
5. Port of inspection					
6. Start of inspection	*YYYY*	*MM*	*DD*	*HH*	
7. Completion of inspection	*YYYY*	*MM*	*DD*	*HH*	
8. Advanced notification received	*Yes*	*No*			
9. Purpose(s)	*LAN*	*TRX*	*PRO*	*OTH (specify)*	
10. Port and State and date of last port call			*YYYY*	*MM*	*DD*
11. Vessel name					
12. Flag State					
13. Type of vessel					
14. International Radio Call Sign					
15. Certificate of registry ID					

16. IMO ship ID, if available	
17. External ID, if available	
18. Port of registry	
19. Vessel owner(s)	
20. Vessel beneficial owner(s), if known and different from vessel owner	
21. Vessel operator(s), if different from vessel owner	
22. Vessel master name and nationality	
23. Fishing master name and nationality	
24. Vessel agent	

25. VMS	*No*	*Yes: National*	*Yes: NPFC*	Type:

26. Status in NPFC area (if applicable) where fishing has been undertaken, including any IUU vessel listing

Vessel identifier	*NPFC*	*Flag State status*	*Vessel on authorised vessel list*	*Vessel on IUU vessel list*

27. Relevant fishing authorisation(s)

Identifier	*Issued by*	*Validity*	*Fishing area(s)*	*Species*	*Gear*

28. Relevant transshipment authorisation(s)

Identifier		*Issued by*		*Validity*	
Identifier		*Issued by*		*Validity*	

29. Transshipment information concerning donor vessels

Name	*Flag State*	*ID no.*	*Species*	*Product form*	*Catch area(s)*	*Quantity*

30. Evaluation of offloaded catch (quantity)

Species	*Product form*	*Catch area(s)*	*Quantity declared*	*Quantity offloaded*	*Difference between quantity declared and quantity determined, if any*

31. Catch retained onboard (quantity)

Species	*Product form*	*Catch area(s)*	*Quantity declared*	*Quantity retained*	*Difference between quantity declared and quantity determined, if any*

32. Examination of logbook(s) and other documentation	*Yes*	*No*	*Comments*
33. Compliance with applicable catch documentation scheme(s)	*Yes*	*No*	*Comments*
34. Compliance with applicable trade information scheme(s)	*Yes*	*No*	*Comments*

35. Type of gear used	

36. Gear examined in accordance with paragraph e) of Annex C	*Yes*	*No*	*Comments*

37. Findings by inspector(s)

38. Apparent violation(s) noted including reference to relevant legal instrument(s)

39. Comments by the master
40. Action taken
41. Master’s signature
42. Inspector’s signature

7th Meeting of the Joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS)
REPORT

3–4 February 2026

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North Pacific Fisheries Commission
7th Meeting of the Joint SC-TCC-COM Small Working Group on Management Strategy Evaluation for Pacific Saury (SWG MSE PS)

3–4 February 2026
WebEx

REPORT

Agenda Item 1. Introductory items

1.1 Opening of the Meeting

1. The 7th 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 3–4 February 2026. The meeting was attended by Members from Canada, China, Japan, the Republic of Korea, the Russian Federation, Chinese Taipei, and the United States of America. The Pew Charitable Trusts (Pew) attended as an observer. Dr. Quang Huynh 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. Dr. Kitakado (hereafter "co-Chair") opened the meeting and welcomed the participants.

3. Mr. Alex Meyer was selected as rapporteur.

1.2 Adoption of agenda

4. The SWG MSE PS agreed to amend the title of Agenda Item 3 to "Review of the adopted HCR and its results," amend the title of Agenda Item 3.2 to "HCR-generated catch level for 2026," and to add "Review of the adopted HCR" as a new Agenda item 3.3.

5. The agenda was adopted as revised (Annex A). The List of Documents and List of Participants are attached (Annexes B, C).

1.3 Meeting logistics

6. 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 PS06

7. The co-Chair presented the outcomes and recommendations from the SWG MSE PS06 meeting (NPFC-2026-SWG MSE PS07-IP01).

2.2 COM09

8. The Science Manager presented the relevant outcomes from the 9th Commission meeting. He highlighted the adoption of Conservation and Management Measure (CMM) 2025-08 for Pacific Saury, including:
   (a) Revision of the annual catch limit for the entire area, with a 10% reduction in accordance with the interim harvest control rule (HCR) and the limiting of the total allowable catch (TAC) for the Convention Area to 60% (121,500 MT) of the annual catch limit in the entire area (202,500 MT);
   (b) Revision of individual Members' TACs and the requirement to ensure that discards of Pacific saury count against these catch limits;
   (c) Addition of an exemption from the requirements stipulated in Paragraph 10 (b) for any Member committed to reducing its annual total catch 65.5% from its reported catch in 2018;
   (d) Addition of a requirement to ensure that catches, including incidental catches of other NPFC species, and any discards are recorded and reported; and
   (e) Addition of a requirement for Members to annually report the catch limit that they diverted, if they have diverted part of their catch limit for areas under their jurisdiction to their own catch in the Convention Area in accordance with Paragraph 13.

2.3 SSC PS15 and 16

9. The co-Chair presented the outcomes and recommendations from the 15th and 16th meetings of the Small Scientific Committee on Pacific Saury (SSC PS; NPFC-2026-SWG MSE PS07-IP03).

10. Chinese Taipei highlighted its concerns with the current Pacific saury stock assessment using the Bayesian state-space surplus production model (BSSPM). Chinese Taipei pointed out the mismatch between the stock assessment results and fisheries observation, noting improvements in fishery indicators, such as higher catch and larger fish in 2025, and the fact that the latest assessment does not include fisheries data from the latest fishing season (2025) due to the current SSC PS meeting timing. Chinese Taipei also raised concerns about the retrospective pattern and scaling instability in the stock assessment results. It also suggested that the stationary productivity assumption may be inappropriate. Furthermore, Chinese Taipei suggested that the CPUE may be biased due to potential hyperstability or hyperdepletion and changing fleet behavior. It also raised concern about the lack of consensus among Members on how to treat the assessment results. Lastly, Chinese Taipei pointed out that the estimated annual catch level derived from the stock assessment is subject to significant uncertainty and should be interpreted with caution.

11. The co-Chair explained that the Scientific Committee (SC) has proposed a modified meeting schedule that would enable the SSC PS to include not only the most up-to-date fisheries-independent data but also the most up-to-date fisheries-dependent data from the latest fishing

season in each future stock assessment. He suggested that the SSC PS could also conduct preliminary work to update Members' CPUEs with data from the 2025 fishing season and test whether this would significantly impact the previous stock assessment results. Regarding the retrospective patterns, the co-Chair pointed out that these have been smaller than the past and that they may be a separate issue from the scaling issues, and that the reason for the retrospective patterns may not be due only to the model, but also the fact that some datasets used in the assessment are changed each year. The co-Chair also noted the need to pay careful attention to the nature of Members' CPUE estimations, taking into account changes in fishery operations such as time, space, gear configuration, and resource-selectivity, and the need to consider how to make greater use of fisheries-independent information.

12. China echoed the concerns raised by Chinese Taipei regarding the stock assessment model specification, assumption, and input data, as well as the plausibility of the stock assessment results. China pointed out that fisheries observations suggest that the stock status is much better than the stock assessment results indicate, which undermines managers' and stakeholders' confidence in the stock assessment. China expressed particular concern with the choice of reference points, especially B_{MSY}, as the estimation of B_{MSY} is unstable and makes it difficult to know the true stock status.

13. Japan acknowledged the concerns raised by China and Chinese Taipei but emphasized that the current stock assessment results using BSSPM, which was developed through intensive discussions among Member scientists and has been in place for years, represent the best available information. Japan reminded the SWG MSE PS that the current interim HCR was established through discussions and negotiations at the SSC PS, the SC, the SWG MSE PS, and the Commission, and that it clearly stipulates how to calculate the catch level for Pacific saury, as described in Annex 1 of CMM 2025-08. Japan also pointed out that the Commission has agreed on using this interim HCR until an age-structured model is developed or the Commission decides otherwise, and Japan suggested that the SSC PS continue to work on addressing the technical issues raised by Members as it develops an age-structured model.

Agenda Item 3. Review of the adopted HCR and its results

3.1 TAC for 2025

14. The SWG MSE PS noted the TAC set for 2025 in CMM 2025-08.

3.2 HCR-generated catch levels for 2026

15. China noted and referred to paragraphs 36 and 37 of the SSC PS16 meeting report, which highlight substantial uncertainties and limitations in the current Pacific saury stock assessment. As noted in the report, the model exhibits instability and considerable uncertainty in key parameter estimates and does not adequately capture the non-stationary population dynamics

driven by environmental variability. In addition, the assessment results show scaling instability across years as new data are incorporated, leading to fluctuations in estimated biomass, biological reference points, and stock status, which undermines the consistency and comparison of annual assessments. In light of these unresolved scientific concerns, China considered that the current stock assessment results are not sufficiently robust to be used as inputs to the HCR for the calculation of TAC, and therefore cannot support their application for management advice at this stage.

16. Japan reiterated that the current stock assessment represents the best available scientific information. Japan also reminded the SWG MSE PS that the current interim HCR represented a compromise, as Japan would have preferred a larger maximum allowable change (MAC) than 10%. Japan emphasized that the process described in the HCR for generating catch levels for 2026 should be followed.

17. The SWG MSE PS noted that the interim HCR for Pacific saury under CMM 2025-08 was used to calculate the annual catch level in the 2026 fishing year, while noting the lack of endorsement from China. Based on assessment inputs from Japan and Chinese Taipei, the unconstrained annual catch level for 2026 = $(B_{2025}*F_{MSY}*(B_{2025}/B_{MSY})$ = 91,180 MT. Based on the adopted interim HCR, the constrained 2026 catch level would be 0.9 x 202,500 = 182,250 MT.

3.3 Review of the adopted HCR

18. Chinese Taipei pointed out that as Pacific saury had been overfished for many years, it made sense that industry needed to endure a reduction in TAC to support the recovery of the stock. At the same time, it is necessary to strike a balance between ensuring the survival of the existing industry and allowing the stock to recover to the MSY level. Chinese Taipei explained that when Members considered the candidate interim HCRs, the table of the summary of key outputs from the simulations for each option (SWG MSE PS05 Report, Table 4) was an important reference for many Members. That table showed that for 2024–2028, the simulations of TAC were all above 200,000 MT, which is the level that Chinese Taipei's industry would be able to endure. It was on that basis that Chinese Taipei agreed to adopt the interim HCR. However, in recent years, the unconstrained catch level based on the stock assessment has been much lower than the median value in the simulations. Given this trend, the HCR is expected to reduce the TAC by 10% every year for many years, which would threaten the survival of Chinese Taipei's Pacific saury industry. Chinese Taipei suggested that the original simulation and the HCR that was adopted were overly optimistic and unrealistic. Chinese Taipei believed that in order to ensure the sustainability of its fisheries and the recovery of the Pacific saury stock, the current interim HCR needs to be reviewed and amended if necessary. Chinese Taipei therefore intends to present a proposal at COM10 to

amend the current interim HCR. The proposal is still being prepared but two important aspects will be the extension of the period of recovery and a change in the HCR's reference points.

19. China shared Chinese Taipei's concern regarding the difference between the catch levels in the simulations and the stock assessment results, pointing out that the two showed opposite trends. China explained that it too had agreed to the current interim HCR based on the belief that the TAC trend would be turning upwards after years of decline, as the simulations seemed to suggest.

20. The co-Chair explained that the numbers in the table that Chinese Taipei referred to were the median results of base case simulations. He explained that these simulations were conducted based on the 2023 stock assessment results and various assumptions and that they therefore contained uncertainties. One such assumption was that the stock assessment results would show an increasing trend in the biomass level. However, the biomass levels estimated by the stock assessments have not actually improved as fast as the median values under the base case scenario. The co-Chair explained that the SWG MSE PS also conducted simulations based on a robustness scenario in which a potential negative productivity scenario was assumed and he noted that the current biomass level estimated by the stock assessment lies between the base case and robustness case of the simulations.

21. Japan acknowledged that the stock assessment results deviate somewhat from the simulation results but pointed out that this often occurs in MSE processes. Japan also reminded Members that when the simulations were presented, it was emphasized that they contained wide uncertainty ranges. Japan noted that although the stock assessment results differed from the median results, they were still within these uncertainty ranges and within what scientists considered to be plausible. Japan emphasized that even if the stock assessment results and the simulations differ, that is not a valid reason for not following the adopted interim HCR this year.

22. Canada noted Chinese Taipei's point that its industry could not endure annual catch levels dropping below 200,000 MT. Canada pointed out that it could be one of the concrete management objectives to ensure annual catch levels are above 200,000 MT, and that the SWG MSE PS could design management procedures and evaluate their ability to meet this objective in MSE simulation. Canada emphasized that the development and testing of such potential management objectives is an important role of the SWG MSE PS and encouraged Members to develop and propose more such objectives.

23. Pew welcomed the discussion on management objectives and supported Canada's comments.

24. The United States recognized Members' positions and concerns with the TAC but reminded

Members that the current interim HCR is a compromise. The United States pointed out that during discussions that led to the adoption of the interim HCR, it had supported a MAC of 40% to allow the quicker recovery of the Pacific saury stock. The United States also noted that, nevertheless, the current HCR is working in aiding the recovery of the stock.

25. Pew reiterated its view that the overall objective of ensuring the recovery of the Pacific saury stock has not yet been achieved. Pew acknowledged the legitimate concerns raised by Members but encouraged the SWG MSE PS to discuss and explore these issues further as part of the process of developing a full MSE. Pew encouraged the SWG MSE PS to not lose sight of its goal of developing a full MSE and to devote resources to completing that work in a timely manner.

26. The co-Chair recognized the concerns raised by Members about the current interim HCR but pointed out that the SWG MSE PS has also been tasked with developing and conducting a full MSE. He suggested that the SWG MSE PS focus on addressing these concerns as part of its current task of developing a full MSE and work towards developing an age-structured operating model, which could better account for the biological characteristics of Pacific saury and consider environmental perspectives. The co-Chair explained that the existing interim HCR could be tested in the full MSE and that other management procedures (MPs) could also be considered, such as other model-based MPs (e.g., using BSSPM) or empirical MPs. In addition, he pointed out that under the newly proposed meeting schedule for the SSC PS, future assessments would be able to include not only the most up-to-date fisheries-independent data, but also the most up-to-date fisheries-dependent data, which would decrease the data lag between assessment time period and annual advice.

Agenda Item 4. Discussion toward development of management procedures (MPs) as a mid-term goal

4.1 Management objectives

4.2 Operating models

4.3 Management procedures

4.4 Performance indicators

27. The SWG MSE PS reviewed the draft table of elements that could be considered when developing a full MSE.

28. The invited expert presented a summary of the work done in 2025 to develop an SS3 assessment for Pacific saury and provided additional comments regarding the ongoing MSE process (NPFC-2026-SWG MSE PS07-IP04). Further improvements have been made to the SS3 model structure and parameterization. The high uncertainty in the preliminary assessment outputs compromises the reliability and predictability of annual advice. Age-structured

models such as SS3 have higher biological realism but may not increase reliability as retrospective patterns remain. Furthermore, the short lifespan of Pacific saury makes estimation difficult because new, unobserved cohorts could significantly impact the next year's abundance. Nonetheless, age-structured models can serve as operating models to evaluate robustness of management procedures. The philosophy of MSE is to develop complex operating models to test robustness of simpler procedures (BSSPM, empirical types). The SWG MSE PS should use MSE to evaluate the "value" of decreasing data lag. The SWG MSE PS should also identify lessons learned from previous work to inform improvements on communication of MSE results (for example, emphasizing that projections are not predictions or forecasts). However, the invited expert also cautioned that the assessment model that explains the dynamics better does not necessarily ensure better management.

29. The SWG MSE PS considered potentially extending the timelines of the draft management objectives for the full MSE.

30. The SWG MSE PS agreed that the final MP should include an exceptional circumstances protocol.

31. Chinese Taipei suggested changing the order of priority among the draft management objectives and elevating "Avoiding unsustainable state of the stock" above "Recovery of the stock." Japan and the United States expressed their preference for maintaining the current order of priority.

32. Canada reiterated its suggestion that a potential additional management objective could be to maintain annual catch levels above 200,000 MT to reflect Chinese Taipei's concerns about the viability of its Pacific saury fishery.

Agenda Item 5. Other matters

33. No other matters were raised.

Agenda Item 6. Timeline and future process

6.1 Timeline

6.2 Future process with assistance of SSC PS

6.3 Workplan till SSC PS17&18 and SWG MSE PS08 meetings

34. The SWG MSE PS prepared two schedules, with future tasks, for developing a full MSE (Annex D). One schedule follows the original timeline set by the Commission (2026–2027). The other schedule follows a longer timeline (2026–2028).

35. Some Members expressed their initial preference for the longer timeline, noting the heavy

workload required and Members' time and capacity constraints. One Member acknowledged the concerns raised by other Members but expressed initial preference for adhering to the original timeline set by the Commission. There was general agreement that a decision of the Commission would be required to lengthen the currently agreed timeline, which will end in 2026–27.

36. The SWG MSE PS agreed to forward both schedules (Annex D) to the Commission for its consideration.

37. Pew expressed disappointment at the potential delay of the full MSE development by a year. Pew encouraged Members to strive to complete the full MSE as soon as possible. Pew also noted that in both of the proposed schedules, management objectives would be a focus of discussions at the next SWG MSE PS meeting and strongly encouraged Members to present concrete proposals of management objectives at that meeting to ensure robust discussions.

38. The invited expert stated that initial MSE results would be helpful to advance discussions on refining objectives, revising candidate MPs, and interpreting results. Until then, much of the concepts are currently abstract. A two-year timeline would also facilitate these discussions and MSE revisions.

Agenda Item 7. Recommendations to the Commission

39. The SWG MSE PS recommends that the Commission note the following regarding the annual catch level calculated for the 2026 fishing year:
    (a) The interim HCR for Pacific saury under CMM 2025-08 was used to calculate the annual catch level in the 2026 fishing year, although there was lack of endorsement from China.
    (b) Based on assessment inputs from Japan and Chinese Taipei, the unconstrained annual catch level for 2026 = (B_{2025}*F_{MSY}*(B_{2025}/B_{MSY}) = 91,180 MT.
    (c) Based on the adopted HCR, the constrained 2026 catch level would be 0.9 x 202,500 = 182,250 MT.

40. The SWG MSE PS recommends the hiring of an invited expert to support future meetings of the SWG MSE PS and the technical work to develop a full MSE.

41. The SWG MSE PS recommends that the Commission endorse one of the schedules prepared by the SWG MSE for full MSE development and to endorse the holding of meetings of the SWG MSE PS accordingly (Annex D).

42. 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 8. Adoption of Meeting Report

43. The report was adopted by consensus.

Agenda Item 9. Close of the Meeting

44. Mr. Mahoney thanked the SWG MSE PS for its productive discussions and looked forward to making further progress in future meetings. He also expressed his thanks to the Secretariat for hosting the meeting, the Rapporteur for his support, and his fellow co-Chair for his hard work.

45. The meeting closed at 12:30 on 4 February 2026, Tokyo time.

LIST OF ANNEXES

Annex A – Agenda

Annex B – List of Documents

Annex C – List of Participants

Annex D – Meeting schedule and tasks for developing a full MSE for Pacific saury

Annex A to SWG MSE PS07 Report

Agenda

Agenda Item 1. Introductory items
- 1.1 Opening of the meeting
- 1.2 Adoption of agenda
- 1.3 Meeting logistics

Agenda Item 2. Overview of the outcomes of previous NPFC meetings
- 2.1 SWG MSE PS06
- 2.2 COM09
- 2.3 SSC PS15 and 16

Agenda Item 3. Review of the adopted HCR and its results
- 3.1 TAC for 2025
- 3.2 HCR-generated catch level for 2026
- 3.3 Review of the adopted HCR

Agenda Item 4. Discussion toward development of management procedures (MPs) as a mid-term goal
- 4.1 Management objectives
- 4.2 Operating models
- 4.3 Management procedures
- 4.4 Performance indicators

Agenda Item 5. Other matters

Agenda Item 6. Timeline and future process
- 6.1 Timeline
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- 6.3 Workplan till SSC PS17&18 and SWG MSE PS08 meetings

Agenda Item 7. Recommendations to the Commission

Agenda Item 8. Adoption of report

Agenda Item 9. Close of the meeting

Annex B to SWG MSE PS07 Report

List of Documents

MEETING INFORMATION PAPERS

Document Number	Title
NPFC-2026-SWG MSE PS07-MIP01	Meeting Information
NPFC-2026-SWG MSE PS07-MIP02	Provisional Agenda
NPFC-2026-SWG MSE PS07-MIP03	Annotated Indicative Schedule

INFORMATION PAPERS

Document Number	Title
NPFC-2026-SWG MSE PS07-IP01	Overview of the outcomes of SWG MSE PS06
NPFC-2026-SWG MSE PS07-IP02	Overview of the outcomes of SSC PS15 and PS16 with focusing on stock assessment outcomes and recommendations
NPFC-2026-SWG MSE PS07-IP03	Meeting materials for Agenda Items 3, 4 and 6
NPFC-2026-SWG MSE PS07-IP04	Summary of the Pacific saury SS3 assessment in 2025

Annex C to SWG MSE PS07 Report

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Annex D to SWG MSE PS07 Report

Meeting schedule and tasks for developing a full MSE for Pacific saury

Option 1

Meeting	**Date**	**Task**	**Format**
COM10	Apr 14-17 **2026**	• Recommend 2026 catch level (CL) based on the adopted HCR • Review outcomes and recommendations from SWG MSE PS07 (including timeline for full MSE)	Hybrid
SWG NSAM	Jun / Jul	• Review progress of age-structured modelling (finalize specification) • Review issues arisen for the BSSPM	Hybrid
SWG MSE PS08	Sep / Oct	• Finalize the management objectives • Finalize conditioning of OMs (based on age-structured models with consideration of uncertainty of parameters and climate impacts, base and robustness cases). Data guillotine • Develop a list of candidate MPs (model-based, empirical) • Finalize performance indicators • Discuss definitions of exceptional circumstances	Hybrid
SSC PS17	Dec 15-17	• Prepare data for 2026 assessment (BSSPM, SS3) • Review results of conditioning of OMs • Review results of preliminary runs of MPs	Virtual
SSC PS18	Jan 19-22 **2027**	• Review results of BSSPM and application of the adopted HCR for computing 2027 CL (back-up) • Review results of age-structured models • Review progress of MSE	Hybrid
	Jan / Feb	• Running MSE and prepare results of performance of MPs	
SWG MSE PS09	Late Feb	• Finalize evaluation of performance of candidate MPs • Recommendations of a few MPs (including exceptional circumstances definitions) to COM11	Hybrid
COM11	Apr 12-15	• Adoption of CMM on MP? • First implementation of MP for 2027 TAC	Hybrid

Option 2

Meeting	Date	Task	Format
COM10	Apr 14-17 **2026**	• Recommend 2026 catch level (CL) based on the adopted HCR • Review outcomes and recommendations from SWG MSE PS07 (including timeline for full MSE)	Hybrid
SWG NSAM	Jun / Jul	• Review progress of age-structured modelling (finalize specification) • Review issues arisen for the BSSPM	Hybrid
SWG MSE PS08	Sep / Oct	• Re-start discussion on objectives, conditioning of OMs (based on age-structured models with consideration of uncertainty of parameters and climate impacts) and possible types of MPs	Virtual
SSC PS17	Dec 15-17	• Prepare data for 2026 assessment (BSSPM, SS3) • Review results of conditioning of OMs	Virtual
SSC PS18	Jan 19-22 **2027**	• Review results of BSSPM and application of the adopted HCR • Review results of age-structured models (completed) • Review progress of MSE	Hybrid
SWG MSE PS09	Feb	• Finalize management objectives • Review conditioning of OMs • Develop a list of candidate MPs (model-based, empirical)	Virtual
COM11	Apr 12-15	• Review progress of MSE	Hybrid
SWG MSE PS10	Summer	• Finalize conditioning of OMs (based on age-structured models with consideration of uncertainty of parameters and climate impacts, base and robustness cases). Data guillotine • Finalize a list of candidate MPs (model-based, empirical) • Finalize performance indicators • Discuss definitions of exceptional circumstances	Hybrid
		• Run MSE and prepare results of performance of MPs (SSC will review in its meeting)	
SWG MSE PS11	Jan / Feb **2028**	• Finalize evaluation of performance of candidate MPs • Recommendations of a few MPs (including exceptional circumstances definitions) to COM12	Hybrid
COM12	April ?	• Adoption of CMM on MP?	Hybrid

Draft MOU with IATTC
COM10 Comments

Memorandum of Understanding between the North Pacific Fisheries Commission (NPFC) and the Inter-American Tropical Tuna Commission (IATTC)

The North Pacific Fisheries Commission (hereafter NPFC) and the ***Inter-American Tropical Tuna Commission*** (hereafter IATTC):

Acknowledging that the objective of the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean (hereafter NPFC Convention) is "to ensure the long-term conservation and sustainable use of the fisheries resources in the Convention Area, ~~[as defined in its Article 4,]~~ while protecting the marine ecosystems of the North Pacific Ocean in which these resources occur";

Commented [A1]: Suggest deleting.

Acknowledging also that the objective of the Convention for the Strengthening of the Inter-American Tropical Tuna Commission Established by the 1949 Convention between the United States of America and the Republic of Costa Rica (hereafter Antigua Convention) is "*to ensure the long-term conservation and sustainable use of the fish stocks covered by that Convention*", which comprise "*tunas and tuna-like species and other species of fish taken by vessels fishing for tuna and tuna -like species in the Convention Area*" (that Convention Area being defined in Article 1 paragraph h);

Recognizing that Article XII of the Antigua Convention establishes among the functions of its Director arranging for cooperation with other organizations when needed for the performance of the functions of the Commission and coordinating the work of the Commission with that of organizations whose cooperation the Director has arranged;

Recognising that Article XXIV of the Antigua Convention calls upon the IATTC to establish relevant institutional arrangements to cooperate with other relevant subregional, regional, and global fishery organizations and arrangements and, as appropriate, to establish relevant institutional arrangements in agreement with such organizations or arrangements, with the goal of promoting the achievement of the objective of this Convention;

Recognising further that Article 21 of the NPFC Convention calls upon the NPFC to "*take into account the conservation and management measures or recommendations adopted by regional fisheries management organizations and arrangements and other relevant intergovernmental organizations that have competence in relation to areas adjacent to the ~~NPFC~~ Convention Area or in respect of fisheries resources not covered by this Convention, species belonging to the same ecosystem or dependent upon or associated with the target stocks, and that have objectives that are consistent with and supportive of the objective of this Convention*", and provides that "*the Commission shall seek to develop cooperative working relationships…with international organizations that can contribute to its work and have competence for ensuring long-term conservation and sustainable use of living resources and their ecosystems*";

Conscious of the existence of a geographical area overlap between the Convention Areas of both the NPFC and the IATTC;

Noting that provisions of both the NPFC Convention and the Antigua Convention address the conservation of non-target, associated or dependent species which belong to the same ecosystem as the target species;

Desiring to put in place a mechanism to promote and facilitate cooperation between IATTC and NPFC;

Therefore, NPFC and IATTC (hereinafter "the Commissions") record the following understandings:

1. OBJECTIVE OF THIS MEMORANDUM

The objective of this MoU is to facilitate, where and as appropriate, cooperation between NPFC and IATTC ~~('the Organisations')~~ the Organizations in order to advance their respective objectives, particularly with respect to stocks or species which are within the mutual interest of both Organizations ~~Organisations~~ [~~Commissions~~] Organizations.

2. AREAS OF COOPERATION

(a) The [Commissions] Organizations intend ~~organisations~~ to establish and maintain consultation, cooperation and collaboration in respect of matters of common interest to both organizations, including but not limited to, the following areas:

i. exchange meeting reports, information, documents and publications regarding matters of mutual interest, consistent with the information sharing policies of each organisation;

ii. exchange data and scientific information in support of the work and objectives of both [Commissions] Organizations, consistent with the confidentiality rules, information sharing policies and internal data security procedures of each organisation including, but not limited to, information on:

a) vessels authorised to fish in accordance with conservation and management measures adopted under the NPFC and Antigua Conventions;

Commented [A2]: Suggest deleting

Commented [A3]: Suggests retaining the definition of Organizations in the brackets.

Commented [A4]: Retain "Organizations". We do not think that NPFC and IATTC should be referred to throughout as "the Commissions". There are places where the commissions may be appropriate, but there are also some places below, which we have indicated, where we understand the intention is to extend the meaning to the entirety of the organizations and so we disagree that "commissions" can be substituted writ large across the MOU.

Commented [A5]: Retain organizations

b) at the specific request of one of the ~~Organisations~~Commissions, transshipment activities of those vessels authorised to conduct transshipment in accordance with conservation and management measures adopted under the NPFC and Antigua Conventions, on a necessity basis; and,

c) vessels identified as having engaged in illegal, unreported and unregulated (IUU) fishing activity and the IUU Vessel Lists established by each ~~Organisation~~ Commission.

iii. collaborate, where and as appropriate, on research efforts relating to species and stocks of mutual interest, including non-target, associated and dependent species;

iv. cooperate where and as appropriate, on the implementation of conservation and management measures adopted under the NPFC Convention and under the Antigua Convention;

v. share best practices in areas of mutual interest, including but not limited to:

a) monitoring, control and surveillance policies and systems, including with respect to Vessel Monitoring Systems (VMS) and to any Electronic Monitoring Schemes (EMS);

b) administration, auditing, training and structure of observer programmes; and

c) compliance and information management systems.

vi. exchange on expertise gained, lessons learned and use of best practices in their areas of activity, within each [~~Commission~~] Organization, including its Secretariat.

vii. consistent with each Commission's rules of procedure, grant reciprocal observer status to representatives of the respective Commissions in relevant meetings of each Commission , including those of its subsidiary bodies.

(b) [~~All~~] joint programs, projects, and actions [~~that may derive from the collaboration and cooperation referred to above~~] [~~shall~~] should be:

i. defined with all the details required for their implementation through the development and adoption of specific agreements under terms of reference or project proposals.

ii. subject to the availability of the financial and human resources necessary for their implementation.

Commented [A6]: Suggest insertion

Commented [A7]: COM10 feels it is important to include some reference to compliance here, as it is an important topic that could benefit from the exchange of best practices.

Commented [A8]: Retain Organization

Commented [A9]: Proposed edits for clarity

Commented [A10]: MOU is non-binding

3. CONSULTATIVE PROCESS

To facilitate effective development, implementation and enhancement of cooperation, the Commissions may establish a consultative process between their respective Secretariats that includes telephone, email and any other means of communication. The consultative process may also proceed in the margins of meetings at which both Commissions' Secretariats are represented by appropriate staff.

4. MODIFICATION

This MoU may be modified at any time with the mutual written consent of both Commissions.

5. LEGALSTATUS

This MoU does not create legally binding rights or obligations. Each Commission should cover its own costs related to the implementation of this MoU.

This MoU does not alter the rights and obligations of members of either Commission under their respective Conventions, including the obligation to comply with the conservation and management measures adopted by their respective Commission.

6. OTHER PROVISIONS

This MoU is intended to commence on the date of the second signature.

Either Commission may discontinue this MoU by giving six months' prior written notice to the other Commission.

7. SIGNATURES

Signed on behalf of the North Pacific Fisheries Commission and the Inter-American Tropical Tuna Commission:

FOR THE NORTH PACIFIC FISHERIES COMMISSION (NPFC)	FOR THE INTER-AMERICAN TROPICAL TUNA COMMISSION (IATTC)
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Shingo Ota Chair	Arnulfo L. Franco Director
Place:	Place:
Date:	Date:

Memorandum of Understanding between the South Pacific Regional Fisheries Management Organisation (SPRFMO) and the North Pacific Fisheries Commission (NPFC)

The South Pacific Regional Fisheries Management Organisation (hereafter SPRFMO) and the North Pacific Fisheries Commission (hereafter NPFC):

Acknowledging that the objective of the Convention on the Conservation and Management of High Seas Fishery Resources in the South Pacific Ocean (hereafter SPRFMO Convention) is, through the application of the precautionary approach and an ecosystem approach to fisheries management, to ensure the long-term conservation and sustainable use of fishery resources and, in so doing, to safeguard the marine ecosystems in which these resources occur;

Acknowledging also the objective of the Convention on the Conservation and Management of High Seas Fisheries Resources in the North Pacific Ocean (hereafter NPFC Convention) is to ensure the long-term conservation and sustainable use of the fisheries resources in the North Pacific Ocean and in so doing safeguard the marine ecosystems in which these resources occur;

Recognising that Article 21 of the NPFC Convention requires the NPFC to cooperate, as appropriate, on matters of mutual interest with relevant regional organizations or arrangements, especially with those regional fisheries management organizations or arrangements with responsibility for fisheries in marine areas near or adjacent to the NPFC Convention Area;

Recognising further that Article 21 of the NPFC Convention calls upon the NPFC to take into account the conservation and management measures or recommendations adopted by regional fisheries management organizations and arrangements and other relevant intergovernmental organizations that have competence in relation to areas adjacent to the NPFC Convention Area;

Recognising also that Article 31 of the SPRFMO Convention requires the SPRFMO Commission, *inter alia*, to cooperate, as appropriate, with other relevant organisations on matters of mutual interest and to seek to make suitable arrangements for consultation, cooperation and collaboration with such other organisations;

Conscious of the fact that the areas that fall within the purviews of the SPRFMO Convention and NPFC Convention are geographically adjacent;

Noting that both the SPRFMO and the NPFC have conservation and management principles and approaches addressing non-target, associated, or dependent species which belong to the same ecosystem as the target species;

Desiring to put in place a mechanism to promote and facilitate cooperation, SPRFMO and NPFC enter into the following Memorandum of Understanding (MoU):

1. OBJECTIVE OF THIS MEMORANDUM

The objective of this MoU is to facilitate, where appropriate, consultation, cooperation, and collaboration between SPRFMO and NPFC ('the Organisations') in order to advance their respective objectives, particularly with respect to matters of common interest.

2. AREAS OF COOPERATION

The Organisations should establish and maintain consultation and cooperation in respect of matters of common interest. In particular, the Organisations intend to:

i. exchange meeting reports, information, documents, and publications regarding matters of mutual interest, consistent with the confidentiality rules and information sharing policies of each Organization;

ii. exchange data and scientific information in support of the work and objectives of both Organisations, consistent with the confidentiality rules, information sharing policies, and internal data security procedures of each Organisation including, but not limited to, information on:

   a) vessels authorised to fish in accordance with conservation and management measures adopted under the SPRFMO and NPFC Conventions;

   b) vessels identified and listed as having engaged in illegal, unreported, and unregulated (IUU) fishing activity and the IUU Vessel Lists established by each Organisation;

   c) relevant stocks and species

iii. cooperate, where appropriate, on research efforts relating to species and stocks of mutual interest, including non-target, associated and dependent species.

iv. share best practices in areas of mutual interest and concern, including, but not limited to:

   a) addressing bycatch of non-target, associated, and dependent species (ecologically related species);

   b) monitoring, control, and surveillance policies and systems, including with respect to Vessel Monitoring Systems;

   c) administration and structure of observer programmes, including information management policies;

   d) compatibility of the conservation and management measures adopted by the Organisations.

v. consider methods of supporting conservation and management measures adopted under the SPRFMO Convention and the NPFC Convention;

vi. exchange on recommending methods to strengthen the compliance review procedures in accordance with each Organisation's Compliance and Monitoring Scheme;

vii. consistent with each Organisation's rules of procedure and other relevant policies, grant reciprocal observer status to representatives of the respective Organisations in relevant meetings of each Organisation, including those of each Organisation's subsidiary bodies;

viii. exchange expertise gained, lessons learned, and use of best practices between the Organisations' Secretariats in their areas of activity.

3. CONSULTATIVE PROCESS

To facilitate effective development, implementation, and enhancement of cooperation, the Organisations may establish a consultative process between their respective Secretariats that includes telephone, email, and any other means of communication. The consultative process may also proceed in the margins of meetings at which both Organisations' Secretariats are represented by appropriate staff.

4. MODIFICATION

This MoU may be modified at any time by the mutual written consent of both Organisations.

5. LEGAL STATUS

This MoU does not create legally binding rights or obligations. Each Organisation should cover their own costs related to the implementation of this MoU.

This MoU does not alter the obligations of members of either Organisation to comply with the conservation and management measures adopted under respective Conventions.

6. OTHERS

This MoU should commence on the date of the second signature.

Either Organisation may discontinue this MoU by giving six months' prior written notice to the other Organisation.

This MoU should operate for three (3) years. Before the end of the three-year period, the Organisations will separately review the operation of this MoU to decide whether it should be renewed.

7. SIGNATURES

Signed on behalf of the South Pacific Regional Fisheries Management Organisation and the North Pacific Fisheries Commission:

FOR THE NORTH PACIFIC FISHERIES COMMISSION (NPFC)	FOR THE SOUTH PACIFIC REGIONAL FISHERIES MANAGEMENT ORGANISATION (SPRFMO)
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Robert Day Executive Secretary	James Brown Executive Secretary
Place: Tokyo, Japan	Place: Wellington, New Zealand
Date: [DAY MONTH] 2026	Date: [DAY MONTH] 2026