Commission for the Conservation and Management of
Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

Northern Committee
Twenty-First Regular Session

Toyama, Japan (Hybrid)
14 – 15 July 2025

SUMMARY REPORT

Acknowledgements

The financial, logistical and administrative support provided by the Western and Central Pacific Fisheries Commission Secretariat and all Members of the Northern Committee are gratefully acknowledged. Mr. Masanori Miyahara, who chaired the Twenty-First Regular Session of the Northern Committee, and Mr. Samuel Coyle, who served as the rapporteur for the meeting, are acknowledged with appreciation.

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The Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

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SUMMARY REPORT

AGENDA ITEM 1 — OPENING OF MEETING

1. The Twenty-First Regular Session of the Northern Committee (NC21) took place in Toyama, Japan, on 14 – 15 July 2025. The meeting was attended by Northern Committee (NC) members from Canada, China, Fiji, Japan, Republic of Korea (ROK), Philippines, Chinese Taipei, United States of America (USA), and Vanuatu and observers from the International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean (ISC), Marine Stewardship Council (MSC), New Zealand, North Pacific Marine Science Organization (PICES), Ocean Governance Institute (OGI), Pacific Islands Forum Fisheries Agency (FFA), The Pew Charitable Trusts (Pew), and World Wide Fund for Nature (WWF). The list of meeting participants is in **Attachment A**.

1.1 Opening of meeting

2. Mr. Masanori Miyahara, Chair of the NC, opened the meeting and invited the Executive Director, Ms. Rhea Moss-Christian, to give opening remarks.

3. The Executive Director thanked the Government of Japan for hosting the meeting in Toyama and acknowledged the warm hospitality from the Joint Working Group (JWG) onward. She highlighted two key points: first, her remarks at the UN Oceans Conference, where the Pacific bluefin tuna recovery was recognized as a major achievement for the JWG, alongside the FAO's report that 95% of global tuna stocks come from sustainable fisheries—a positive sign for the WCPFC. Second, she raised awareness about deep sea mining in the western North Pacific, noting its overlap with the WCPFC area and potential implications for tuna fisheries, emphasizing this was for awareness purposes. She asked participants to consider these points to support a successful meeting.

1.2 Adoption of agenda

4. The provisional agenda was adopted without modification (**Attachment B**).

1.3 Meeting arrangements

5. Japan, as the host of the meeting, outlined the meeting arrangements.

6. Mr. Samuel Coyle (Japan) was appointed as rapporteur for the meeting.

1.4 Report from ISC and SC

1.4.1 Report from ISC

7. Dr. Shuya Nakatsuka, Vice-Chair of the ISC, presented the outcomes of the ISC25 Plenary Meeting, which was held in Busan, Republic of Korea. The meeting was attended by scientists from Canada, Chinese Taipei, Japan, Korea, Mexico, and the USA. Some observers also attended the meeting.

8. Dr. Nakatsuka reported 2024 landing figures for North Pacific species. North Pacific albacore landings reached 51,052 metric tons in 2024, representing a 12.8% increase from the previous year. Pacific bluefin tuna landings totaled 17,843 metric tons in 2024. Blue marlin landings were 6,756 metric tons, striped marlin landings were 2,433 metric tons, and blue shark landings totaled 36,039 metric tons in 2024, representing a 13% increase. Shortfin mako shark landings were 1,082 metric tons in 2024.

9. For North Pacific albacore, the ISC conducted further analyses of the relationships between fleet-specific spawning potential ratios (SPRs) and effort for the portions of the Japanese longline (JPLL) fishery that targets NPO ALB. For Pacific bluefin tuna, the ISC was tasked by the JWG of the WCPFC and IATTC to complete the MSE of Pacific bluefin tuna in 2025; it completed the task, which was presented at the JWG. The PBFWG also addressed tasks requested by the JWG: (1) additional projections to reflect the newly adopted management measures in 2024; and (2) calculate conversion factors between WPO small to WPO large and WPO large to EPO.

10. The ISC Billfish Working Group (BILLWG) updated projection runs for the WCNPO MLS rebuilding analysis to reflect the catch distribution by country from the CMM 2024-06. Dr. Nakatsuka noted that striped marlin is the most concerning stock, as it is very likely to be overfished and likely subject to overfishing. Reducing annual catch below 2,400 metric tons is expected to promote recovery of the stock by 2040 or sooner, depending on the catch reduction. The ISC also noted that if the NC intends to request more regular stock assessment reviews as well as MSE, a strategy needs to be developed to provide sufficient financial support for these activities.

11. Japan noted gaps in blue shark data around the year 2000, observing that the chart showed significant differences between the right and left sides and asked what happened around this threshold period and why there was a gap. Dr. Nakatsuka explained that there was an information gap and that the USA could provide additional information on the margins of the meeting.

1.4.2 Report from SC

12. The NC noted that as the 21st Regular Session of the WCPFC Scientific Committee will be held on 13 – 21 August 2025, no report from SC21 was available at NC21.

AGENDA ITEM 2 — CONSERVATION AND MANAGEMENT MEASURES FOR THE NORTHERN STOCKS

2.1 Pacific bluefin tuna (CMM 2024-01)

13. The Co-Chairs of the Joint IATTC and WCPFC-NC Working Group Meeting on the Management of Pacific Bluefin Tuna (JWG) presented the outcomes of the 10th JWG as outlined in the Chairs' Summary

(**Attachment C**). The JWG strongly urged further discussion on the margins of meetings to facilitate completion of this work.

14. The NC agreed to follow the following work plan the JWG agreed upon: "The JWG affirmed the commitment to complete work related to the long-term harvest strategy, catch documentation scheme, and amendments to MCS in 2026:

2025:

- JWG Members work to support progress on the long-term harvest strategy through bilateral and multilateral meetings conducted on the margins of the IATTC and WCPFC meetings. JWG Members will communicate their preferences to the JWG Co-Chairs by December 2025 so that they can make arrangements for virtual or in-person intersessional meeting(s) as needed.
- ISC begins work to develop guidance and criteria for defining exceptional circumstances, particularly with respect to risks related to low recruitment to be provided to JWG-11.

2026:

- The JWG will hold intersessional meetings as needed to finalize the long-term harvest strategy at JWG-11.
- JWG recommends a long-term harvest strategy, including additional management measures triggered by exceptional circumstances, which will be implemented in 2027.
- JWG recommends a CDS CMM/resolution.
- JWG recommends amendments to existing MCS CMM/resolution after reviewing reports on implementation of PBF measures."

15. WWF and Pew expressed disappointment in the JWG outcome and serious concern about the future of Pacific bluefin tuna. WWF and Pew noted that more than five years and considerable resources had been invested in the MSE process, which represents the best available science. WWF and Pew stressed the importance of bilateral discussions and an intersessional JWG meeting before the December Commission meeting.

16. The USA noted that ISC developed a summary of PBF migratory patterns, and NC21 recommended that **Attachment D** be provided to WCPFC22 to respond to WCPFC21's request.

2.2 North Pacific albacore (CMM 2019-03)

2.2.1 Reports from CCMs and Observers

17. The NC reviewed the compiled catch and effort information for North Pacific albacore in NC21-WP-01.

18. Japan raised several questions regarding China's reporting. Japan asked why China changed its management metric from number of fishing vessels to number of fishing days in 2024, whether this control method would continue in 2025, and requested the actual number of fishing vessels for 2024. Japan also noted that China should report fishing effort separately for the Convention Area and the entire North Pacific as required by the CMM.

19. China explained that it changed to control its effort from vessel numbers to fishing days in 2024 and 2025, and noted that no decision had been made on the effort metric to control its fishing effort in 2026. China confirmed that the number of fishing vessels in 2024 was still 10, and that their numbers represented efforts in the Convention Area because they do not have fishing opportunities targeting North Pacific albacore in the EPO in the North Pacific.

20. Japan raised the same reporting requirement with Chinese Taipei and Vanuatu regarding separate reporting for the Convention Area and entire North Pacific. Chinese Taipei and Vanuatu confirmed they would update the information accordingly.

21. The USA noted a significant increase in North Pacific albacore catch by Chinese Taipei in recent years and asked how effort remained consistent while catch increased. Chinese Taipei explained that the increase came mainly from bycatch by other fishing vessels as vessels returned to fishing grounds after COVID-19.

22. The NC expressed appreciation to the Secretariat for compiling the tables and encouraged CCMs to provide any management changes for the implementation of the CMM.

2.2.2 Application of Harvest Strategy for North Pacific Albacore Fishery

23. The ISC presented findings from the Albacore Working Group (ALBWG) regarding criteria for identifying exceptional circumstances and scientific advice for translating fishing intensity into catch and effort. The ISC explained that the ISC24 Plenary had supported the criteria for exceptional circumstances (Stock and Fleet Dynamics, Application, and Implementation), and that these criteria would be analyzed during stock assessments with results reported in assessment reports.

24. The NC agreed to use the proposed exceptional circumstances criteria **(Attachment E)**.

25. The ISC ALBWG presented the following advice on how fishing intensity should be interpreted to actual management measures under the harvest strategy for North Pacific albacore:

a. It should be noted that both RFMOs currently maintain fishing effort for North Pacific albacore at or below the average of 2002 – 2004 levels (e.g., IATTC Resolution C-05-02) and that they have maintained the fishing impact on North Pacific albacore around or below the target reference point of 45% F%SPR.

b. The ALBWG recommended that the relationships will need to be reevaluated with updated stock assessments and if reference points are exceeded for the stock (i.e., if the SSB falls below the threshold or limit reference points for North Pacific albacore (30%SSBcurrent,F=0 and 14%SSBcurrent,F=0) or if exceptional circumstances are identified.

c. The ALBWG therefore recommended that changes in fishing intensity required by the North Pacific albacore harvest strategy can potentially be translated into catch reductions for all fleet groups.

d. The ALBWG recommended that changes in fishing intensity required by the North Pacific albacore harvest strategy can potentially be translated into changes in effort for the management of surface fleet groups, JPPL and EPOSF.

e. The ALBWG recommended that these JPLL fleets targeting North Pacific albacore may be able to be managed using effort or catch controls. However, the increased variability in the relationships between effort and SPRs, relative to catch, should be taken into account.

f. The ALBWG recommended that RFMOs adopt rules to allocate a proportion of the total fishing intensity resulting from the harvest strategy harvest control rule to each of the countries or fleets before fleet specific fishing intensities can be translated into catch and effort. As an example, an approach may be for the RFMOs to specify a historical or current time period. The ALBWG can then calculate the mean percentage share of the SPR for each fleet or country during that period. Once the allocation guidelines are provided the ALBWG can provide options for estimating the fleet-specific SPRs such that the desired total SPR values were met, while the share of benefits for each fleet or country were maintained at the desired levels. These fleet specific SPRs could then in turn be converted into catch and/or effort levels, as needed. An alternative example may be for the RFMOs to specify the exact amounts and/or shares of catch and/or effort for each fleet or country, and potentially recalculate the exact amounts after every stock assessment.

26. Canada proposed that the ISC provide estimates of the historical impact of each fleet group on the stock. After discussion on this proposal, the NC agreed to request the ISC to provide such estimates based on fishing intensity during the time periods of 2002-2004 and 1999-2015, and to guide fleet-specific reductions in fishing intensity should the female spawning stock biomass fall below the threshold reference point as mandated by the harvest strategy.

27. Japan emphasized that major fisheries should be managed with the same management metrics to avoid unfairness, suggesting that fishing effort control might be appropriate when stock is above the limit reference point, taking into account the highly fluctuating nature of albacore catch year by year. Japan suggested that Japanese longline fisheries could be divided into two categories (albacore targeting and albacore bycatching) based on the ratio of North Pacific albacore in the entire catch.

28. Korea noted that albacore is a bycatch species for Korea and that it had no particular preference on fleet grouping for now because it did not fully understand the implications of the idea of grouping certain bycatching fleets together. Then, it asked about the background for the 1999-2015 reference period and why only female SSB was used as an indicator.

29. Canada explained that 1999-2015 was the period used to simulate catch ratios in future projections in the MSE. The ISC clarified that albacore assessment uses a sex-specific model and SSB is based only on females, which is why the harvest control rule is based on female SSB.

30. Pew thanked Canada for its proposal and supported tasking the ISC to provide additional information but expressed disappointment that the NC appeared unable to recommend a method to translate fishing intensity into management quantities this year, noting this was a task in the NC's workplan. Pew emphasized that now is the time to ensure the harvest strategy can be implemented and urged members to have the necessary consultations to adopt a method of translating fishing intensity next year.

31. Responding to the ISC's questions on fleet group definitions, Vanuatu agreed to be separated as a distinct fleet group, whereas Korea agreed to maintain its longline fleet as a distinct fleet group.

2.2.3 Review of the CMM for North Pacific Albacore (CMM 2019-03)

32. There were no proposals to amend CMM 2019-03.

2.3 North Pacific swordfish (CMM 2023-03)

2.3.1 Development of a management framework

33. The ISC reported that the BILLWG had discussed producing an MSE for North Pacific swordfish but noted that none of the BILLWG CCMs have the capacity to provide a scientist for this work. The ISC estimated that a full MSE could be completed in 5 years, including 2 years of stakeholder engagement and 3 years of model development.

34. The USA offered to provide an analyst for the ISC to develop an MSE, noting that swordfish should be the next target for MSE development. Dr. Nakatsuka, Vice-Chair of the ISC, thanked the USA for the offer and suggested that the ISC would consult with the USA regarding MSE preparation for this stock.

35. Dr. Nakatsuka also reminded the members that the NC, rather than the ISC, should take leadership for stakeholder meetings to develop an MSE. The NC agreed to take the lead in facilitating stakeholder dialogue for the development of an MSE.

36. The NC agreed to initiate an MSE and to task the ISC to develop a workplan, as well as to task the NC to start considering management objectives:

- The NC is requesting the ISC to begin technical work on a management strategy evaluation (MSE) for Western and Central North Pacific Ocean swordfish once additional capacity for MSE is provided. Specifically, the NC requests the ISC to develop a detailed MSE workplan that will be presented to NC in 2026, outlining steps and timeline to conduct and complete an MSE.

- The NC is tasked to discuss candidate operational management objectives for WCNPO swordfish in 2026.

2.3.2 Review of CMM for NP Swordfish (CMM 2023-03)

37. The NC reviewed the compiled catch and effort information for North Pacific swordfish and decided to maintain CMM 2023-03 as it is.

AGENDA ITEM 3 — CONSERVATION AND MANAGEMENT MEASURES FOR OTHER STOCKS

3.1 North Pacific striped marlin (CMM 2010-01)

38. Dr. Michelle Sculley (ISC) presented updated projections for striped marlin as requested at the last meeting. The ISC noted that WCPFC21 had adopted a new CMM for striped marlin (CMM 2024-06) setting a total catch limit of 2,400 metric tons, with each country able to take up to 165 metric tons of additional catch if the catch limit in 2023-2025 is not reached. The ISC presented three projection scenarios based on the CMM and reported that the 2025 projection with a 2,400-metric-ton-limit in 2025-27 requires a limit of 2,300 metric tons in 2028-2032 and 2,200 metric tons in 2033-2034 to reach the rebuilding target of 3,660 metric tons with a 60% probability by 2034.

39. Japan asked why scenario 3 showed an upward trend in future stock status while scenarios 1 and 2 did not, and requested that such technical presentations be provided prior to the meeting.

40. The ISC explained that increased catch in 2025 and 2026 reduces the population around 2029, but the subsequent reduction in catch to 2,150 metric tons allows the population to recover more quickly, noting that if projections were extended 10 or 15 years, the lines would equilibrate.

41. Dr. Nakatsuka further noted that the ISC always tries to provide information as quickly as possible, but that the timing of the NC meeting created difficulty in providing results ahead of time.

42. Chair Miyahara noted that there was no advice to the Commission on this item this year.

AGENDA ITEM 4 — CLIMATE CHANGE

43. The NC reviewed the progress report on the CMM Climate Change Vulnerability Assessment consultancy commissioned by the WCPFC following WCPFC21. Dr. Kerrie Robertson (Adira Consulting) presented the preliminary results of the comprehensive literature review examining over 500 studies from across the globe, including over 100 operational vulnerability frameworks. Dr. Robertson explained that there is no single standardized approach to undertaking climate change vulnerability assessments, with significant discretion available in choosing methodological frameworks. She noted that the most useful assessments are those that identify key problems and potential solutions, serving as effective planning tools. The consultants proposed adopting the IPCC AR6 definition of vulnerability and are developing a bespoke WCPFC framework that will be resource-efficient, iterative, and capable of flagging issues relevant to CMM revisions. Dr. Robertson indicated that the framework will be tested against the agreed list of CMMs before consultation with the SC, the TCC, and submission to the Commission.

44. The NC appreciated the presentation made by Dr. Robertson.

AGENDA ITEM 5 — REGIONAL OBSERVER PROGRAMME

45. The USA informed the NC of its intention to submit a paper to SC21 requesting feedback on the concept to develop an overarching WCPFC monitoring program, noting the overlap in both the Regional Observer Programme and the Electronic Monitoring program. The USA explained that the proposal suggests the Commission task the Chairs of the ER&EM IWG and the ROP IWG to work together, with any interested parties, to consider the data collection needs of both programs and areas of existing overlap.

46. The NC noted that this topic was discussed at TCC20 and further discussions will take place at TCC21. The NC agreed to drop this item from the agenda in future meetings.

AGENDA ITEM 6 — DATA

47. No discussion was held on this agenda item.

AGENDA ITEM 7 — COOPERATION WITH OTHER ORGANIZATIONS

7.1 ISC

48. The NC noted the ISC's request for more stable financial support and acknowledged the generous contributions from the USA toward the peer-review of the Pacific bluefin tuna stock assessment and the development of the swordfish MSE.

49. The NC thanked the ISC for its rigorous scientific work and great contributions to the NC.

50. The Chair requested members to develop a proposal to strengthen support to the ISC at NC22.

7.2 IATTC

51. The NC noted the importance of continued cooperation with the IATTC and agreed to continue the JWG.

52. The USA requested to include swordfish in future cooperative work with the IATTC, which was agreed upon.

AGENDA ITEM 8 — FUTURE WORK PROGRAMME

8.1 Work Programme for 2024-2026

53. The NC reviewed and revised the Work Programme for the Northern Committee for 2026-2028 (**Attachment F**).

AGENDA ITEM 9 — ADMINISTRATIVE MATTERS

9.1 Election of Officers

54. The NC considered the appointment of the NC vice-Chair and agreed to defer this decision to intersessional consultations before WCPFC22 in December.

9.2 Administrative arrangements for the Committee

9.2.1 Secretariat functions and costs

55. No specific issues were raised.

9.2.2 Rules of Procedure

56. No proposals were received on this matter.

9.3 Next meeting

57. **Japan offered to host the NC22 meeting, tentatively scheduled for July 13 to 14, in conjunction with the JWG11 meeting. The arrangement of the next meeting will be notified well in advance.**

9.4 Other business

58. No other business was discussed.

AGENDA ITEM 10 — ADOPTION OF THE SUMMARY REPORT OF THE 21ST REGULAR SESSION OF THE NORTHERN COMMITTEE

59. The NC reviewed and adopted the Summary Report.

AGENDA ITEM 11 — CLOSE OF THE MEETING

60. The meeting was brought to a close at 10:11 AM on 15 July 2025.

Attachment A

Commission for the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

NORTHERN COMMITTEE
TWENTY-FIRST REGULAR SESSION

Toyama, Japan (Hybrid)
14 – 15 July 2025

LIST OF PARTICIPANTS

CHAIR

Masanori Miyahara
Fisheries Agency of Japan
Advisor to the Minister of Agriculture, Forestry and Fisheries
masamiyafaj1@gmail.com

CANADA

Kristen Cote
Fisheries and Oceans Canada
Senior Policy Advisor

Sarah Hawkshaw
Fisheries and Oceans Canada
Biologist
sarah.hawkshaw@dfo-mpo.gc.ca

CHINA

Fan Shu Qi
Shanghai Ocean University
assistant scientist
1582187049@qq.com

Li Yan
China Overseas Fisheries Association
Deputy Director of Highseas Fisheries
liyan@cofa.net.cn

Liu Xiaobing
Shanghai Ocean University
Visiting Professor
xiaobing.liu@hotmail.com

Lyu Zehua
Shanghai Ocean University
Doctor
zhlv@shou.edu.cn

Zhe Geng
Shanghai Ocean University
Stock Assessment Scientist
zgeng@shou.edu.cn

FIJI

Epi Batibasaga
Head of Delegation
Ministry of Fisheries
Fisheries Officer
batibasaga@gmail.com

Moses Mataika
Ministry of Fisheries
Fisheries Officer - Data
mataika.moses@gmail.com

JAPAN

Takumi Fukuda
Fisheries Agency of Japan
Resource Management Department
takumi_fukuda720@maff.go.jp

Masahide Kannou
Fisheries Agency of Japan
Staff, International Affairs Division
masahide_kanno210@maff.go.jp

Akari Onami
Fisheries Agency of Japan
staff
akari_onami830@maff.go.jp

Akihito Fukuyama
Japan Far Seas Purse Seine Fishing Association
Managing Director
fukuyama@kaimaki.or.jp

Atsushi Sawada
Shimokita Regional Administration Bureau, Regional Agriculture, Forestry and Fisheries Department, Shimokita Regional Fisheries Office, Fisheries Management and Development Division
Technical Staff
atsushi_sawada@pref.aomori.lg.jp

Ayami Nakato
OFCF
staff
nakato@ofcf.or.jp

Daisuke Nakamura
Kochi Offshore Tuna Fisheries Association
Advisor
k-nakamura@kogyoren.jf-net.ne.jp

Eihachiro Matsuzawa
Kochi Offshore Tuna Fisheries Association
President
k-gyoren3@kogyoren.jf-net.ne.jp

Haruo Tominaga
Fisheries Agency of Japan
Director for International Fisheries Coordination
haruo_tominaga170@maff.go.jp

Hidefumi Kawamoto
San-In Purse Sein Fisheries Cooperative
Executive director
info@sanmaki.jp

Hideki Nakao
Miyazaki Tuna Fisheries Association
Advisor
h-nakao@mzgyoren.jf-net.ne.jp

Hidetada Kiyofuji
Fisheries Resources Institute
Highly Migratory Resource Division, Fisheries Stock Assessment Center
kiyofuji_hidetada20@fra.go.jp

Hidetoshi Ito
Taiyo A & F Co., Ltd.
Director
hid-itou@maruha-nichiro.co.jp

Hirofumi Niiyama
Hokkaido Bluefin Tuna Association
vice chairman
bluefin@bf.hokkaidooffice.jp

Hirohide Matsushima
Fisheries Agency of Japan
International Affairs Division
hiro_matsushima500@maff.go.jp

Hiroki Ihara
Federation Of North Pacific District Purse Seine Fisheries Cooperative associations of Japan
Assistant Manager
hiroki_ihara540@kitamaki.jp

Hiromu Fukuda
Fisheries Research and Education Agency of Japan, Fisheries Resources Institute
Head, Bluefin Tunas Group, Highly Migratory Resources Division
fukuda_hiromu57@fra.go.jp

Jun Takahashi
Overseas Fishery Cooperation Foundation of Japan (OFCF)
Advisor
jun@ofcf.or.jp

Kaoru Kawamoto
Fisheries Agency of Japan
Interpreter
dvorjakkawamoto@ybb.ne.jp

Kazuhiro Ueki

Nitto Suisan Corporation
Ishinomaki Branch Manager
kazuhiro.ueki@nittosuisan.com

Kazushige Hazama
National Offshore Tuna Fisheries Association of Japan
Manager
hazama@kinkatsukyo.or.jp

Kei Hirose
Taiyo A&F Co., Ltd.
Tokyo, Japan
k-hirose@maruha-nichiro.co.jp

Keietsu Ogata
TAIKEI GYOGYO KABUSHIKI KAISHA
PRESIDENT
taikeioffice@taikeigyogyo.jp

Keiko Imoto
"Sanin purse seine Fisheries cooperative association"
Associate Director
imoto@sanmaki.jp

Keisuke Akimoto
Miyazaki Prefecture Bonito and Tuna Fishermen's Association
Secretariat
kk-akimoto@mzgyoren.jf-net.ne.jp

Kenichi Sakuragi
Fisheries Department
Director
kenichi_sakuragi@kyokuyo.co.jp

Kenji Aoki
Nitto Suisan
Managing Director
kenji.aoki@nittosuisan.com

Kirara Nishikawa
Fisheries Resources Institute, FRA
Scientist, Bluefin Tunas Group, Highly Migratory Resource Division
nishikawa_kirara68@fra.go.jp

Kotaro Harada
Ishikawa Prefecture
Chief Engineer
kharada@pref.ishikawa.lg.jp

Kyoichiro Saito
Ishikawa Prefecture Fisheries Research Center
Engineer
Kyoichiro.S999@pref.ishikawa.lg.jp

Mako Iioka
Fisheries Agency of Japan
Fisheries Agency of Japan
mako_iioka540@maff.go.jp

Masakatsu Irei
Okinawa Tuna Fisheries Association
Vice President
zenkinjp@kinkatsukyo.or.jp

Masatake Kato
Federation Of North Pacific District Purse Seine Fisheries Cooperative associations of Japan
Executive Managing Director
masatake_katou210@kitamaki.jp

Masatoshi Ooyama
Ishinomaki Fishery Co., Ltd.
President
m-ooyama@maruha-nichiro.co.jp

Masayoshi Miyahira
Assistant Director, Agricultural and Marine Products Office, Trade Control Department, Ministry of Economy, Trade and Industry
Officer
miyahira-masayoshi@meti.go.jp

Mayu Kato
Toyama Prefectural Fisheries and Fishing ports Division
Senior Staff
mayu.kato@pref.toyama.lg.jp

Meiko Kawahara
Taiyo A & F Co., Ltd.
Deputy General Manager
m-kawahara@maruha-nichiro.co.jp

Mitsunori Murata
National Ocean Tuna Fishery Association
Secretariat
mi-murata@zengyoren.jf-net.ne.jp

Muneharu Tokimura
JOP (The Overseas Fishery Cooperation Foundation of Japan)
Adviser
tokimura@ofcf.or.jp

Naoki Iida
Toyama Prefectural Fisheries and Fishing ports Division
Section Chief
naoki.iida@pref.toyama.lg.jp

Naoki Ishiyama
Ishikawa Prefecture Fisheries Research Center
Staff
cisiyama@pref.ishikawa.lg.jp

Nobushige Shimizu
Fisheries Agency of Japan
Staff
nobushige_shimizu640@maff.go.jp

Riku Izumi
Engineer
Fisheries Division, Ishikawa Prefecture
r.izumi79@pref.ishikawa.lg.jp

Ryusuke Sakamoto
Ishikawa Prefecture Fisheries Division
Chief Engineer
ryu-saka@pref.ishikawa.lg.jp

Sakura Ito
Fisheries Agency of Japan
Staff
sakura_ito700@maff.go.jp

Samuel Coyle
Fisheries Agency of Japan
Staff
coyle@urbanconnections.jp

Satoshi Fujiwara
Fisheries Management Division, Fisheries Bureau, Hokkaido Department of Fisheries and Forestry
Section chief
fujiwara.satoshi1@pref.hokkaido.lg.jp

Satoshi Miyazaki
Agricultural and Marine Products Office, Trade Control Department, Ministry of Economy, Trade and Industry
Assistant Director
miyazaki-satoshi@meti.go.jp

Shigekazu Konno
Nitto Suisan Corporation
Ishinomaki Assistant Branch Manager
shigekazu.konno@nittosuisan.com

Shigeo Inada
Miyazaki Prefecture Bonito and Tuna Fishermen's Association
board member
kkk-akimoto@mzgyoren.jf-net.ne.jp

Shinichi Shirakawa
Fisheries Promotion Division, Bureau of Fisheries, Department of Agriculture, Forestry and Fisheries, Aomori Prefectural Government
Senior Administrative Officer
shinichi_shirakawa@pref.aomori.lg.jp

Shinji Hiruma
Fisheries Department, Nagasaki Prefecture
Supervisor
s-hiruma@pref.nagasaki.lg.jp

Shinji Tawara
Miyazaki Prefecture Bonito and Tuna Fishermen's Association
board member
k-akimoto@mzgyoren.jf-net.ne.jp

Shuya Nakatsuka
Fisheries Resources Institute
Deputy Director, Highly Migratory Resources Division
nakatsuka_shuya49@fra.go.jp

Susumu Oikawa
Taiyo A & F Co., Ltd.
Managing Director
s-oikawa@maruha-nichiro.co.jp

Takashi Kouyama
Taiyo A＆F Co., Ltd.
Deputy General Manager
t-kouyama@maruha-nichiro.co.jp

Takeshi Miwa
Fisheries Agency of Japan
Counsellor
takeshi_miwa090@maff.go.jp

Taku Nakamura
Assistant Director, Agricultural and Marine Products Office, Trade Control Department, Ministry of Economy, Trade and Industry
Deputy Director
nakamura-taku@meti.go.jp

Tetsuya Kunito
Federation of North Pacific District Purse Seine Fisheries Cooperative Associations of Japan
Section Manager
tetsuya_kunito920@kitamaki.jp

Tomohiro Itou
Fishing Promotion Division, Nagasaki Prefecture
Chief engineer
tomohiroito@pref.nagasaki.lg.jp

Toru Kawabata
Ishikawa Prefecture Fisheries Research Center
Engineer, Marine Resources Department
t-kawabata@pref.ishikawa.lg.jp

Toshiyuki　Shiotani
Shinminato fisheries cooperative association
Fisheries cooperative president
jfshinminato@tairyonet.or.jp

Yamada Kairi
Fisheries Agency of Japan
Staff, International Affairs Division
kairi_yamada180@maff.go.jp

Yasuji Tamaki
Japan Setnet Fisheries Association
Managing Director
nihonteichi@shore.ocn.ne.jp

Yoko Yamakage
Fisheries Agency of Japan
Interpreter
yamakageyoyo@gmail.com

Yoshihiro Notomi
National Offshore Tuna Fisheries Association of Japan
Managing Director
notomi@kinkatsukyo.or.jp

Yosuke Matsuoka
Ishikawa Prefecture Fisheries Research Center
Engineer
Matsuoka.Y@pref.ishikawa.lg.jp

Yuichi Tsuda
Fisheries Resources Institute, Japan Fisheries Research and Education Agency
Head, Skipjack and Albacore Group, Highly Migratory Resources Division
tsuda_yuichi58@fra.go.jp

Yuji Uozumi
Japan Tuna Fisheries Co-operative Association
Adviser

PHILIPPINES

Isidro Tanangonan
Bureau of Fisheries and Aquatic Resources
Aquaculturist II
itanangonan@bfar.da.gov.ph

Joeren Yleana
Bureau of Fisheries and Aquatic Resources
Supervising Aquaculturist
joerenyleana@yahoo.com

REPUBLIC OF KOREA

Ilkang Na
Ministry of Oceans and Fisheries
Multilateral Fisheries Negotiator
ikna@korea.kr

Heewon Park
National Institute of Fisheries Science(NIFS)
Republic of Korea

Jae-geol Yang
Korea Overseas Fisheries Cooperation Center
Policy Analyst
jg718@kofci.org

Jung-re Riley Kim
Ministry of Oceans and Fisheries
Head of Fisheries Negotiation Unit
riley1126@korea.kr

CHINESE TAIPEI

Shao-Wei Lu
Head of Delegation
Associate Technical Specialist,
Fisheries Agency, Ministry of Agriculture
shaowei0220@ms1.fa.gov.tw

Joseph Chia-Chi Fu
CEO,
Overseas Fisheries Development Council
joseph@ofdc.org.tw

Ken Ke-Chen Yang
Taiwan Tuna Longline Association
Secretary General
younker.yang@gmail.com

Lin Han-Yu
Taiwan Tuna Association
General Secretary
tony@tuna.org.tw

Shui-Kai Chang
Graduate Institute of Marine Affairs,
National Sun Yat-sen University
Professor
skchang@faculty.nsysu.edu.tw

Tzu-Ching Yu
Project Manager,
Overseas Fisheries Development Council
evan@ofdc.org.tw

UNITED STATES OF AMERICA

Sarah Malloy
NOAA Fisheries
Regional Administrator, Pacific Islands Regional Office
sarah.malloy@noaa.gov

Alex Kahl
NOAA Fisheries - Pacific Islands Regional Office
International Fisheries
alex.kahl@noaa.gov

Andrew Lawler
NOAA
Principal Deputy Assistant Secretary for International Fisheries
andrew.lawler@noaa.gov

Christa Marie Svensson
PFMC
Alternate-Commissioner
csvensson@trimarinegroup.com

David Rudie
PFMC
Chair HMSAS
rudie.dave@gmail.com

Desiree Tommasi
Fisheries Collaborative Program, University of California Santa Cruz
Project Scientist
detommas@ucsc.edu

Emily Reynolds
NOAA Fisheries, Pacific Islands Regional Office
Fishery Policy Analyst
emily.reynolds@noaa.gov

Eric Kingma

Hawaii Longline Association
Executive Director
Eric.K.Kingma@gmail.com

Felipe Carvalho
NOAA PIFSC
Supervisory Stock Assessment Scientist
felipe.carvalho@noaa.gov

Huihua Lee
Southwest Fisheries Science Center, NMFS
Research Mathematical Statistician
huihua.lee@noaa.gov

Jason Philibotte
NOAA Fisheries
International Fisheries, Division Chief
jason.philibotte@noaa.gov

Josh Madeira
Monterey Bay Aquarium
Director of Policy & Stakeholder Engagement
jmadeira@mbayaq.org

Joshlyn Cardoza
AAFA
Assistant director of operations
admin@americanalbacore.com

Kerry Griffin
Pacific Fishery Management Council
Staff Officer - Highly Migratory Species
kerry.griffin@pcouncil.org

Kitty Simonds
Western Pacific Regional Fishery Management Council
Executive Director
kitty.simonds@noaa.gov

Larry Phillips
American Sportfishing Association
Pacific Fisheries Policy Director
lphillips@asafishing.org

Lucille Bulkeley
NOAA WCR HMS
IATTC Policy Support
lucille.bulkeley@noaa.gov

Mark Fitchett
Western Pacific Regional Fishery Management Council
Pelagic Fisheries Ecosystem Scientist
mark.d.fitchett@noaa.gov

Michelle Sculley
NOAA
Stock Assessment Scientist
michelle.sculley@noaa.gov

Mike Conroy
West Coast Fisheries Consultants
President
Mike@wecofm.com

Mike Thompson
US COMMISSIONER / IATTC
REC fisheries rep
thompsonmike148@gmail.com

Rachael Wadsworth
NOAA Fisheries
Fishery Policy Analyst
rachael.wadsworth@noaa.gov

Rachel Ryan
U.S. Department of State
Foreign Affairs Officer
RyanRL@state.gov

Roger Dang
Member
Vice Chair

Ryan Wulff
NOAA
ARA for Sustainable Fisheries
ryan.wulff@noaa.gov

Steven Teo
NOAA Fisheries
Research Fisheries Biologist
steve.teo@noaa.gov

Stuart Chikami

Western Pacific Fisheries, Inc.
Manager

Theresa Labriola
Wild Oceans
Pacific Program Director
tlabriola@wildoceans.org

Tyler Lawson
NOAA Fisheries
Fish Biologist
tyler.lawson@noaa.gov

Valerie Post
NOAA Fisheries
Fishery Policy Analyst
valerie.post@noaa.gov

VANUATU

Lucy Andrea Joy
Vanuatu Fisheries Department
Principal Data Officer
ljoy@fisheries.gov.vu

Rocky Kaku
Vanuatu Fisheries Department
Research officer
rkaku@fisheries.gov.vu

NEW ZEALAND

Robert Gear
Ministry for Primary Industries
Manager, Highly Migratory Species and Pacific Fisheries Team
robert.gear@mpi.govt.nz

MARINE STEWARDSHIP COUNCIL

Bill Holden
Marine Stewardship Council
Senior Tuna Fisheries Outreach Manager
bill.holden@msc.org

NORTH PACIFIC MARINE SCIENCE ORGANIZATION (PICES)

Kathryn Berry
PICES (North Pacific Marine Science Organization)
Project Science Director
kathryn.berry@pices.int

OCEAN GOVERNANCE INSTITUTE (OGI)

Hiroshi Ohta
The Ocean Governance Institute (OGI)
Director-General
hohta21@gmail.com

Isao Sakaguchi
Gakushuin University
Professor
isao.sakaguchi@gakushuin.ac.jp

Yasuhiro Sanada
Ocean Governance Institute
Chief Research Officer

PACIFIC ISLANDS FORUM FISHERIES AGENCY (FFA)

'Ana F. Taholo
Pacific Islands Forum Fisheries Agency
Compliance Policy Advisor
ana.taholo@ffa.int

Joyce Samuelu-Ah Leong
Pacific Islands Forum Fisheries Agency (FFA)
Fisheries Management Adviser
joyce.samuelu-ahleong@ffa.int

Marina Abas
Pacific Islands Forum Fisheries Agency (FFA)
Fisheries Management Advisor
marina.abas@ffa.int

PEW CHARITABLE TRUSTS

Dave Gershman
The Pew Charitable Trusts
Senior Officer, International Fisheries Conservation
dgershman@pewtrusts.org

WORLD WIDE FUND FOR NATURE (WWF)

Shuhei Uematsu
WWF Japan
Manager of Anti-IUU Fishery Project & Manager of Fisheries Resources Management, Oceans and Seafood Group
uematsu@wwf.or.jp

WCPFC SECRETARIAT

Rhea Moss-Christian
Western and Central Pacific Fisheries Commission (WCPFC)
Executive Director
rhea.moss-christian@wcpfc.int

Eidre Sharp
Western and Central Pacific Fisheries Commission (WCPFC)
Deputy Compliance Manager
Eidre.Sharp@wcpfc.int

Elaine G. Garvilles
Western and Central Pacific Fisheries Commission (WCPFC)
Assistant Science Manager
Elaine.Garvilles@wcpfc.int

Emma N. Mori
Western and Central Pacific Fisheries Commission (WCPFC)
Project Management Assistant
emma.mori@wcpfc.int

Hilary Ayrton
Western and Central Pacific Fisheries Commission (WCPFC)
Fisheries Management and Compliance Adviser
hilary.ayrton@wcpfc.int

Kerrie Robertson
Adira Consulting
Consultant to WCPFC
kerrie@adiraconsulting.com.au

Lara Manarangi-Trott
Western and Central Pacific Fisheries Commission (WCPFC)
Compliance Manager
Lara.Manarangi-Trott@wcpfc.int

Lucille Martinez
Western and Central Pacific Fisheries Commission (WCPFC)
Administrative Officer
lucille.martinez@wcpfc.int

Simson Nanpei
Western and Central Pacific Fisheries Commission (WCPFC)
IT Officer
simson.nanpei@wcpfc.int

SungKwon Soh
Western and Central Pacific Fisheries Commission (WCPFC)
Science Manager
sungkwon.soh@wcpfc.int

Tim Jones
Western and Central Pacific Fisheries Commission (WCPFC)
IT Manager
tim.jones@wcpfc.int

Attachment B

Commission for the Conservation and Management of
Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

NORTHERN COMMITTEE
TWENTY-FIRST REGULAR SESSION

Toyama, Japan (Hybrid)
14 – 15 July 2025

PROVISIONAL AGENDA

WCPFC-NC21-2025/02

AGENDA ITEM 1 OPENING OF THE MEETING

1.1 Opening of the meeting
1.2 Adoption of the agenda
1.3 Meeting arrangements
1.4 Report from the ISC and SC
1.4.1 Report from the ISC 1.4.2 Report from SC

AGENDA ITEM 2 CONSERVATION AND MANAGEMENT MEASURES FOR THE NORTHERN STOCKS

2.1 Pacific Bluefin Tuna (CMM 2024-01)
2.2 North Pacific albacore (CMM 2019-03)
2.2.1 Reports from CCMs and Observers
2.2.2 Application of Harvest Strategy for North Pacific Albacore Fishery
2.2.3 Review of the CMM for North Pacific Albacore (CMM 2019-03)
2.3 North Pacific swordfish (CMM 2023-03)
2.3.1 Reports from CCMs and Observers 2.3.2 Development of a management framework

AGENDA ITEM 3 CONSERVATION AND MANAGEMENT MEASURES FOR OTHER STOCKS

3.1 North Pacific striped marlin (CMM 2024-06)

AGENDA ITEM 4 CLIMATE CHANGE

AGENDA ITEM 5 REGIONAL OBSERVER PROGRAMME

AGENDA ITEM 6 DATA

AGENDA ITEM 7 COOPERATION WITH OTHER ORGANIZATIONS

7.1 ISC

7.2 IATTC

AGENDA ITEM 8 FUTURE WORK PROGRAMME

8.1 Work program for 2026-2028

AGENDA ITEM 9 ADMINISTRATIVE MATTERS

9.1 Election of officers
9.2 Administrative arrangements for the Committee
9.2.1 Secretariat functions and costs 9.2.2 Rules of Procedure
9.3 Next meeting
9.4 Other business

AGENDA ITEM 10 ADOPTION OF THE SUMMARY REPORT OF THE 20th REGULAR SESSION OF THE NORTHERN COMMITTEE

AGENDA ITEM 11 CLOSE OF THE MEETING

Attachment C

JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE MANAGEMENT OF PACIFIC BLUEFIN TUNA
TENTH SESSION (JWG-10)

Toyama, Japan (Hybrid)
9 – 12 July 2025

CHAIRS' SUMMARY OF THE 10TH JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE MANAGEMENT OF PACIFIC BLUEFIN TUNA

IATTC-NC-JWG10-2025/00

AGENDA ITEM 1 OPENING OF THE MEETING

1. The 10th Session of the Joint IATTC and WCPFC-NC Working Group Meeting on the Management of Pacific Bluefin Tuna (JWG-10) was held on 9 – 12 July 2025. The meeting was opened by co-chairs Mr. Josh Madeira (USA, IATTC) and Mr. Masanori Miyahara (Japan, Northern Committee Chair).

2. Japan welcomed JWG members, observers, and participants, expressing gratitude to attendees and special thanks to the co-chairs. Japan noted that this year features challenging measures including long-term management and universal Monitoring Control and Surveillance (MCS) measures, emphasizing that while these items are difficult and complicated, they are confident the JWG can make good progress.

3. A list of participants to the JWG-10 is included in **Annex A**.

AGENDA ITEM 2 ADOPTION OF AGENDA AND MEETING PROCEDURES

4. Co-Chair Madeira outlined the meeting procedures and presented the provisional agenda for adoption.

5. The provisional agenda was adopted (**Annex B**).

6. Mr. Samuel Coyle of Japan was appointed as rapporteur for the meeting.

AGENDA ITEM 3 REPORTS ON THE IMPLEMENTATION OF PACIFIC BLUEFIN TUNA MEASURES

7. The JWG reviewed WCPFC and IATTC members' implementation reports regarding CMM 2024-01, CMM 2024-02, Resolution C-24-02, and Resolution C-24-03. Co-Chair Miyahara explained that the discussion would be conducted in two rounds: first, a discussion on the implementation of CMMs by each party, and second, a review of the reports on MCS measures.

8. Japan asked Korea about current year fishing activities, specifically about a reported large purse seine catch of 7,000 fish in July that could potentially cause overshooting of catch limits. Korea responded

that there was a significant PBF catch in late June or early July, and they were still compiling the exact catch amount. Korea explained that their initial report showed purse seine catches did not exceed 600 metric tons and they have reserved catch limits of more than 300 metric tons for unexpected situations.

9. In response to questions from Japan, Korea subsequently provided additional information from their relevant division, noting that they do not have recreational fisheries specifically targeting PBF but that recreational fisheries catch small PBF from time to time due to high abundance in their waters. Korea reported that recreational fisheries caught 358 individual PBF (0.83 metric tons) in 2023 and 526 individual PBF (1.21 metric tons) in 2024, with catches consisting only of small fish due to gear configuration. Regarding set nets, Korea reported having 155 total set net licenses (82 in Gangwon Province and 73 in North Gyeongsang Province) that do not target PBF. Japan clarified that their 1,688 set net sites are authorized to catch PBF, with many targeting PBF while others do not, and noted that Korea's recreational catches should be counted against their catch limits as a mandatory requirement. Korea explained that they count recreational fishery catches against their 2024 catch limits; they will continue to count against future catch limits.

10. The USA asked Mexico about the number of pens holding PBF and whether Mexico also has pens for yellowfin tuna. While they do not have the exact number, Mexico responded that Mexican farming companies have limited capacity based on each company's concession, and there are no pens for yellowfin tuna. Japan asked Mexico about sports fishery data collection methods, noting that Mexico estimated sports fishery catch to be 4 metric tons in 2024, and whether fishermen are required to provide catch reports. Mexico responded that sports fishermen must fill out documents and there are port inspectors who check vessel arrivals and communicate with fishermen.

11. Japan asked Chinese Taipei about the management of recreational sports fishermen, noting that their catches should be counted under WCPFC measures. Chinese Taipei responded that they have laws requiring recreational fishermen to obtain tags before landing PBF, and without tags, they are not allowed to land.

12. In response to a question from Japan about how the USA manages the catch from their sport fisheries, the USA responded that its recreational fisheries are robustly managed in a manner consistent with its commercial fisheries through trip limits, bag limits, 100% logbook and near-real time reporting requirements. Although the management of this fishery did not change between 2023 and 2024, US recreational catches for PBF declined, and the number of fish caught to date in 2025 is also much lower than the same period in 2024. Japan noted concerns about the gap between commercial and recreational fishing trends, with commercial catches reducing by almost 40% while recreational catches increased sharply to a record high of almost 2,000 metric tons in 2023, and asked how the USA plans to manage sports fisheries under the new management procedure. Co-Chair Miyahara noted that this question was relevant to discussions to occur in Agenda Item 5.

13. Japan asked New Zealand about managing the sports fishery catch of PBF under WCPFC conservation measures. New Zealand responded that they manage PBF recreational harvest by a combined bag limit of 20 finfish per day, which differs from their southern bluefin tuna management approach. Chinese Taipei requested information about New Zealand's international trade partners, to which New Zealand replied that in 2024, they exported PBF primarily to Japan and smaller amounts to the USA, Australia, Canada, and Switzerland.

14. In response to a question from Japan about monitoring the number and average size of PBF

caged in farming pens, particularly when originally caught by purse seiners, Korea responded that they check the amount of caging and harvest of PBF based on paper documents. Korea noted that government officials and scientists visit the farms to monitor activities, although coverage is not 100%. Korea explained that farming activities for PBF are in their initial experimental stage, so going forward, they will consider making necessary enhancements to their existing MCS system.

15. Japan asked Mexico to provide MCS information in written form for both WCPFC and IATTC implementation reports. Regarding farming activities, Japan noted that Mexico's purse seiners have 100% observer coverage, but observers cannot identify the number of fish to be caged or the average size of PBF to be caged, which is why video cameras are necessary. Japan asked whether Mexico's operators use video cameras to confirm the actual size of fish. Mexico responded that they have stereoscopic cameras when transfer is done and that observers and inspectors have the possibility to get information about the amount of fish transferred.

16. In response to questions from Japan about violations by sports fishermen, the USA reported that they have never discovered any laundering of PBF and noted that while recreational fishermen are prohibited from selling PBF on the market, a minimal number of violations have been identified and are addressed. Japan noted that the USA sport fisheries caught almost 2,000 metric tons in 2023, which could have a big impact, and stated that monitoring and enforcement measures are important. Japan explained that in their case, they frequently identify violations during peak season that are subject to penalties, with around 10 cases identified in their recreational fisheries almost every year, and expressed surprise that USA sports fishermen caught 2,000 metric tons, but no violations were found.

17. Co-Chair Miyahara noted the need for a standardized MCS reporting format and tasked Japan with creating a unified format for MCS reporting based on current CMM and IATTC resolutions. Japan agreed to make efforts to create a format for reporting that would be used for next year's reporting. Co-Chair Miyahara asked Japan to create a draft skeleton of MCS measures for consideration at the JWG 11 meeting next year. Japan noted that creating a draft skeleton of MCS measures is a challenging task and requested assistance from other delegations during the intersessional period, stating that cooperation is necessary to complete this work. Japan created a draft reporting template and explained that it allows members to place their MCS activities according to existing obligations, and expressed hope that it would be helpful for unified reporting. The template in Annex C was considered but could not be agreed upon. This template will be sent to each commission for further consideration **(Annex C)**.

18. No further discussions were held on the reports submitted by other members.

AGENDA ITEM 4 SCIENTIFIC INFORMATION ON PACIFIC BLUEFIN TUNA

4.1 Catch limit scenario projections

19. Dr. Shuya Nakatsuka, the Chair of the ISC Pacific Bluefin Tuna Working Group (PBFWG), presented updated projection results using the 2024 benchmark stock assessment. The PBFWG reviewed the projection results, notably scenario 3 that reflects the current management measures (CMM 2024-01 and C-24-02) and scenario 4 that maximizes the use of the conversion factor of small-fish quota to large-fish quota. The PBFWG noted that the projection of new measures is only slightly more pessimistic compared to the scenario 15 presented in 2024, while the projection of maximum application of the conversion factor produced much more optimistic results.

20. The USA noted that in last year's negotiations, it was important that any quota increases would still allow for long-term increases to the biomass over time. They also noted the significant positive conservation benefits of transferring small fish to large fish, even after applying the conversion factor. The USA asked about the confidence intervals related to scenario 3, noting that it is possible that the stock could fall below the second rebuilding target over time, and inquired whether recruitment or other factors may influence this possible outcome.

21. The PBFWG explained that the dotted lines represented the fifth and 95th percentiles, and the main reason for the variance in projections is the assumption of recruitment variance, which creates the width of the area. The PBFWG noted a small dip around 2030 reflecting slightly lower recruitment, but it will be higher in the long term, with the width in the trajectory reflecting recruitment value assumptions.

22. Pew Charitable Trusts noted that Table 2 shows future projection scenarios and the probability of overfishing according to various reference points. They expressed concern that under the new CMM, there is a risk of overfishing depending on the level of the target and looked forward to more discussions on the long-term harvest strategy to prevent an overfishing situation in the future.

4.2 Research on migratory patterns

23. The PBFWG explained that they had not received any additional requests from the Northern Committee as referred to in last year's report, and there had not been a formal request to ISC on this matter. The PBFWG noted that stock structure and distribution are key information for understanding stock and fundamental for stock assessment, and are of great interest for many scientists, much broader than ISC itself. The PBFWG stated that there are many studies regarding migratory patterns, but they were not quite sure what was being requested, and if the JWG or the NC wants specific information on migratory patterns, they would need specific instructions.

24. The USA appreciated the information presented by ISC and noted that there are many studies describing migration patterns and documenting historical harvests. They stated they did not want to divert PBFWG too far from their existing schedule, specifically the peer review next year, and suggested a path forward might be to identify references that document migration patterns and list those references to satisfy the request. They suggested the JWG could recommend to the NC that this could be a path forward. The JWG recommended that the NC task the ISC to compile existing references that document migration patterns and present them to WCPFC22.

4.3 Review of conversion factors

25. The PBFWG presented analysis regarding conversion factors for swapping catch quotas between Pacific bluefin tuna fishery sectors while maintaining overall fishing intensity. The analysis calculated conversion factors among WCPO small to WCPO large and WCPO large to EPO, and can be used to convert between all fishery sectors.

26. The PBFWG noted that the results could vary if conditions such as selectivity of fleets or natural mortality are different from those assumed, and that transfers of TAC between the EPO and WCPO based on a prescribed fishery impact ratio would be more consistent with how the impact between EPO and WCPO was calculated for the Management Strategy Evaluation (MSE).

4.4 Reports from WCPFC-SC and IATTC-SAC

27. The JWG acknowledged that the 21st meeting of the WCPFC Scientific Committee (August 13–21, 2025, Tonga) would occur after JWG-10, hence no SC outcomes were available for this meeting.

28. The IATTC representative reported that the 16th SAC meeting took place in June. The SAC endorsed the recommendations from the IATTC scientific staff, who made four recommendations: (1) reference points should be adopted, taking into consideration those in SAC-14; (2) choose one of the harvest control rules and test using MSE, considering performance relative to possible reference points for PBF and other performance metrics; (3) recruitment should be monitored, and the harvest strategy should include provisions for exceptional circumstances; and (4) future work should focus on improving harvest control rules to ensure they are robust.

AGENDA ITEM 5 LONG-TERM HARVEST STRATEGY

5.1 Development of the long-term harvest strategy

29. Co-Chair Madeira acknowledged the significant progress made to date and thanked the ISC for their work to complete the MSE analysis and final report. He noted that the JWG had received the final MSE results just two weeks prior to the meeting and that all results had been posted for review.

30. Co-Chair Madeira emphasized that the current long-term harvest strategy for PBF was outdated and should be updated in both commissions as a matter of priority. He noted that the JWG was expected to recommend a comprehensive long-term harvest strategy in 2025 and that it was anticipated to be implemented in 2026. Further, he noted that the IATTC resolution C-24-03 was a two-year measure that would need to be negotiated in 2026.

31. Co-Chair Madeira outlined the key elements that must be included in the long-term harvest strategy agreement, as required by WCPFC CMM 2022-03 and relevant IATTC resolutions, including management objectives, acceptable levels of risk, reference points, monitoring strategy, harvest control rules, and the MSE framework itself for future testing of different harvest control rules.

5.2 Management Strategy Evaluation (MSE)

32. Dr. Desiree Tommasi, representing the PBFWG, provided a summary of the final results of the MSE. She explained that the MSE examined the performance of candidate management procedures for PBF relative to the set of objectives agreed upon by the JWG using a closed-loop computer simulation that accounted for uncertainty in observations, assessment models, and implementation.

33. Dr. Tommasi described the management procedures as model-based harvest strategies that estimate stock status from an estimation model, specify a harvest control rule (HCR) to be applied, and establish TAC by fleet segment: TAC Eastern Pacific Ocean (EPO), TAC WCPO small fish, and TAC WCPO large fish.

34. Dr. Tommasi explained that performance was evaluated based on four categories: safety, status,

stability, and yield. For safety performance, the objective was to maintain less than 20% probability of the stock falling below the limit reference point (LRP), with all HCRs showing less than 10% probability of breaching the IATTC's interim LRP. All HCRs except for HCRs 6 and 14 were also able to maintain a low probability (<20%) of breaching the second interim rebuilding target of 20%SSBF=0. For status performance, the objective was to maintain fishing mortality at or below the target level with at least 50% probability, with all HCRs achieving at least 50% probability of maintaining fishing mortality at or below their target levels.

35. Dr. Tommasi noted that stability performance aimed to limit changes in overall catch limits between management periods to no more than 25% unless the stock was below the LRP, while yield performance focused on maintaining an equitable balance in proportional fishery impact between the WCPO and EPO, maximizing yield over medium and long terms. She emphasized that HCRs with the highest probability of spawning stock biomass (SSB) being at or above the second rebuilding target had the lowest yield metrics and vice versa, demonstrating clear tradeoffs between safety and yield objectives.

36. Following the presentation, China sought clarification on the MSE projection timeframe, noting that the projection period seemed short compared to the PBF lifespan of 15-20 years, suggesting a 30–40-year timeframe might be more appropriate. Dr. Nakatsuka responded that the projection was based on the generation time of 8-9 years rather than maximum age, covering more than two generations.

5.3 Recommendations on the long-term harvest strategy

37. Co-Chair Madeira requested members to share their priorities regarding the MSE results and management objectives, emphasizing the need for discussion on tradeoffs between safety, status, stability, and yield objectives that had been previously agreed upon by the JWG.

38. The JWG reaffirmed that the four management objective categories—safety, status, stability, and yield—were all equally important and had been agreed upon through extensive discussions 2-3 years earlier. Members emphasized that economic factors and equitable fishery impacts were important considerations, with priority given to ensuring the PBF stock never becomes heavily depleted again and biomass is maintained above the second rebuilding target. Several members noted that attention should focus on the performance of HCRs rather than revisiting management objectives.

39. Japan expressed preference for HCR 5, noting that according to the MSE simulation, relationships between yield and performance were demonstrated. Japan noted that all HCRs except 6 and 14 showed a < 20% probability of SSB falling below 20%SSBF=0, indicating that safety criteria were met for most HCRs. Japan emphasized that some HCRs, like 1, 2, 3, 9, 10, and 11, showed the possibility of significant TAC reduction when the stock falls, indicating low stability in terms of fishery management and harvest.

40. The USA expressed support for HCRs 9 to 16, as these scenarios support the 70:30 West-East allocation, which is an important aspect for the USA, given that EPO historically had a much larger impact. The USA emphasized the importance for their stakeholders to gain a more equitable portion of the harvest and favored scenarios with defined targets and limit reference points, which eliminated HCRs 5, 6, 7, 13, 14, and 15 from consideration.

41. New Zealand noted that modifications to the 2024 benchmark may have resulted in optimism and emphasized that the sustainability of stock was paramount, not wanting to lose the recovery,

especially considering climate change. New Zealand stated their preference for two HCRs that most closely aligned with their domestic harvest strategy standards: HCRs 3 and 11. New Zealand noted that their harvest strategy standard specifies a default soft limit which is analogous to the WCPFC LRP of 20%SSBF=0.

42. Korea explained that they have not established a definitive position on the selection of HCRs, noting they did not want to rush to make important decisions without adequate time to digest the information that had been made available only two to three weeks prior. Korea noted that, regarding concerns about the absence of LRP in some HCR scenarios, the important point was to keep the stock safe regardless of terminology, emphasizing attention to the yield and safety relationship.

43. Chinese Taipei supported Japan's position, agreeing that all HCRs except 6 and 14 could ensure the stock would remain at a safe level. Chinese Taipei expressed support for HCR 5, because it is easier to communicate with the stakeholders since part of its concept has already been implemented and it has proven effective in achieving the rebuilding targets.

44. In relation to HCR 5, Korea reiterated its previous statement made during the intersessional JWG meeting that was held in Monterey that reverting back to the level of CMM 2021-02 in the event of the SSB falling below the LRP of 20%SSBF0 would not necessarily mean that the catch limit allocation to each country would be the same as what is in that CMM.

45. Japan further stated that HCR 5 was the most suitable option it could accept among the 16 options. Japan noted that its stakeholders have endured significant sacrifices in implementing strict CMMs, including a 50% decrease in small fish catch limits. Japan stressed that more ambitious HCRs would not be workable for their stakeholders, particularly given the extensive fisheries operations in their exclusive economic zone, territorial waters, and internal waters.

46. Japan also stated that it does not agree to drop HCRs 6 and 14, since they provide sufficient safety with the probability of stock falling below 20%SSBF=0 at around 23%, which maintains the stock above the IATTC LRP of 7.7%SSBF=0 with very high probability.

47. The USA expressed disagreement with Japan's position, emphasizing that the JWG should not jeopardize the hard-won rebuilding success by accepting any HCR that could allow the stock to fall below 20%SSBF=0. The USA argued that establishing a 20%SSBF=0 LRP would be the minimum acceptable threshold, noting that if the stock fell below this level, fishing effort should be reduced to minimal levels. The USA also clarified that it would prefer an F-target of 40% to prioritize safety.

48. Following bilateral discussions, Japan reported that while some progress had been made, significant gaps in opinions remained between the delegations. The USA reiterated its position that establishing a 20%SSBF=0 LRP would be essential for preventing backward movement.

49. The JWG noted general views to continue discussions on an appropriate range of F-targets, with a preliminary focus on consideration of a 25% to 30% range for future HCR selection, noting the need to consider together with other elements of HCR as a package.

50. Japan questioned the implication of changing the management cycle to two years from three years in the long-term harvest strategy. ISC replied that the shorter management cycle leads to responsive management, in general, including earlier response to recruitment drops. ISC further explained that the safety performance might be similar even when deploying a two-year management cycle.

51. The JWG requested that the ISC develop guidance and criteria for defining exceptional circumstances, particularly with respect to risks related to low recruitment, and provide them to the JWG.

52. The JWG noted that exceptional circumstances procedures would be important regardless of the selected HCR, particularly for addressing potential recruitment drops.

53. The JWG acknowledged that while agreement on specific HCRs had not been reached, there was unanimous appreciation to the ISC for the excellent work on the MSE, noting that the quality of the scientific work remained outstanding regardless of the difficulty in reaching consensus on HCR selection.

54. The JWG re-emphasized its commitment to agree to a long-term harvest strategy based on the MSE and the intention to keep the stock above the second rebuilding target. The members committed to holding intersessional discussions to advance the long-term harvest strategy, as outlined in the workplan.

55. The JWG recognized the success of the rebuilding efforts and the significant impacts these had on stakeholders, acknowledging the considerable efforts made by all parties. The JWG expressed a strong commitment that no one wanted to see the stock fall back below the 20% rebuilding target. The JWG also noted broad agreement on the importance of protecting Age-0 fish as a key element of future management measures.

AGENDA ITEM 6 REVIEW OF CONSERVATION AND MANAGEMENT MEASURES FOR PACIFIC BLUEFIN TUNA

56. No discussions were held on this agenda item.

AGENDA ITEM 7 CATCH DOCUMENTATION SCHEME

57. Mr. Shingo Ota (Japan), Chair of the 6th Joint Working Group on Catch Documentation Scheme Technical Meeting (JWG-CDS-06), presented the key outcomes of the technical meeting held on 9 July 2025.

58. Mexico expressed appreciation for the Chair's Summary Report and noted that it contained fishing methods that are not used across regions. Mexico observed that while the resolutions would have essentially the same content in both commissions, there would be some differences based on what is permitted or does not exist in the respective commissions. Mexico requested that this distinction be reflected in the report.

59. In response, Mr. Ota acknowledged Mexico's comment and confirmed that he would consult with the rapporteur to include additional text in the summary to address this point before submitting the revised document to the Secretariat.

60. Co-Chair Miyahara asked if there were any other comments on the Chair's Summary Report. With the single amendment proposed by Mexico, the JWG adopted the report.

AGENDA ITEM 8 NEXT JWG MEETING

61. The JWG affirmed the commitment to complete work related to the long-term harvest strategy, catch documentation scheme, and amendments to MCS in 2026. To achieve these goals, the JWG propose the following work plan:

2025:

- JWG Members work to support progress on the long-term harvest strategy through bilateral and multilateral meetings conducted on the margins of the IATTC and WCPFC meetings. JWG Members will communicate their preferences to the JWG Co-Chairs by December 2025 so that they can make arrangements for virtual or in-person intersessional meeting(s) as needed.
- ISC begins work to develop guidance and criteria for defining exceptional circumstances, particularly with respect to risks related to low recruitment, to be provided to JWG-11.

2026:

- The JWG will hold intersessional meetings as needed to finalize the long-term harvest strategy at JWG-11.
- JWG recommends a long-term harvest strategy, including additional management measures triggered by exceptional circumstances, which will be implemented in 2027.
- JWG recommends a CDS CMM/resolution.
- JWG recommends amendments to the existing MCS CMM/resolution after reviewing reports on the implementation of PBF measures.

62. The JWG considered the tentative date and location for the JWG-11 meeting in 2026. After the discussion, the JWG agreed that the next meeting would be scheduled for July 8 - 11 in Japan, subject to final confirmation of arrangements.

63. The JWG noted that the 7th Joint Working Group on Catch Documentation Scheme Technical Meeting (JWG-CDS07) would be held in conjunction with JWG11, with the duration to be determined based on progress made in intersessional work.

AGENDA ITEM 9 OTHER BUSINESS

64. Korea expressed appreciation for the collective efforts of all JWG members and noted that the 2024 scientific assessments demonstrate that PBF stock is in rapid recovery, meeting rebuilding targets ahead of schedule. Korea emphasized that this success has created new realities for coastal states, including unprecedented increases in PBF abundance in Korean waters, likely due to climate change altering migratory patterns and distribution. While coastal states of the WCPFC hold the rights to manage highly migratory species in their territorial and archipelagic waters, Korea noted that they have voluntarily participated in the international management framework with limited catch limits based on historical records, these rigid historical quotas are creating severe socio-economic strain on coastal fishing communities who face economic hardship while seeing abundant resources in their traditional fishing grounds. Korea stated that the remarkable recovery must translate into adaptive and equitable management, emphasizing that the long-term management framework should fully consider the current state of the resource and the legitimate rights and needs of coastal states experiencing dramatic changes

in stock distribution, and reaffirmed their commitment to sustainable PBF management while identifying ensuring the livelihoods of fishing communities as a top priority **(Annex E)**.

AGENDA ITEM 10 ADOPTION OF REPORT

65. The IATTC-NC JWG10 adopted the report.

AGENDA ITEM 11 CLOSE OF MEETING

66. The meeting was brought to a close at 11:12 AM on 12 July 2025.

ANNEXES

Annex A – List of participants

Annex B – Agenda

Annex C – Draft Reporting Template of CMM 2024-02 / Resolution C-24-03

Annex D – Chair's Summary of 6th CDS Technical Meeting

Annex E – Korea's statement

Annex A

JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE MANAGEMENT OF PACIFIC BLUEFIN TUNA
TENTH SESSION (JWG-10)

Toyama, Japan (Hybrid)
9 – 12 July 2025

LIST OF PARTICIPANTS

CO-CHAIR

Josh Madeira
Monterey Bay Aquarium
Director of Policy & Stakeholder Engagement
jmadeira@mbayaq.org

CO-CHAIR

Masanori Miyahara
Fisheries Agency of Japan
Advisor to the Minister of Agriculture, Forestry and Fisheries
masamiyafaj1@gmail.com

CDS Technical Meeting CHAIR

Shingo Ota
Fisheries Agency of Japan
Special Adviser to the Minister of Agriculture, Forestry and Fisheries
shingo_ota810@maff.go.jp

CANADA

Kristen Cote
Fisheries and Oceans Canada
Senior Policy Advisor
kristen.cote@dfo-mpo.gc.ca

Sarah Hawkshaw
Fisheries and Oceans Canada
Biologist
sarah.hawkshaw@dfo-mpo.gc.ca

CHINA

Fanshuqi
Shanghai Ocean University
assistant scientist
1582187049@qq.com

Li Yan
China Overseas Fisheries Association
Deputy Director of Highseas Fisheries
liyan@cofa.net.cn

Zhe Geng
Shanghai Ocean University
Stock Assessment Scientist
zgeng@shou.edu.cn

FIJI

Epi Batibasaga
Head of Delegation
Ministry of Fisheries
Fisheries Officer
batibasaga@gmail.com

Moses Mataika
Ministry of Fisheries
Fisheries Officer - Data
mataika.moses@gmail.com

JAPAN

Takumi Fukuda
Fisheries Agency of Japan
Resource Management Department
takumi_fukuda720@maff.go.jp

Akari Oonami
Fisheries Agency of Japan
staff
akari_onami830@maff.go.jp

Anna Inomata
Fisheries Agency of Japan
Staff
anna_inomata570@maff.go.jp

Hidetoshi Ito
Taiyo A & F Co., Ltd.
Director
hid-itou@maruha-nichiro.co.jp

Hirofumi Niiyama
Hokkaido Bluefin Tuna Association
vice chairman
bluefin@bf.hokkaidooffice.jp

Hirohide Matsushima
Fisheries Agency of Japan
International Affairs Division

Hiromu Fukuda
Fisheries Research and Education Agency of Japan, Fisheries Resources Institute
Head, Bluefin Tunas Group, Highly Migratory Resources Division
fukuda_hiromu57@fra.go.jp

Katsuya Sato
Fisheries Agency of Japan
staff
katsuya_sato770@maff.go.jp

Kazushige Hazama
National Offshore Tuna Fisheries Association of Japan
Manager
hazama@kinkatsukyo.or.jp

Keiko Imoto
"Sanin purse seine Fisheries cooperative association"
Associate Director
imoto@sanmaki.jp

Kengo Tanaka
All Japan Purse Seine Fisheries Association
Managing Director
zenmaki05@atlas.plala.or.jp

Kenichi Sakuragi
Fisheries Department
Director
kenichi_sakuragi@kyokuyo.co.jp

Kenji Aoki
Nitto Suisan
Managing Director
kenji.aoki@nittosuisan.com

Kirara Nishikawa
Fisheries Resources Institute, FRA
Scientist, Bluefin Tunas Group, Highly Migratory Resource Division
nishikawa_kirara68@fra.go.jp

Mako iioka
Fisheries Agency of Japan
Fisheries Agency of Japan
mako_iioka540@maff.go.jp

Meiko Kawahara
Taiyo A & F Co., Ltd.
Deputy General Manager
m-kawahara@maruha-nichiro.co.jp

Nobushige Shimizu
Fisheries Agency of Japan
Staff
nobushige_shimizu640@maff.go.jp

Norio Takahashi
Highly migratory resources division, Japan Fisheries Resources Institute
Senior Scientist
takahashi_norio91@fra.go.jp

Ryusuke Sakamoto
Ishikawa Prefecture Fisheries Division
Chief Engineer
ryu-saka@pref.ishikawa.lg.jp

Sakura Ito
Fisheries Agency of Japan
Staff
sakura_ito700@maff.go.jp

Samuel Coyle
Fisheries Agency of Japan
Staff
coyle@urbanconnections.jp

Satoshi Miyazaki
Agricultural and Marine Products Office, Trade Control Department, Ministry of Economy, Trade and Industry
Assistant Director
miyazaki-satoshi@meti.go.jp

Shuya Nakatsuka
Fisheries Resources Institute
Deputy Director, Highly Migratory Resources Division
nakatsuka_shuya49@fra.go.jp

Susumu Oikawa
Taiyo A & F Co., Ltd.
Managing Director
s-oikawa@maruha-nichiro.co.jp

Takashi Kouyama
Taiyo A＆F Co., Ltd.
Deputy General Manager
t-kouyama@maruha-nichiro.co.jp

Tetsuya Kunito
Federation of North Pacific District Purse Seine Fisheries Cooperative Associations of Japan
Section Manager
tetsuya_kunito920@kitamaki.jp

Yoshihiro Notomi
National Offshore Tuna Fisheries Association of Japan
Managing Director
notomi@kinkatsukyo.or.jp

Yuji Uozumi
Japan Tuna Fisheries Co-operative Association
Adviser

REPUBLIC OF KOREA

Ilkang Na
Ministry of Oceans and Fisheries
Multilateral Fisheries Negotiator
ikna@korea.kr

Heewon Park
National Institute of Fisheries Science(NIFS)
Republic of Korea

Hong Seo Jin
National Fishery Products Quality Management Service
English editor

Jae-geol Yang
Korea Overseas Fisheries Cooperation Center
Policy Analyst
jg718@kofci.org

Jung-re Riley Kim
Ministry of Oceans and Fisheries
Head of Fisheries Negotiation Unit
riley1126@korea.kr

Min-kyung Kim
National Fishery Products Quality Management Service (NFQS)
Assistant director
kyung91206@korea.kr

PHILIPPINES

Isidro Tanangonan
Bureau of Fisheries and Aquatic Resources
Aquaculturist II
itanangonan@bfar.da.gov.ph

Joeren Yleana
Bureau of Fisheries and Aquatic Resources
Supervising Aquaculturist

joerenyleana@yahoo.com

CHINESE TAIPEI

Shao-Wei Lu
Head of Delegation
shaowei0220@ms1.fa.gov.tw
Associate Technical Specialist,
Fisheries Agency, Ministry of Agriculture

Shui-Kai Chang
Graduate Institute of Marine Affairs,
National Sun Yat-sen University
Professor
skchang@faculty.nsysu.edu.tw

Joseph Chia-Chi Fu
joseph@ofdc.org.tw
CEO,
Overseas Fisheries Development Council

Tzu-Ching Yu
evan@ofdc.org.tw
Project Manager,
Overseas Fisheries Development Council

UNITED STATES OF AMERICA

Christa Marie Svensson
PFMC
Commissioner
cmsvensson@gmail.com

Alex Kahl
NOAA Fisheries - Pacific Islands Regional Office
International Fisheries
alex.kahl@noaa.gov

Andrew Lawler
NOAA
Principal Deputy Assistant Secretary for
International Fisheries
andrew.lawler@noaa.gov

Dave Rudie
PFMC
Chair HMSAS
rudie.dave@gmail.com

Desiree Tommasi
Fisheries Collaborative Program, University of California Santa Cruz
Project Scientist
detommas@ucsc.edu

Dorothy Lowman
Lowman and Associates
Owner/ Consultant
dmlowman01@comcast.net

Emily Reynolds
NOAA Fisheries, Pacific Islands Regional Office
Fishery Policy Analyst
emily.reynolds@noaa.gov

Huihua Lee
Southwest Fisheries Science Center, NMFS
Research Mathematical Statistician
huihua.lee@noaa.gov

Jason Philibotte
NOAA Fisheries
International Fisheries, Division Chief
jason.philibotte@noaa.gov

Joshlyn Cardoza
AAFA
Assistant director of operations
admin@americanalbacore.com

Kerry Griffin
Pacific Fishery Management Council
Staff Officer - Highly Migratory Species
kerry.griffin@pcouncil.org

Kosha Arabi
MAGUROHANTA,LLC
Manager
info@magurohanta.com

Larry Phillips

American Sportfishing Association
Pacific Fisheries Policy Director
lphillips@asafishing.org

Lucy Bulkeley
NOAA WCR HMS
IATTC Policy Support
lucille.bulkeley@noaa.gov

Mike Conroy
West Coast Fisheries Consultants
President
Mike@wecofm.com

Mike Thompson
US COMMISSIONER / IATTC
REC fisheries rep
thompsonmike148@gmail.com

Rachael Wadsworth
NOAA Fisheries
Fishery Policy Analyst
rachael.wadsworth@noaa.gov

Rachel Ryan
U.S. Department of State
Foreign Affairs Officer
RyanRL@state.gov

Roger Dang
Fresh Island Fish Co.
General Manager

Ryan Wulff
NOAA
ARA for Sustainable Fisheries
ryan.wulff@noaa.gov

Sarah Malloy
NOAA Fisheries
Regional Administrator, Pacific Islands Regional Office
sarah.malloy@noaa.gov

Steven Teo
NOAA Fisheries
Research Fisheries Biologist
steve.teo@noaa.gov

Stuart Chikami
Western Pacific Fisheries, Inc.
Manager

Theresa Labriola
Wild Oceans
Pacific Program Director
tlabriola@wildoceans.org

Valerie Post
NOAA Fisheries
Fishery Policy Analyst
valerie.post@noaa.gov

VANUATU

Lucy Joy
Vanuatu Fisheries Department
Principal Data Officer
ljoy@fisheries.gov.vu

Rocky Kaku
Vanuatu Fisheries Department
Research officer
rky.kaku@gmail.com

MEXICO

Martha Betancourt Aguirre
FIDEMAR
Member of delegation
martha.betancourt@uabc.edu.mx

Michel Dreyfus Leon
FIDEMAR
In charge of research
mchldryfs@gmail.com

NEW ZEALAND

Robert Gear
Ministry for Primary Industries
Manager, Highly Migratory Species and Pacific Fisheries Team

robert.gear@mpi.govt.nz

INTER-AMERICAN TROPICAL TUNA COMMISSION (IATTC)

Brad Wiley
IATTC
Policy Officer
bwiley@iattc.org

Mark Maunder
IATTC
Head of stock assessment program
mmaunder@iattc.org

NORTH PACIFIC MARINES SCIENCE ORGANIZATION (PICES)

Kathryn Berry
BECI Science Director
Kathryn.berry@pices.int

PACIFIC ISLAND FORUM FISHERIES AGENCY SECRETARIAT

Marina Abas
Pacific Islands Forum Fisheries Agency (FFA)
Fisheries Management Advisor
marina.abas@ffa.int

Joyce Samuelu Ah-leong
Pacific Islands Forum Fisheries Agency (FFA)
Fisheries Management Adviser
joyce.samuelu-ahleong@ffa.int

MARINE STEWARDSHIP COUNCIL

Bill Holden
Marine Stewardship Council
Senior Tuna Fisheries Outreach Manager
bill.holden@msc.org

MONTEREY BAY AQUARIUM

Andre Boustany
Monterey Bay Aquarium
Director of Science
aboustany@mbayaq.org

OCEAN GOVERNANCE INSTITUTE (OGI)

Hiroshi Ohta
The Ocean Governance Institute (OGI)
Director-General
hohta21@gmail.com

Isao Sakaguchi
Gakushuin University
Professor
isao.sakaguchi@gakushuin.ac.jp

Yasuhiro Sanada
Ocean Governance Institute
Chief Research Officer

THE OCEAN FOUNDATION

Emil Aalto
Stanford University
Research Scientist
aalto@stanford.edu

THE PEW CHARITABLE TRUSTS (PEW)

Dave Gershman
Senior Officer, RFMO Policy-International Fisheries
dgershman@pewtrusts.org

WORLD WIDE FUND FOR NATURE (WWF)

Shuhei Uematsu
Manager of Fisheries Resource Management
uematsu@wwf.or.jp

WCPFC SECRETARIAT

Rhea Moss-Christian
Western and Central Pacific Fisheries Commission (WCPFC)
Executive Director
rhea.moss-christian@wcpfc.int

Eidre Sharp

Western and Central Pacific Fisheries
Commission (WCPFC)
Deputy Compliance Manager
Eidre.Sharp@wcpfc.int

Elaine G. Garvilles
Western and Central Pacific Fisheries
Commission (WCPFC)
Assistant Science Manager
Elaine.Garvilles@wcpfc.int

Emma N. Mori
Western and Central Pacific Fisheries
Commission (WCPFC)
Project Management Assistant
emma.mori@wcpfc.int

Hilary Ayrton
Western and Central Pacific Fisheries
Commission (WCPFC)
Fisheries Management and Compliance Adviser
hilary.ayrton@wcpfc.int

Lara Manarangi-Trott
Western and Central Pacific Fisheries
Commission (WCPFC)
Compliance Manager
Lara.Manarangi-Trott@wcpfc.int

Lucille Martinez
Western and Central Pacific Fisheries
Commission (WCPFC)
Administrative Officer
lucille.martinez@wcpfc.int

Nicole Solomon
Western and Central Pacific Fisheries
Commission (WCPFC)
Secretary/Receptionist
nicole.solomon@wcpfc.int

Simson Nanpei
Western and Central Pacific Fisheries
Commission (WCPFC)
IT Officer
simson.nanpei@wcpfc.int

SungKwon Soh
Western and Central Pacific Fisheries
Commission (WCPFC)
Science Manager
sungkwon.soh@wcpfc.int

Tim Jones
Western and Central Pacific Fisheries
Commission (WCPFC)
IT Manager
tim.jones@wcpfc.int

Annex B

JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE MANAGEMENT OF PACIFIC BLUEFIN TUNA
TENTH SESSION (JWG-10)

Toyama, Japan (Hybrid)
9 – 12 July 2025

AGENDA

1. OPENING OF THE MEETING

2. ADOPTION OF AGENDA AND MEETING PROCEDURES

Any additional issues raised here will be covered under the agenda OTHER BUSINESS.

3. REPORTS ON THE IMPLEMENTATION OF PACIFIC BLUEFIN TUNA MEASURES

Each CCM or CPC involved in Pacific bluefin tuna fisheries and/or farming shall submit a report to the Executive Director on implementing relevant measures by 15 June each year.

JWG10 will review implementation reports from WCPFC and IATTC Members regarding CMM 2024-01, CMM 2024-02, RESOLUTION C-24-02, and RESOLUTION C-24-03. CCMs and CPCs are reminded that new measures related to Monitoring Control and Surveillance (MCS) are now in force per WCPFC CMM 2024-02 and IATTC Resolution C-24-03. These new reporting obligations will be reviewed by JWG-10 and subsequently reviewed by the appropriate committees at WCPFC and IATTC.

4. SCIENTIFIC INFORMATION ON PACIFIC BLUEFIN TUNA

4.1 Catch limit scenario projections

The ISC Pacific Bluefin Tuna Working Group (PBFWG) will provide JWG10 with updates on projection results based on CMM 2024-01 and Resolution C-24-02 using the 2024 benchmark stock assessment, as requested by JWG-09.

4.2 Research on migratory patterns

The PBFWG will provide an update on research on Pacific bluefin tuna migratory patterns, as requested by WCPFC21.

4.3 Review of conversion factors

The PBFWG will provide analysis regarding conversion factors to inform discussions on long-term harvest strategy and review of conservation and management measures.

4.4 Reports from WCPFC-SC and IATTC-SAC

The 21st meeting of the WCPFC Scientific Committee (August 13–21, 2025, Tonga) will occur after JWG10; hence, no SC outcome will be available.

IATTC will present key outcomes from the 16th Meeting of the Scientific Advisory Committee (May 26 – June 6, 2025, San Diego).

5. LONG-TERM HARVEST STRATEGY

5.1 Development of the long-term harvest strategy

The Co-Chairs will provide a summary of the development of the long-term harvest strategy to date and expectations for 2025.

5.2 Management Strategy Evaluation (MSE)

The PBFWG will provide the results of the MSE and any relevant guidance provided by ISC in June 2025.

5.3 Recommendations on the long-term harvest strategy

JWG-10 will discuss harvest strategy elements, including reference points and management procedures, and make recommendations for consideration by NC21 and IATTC.

5.4 Review the workplan

JWG-10 will review the workplan for the long-term harvest strategy and recommend next steps to consider and incorporate new information.

6. REVIEW OF CONSERVATION AND MANAGEMENT MEASURES FOR PACIFIC BLUEFIN TUNA

JWG10 will review relevant CMMs and Resolutions and propose any revisions, including any amendments to align with the long-term harvest strategy, as needed and appropriate.

7. CATCH DOCUMENTATION SCHEME

The Chair of the CDS Technical Meeting will present key outcomes. JWG10 will review progress on:

- Development of the electronic Pacific Bluefin Catch Documentation System (ePBCD),
- Drafting a CMM/Resolution to establish a PBF Catch Documentation Scheme.

8. NEXT JWG MEETING

The JWG10 will consider the tentative date and location of the JWG11 meeting in 2026, including the duration of the CDS Technical Meeting.

9. OTHER BUSINESS

Issues raised under Agenda Item 2 will be discussed here.

10. ADOPTION OF REPORT

11. CLOSE OF MEETING

Annex C

JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE MANAGEMENT OF PACIFIC BLUEFIN TUNA
TENTH SESSION (JWG-10)

Toyama, Japan (Hybrid)
9 – 12 July 2025

Draft Reporting Template of Conservation and Management Measure 2024-02 for the Monitoring, Controlling, and Surveillance of Pacific Bluefin Tuna / Resolution C-24-03 on Monitoring and Control Measures for the Bluefin Tuna Fishery in the EPO

Related provisions of CMM 2024-02/Resolution C-24-03

2. *Each CCM/CPC that has Pacific bluefin tuna fisheries and/or farming shall report to the Executive Director/Director by 15 June each year on the implementation of its monitoring and control measures it has taken in the previous calendar year to ensure its compliance with CMM2024-01/Resolution C-24-02 that include the following components:*
3. *CCMs/CPCs that do not have Pacific bluefin tuna fisheries and/or farming, shall report to the WCPF/IATTC Secretariat annually any by-catches of Pacific bluefin tuna under paragraph 9 of CMM 2024-01/footnote 1 of Resolution C-24-02.*

2(1) Monitoring and control measures for fisheries

a. Registration of commercial fishing vessels that are authorized to fish for Pacific bluefin tuna (including the WCPFC RFV in accordance with CMM 2018-06 on WCPFC Record of Fishing Vessels and Authorization to Fish) / a) Registration of commercial fishing vessels in the IATTC Regional Vessel Register in accordance with Resolution C-24-07 on the Regional Vessel Register	
b. Registration of set nets that are authorized to fish for Pacific bluefin tuna (including registration scheme, number of registered set nets) / b) Registration of set nets that are authorized to fish for Pacific bluefin tuna (including registration scheme, number of registered set nets)	

c. Allocation of catch limits by fishery within the CCMs, where such allocation exist / c) Allocation of catch limits by fishery within the CPCs, where such allocation exist	
d. Reporting requirements for catches for fisheries (targeted, incidental, and discards) / d) Reporting requirements for catches for fisheries (targeted, incidental, and discards), including Resolution C-03-05 on data provision	
e. Measures to monitor catch (e.g. landing receipts, landing inspection, observer program, etc.) / e) Measures to monitor catch (e.g. landing receipts, landing inspection, observer program, etc.)	
f. Measures to monitor landings (including CMM 2017-02 on Minimum Standards for Port State Measures) / f) Measures to monitor landings, including Resolution C-21-07 on port state measures	
g. Measures to monitor domestic transactions / g) Measures to monitor domestic transactions	

(2) Monitoring and control measures for farming

a. Registration of farms that are authorized to farm Pacific bluefin tuna (including registration scheme, number of registered farms, number of registered 'holding pens' or 'cages')	
b. Reporting requirements for caging of fish	
c. Reporting requirements for harvest of farmed fish	
d. Measures to monitor farming activities (including Rules, standards, and procedures to monitor transfer and caging activities)	

Annex D

JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE MANAGEMENT OF PACIFIC BLUEFIN TUNA
TENTH SESSION (JWG-10)

Toyama, Japan (Hybrid)
9 – 12 July 2025

CHAIR'S SUMMARY OF THE 6TH CATCH DOCUMENTATION SCHEME (CDS06) TECHNICAL MEETING

IATTC-NC-CDS06-2025/00

1. OPENING OF MEETING

1.1 Welcome

1. Mr. Shingo Ota, Chair of the CDS Working Group, opened the meeting and welcomed the participants.

1.2 Appointment of rapporteur

2. Mr. Samuel Coyle of Japan was appointed the rapporteur for the meeting.

1.3 Adoption of the agenda

3. The provisional agenda was adopted without any change (**Appendix 1**).

1.4 Meeting arrangements

4. Japan explained the meeting arrangements.

2. DEVELOPMENT OF A CATCH DOCUMENTATION SCHEME FOR PACIFIC BLUEFIN TUNA

2.1 Recap of the 5th CDS Technical Meeting and intersessional activities

5. The Chair noted that the participants at the 5th CDS Technical Meeting had revisited and reaffirmed the conclusions drawn at the 4th CDS Technical Meeting, except for the demarcation of responsibility between the IATTC and WCPFC Secretariats in operational work for system development and maintenance.

6. The Chair recalled that the 5th CDS Technical Meeting had identified two differing views about system development: one system for both organizations versus a separate but harmonized system for each organization, with participants agreeing to continue discussing both approaches.

7. The Chair summarized the key agreements from the 5th CDS Technical Meeting on draft CMM elements, including: initially covering international transactions; excluding heads, eyes, roes, guts and tails from scope; mandating registration of fishing vessels targeting PBF and farms; including information on vessel, catch, trade, caging, harvesting and transshipment; keeping tagging optional with exemption of tagged fish from validation; requiring validation by government authorities or delegated organizations; establishing a reconciliation process for automatic data validity checking; and agreeing to further discuss treatment of vessels not targeting PBF, data confidentiality arrangements, communication protocols, and exceptional arrangements.

8. The Chair noted that the Small Working Group had been tasked to produce an amended draft CMM based on the 5th CDS Technical Meeting discussions and present it at the current meeting.

9. The Chair noted that the draft letter of agreement between the IATTC/WCPFC and the SPC was successfully endorsed by the JWG and signed on May 9, 2025.

2.2 Framework and governance of ePBCD

10. The participants continued to discuss options for budgetary and administrative consideration, including system architecture and the roles and responsibilities of the IATTC and WCPFC Secretariats.

11. The participants revisited the two differing views about system development: one system for both organizations and a separate but harmonized system for each organization.

12. The participants generally agreed to support one system for both organizations, with general preference expressed for a single system as being more cost-effective than developing two separate systems.

13. The participants agreed to make a final decision on this point after evaluating the technical and financial implications of supporting one system, taking into account the ongoing informal discussions with Shore Informatics regarding the feasibility of developing an ePBCD based on the CCSBT's e-CDS system.

14. The participants agreed that given the difference in conservation and management measures for PBF between the IATTC and WCPFC, certain flexibility should be considered when formulating actual resolutions or CMMs for the CDS in each commission.

2.3 Review of the revised draft CMM

15. Japan presented the working draft CMM Resolution, emphasizing that it was prepared by the Small Working Group as a basis for discussion and had not received formal authorization from the Small Working Group.

16. The presentation covered the background, noting that the 5th CDS Technical Meeting in 2024 tasked the Small Working Group to produce an amended draft CMM, and that both the 102nd IATTC meeting and 21st WCPFC Regular Session agreed to consider the establishment of a CDS for Pacific bluefin tuna fisheries by December 31, 2026.

17. Japan outlined what has been agreed upon from previous meetings, including: (1) exclusion of

seafood traceability and specific monitoring, controlling and surveillance measures (3rd CDS Technical Meeting, 2022); (2) stepwise approach initially covering international transactions; (3) exclusion of heads, eyes, roes, guts and tails from scope; (4) mandatory registration of fishing vessels targeting PBF and farms; (5) optional rather than mandatory tagging with exemption of tagged fish from validation; (6) validation by government authorities or delegated organizations; (7) verification system following other RFMOs practices; and (8) automatic reconciliation process for data validity checking.

18. The presentation detailed the draft CMM structure across eight parts: (I) General Provisions and Application, covering objective, scope, and definitions; (II) Documents and Information Required, specifying information for ePBCD and ePBRC; (III) Validation, establishing recording and validation procedures; (IV) Tag, providing optional tagging provisions; (V) Verification for PBF trade, covering examination and verification procedures; (VI) Communication, addressing notification requirements; (VII) Data Sharing and Confidentiality, establishing data handling protocols; and (VIII) Exceptional Arrangements, providing for paper documentation under specific circumstances.

19. Key provisions presented included: prohibition of export, import or re-export without completed and validated ePBCD or ePBRC; pilot testing phase for at least X years on voluntary basis before mandatory implementation; automatic reconciliation function to detect data inconsistencies; validation requirements by authorized government officials or delegated organizations; and exceptional arrangements allowing paper documentation under specific circumstances such as small catches less than 1 metric ton, system malfunctions, or technical difficulties.

20. Following the presentation, the participants provided suggestions to revise the draft resolution. The participants made revisions to multiple sections, including paragraphs 1, 3, 4, 5, 6, 7, 8, 9, 13, and 14, to improve readability and clarify terms and phrases. The participants also made changes to paragraphs 15, 17, 19, 22, 26, 27, and 28, and added a new paragraph 29 as a placeholder for a text to be proposed by Korea. The participants postponed their suggestions regarding specific time frames for paragraphs 8 and 26. The outcomes of the discussion are reflected in **Appendix 2**.

21. The participants discussed concerns about Annex F regarding artificial fry, particularly the potential for mixing artificial fry with wild fry and the need for proper identification systems to prevent loopholes and regulatory avoidance.

22. The participants discussed the question of whether the ePBCD system should use one form for export and re-export and another for the other activities, such as catch and caging, or combine landing and export information in one form and a separate form for re-export, as in the case of ICCAT, with the WCPFC Secretariat noting feedback from CCSBT suggesting they would have preferred the former one if designing from scratch due to software complications.

23. The participants agreed that Japan will contact the CCSBT Secretariat to better understand the difficulties they faced with having the ICCAT system and share this information with the Small Working Group.

3. NEXT MEETING

24. The participants agreed to convene the 7th CDS Technical Meeting in conjunction with the 11th

JWG meeting.

25. The participants agreed to give the Small Working Group discretion to propose additional virtual technical working group meetings before the 7th Meeting, depending on the progress made by the Small Working Group.

26. The participants agreed that the duration of the next technical meeting will be decided intersessionally, depending on the progress made by the Small Working Group and any additional working group meetings.

4. OTHER BUSINESS

27. WWF welcomed the good progress made on the CDS and emphasized the need to introduce the CDS as soon as possible given the expanding distribution of PBF, noting that the system does not need to be perfect from the start and can be improved stepwise. WWF recommended holding additional Small Working Group meetings if needed to ensure completion by 2026.

28. The Chair noted that the Small Working Group will work intersessionally, possibly through email exchange, and that the success of producing a completed draft CMM depends on the Small Working Group's efforts.

5. CHAIR'S SUMMARY AND REPORT TO THE JWG

29. The Chair will provide his summary of the CDS technical meeting to the JWG as usual.

Appendix 1

JOINT IATTC AND WCPFC-NC WORKING GROUP
SIXTH CATCH DOCUMENTATION SCHEME TECHNICAL MEETING
(CDS-06)

Toyama, Japan (Hybrid)
09:00 – 15:00, 9 July 2025

ANNOTATED AGENDA

1. OPENING OF THE MEETING

1.1 Welcome

Mr. Shingo Ota, Chair of the CDS Technical Meeting, will open the meeting.

1.2 Appointment of rapporteur

A rapporteur will be appointed.

1.3 Adoption of the agenda

An agenda will be adopted. Any additional issues will be discussed under Other Matters.

1.4 Meeting arrangements

The Chair will explain the meeting arrangements, process, and reporting to the JWG.

2. DEVELOPMENT OF A CATCH DOCUMENTATION SCHEME FOR PACIFIC BLUEFIN TUNA

2.1 Recap of the 5th CDS Technical Meeting and intersessional activities

The Chair will briefly review the results of the 5th CDS Technical Meeting and intersessional work.

61.

2.2 Framework and governance of ePBCD

The meeting participants will continue discussing options for budgetary and administrative consideration, including system architecture and the roles and responsibilities of the IATTC and WCPFC secretariats**.**

2.3 Review of the revised draft CMM

The meeting participants will continue to discuss elements to be included in the CMM submitted by the small working group.

62.

3. NEXT MEETING

The participants will discuss the venue and timing of the next meeting.

63.

4. OTHER BUSINESS

64. Any other matters raised under Agenda Item 1.3 will be discussed here.

65.

5. CHAIR'S SUMMARY AND REPORT TO THE JWG

66. The Chair will summarize the results of the CDS Technical Meeting to be reported to the Joint IATTC-WCPFC NC Working Group.

6. CLOSE OF THE MEETING

Appendix 2

JOINT IATTC AND WCPFC-NC WORKING GROUP
SIXTH CATCH DOCUMENTATION SCHEME TECHNICAL MEETING
(CDS-06)

Toyama, Japan (Hybrid)
09:00 – 15:00, 9 July 2025

Working Draft CMM Resolution for Pacific Bluefin Tuna CDS

IATTC-NC-CDS06-2025/02

Small Working Group under the CDS Technical Meeting

Background

In 2019 and 2020, the virtual working group established under the CDS Technical Meeting discussed a draft CMM/Resolution for Pacific bluefin tuna Catch Documentation Scheme. The draft CMM/Resolution received many comments and suggestions from the members of the virtual working group. In June 2022, Japan, as the lead, circulated the 3rd draft of the CMM/Resolution among members of virtual working group, with all comments and suggestions tentatively incorporated. However, since the text became quite busy with those comments and suggestions, including provisions related to traceability and monitoring, controlling and surveillance measures, some of which were considered to be beyond the scope of the CDS, the 3rd draft was not directly discussed at the 3rd CDS Technical meeting.

The 3rd CDS Technical meeting in July, 2022 agreed that "the scope and functions of the draft CMM for the development of CDS would: i) not include seafood traceability and not go beyond the scope of the bluefin tuna CDSs utilized by the CCSBT and ICCAT, and ii) not include specific monitoring, controlling and surveillance measures."

The 4th CDS Technical meeting in July 2023 tentatively agreed to use resources from the CCSBT e-CDS as the platform for the system development of ePBCD. This choice has some implication to the Draft CMM/Resolution. On the other hand, there were several pending issues that need further discussion, such as demarcation between IATTC and WCPFC.

In July 2024, the small working group submitted a working draft CMM/Resolution to the 5th CDS Technical meeting. This draft was developed based on the 3rd draft and by simplifying some of the text to reflect the agreement in 2022 to narrow the scope and functions of the draft CMM/Resolution. The 5th CDS Technical meeting tentatively agreed to take a stepwise approach to determine the scope of application and to initially set the scope as covering international transactions. The 5th CDS Technical meeting also agreed to task the small working group to produce an amended draft CMM and to present it at the next CDS Technical meeting.

Furthermore, at the 102nd meeting of the IATTC in September 2024 and the 21st regular session of the WCPFC in December 2024, the CPCs/CCMs agreed to consider the establishment of a CDS for Pacific bluefin tuna fisheries in the EPO/WCPO by 31 December 2026.

In light of these progress, the small working group wishes to submit the amended working draft CMM/Resolution as attached. This working draft has not received any authorization from the virtual working group or small working group established under the CDS Technical meeting. Rather, this document was created for the purpose of having a basis for further discussion at the 6th CDS Technical meeting and thereafter.

Part I: General Provisions and Application

1. The objective of the Pacific bluefin tuna Catch Documentation (PBCD) program is to identify the origin and movement of Pacific bluefin tuna (PBF) in its processed or unprocessed form (wild capture or farmed) in order to support the implementation of Conservation and Management Measure (CMM)/Resolution for PBF, including by providing a tool to assist in combating IUU fishing.

2. This CMM/Resolution applies to PBF, except for those captured in sport and recreational fisheries when their sales are prohibited.

3. For the purpose of this CMM/Resolution:
   (1) "Catch" means:
   Commercial wild capture of PBF, except when the captured PBF is not retained on board~~released [or discarded][1]~~.
   (2) "Caging" means:
   The relocation of live PBF from a fishing vessel, trap or transport cage to a farming cage, including a fattening cage.
   (3) "Export" means:
   Any movement of PBF from the territory of the Commission Member, Cooperating Non-member and participating Territory (hereinafter referred to as CCM)/Member and Cooperating Non-Member (hereinafter referred to as CPC) where the fishing vessel is flagged (hereinafter referred to as flag CCM/CPC) or where the trap or farm is established (hereinafter referred to as trap CCM/CPC or farm CCM/CPC, respectively) to the territory of another CCM/CPC or non-CCM/non-CPC of the Commission, or from the fishing grounds to the territory of a CCM/CPC which is not the flag CCM/CPC or to the territory of a non-CCM/non-CPC of the Commission.
   (4) "Harvest [(from cages)]" means:
   Removal~~Taking~~ of PBF from farming cages for consumption, processing, export or other purposes that result in the death of the animal.
   (5) "Import" means:
   Any introduction of PBF into the territory of a CCM/CPC [or non-CCM/CPC] ~~,~~ from another CCM/CPC or non-CCM/CPC of the Commission, or from the fishing grounds to the territory of a CCM/CPC, which is not the flag CCM/CPC, trap CCM/CPC or farm CCM/CPC.
   (6) "Re-export" means:
   Any movement of PBF from the territory of a CCM/CPC where it was previously imported to the territory of another CCM/CPC or non-CCM/non-CPC.
   (7) "Transshipment" means:
   The unloading of all or any of PBF on board a fishing vessel to another fishing vessel either at sea or in port.

4. [Export, import or re-export of PBF without a completed and validated electronic Pacific bluefin tuna Catch Documentation (ePBCD) or electronic Pacific bluefin tuna Re-export Certificate (ePBRC) shall be prohibited.] Export, import or re-export of fish parts other than the meat or collars (i.e., heads, eyes, roes, guts and tails) shall be exempted from the requirement of this CMM/Resolution.

5. Development and implementation of ePBCD and [ePBRC]

~~[1] By the Chinese Taipei~~

(1) For the implementation of this CMM/Resolution, an interoperable ePBCD system [between IATTC and WCPFC] will be developed. This system will also be made available for [ePBRC]. WCPFC and IATTC Secretariats should formulate the Terms of Reference for an open tender for the system development before the end of 20XX, or as soon as possible thereafter. Such Terms of Reference shall be approved by both WCPFC and IATTC. The Secretariat shall report to the Commission the result of tenders and progress on the system development thereafter.

(2) A pilot testing phase will be undertaken at least for [X] years to implement ePBCD and [ePBRC]. The pilot testing will involve CCMs/CPCs on a voluntary basis and cover range of actions required in this CMM/Resolution.

(3) Use of the ePBCD system is mandatory of all CCMs/CPCs once the establishment of the ePBCD system is completed with necessary modifications as a result of ~~implemented after~~ the pilot testing phase.

(4) Notwithstanding ~~[~~paragraph 4 and~~]~~[2] subparagraph (3), paper PBCDs and [PBRCs], whose formats are attached as Annex A and B, respectively, or printed ePBCDs and [ePBRCs] may be used in cases falling under the exceptional circumstances specified in paragraph 26. The provisions of paragraph 4 and Parts II through VII shall apply *mutatis mutandis* to paper PBCDs and PBRCs or printed ePBCDs and [ePBRCs].

(5) The ePBCD system will include a function that automatically detects any inconsistencies in the input data and notifies the relevant CCMs/CPCs of these inconsistencies. Such inconsistencies shall include the following:

a. The accumulated catch attributed to a CCM/CPC recorded in the ePBCD system exceeds that CCM/CPC's catch quota or catch limit for the relevant management year (notification will be sent to the CCM/CPC).

b. The amount of exported Pacific bluefin tuna recorded in the ePBCD system originating from a single vessel or trap on a single day exceeds the recorded amount of PBF caught by that vessel or trap on that day (notification will be sent to the exporting CCM/CPC).

Part II: Documents and Information Required

6. The following information shall be recorded in the ePBCD. Each item shall be in accordance with the specifications in Annex C.
   (1) Information on catch
   (2) Information on transshipment
   (3) Information on harvest [(from cages)]
   (4) Information on first sale after catch
   (5) Information on [export] and import

7. The following information shall be recorded in the [ePBRC]. Each item shall be in accordance with the specifications in Annex D.
   (1) Information on imported PBF, including information on related ePBCD(s)
   (2) Information on re-export and import

Part III: Validation

8. Record in ePBCD and [ePBRC]~~CR~~

[2] ~~By the Chinese Taipei~~

(1) The master or operator of a vessel, the trap or farm operator, the exporter, their authorized representative, or the authorized representative of the flag CCM/CPC, trap CCM/CPC, farm CCM/CPC or the CCM/CPC where PBF is exported from (hereinafter referred to as export CCM/CPC) shall record the information specified in paragraph 6 in the appropriate section of the ePBCD on each occasion it catches, transships, harvests [(from cages)], first sells, or exports PBF.

(2) ~~Notwithstanding subparagraph (1), following the recording of catch and transshipment information in the ePBCD, the recording of information afterwards in the ePBCD is not required for PBF that is not exported.~~ For PBF that is not exported, catch and transshipment information must be recorded in the ePBCD, however, the additional information required in sub-paragraph (1) is not required.

(3) Information on catch shall be recorded within [7~~-~~] days of the landing. However, if the landing of PBF by one vessel or one trap at a time is less than [1] metric ton, or the PBF is tagged in accordance with Part IV, the information may be recorded within [ ] days. When PBF is caged, information on catch shall be recorded within [ ]. Any transfer of the caged PBF shall be prohibited until the information on catch is recorded.

(4) The re-exporter, its authorized representative, or the authorized representative of the CCM/CPC where the PBF is re-exported from (hereinafter referred to as re-export CCM/CPC) shall record the information specified in paragraph 7 in the appropriate section of the [ePBRC] on each occasion they re-exports PBF.

9. Validation of ePBCD and [ePBRC]

(1) The ePBCD and [ePBRC] must be validated by an authorized government official, or other authorized individual or institution, of the flag CCM/CPC, trap CCM/CPC, farm CCM/CPC, export CCM/CPC or re-export CCM/CPC that caught, harvested [(from cages)], exported or re-exported PBF.

(2) The ePBCD shall be validated only when:

a. All the information provided in the ePBCD has been established to be accurate;

b. The accumulated catch attributed to a CCM/CPC is within that CCM/CPC's catch quota or catch limit for the relevant management year; and,

c. The PBF in the ePBCD was caught, transshipped, harvested [(from cages)] or sold in compliance with other applicable provisions of CMMs/Resolutions.

(3) The [ePBRC] shall be validated only when:

a. All the information provided in the [ePBRC] has been established to be accurate;

b. All the ePBCD numbers relating to the previously imported PBF products are included.

c. Each related ePBCD had been validated and accepted for the importation of the products declared on the [ePBRC]; and,

d. The products to be re-exported are wholly or partly the same product on the validated ePBCD(s).

Part IV: Tag

10. Notwithstanding paragraph 9, validation of ePBCD shall not be required when PBF is tagged by the flag CCM/CPC or trap CCM/CPC in accordance with the following criteria:

(1) All PBF in the ePBCD concerned are individually tagged;

(2) The minimum information associated with the tag includes:

a. Identifying information on the vessel or trap that caught PBF;

b. The date of catch or landing;
c. The area of catch of the PBF;
d. The type of product and weight of the PBF;
e. Information on the exporter and importer (where applicable);
f. The point of export (where applicable).

(3) Information on tagged fish is compiled by the responsible CCM/CPC and made available to the Secretariat upon its request.

11. CCMs/CPCs may require their vessels or traps to affix a tag to each PBF~~BFT~~ preferably at the timing of kill, but no later than the time of landing. The tags shall have unique country-specific numbers and be tamper proof. The tag numbers shall be linked to the ePBCD.

12. Such tags shall only be used when the accumulated catch attributed to a CCM/CPC is within that CCM/CPC's catch quota or catch limit for the relevant management year, including where appropriate individual quotas allocated to vessels or traps.

Part V: Verification for PBF trade

13. Each CCM/CPC shall ensure that its competent authorities, or other authorized individuals or institutions take steps to identify each consignment of PBF imported into or exported or re-exported from its territory and request and examine the validated ePBCD(s) and [ePBRC(s)] as well as other related documentation for each consignment of PBF when it is exported, imported or re-exported. These authorities, individuals or institutions may also examine the contents of the consignment to verify the information contained in the ePBCD and in related documents and, where necessary, shall carry out verifications with the importer or exporter~~operators~~ concerned.

14. If as a result of examinations or verifications carried out pursuant to paragraph 13, ~~[a doubt arises]~~ [questions arise]~~[3]~~ regarding the information contained in an ePBCD or [ePBRC], the final importing CCM/CPC and the CCM/CPC whose competent authorities validated the ePBCD(s) or [ePBRC(s)] shall cooperate to address~~resolve~~ such questions~~doubts~~.

15. If a CCM/CPC involved in export, import or re-export of PBF identifies a consignment in violation of paragraph 4, it shall notify the findings to the relevant CCM/CPC. The relevant CCM/CPC shall take necessary measures, including investigations, and share the results with the informing CCM/CPC.~~[Secretariat][4], the export CCM/CPC, re-export CCM/CPC and, where known, the flag CCM/CPC.~~

16. Pending the examinations or verifications under paragraph 13 to confirm compliance of PBF consignment with the requirements in this CMM/Resolution and any other relevant CCMs/Resolutions, the CCMs/CPCs shall not grant its release for export, import and re-export.

17. Where a CCM/CPC, as a result of examinations or verifications under paragraph 13 and in cooperation with the validating authorities concerned, determines that an ePBCD or [ePBRC] is invalid, import, export and re-export of the PBF consignment shall be prohibited.

~~[3] By the United States~~
~~[4] By the Chinese Taipei~~

Part VI: Communication

18. Each CCM/CPC shall notify the Secretariat of the name, title, organization and address of the government officials or other authorized individuals specified in paragraph 9(1), and the name and address of the other authorized institutions specified in the same paragraph and, where appropriate, the name and title of the officials who are individually empowered within those institutions. This notification shall indicate the date at which the authorization comes into force. Any changes to the content of the notification under this paragraph shall be promptly notified to the Secretariat.

19. Each CCM/CPC shall notify the Secretariat of the name, address and contact details of the organization that will serve as the point of contact for questions related to ePBCDs or [ePBRCs] concerning the CCM/CPC. Any changes to the content of the notification under this paragraph shall be promptly notified to the Secretariat.

20. All CCMs/CPCs concerned shall, as soon as possible for the ePBCD system implementation, submit to the Secretariat the data necessary to ensure the registration of their users in the ePBCD system. Access to and use of the system cannot be ensured for those who fail to provide and maintain the data required by the ePBCD system.

21. The Commission shall request the non-CCMs/non-CPCs that are involved in export, import or re-export of PBF to cooperate with the implementation of the program and to provide to the Commission data obtained from such implementation.

22. Access to the ePBCD system shall be granted to non-CCMs/non-CPCs to facilitate trade of PBF. Until such time as the functionality is developed that allows non-CCMs/non-CPCs access to the system, this shall be accomplished through completion by the non-CCMs/non-CPCs of paper PBCD and [PBRC] consistent with the terms of paragraph 5(4) and submission to the Secretariat for entry into the ePBCD system. The Secretariat shall communicate without delay to those non-CCMs/non-CPCs known to import, export or re-export PBF to make them aware of the ePBCD system and the applicable provisions of this CMM/Resolution.

Part VII: Data Sharing and Confidentiality

23. The information notified under paragraph 18 shall be handled as non-public domain data and the Secretariat shall facilitate access to this information by authorized CCM/CPC users through the secure pages of the Commission website.

24. The Secretariat shall facilitate access to the information notified under paragraph 19 through the public pages of the Commission website.

25. All the data in ePBCD shall be processed in accordance with the Rules of Procedures for the Protection, Access to, and Dissemination of Data Compiled by the Commission/Resolution on Confidentiality.

Part VIII: Exceptional Arrangements

26. Paper PBCDs and [PBRCs], whose formats are attached as Annex A and B, respectively, or printed ePBCDs and [ePBRCs] may be used in accordance with paragraph 5(4), if any of the following circumstances apply:
    (1) The landing or caging of PBF by one vessel or one trap at a time is less than [1] metric ton, or the PBF is tagged in accordance with Part IV. In this case, the logbook or the sales note may be used as a temporary PBCD. Such paper PBCDs, printed ePBCDs or temporary PBCDs shall be converted to ePBCDs within a period of [ ] days or prior to the export, whichever is first;
    (2) PBF is caught prior to the full implementation of the ePBCD system as specified in paragraph 5(3);
    (3) Technical difficulties arise with the ePBCD system that preclude a CCM/CPC from using the system. In this case, the CCM/CPC shall follow the procedures set forth in Annex E. Delays by CCMs/CPCs in taking necessary actions, such as providing the data necessary to ensure the registration of users in the ePBCD system or other avoidable situations, do not constitute technical difficulties in this subparagraph.
    (4) In the case of trade between CCMs/CPCs and non-CCMs/non-CPCs, where access to the ePBCD system by non-CCMs/non-CPCs through the Secretariat in accordance with paragraph 22 is not possible or is not timely enough to ensure that trade is not unduly delayed or disrupted.

27. When a paper PBCD or [PBRC], or a printed ePBCD or [ePBRC] is used in accordance with paragraphs 5(4) and 26, importing CCMs/CPCs, solely on the basis of the use of such paper or printed PBCD and [PBRC], shall not be cited as a reason to delay or deny import of PBF.

28. Where requested by a CCM/CPC, the Secretariat shall facilitate the conversion of paper PBCDs or [PBRCs], or printed ePBCDs or [ePBRCs] to ePBCDs or [ePBRCs].

~~28.~~29. New text to be proposed by Korea

Annex A: Format of Paper PBCD

Need to be considered based on the discussion in the main text.

Annex B: Format of Paper PBRC

Need to be considered based on the discussion in the main text.

Annex C: Information to be Recorded in ePBCD

Need to be considered based on the discussion in the main text.

Annex D: Information to be Recorded in ePBRC

Need to be considered based on the discussion in the main text.

Annex E: Procedures for Technical Difficulties with the ePBCD system

Need to be considered based on the discussion in the main text.

Annex F: Artificial Fry

Need to be considered based on the discussion in the main text.

Annex E

JOINT IATTC AND WCPFC-NC WORKING GROUP MEETING ON THE MANAGEMENT OF PACIFIC BLUEFIN TUNA
TENTH SESSION (JWG-10)

Toyama, Japan (Hybrid)
9 – 12 July 2025

KOREA'S STATEMENT

Thank you, co-chairs.

The Republic of Korea would first like to express its sincere appreciation for the collective and arduous efforts of all members of the Joint Working Group. The latest scientific assessments from 2024 have provided clear and encouraging evidence that the Pacific bluefin tuna stock is in a period of rapid recovery, meeting our ambitious rebuilding targets well ahead of schedule. This is a testament to the effectiveness of our collaborative conservation measures over the past two decades and a shared success we can all be proud of.

This very success has brought forth new and pressing realities for coastal states, including the Republic of Korea. In recent years, our waters have witnessed an unprecedented and dramatic increase in the abundance of Pacific bluefin tuna. While the precise causes are still under investigation, it is widely presumed that factors such as climate change are altering the migratory patterns and distribution of this valuable species. We note that Korea is not alone in observing these significant shifts.

While coastal states of the WCPFC hold the rights to manage highly migratory species in their territorial and archipelagic waters, the Republic of Korea has voluntarily and steadfastly participated in this international management framework with very limited catch limits based on historical catch records that no longer reflect the reality of the resource's distribution and abundance. We have done so as the stock was in a dire situation and to implement the principle that cooperative management is the most effective path to the long-term sustainability of this highly migratory species.

However, the stock is rapidly recovering now. Catch limits based solely on catch records from 20 years ago have created a severe socio-economic strain on our coastal fishing communities. These communities, which are facing economic hardship and the threat of decline, now see a resurgent and abundant resource in their traditional fishing grounds, yet they are constrained by rigid, historical quotas. It is an untenable situation for a responsible coastal state to simply watch as its fishing communities suffer while a healthy and plentiful resource is at their doorstep.

The remarkable recovery of the Pacific bluefin tuna is a collective achievement that must now translate into adaptive and equitable management. Looking forward, it is imperative that the long-term management framework for this species fully considers the current state of the resource and the legitimate rights and acute needs of coastal states that are experiencing these dramatic changes in stock distribution.

The Republic of Korea remains fully committed to the sustainable management of Pacific bluefin tuna. A long-term management regime that fully considers the new realities will motivate Korea to maintain its commitment. As a costal state, one of Korea's top priorities is to ensure the livelihoods of our fishing communities who depend on the resources in our territorial waters.

We believe that by working together and acknowledging the changed circumstances, we can ensure both the continued health of the Pacific bluefin tuna and the vitality of the coastal communities that depend on it.
Thank you.

Attachment D

NORTHERN COMMITTEE
TWENTY-FIRST REGULAR SESSION

14 – 15 July 2025
Toyama, Japan (Hybrid)

STOCK STRUCTURE AND DISTRIBUTION OF PACIFIC BLUEFIN TUNA

WCPFC-NC21-2025/WP-08

PACIFIC BLUEFIN TUNA WORKING GROUP ISC[1]

[1] International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean

STOCK STRUCTURE AND DISTRIBUTION OF PACIFIC BLUEFIN TUNA

Bluefin tunas in the Pacific and Atlantic Oceans were once considered a single species (*Thunnus thynnus*) with two subspecies (*Thunnus thynnus orientalis* and *Thunnus thynnus thynnus*, respectively), but are now recognized as distinct species (*Thunnus orientalis* and *Thunnus thynnus* for Pacific and Atlantic bluefin tunas, respectively) based on genetic and morphometric studies (Collette 1999). This taxonomic distinction is adopted by pertinent tuna RFMOs, the Food and Agriculture Organization of the United Nations (FAO), and ISC.

PBF are mainly distributed in subtropical and temperate latitudes between 20°N and 50°N, although they are occasionally encountered in tropical waters and in the southern hemisphere (Fujioka et al. 2015). There are several spawning grounds of PBF in the western North Pacific Ocean (WPO) (Ohshimo et al. 2018, Tanaka et al. 2020), and two of them have been considered major spawning grounds: 1) waters between the Ryukyu Islands in Japan and the eastern coast of Taiwan islands; and 2) the southern portion of the Sea of Japan (Schaefer 2001). Conversely, no evidence of PBF reproduction has been observed in the eastern Pacific Ocean (EPO) despite there being enough older PBF for reproduction (Dewar et al. 2022). A study on the natal origin of adult PBF caught either in the waters around the Ryukyu Islands or in the Sea of Japan indicated that they originated from both of these spawning grounds (Uematsu et al. 2018). Similarly, elemental analysis of otoliths from adult PBFs caught in the waters around Taiwan indicated that they also originated from both known spawning grounds (Rooker et al. 2021). Additionally, age1 PBFs caught in the EPO have been traced back to both known spawning grounds using trace elements in their otoliths (Wells et al. 2020). These findings support the notion of a single stock for PBF, as there is no significant difference in the natal origin between the two known spawning grounds. Genetics and tagging studies (e.g., Bayliff 1994, Tseng and Smith 2012) further support the assumption of a single stock for PBF. A review conducted by Nakatsuka (2019) concluded that there is no evidence exclusively suggesting the existence of multiple stocks after examining available genetic and reproductive information, otolith and vertebrae data, and fishery data. As a result, a single highly migrating stock is assumed in the PBF assessment within the ISC and is acknowledged by the RFMOs (WCPFC and IATTC).

Despite substantial inter-annual variations in movement in terms of the numbers of migrants, timing of migration, and migration routes, the movements of PBFs are among the most extensively documented among highly migratory species. Mature adults in the WPO typically migrate northward to feeding grounds following spawning (Fujioka et al. 2025), although a small proportion of fish may move southward or eastward (Itoh 2006). Fish aged 0-1 that have hatched in the waters surrounding the Ryukyu Islands and eastern Taiwan main Island migrate northward with the Kuroshio Current during the summer as they grow, while age-0 fish that have hatched in the Sea of Japan migrate along the coastlines of Japan and Korea (Inagake et al. 2001, Itoh et al. 2003). Depending on oceanic conditions, an undetermined portion of immature fish aged 1-3 in the WPO makes a seasonal clockwise eastward migration across the North Pacific Ocean (stable isotope in muscle tissues: Tawa et al. 2017, Madigan et al. 2017), spending several years as juveniles in the EPO before returning to the WPO (Inagake et al. 2001). The drivers behind this trans-Pacific migration have been hypothesized to be limitations in food sources in the WPO and favorable oceanographic conditions (Polovina 1996). While PBFs are in the EPO, juveniles make seasonal north-south migrations along the west coast of North America (Kitagawa et al. 2007, Boustany et al. 2010). In spring, they are found in the waters off the southern coast of Baja California, and as summer approaches and waters warm, they move northwest into the southern California Bight. By fall, PBF distribute in the waters off central and northern California. After spending 3-4 years in the EPO, PBF migrate westward, presumably for spawning, as no spawning grounds have been observed outside of the WPO. This

westward migration typically occurs from December to March as they begin their migration along the coast of California (Boustany et al. 2010). The considerable seasonal (Fujioka et al. 2021) and interannual variations in trans-Pacific movement make it challenging to quantify migration rates accurately. A certain, albeit limited, number of individuals migrate to the southern hemisphere, especially waters off Australia and New Zealand, and most of the observed fish in that region were relatively large PBF, exceeding 180 cm in length (Bayliff 1994). However, information on these southern hemisphere migrants is limited due to the paucity of observations in the area.

References

Bayliff, W. H. 1994. A review of the biology and fisheries for northern bluefin tuna, *Thunnus thynnus*, in the Pacific Ocean. FAO Fish. Tech. Pap. 336/2: 244-295.

Boustany, A. M., Matteson, R., Castleton, M., Farwell, C. and Block, B. A. 2010. Movements of pacific bluefin tuna (*Thunnus orientalis*) in the Eastern North Pacific revealed with archival tags. Progress in Oceanography 86 (1-2), 94-104.

Collette, B. B. 1999. Mackerels, molecules, and morphology. In Séret, B. and Sire, J.-Y. (eds.), Proceedings of 5th IndoPacific Fish Conference, Nouméa, New Caledonia, 1997. Société Française d'Ichthyologie, Paris, France. pp. 149-164.

Dewar, H., Snodgrass, O. E., Muhling, B. A. and Schaefer, K. M. 2022. Recent and historical data show no evidence of Pacific bluefin tuna reproduction in the southern California Current system. PLoS ONE 17(5): e0269069.

Fujioka, K., Masujima, M., Boustany, A. M., and Kitagawa, T. 2015. Horizontal movements of Pacific bluefin tuna. In Kitagawa, T. and Kimura, S. (eds.), Biology and ecology of bluefin tuna. CRC Press, Boca Raton London, New York. pp. 101-122.

Fujioka, K., K. Sasagawa, Kuwahara, T., Estess, E. E., Takahara, Y., Komeyama, K., Kitagawa, T., Farwell, C. J., Furukawa, S., Kinoshita, J., Fukuda, H., Kato, M., Aoki, A., Abe, O., Ohshimo,

S. and Suzuki, N. 2021. Habitat use of adult Pacific bluefin tuna *Thunnus orientalis* during

the spawning season in the Sea of Japan: evidence for a trade-off between thermal preference and reproductive activity. Mar. Ecol. Prog. Ser. 668: 1-20. https://doi.org/10.3354/meps13746.

Fujioka, K., Hiraoka, Y., Kuwahara, T., Tsukahara Y., Fukuda, H. 2025. Post-spawning migration and habitat use of adult Pacific bluefin tuna (*Thunnus orientalis*) in the western North Pacific. Marine Biology. 172:34. https://doi.org/10.1007/s00227-025-04596-6

Inagake, D., Yamada, H., Segawa, K., Okazaki, M., Nitta, A. and Itoh., T. 2001. Migration of young bluefin tuna, *Thunnus orientalis* Temminck et Schlegel, through archival tagging experiments and its relation with oceanographic condition in the western North Pacific. Bull. Natl. Res. Inst. Far Seas Fish. 38: 53-81.

Itoh, T. 2006. Sizes of adult bluefin tuna *Thunnus orientalis* in different areas of the western Pacific Ocean. Fish. Sci. 72: 53–62.

Itoh, T., Tsuji, S. and Nitta, A. 2003. Migration patterns of young PBF (*Thunnus orientalis*) determined with archival tags. Fish. Bull. 101: 514-534.

Kitagawa, T., Boustany, A. M, Farwell, C. J., Williams, T. D., Castleton, M.R. and Block, B.A. 2007. Horizontal and vertical movements of juvenile bluefin tuna (*Thunnus orientalis*) in relation to seasons and oceanographic conditions in the eastern Pacific Ocean. Fisheries Oceanography 16(5): 409-421.

Madigan, D. J., Boustany, A. and Collette, B. B. 2017. East not least for Pacific bluefin tuna. Science 357:356–357.

Nakatsuka, S. 2019. Stock Structure of Pacific Bluefin Tuna (*Thunnus orientalis*) for Management

Purposes—A Review of Available Information, Reviews in Fisheries Science & Aquaculture, 28(2), 170–181. https://doi.org/10.1080/23308249.2019.1686455

Ohshimo, S., Sato, T., Okochi, Y., Tanaka, S., Ishihara, T., Ashida, H. and Suzuki, N. 2018. Evidence of spawning among Pacific bluefin tuna, *Thunnus orientalis*, in the Kuroshio and KuroshioOyashio transition area. Aquat. Living Resour., 31: 33. https://doi.org/10.1051/alr/2018022

Polovina, J. J. 1996. Decadal variation in the Trans-Pacific migration of northern Bluefin tuna (*Thunnus thynnus*) coherent with climate-induced change in prey abundance. Fish. Oceanogr. 5:114-119.

Rooker, J.R., Wells, R. J. D., Block, B. A., Lui, H., Baumann, H., Chiang, W.-C., Zapp Sluis, M., Miller,

N. R., Mohan, J. A., Ohshimo, S., Tanaka, Y., Dance, M. A., Dewar, H., Snodgrass, O. E. and

Shiao, J.-C. 2021. Natal origin and age-specific egress of Pacific bluefin tuna from coastal nurseries revealed with geochemical markers. Scientific Reports 11: 14216.

Schaefer, K. 2001. Reproductive biology of tunas. in B. A. Block and E. D. Stevens. (eds.), Tuna - Physiology, Ecology, and Evolution. Academic Press, San Diego. pp. 225-270.

Tanaka, Y., Tawa, A., Ishihara, T., Sawai, E., Nakae, M., Masujima M. and Kodama, T. 2020. Occurrence of Pacific bluefin tuna *Thunnus orientalis* larvae off the Pacific coast of Tohoku area, northeastern Japan: possibility of the discovery of the third spawning ground. Fisheries Oceanography 29: 46–51.

Tawa, A., Ishihara, T., Uematsu, Y., Ono, T. and Ohshimo, S. 2017. Evidence of westward transoceanic migration of Pacific bluefin tuna in the Sea of Japan based on stable isotope analysis. Mar Biol 164, 94. https://doi.org/10.1007/s00227-017-3127-8

Tseng, M.-C. and Smith, P.J . 2012. Lack of genetic differentiation observed in Pacific bluefin tuna (*Thunnus orientalis*) from Taiwanese and New Zealand waters using mitochondrial and nuclear DNA markers. Marine and Freshwater Research 63(3) 198-209.

Uematsu, Y., Ishihara, T., Hiraoka, Y., Shimose, T. and Ohshimo, S. 2018. Natal origin identification of Pacific bluefin tuna (*Thunnus orientalis*) by vertebral first annulus. Fish. Res. 199: 26– 31.

Wells R. J. D., Mohan J. A., Dewar H., Rooker J. R., Tanaka Y. and Snodgrass O. E. 2020. Natal origin of Pacific bluefin tuna from the California Current Large Marine Ecosystem. Biol Lett. 16: 20190878. http://dx.doi.org/10.1098/rsbl.2019.0878.

Element	Indicator	Range	Evaluation Schedule
Stock and Fleet Dynamics	Depletion stock biomass ($SSB/SSB_{current, F=0}$)	In any year estimates fall outside the range of uncertainty simulated by the operating models (OMs) used in the most recent MSE (accepted by the ALBWG in 2021)	Benchmark stock assessment every 3 years
	Fishing intensity ($F_{\%SPR}$) where SPR is the spawning potential ratio		
	Changes in fleet dynamics	Any substantial differences from the structure and parameterization used in the OMs of the most recent MSE (accepted by the ALBWG in 2021)	As new evidence and research is presented and accepted by the ALBWG
	Biological parameters		
Application	Stock assessment	Stock assessment is not producible or estimates are unreliable	Benchmark stock assessment every 3 years
Implementation	Fishing intensity ($F_{\%SPR}$)	The fishing intensity is different from what is prescribed by the HCR, given the uncertainty range that was simulated by the most recent MSE (accepted by the ALBWG in 2021)	Benchmark stock assessment every 3 years
	Realized catch or effort	If a TAC/TAE is implemented and the realized catch or effort exceeds the TAC/TAE by greater than 20%	Benchmark stock assessment every 3 years

Attachment F

Commission for the Conservation and Management of
Highly Migratory Fish Stocks in the Western and Central Pacific Ocean

NORTHERN COMMITTEE
TWENTY-FIRST REGULAR SESSION

Toyama, Japan (Hybrid)
14 – 15 July 2025

WORK PROGRAMME FOR THE NORTHERN COMMITTEE

Work areas	Objectives	Annual tasks		
	2026–2028	2026	2027	2028
1. Northern stocks				
a. Monitor status; consider management action	Review status and take action as needed for: **<u>North Pacific albacore</u>** Tasks (A) Review members' reports on their implementation of CMM 2019-03. (B) Implement the Harvest Strategy, including: (1) monitor if LRP is breached; (2) continue to work on other elements of harvest strategies, if appropriate	Review the compiled members' reports and identify or make recommendations to rectify shortcomings. Review ISC's advice and consider management measures to further the development of the Harvest Strategy to complete Task B.	Review the compiled members' reports and identify or make recommendations to rectify shortcomings. Continue to further development of the harvest strategy to complete Task (B)(2).	Review the compiled members' reports and identify or make recommendations to rectify shortcomings. Continue to further development of the harvest strategy to complete Task (B)(2).

	based on MSE; (3) recommend any changes to CMM.	Obtain the new assessment results from ISC and recommend any necessary changes to CMM. (Task (B) (3))		
	<u>Pacific bluefin tuna</u> Tasks (A) Review members' reports on their implementation of CMM on Pacific bluefin tuna. (B) Complete the development of the Harvest Strategy including: (1) continue to work to establish LRP, TRP and other elements of harvest strategy; (2) recommend any changes to CMM; (C)Improve MCS; (D) Complete the work of CDS.	Review the compiled members' reports and identify or make recommendations to rectify shortcomings. Complete Tasks (B), (C), and (D) based upon the outcomes of JWG11 in 2026.	Review the compiled members' reports and identify or make recommendations to rectify shortcomings. Review the 2027 stock assessment/update results and recommend any necessary changes to CMM. (Task (C)). Review the progress of tasks (B), (C), and (D).	Review the compiled members' reports and identify or make recommendations to rectify shortcomings. Review the progress of tasks (B), (C), and (D).
	<u>Swordfish</u> Further develop the harvest strategy consistent with CMM 2023-03 throughMSE process.	Review ISC's advice on the work plan for the MSE, and consider and provide advice on operational management objectives and work plan for MSE.	Review the progress of the MSE process.	Review the progress of the MSE process. Review the new stock assessment and recommend changes to CMM if necessary.
b. Data	Achieve timely submission of complete data needed for assessments, formulation of measures, and review of Commission decisions.	CCMs participating in the NC submit complete data on fisheries for northern stocks to the Commission. Encourage submission to	CCMs participating in the NC submit complete data on fisheries for northern stocks to the Commission. Encourage submission to	CCMs participating in the NC submit complete data on fisheries for northern stocks to the Commission. Encourage submission to

	Consider systems to validate catch data	Commission of Pacific bluefin tuna, North Pacific albacore, North Pacific striped marlin and swordfish data from all CCMs and make available to ISC.	Commission of Pacific bluefin tuna, North Pacific albacore, North Pacific striped marlin and swordfish data from all CCMs and make available to ISC.	Commission of Pacific bluefin tuna, North Pacific albacore, North Pacific striped marlin and swordfish data from all CCMs and make available to ISC.
c. Scientific support	Provide support for scientific studies.			
2. Non-northern stocks				
	Striped marlin	Review information from ISC that may inform management advice for the rebuilding plan	Review the 2027 stock assessment results.	
	Blue shark	Review information from ISC that may inform management advice	Review the 2027 stock assessment results.	Review information from ISC that may inform management advice
3. Non-target, associated, dependent species				
a. Seabirds	Evaluate effectiveness of current measures to minimize catch and mortality, and improve them as needed.	Review implementation of CMM 2018-03 in the northern area.	Review implementation of CMM 2018-03 in the northern area.	Review implementation of CMM 2018-03 in the northern area.
b. Sea turtles	Consider appropriate implementation of methods to minimize catch and mortality.	Review mitigation research results and consider management action.	Review mitigation research results and consider management action.	Review mitigation research results and consider management action.
c. Sharks	Consider appropriate implementation for CMM 2024-05 in the northern area.	Review scientific advice from ISC, if any, and consider management options as necessary. Encourage submission of all shark data to ISC.	Review scientific advice from ISC, if any, and consider management options as necessary. Encourage submission of all shark data to ISC.	Review scientific advice from ISC, if any, and consider management options as necessary. Encourage submission of all shark data to ISC.

4. Review effectiveness of decisions	Annually review effectiveness of conservation and management measures and resolutions applicable to fisheries for northern stocks.	Review effectiveness of North Pacific albacore measure (CMM 2019-03), including members' reports on their interpretation and implementation of fishing effort control. Review effectiveness of Pacific bluefin tuna measure. Review effectiveness of North Pacific swordfish measure.	Review effectiveness of North Pacific albacore measure (CMM 2019-03), including members' reports on their interpretation and implementation of fishing effort control. Review effectiveness of Pacific bluefin tuna measure. Review effectiveness of North Pacific swordfish measure.	Review effectiveness of North Pacific albacore measure (CMM 2019-03), including members' reports on their interpretation and implementation of fishing effort control. Review effectiveness of Pacific bluefin tuna measure. Review effectiveness of North Pacific swordfish measure.
5. Cooperation with other organizations				
a. ISC		Develop arrangements to support ISC's works.	Review the progress.	Review the progress.
b. IATTC	Following Article 22.4, consult to facilitate consistent management measures throughout the respective ranges of the northern stocks.	Have consultation to maintain consistent measures for North Pacific albacore, Pacific bluefin tuna, and swordfish. Hold a joint working group meeting on Pacific bluefin tuna management.	Have consultation to maintain consistent measures for North Pacific albacore, Pacific bluefin tuna, and swordfish. Hold a joint working group meeting on Pacific bluefin tuna management.	Have consultation to maintain consistent measures for North Pacific albacore, Pacific bluefin tuna, and swordfish. Hold a joint working group meeting on Pacific bluefin tuna management.
6. Climate Change	Develop a framework for how to include climate change analyses into NC processes.	Review the progress of climate change studies by the Commission and improve NC works.	Review the progress of climate change studies by the Commission and improve NC works.	Review the progress of climate change studies by the Commission and improve NC works.