

**SCIENTIFIC COMMITTEE
SEVENTEENTH REGULAR SESSION**

Electronic Meeting
11-19 August 2021

Intersessional Activities of the Scientific Committee

WCPFC-SC17-2021/GN-IP-06

Secretariat

Introduction

This purpose of this paper is to inform the Scientific Committee (SC) of the relevant science-related activities undertaken since SC16.

I. Summary Report of the 16th Regular Session of the Scientific Committee

1. As the first virtual meeting of the Commission, the 16th Regular Session of the Scientific Committee was convened in August 2020 due to travel restrictions as a result of the COVID-19 pandemic. The Secretariat posted on the SC16 website the SC16 Outcomes Document on 28 August 2020 and the intersessionally adopted SC16 Summary Report including the Executive Summary on 6 November 2020.

II. Science Services from the SPC-OFP

2. In 2006, the Commission signed the first memorandum of understanding (MOU) with the Commission's Scientific Services Provider (SPC-OFP) to provide scientific and data management services. The MOU is composed of two sections: 1) general scientific, financial and administrative agreement which will be updated every three years, and 2) Annex I of the MOU (*Agreement for the Annual Provision of Scientific Services to the Commission and Assistance to Members by the Pacific Community*) which will be updated each year to accommodate scientific services as requested by the Commission for each calendar year. In December 2009, the Commission and the SPC agreed to revise the MOU to provide for a three-year arrangement as directed by the Commission. The revision of the MOU was made in 2010, 2013, 2016 and 2019, which included implementation of the Shark Research Plan and development of management strategy evaluation to support the implementation of the WCPFC harvest strategy framework. In 2019, the term MOU was changed to the MOA (Memorandum of Agreement).

3. The SPC-OFP produced or was involved in producing around 55 papers and reports for SC17, covering all four theme issues of the SC plenary agenda, steering committee meetings and online discussion forum topics, and provided *ad hoc* advice and support throughout the year. In addition, the SPC-OFP assisted the following activities:

- Participated in TCC16 and WCPFC17, producing several additional key scientific papers and presentations for each meeting;
- Assisted the WPEA Project by supporting the electronic meeting of the Tuna Data Review and Annual Tuna Catch Estimates Workshops hosted by the Project participating countries (Indonesia, Philippines and Vietnam), and ongoing database system and data management support;
- Conducted the Pacific Tuna Tagging Project (PTTP) and coordinated three PTTP Cruise Planning Advisory Committee meetings and the 15th PTTP Steering Committee meeting electronically;
- Continued the Biological Sampling Programme and hosted the 3rd WCPFC Tuna Tissue Bank Steering Committee meeting electronically;
- Hosted the online 15th Tuna Data Workshop to assist compilation of CCM's tuna fishery data;
- Hosted the online Pre-assessment Workshop for 2021 South Pacific albacore, southwest Pacific swordfish and southwest Pacific blue shark stock assessments.
- Participated in and provided scientific papers and presentations to TTMW1 (Development of New WCPFC Tropical Tuna Measure Workshop 1).
- Commenced the data compilation and analysis related to transshipment information in support of the review of CMM 2009-06, to be completed in early 2022.
- Updated the tables on Annual Catch and Effort estimates (the "ACE tables" <https://www.wcpfc.int/ace-by-fleet>) to include:
 - additional estimates of effort where it is practicable to be derived based on the April 30 scientific data submissions from CCMs and provide an update to SC17; and
 - estimates of annual area-based CMM quantitative limits where it is practicable for the estimate to be derived based on the April 30 scientific data submissions from CCMs and to provide an update to TCC17.

III. Progress of the SC Work Programme Activities

4. SC work programmes conducted in 2020-2021 include, with Commission budgets in parenthesis:

a) *Project 35b: WCPFC Tuna Tissue Bank (\$ 101,180)*

The WCPFC Tuna Tissue Bank (TTB) project has been continued since 2016. The 3rd Steering Committee meeting was held electronically on 3 August 2021. CCMs are invited to visit the TTB website: <https://www.spc.int/ofp/PacificSpecimenBank>. SC17 will review recommendations in the Steering Committee report (SC17-RP-P35b-01).

b) *Project 42: Pacific-wide tagging project (\$ 730,000)*

WCPFC17 agreed 2021-2022 PTTP Work Plan, and allocated funding of \$730,000 for 2021. The 3rd Cruise Planning Advisory Committee noted that the CP15 research cruise is a 40-day charter onboard the Gutsy Lady 4, departing on the 15th of July and returning on the 24th of August. The cruise follows a similar strategy to the previous year's CP14, transecting Tropical Atmosphere Ocean (TAO) buoys in the EEZ of Kiribati and international waters, whilst opportunistically targeting drifting FADs shared through industry-science partnerships. In addition to biological sampling, the primary objectives include i) conventional tag releases of bigeye and yellowfin tuna, associated with TAO moorings or drifting FADs, with a target of 5000 releases; and ii) archival tag releases of bigeye tuna and, fishing conditions permitting, skipjack tuna associated with drifting FADs. The 15th Steering Committee meeting was held electronically on 3 August 2021.

c) *Project 60: Improving Purse seine species composition (\$ 40,000)*

The SPC-OFP published a meeting paper SC17-ST-IP-04 to document the progress of this project. Attention is drawn to the request that, in light of COVID-related restrictions on planned fieldwork in 2020/21, the paper seeks approval to carry over unused funds into 2022.

d) *Project 88: Acoustic FAD Analysis (\$15,000 + EU fund)*

The project is mainly funded by EU with the WCPFC's co-finance of \$15,000 for 2021. Updates on the Project 88 is detailed in the final report (SC17-MI-IP-05). Attention is drawn to the need for additional data covering the whole WCPFC Convention Area and encouragement for other industry partners to become involved in future projects. The outputs are in SC17-MI-IP-05.

e) *Project 90: Better data on fish weights and lengths for scientific analyses (\$ 27,000)*

Project 90 was originally a 3-year project (2019 - 2021) but WCPFC17 endorsed the extension of the project to 57 months from January 2019 through September 2023 (\$27,000 for 2021 and \$75,000 for 2022). The outputs from 2020-2021 work are in a preliminary report to SC17 (SC17-ST-IP-05).

f) *Project 104: Appropriate LRPs for Southwest Pacific Ocean Striped Marlin and Other Billfish (\$ 31,000)*

This project aims to identify performance indicators and appropriate limit reference points (LRP) for Southwest Pacific Ocean striped marlin. While the focal species is striped marlin, the project should also consider the appropriateness of the recommendations for other billfish (i.e., blue marlin, black marlin and swordfish) in the WCPO. The outputs are in SC17-MI-WP-08.

g) *Project 105: Bomb Radiocarbon Age Validation for bigeye and yellowfin tunas in WCPO (\$ 97,987)*

The objective of this project is to test the validity of age estimates for bigeye and yellowfin tuna from the western and central Pacific Ocean using bomb radiocarbon dating. The progress of the project is in SC17-SA-IP-09 and the project will be finalized in August 2022.

h) *Project 107: South Pacific Blue Shark Assessment (USD 20,000)*

This project is to undertake a stock assessment of blue sharks in the southwest Pacific Ocean. This project is co-financed by EU through its voluntary contribution of around Euros 37,000, and the results of the assessment are in SC17-SA-WP-03, with supporting papers SC17-SA-IP-06 and SC17-SA-IP-18.

i) *Project 109: Training of Observers for Elasmobranch biological sampling*

This project aims to develop material for observers to use and run training workshops for a core group of observers in elasmobranch biological sampling and to train observers to collect elasmobranch biological material for age, growth and reproduction. The progress report is in SC17-ST-IP-07. Attention is drawn to the request that, in light of COVID-related restrictions on planned fieldwork in 2020/21, the paper seeks approval to carry over unused funds into 2022.

- j) *Project 110: Non-entangling and biodegradable FADs*
Through funding from the EU, US and the ISSF, this project will conduct trials of non-entangling and biodegradable drifting Fish Aggregation Devices (dFADs) in the Western and Central Pacific Ocean (WCPO). The progress report is provided as SC17-EB-IP-03. Attention is drawn to the delays in the activities planned due to the COVID-19 pandemic, and the expectation of a no-cost project extension being required as a result.

IV. Cooperation with other organizations

5. The Secretariat was represented at the following science-related meetings during the last 12 months:
- SPC Pre-Assessment Workshop, 30 March to 1 April 2021, Online workshop (Zoom);
 - SPC Tuna Data Workshop, 7-8 April 2021, Online workshop (Zoom);
 - The 21st ISC Plenary Meeting, 13-21 July 2021, Online Meeting (Microsoft Teams); and
 - WPEA Project related workshops and meetings for data review and annual catch estimates workshops and other related meetings were conducted online.

V. Research Projects

Japanese Trust Fund Project

6. The Japanese Government supported the first year of JTF Phase 3 with a total budget of \$232,821, including WCPFC's 7.5% administration fee. Six project proposals were endorsed for 2021: two from Solomon Islands, one from Vanuatu, and three from Tonga. The Steering Committee meeting this year (2021) will be done through email correspondence. The Steering Committee will review the progress of each project. Detailed progress is described in the JTF Status Report (SC17-RP-JTF-01). The Steering Committee report will be posted in the SC17 website (SC17-RP-JTF-02).

WCPFC Tuna Tissue Bank (TTB)

7. Refer to Paragraph 4.a) *Project 35b* above. In addition, the Secretariat has received a request from a Ph.D. candidate in Macquarie University (Australia) to access blue marlin (*Makaira nigricans*) tissue samples. Following the WCPFC Tuna Tissue Bank Access Protocols, the Secretariat has made a formal agreement that was signed by both parties in September 2020. The primary aim of this research is to identify and understand the prey species crucial to marlin populations and to understand the ecological role marlin play in the Pacific and whether this varies regionally. This project has been delayed due to the COVID-19 pandemic and it is not due to be completed until 2024.

West Pacific East Asia Project

8. The current WPEA-ITM Project funded by the New Zealand government continued to conduct key data collection activities in Indonesia, Philippines and Vietnam. Details are described in the WPEA-ITM Project Update (SC17-RP-WPEA-01).

VI. Voluntary Contributions from Members and Observers

9. Members and Observers of the Commission have voluntarily provided funding supports for the scientific work of the Commission. The European Union has made available to WCPFC in 2021-2023

around EUR 450,000 to fund Project 107: Assessment of blue shark in the southwest Pacific and Project 110: Non-entangling and Biodegradable FAD trial in the WCPO. The USA (\$85,000) and ISSF (\$20,000) also made an additional contribution for Project 110. The third 5-year programme of the Korean government to support the SPC's Pacific Tuna Tagging Project started in 2019, providing about USD 170,000 per year.

Progress of 2021 Projects

Summary of SC work programme titles and budget for 2021, and indicative budget for 2022–2023 (USD)

Project Title	2021	2022	2023	Report to SC17
SPC-OFP Scientific Services	943,014	961,875	981,112	<ul style="list-style-type: none"> Through the 2021 services agreement, around 55 papers and reports were published. Assisted other Commission activities as detailed in Section II.
SPC Additional resourcing	169,810	173,206	176,670	
1) Project 35b - WCPFC Tuna Tissue Bank	101,180	103,204	105,268	<ul style="list-style-type: none"> SPC conducted the 3rd Steering Committee meeting on 3 August 2021 and produced progress report and Steering Committee report. SC17 will review the Steering Committee recommendations. Project 35b to be continued in 2022.
2) Project 42 - Pacific Tuna Tagging Program	730,000	730,000	730,000	<ul style="list-style-type: none"> SPC conducted the 15th Steering Committee meeting on 3 August 2021 and produced progress report and Steering Committee report. SC17 will review the Steering Committee recommendations. Project to be continued.
3) Project 60 – Purse Seine Species Composition	40,000			<ul style="list-style-type: none"> SPC. ODF Topic 4. Refer to SC17-ST-IP-04.
4) Project 88 - Acoustic FAD analyses	15,000			<ul style="list-style-type: none"> SPC. Matching fund of \$30,000 for EU's support (EUR 180,000) to Project 88; ODF Topic 16. Refer to SC17-MI-IP-05
5) Project 90 - Length weight conversion	20,000	75,000		<ul style="list-style-type: none"> SPC. ODF Topic 5. Project to be continued in 2022. Refer to SC17-ST-IP-05.
6) Project 101 – Updated Monte Carlo simulations of the potential of longline shark mitigation approaches incorporating updated knowledge				<ul style="list-style-type: none"> Project funded by the USA Refer to SC17-EB-WP-01
7) Project 102 – Population projections for oceanic whitetip shark				<ul style="list-style-type: none"> Project funded by the USA Refer to SC17-SA-IP-21
8) Project 104 – appropriate LRPs for SW Pacific Ocean striped marlin and other billfish	31,000			<ul style="list-style-type: none"> SPC Refer to SC17-MI-WP-08.
9) Project 105 – Bomb radiocarbon age validation for bigeye and yellowfin tunas in WCPO	97,980			<ul style="list-style-type: none"> CSIRO Expected date of project completion is 31 August 2022. Refer to SC17-SA-IP-09
10) Project 106 – Aging of South Pacific Albacore	0			<ul style="list-style-type: none"> Funded by SPC and CSIRO Refer to SC17-SA-IP-10
11) Project 107 – SP blue shark assessment	20,000			<ul style="list-style-type: none"> SPC Co-financed by EU voluntary contribution of around Euros 37,000

				<ul style="list-style-type: none"> • Refer to SC17-SA-WP-03
12) Project 109 – Training observers for elasmobranch biological sampling	25,000			<ul style="list-style-type: none"> • SPC • Refer to SC17-ST-IP-07
13) Project 110 – Non-entangling and biodegradable FADs				<ul style="list-style-type: none"> • Financed through voluntary contributions of EU (Euros 412,000), USA (\$85,000) and ISSF (\$20,000). • Expected date of project completion is 31 July 2023. • Refer to SC17-EB-IP-03