



**SCIENTIFIC COMMITTEE
FOURTEENTH REGULAR SESSION**

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INTERSESSIONAL ACTIVITIES OF THE SCIENTIFIC COMMITTEE

**WCPFC-SC14-2018/GN-WP-04
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Secretariat

Introduction

This purpose of this paper is to inform the Scientific Committee (SC) of the relevant activities to the work of the SC that were pursued and undertaken since SC13.

I. Summary Report of the 13th Regular Session of the Scientific Committee

1. The Secretariat posted on the SC13 website an adopted final version of the Summary Report and Executive Summary of the Thirteenth Regular Session of the Scientific Committee on 17 November 2017.

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 science 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 (*Agreement for the Provision of Scientific Services to the Commission and Assistance to Members by the Pacific Community*) of the MOU which will be updated each year to accommodate the specific services and terms of reference for the provision of scientific services as requested by the Commission for each calendar year. In 2009, the Commission and the SPC agreed to revise the MOU to provide for a three-year arrangement as directed by the Commission. A revised three-year MOU was signed in March 2013 and 2016, which included implementation of the Shark Research Plan and development of management strategy evaluation to support the implementation of the harvest strategy framework.

3. The general description of SPC-OFP's scientific services, in cooperation with other scientists, as appropriate, including those from Members of the Commission, may include, *inter alia*, the following:

- i. data management services, including, as appropriate, the collection, compilation and dissemination of fisheries data according to agreed principles and procedures established by the Commission, data processing, and database development and maintenance, taking full account of the procedures and policies of both organizations relating to the confidentiality, disclosure and publication of data;
- ii. data summaries, identification of data gaps and analyses that the Commission may routinely require to carry out its functions;

- iii. other data summaries and analyses that the Commission may require from time to time;
- iv. Advice on the implementation of e-reporting and e-monitoring;
- v. regional stock assessments, CPUE standardization, sensitivity analysis and model refinement for key target and non-target species;
- vi. ecosystem analyses, including developing ecosystem modelling and application to management, ecological risk assessment and related work;
- vii. implementation of the approved Shark Research Plan, including stock assessment of key shark species, and refinement of the Shark Research Plan as needed;
- viii. scientific evaluation of potential management options, agreed conservation and management measures and related work;
- ix. development of management strategy evaluation to support the implementation of the harvest strategy framework;
- x. scientific advice in relation to the implementation of the Commission's vessel monitoring system, regional observer programme or other initiatives relating to fishing gear and technology, as appropriate;
- xi. design and implementation of biological, ecological or stock assessment research programmes requested by the Commission, including collaborative research programmes with other regional fishery management organizations; and
- xii. other advisory and technical services.

4. The components for specific scientific services in Annex I, as annually reviewed and agreed by both WCPFC and SPC, include:

Core SPC services

- 1) Data management, statistical analyses and related services
 -) Data management
 -) Compilation of catch and effort estimates
 -) Additional data-related issues
 -) Data dissemination
 -) Technical / policy advice
 -) Support of other data-related projects of the Commission
- 2) Stock assessment and related analytical services
 -) Target species stock assessments and auxiliary analyses
 -) Implementation of the Shark Research Plan 2016-2000
 -) Model development and refinement
- 3) Management analyses and CMM performance monitoring
 -) Conservation and management measure performance monitoring
 -) Development of harvest strategy framework
 -) Analyses to support development of conservation and management measures

Other advisory and technical services

5. The SPC-OFP produced 42 papers and reports, covering all four theme issues of the SC plenary agenda, and provided *ad hoc* advice and support throughout the year. In addition, SPC-OFP assisted the following activities:

-) Participated in TCC13 and WCPFC14, producing several key scientific papers and presentations for each meeting;
-) Supported ABNJ – WCPO Tuna Management Workshop;
-) Assisted the WPEA Project by participating 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;

- J Supported the WCPFC Bycatch Mitigation Problem-Solving Workshop;
- J Conducted the Pacific Tuna Tagging Project (PTTP) and coordinated the PTTP Steering Committee Meeting;
- J Continued the Biological Sampling Programme and hosted the WCPFC Tuna Tissue bank;
- J Hosted the 12th Tuna Data Workshop to assist compilation of CCM's tuna fishery data;
- J Hosted the preparatory workshop for 2018 stock assessments; and
- J Provided technical support for the 3rd Meeting of the EM&ER-IWG.

III. Progress of SC Work Programme Activities

6. SC work programmes conducted in 2016-2017 include:

- J (Project 15) West Pacific East Asia Project
The GEF-funded UNDP's WPEA-SM project, implemented by the UNDP and the Secretariat was extended to April 2019 and a terminal evaluation will start in October 2018. An independent audit was conducted during March-June this year and the audit report is in the process of finalization. The Project Board meeting will be in Vietnam, 26-27 October 2018.
- J (Project 35) Sampling in support of an age, growth and maturity study of bigeye tuna
A comprehensive review and study of bigeye tuna reproductive biology was proposed in 2008 (SC4) and SPC has been conducting this research since 2009. Over nine years of sampling and subsequent analyses have been completed.
- J (Project 35b) Maintenance and enhancement of WCPFC Tissue Bank
Maintaining the WCPFC Tissue Bank has been ongoing since 2016. Six researchers have benefited through access to the Tissue Bank. Details of the projects and outputs to date are reported in "Project 35b: WCPFC Tuna Tissue Bank" on the SC14 website: <https://www.wcpfc.int/node/31011>
- J (Project 42) Pacific-wide tagging project
SC12 recognising the importance of this work extended the scope and recommended a significant increase in budget from USD 10,000 to USD 250,000 for tagging work to be conducted in 2017. This recommendation was approved and reflected in the decisions of WCPFC13. In addition, the Government of the Republic of Korea provided funding support to the PTTP of USD173,590 in 2017, making a total sum of USD 423,500 available to support tuna tagging in 2017. SC13 endorsed the PTTP workplan for 2017 to 2020 allocating funding for 2017, subsequently agreed at WCPFC14. This project is reported under "Project 42: Pacific Tuna Tagging Project Report and Workplan for 2018-2021" located at SC14: <https://www.wcpfc.int/node/30979>
- J (Project 57) Limit reference points - Develop proposed limit reference points for elasmobranchs
SC12 produced a scope and associated budget to contract this project, however the tender was not taken up. This is thought to be due the onerousness of the scope in combination with a relatively low budget. The scope and budget will be revisited during SC13. SC13 reviewed the scope of work and proposed budget and submitted recommendations to WCPFC14. The commission agreed to provide USD25,000 and a further USD30,000 was subsequently made available via ABNJ Common Oceans. Due to a late start in 2018, and given the amount of work to be undertaken, it is anticipated that the consultants will present a substantial progress report to SC14, and finalise the project before 31st December 2018.

- J) (Project 60) Further paired sampling and unloading data comparisons
Budget would cover at-sea data collection (2nd observer), associated travel, and some analytical support. A budget of \$50,000 allocated in each of 2016 and 2017 and a multi-year contract was signed. Future work beyond December 2017 is not currently funded, the project outputs are reported annually to SC, and for 2018, refer to “Better purse seine catch composition estimates: progress on the Project 60 work plan” on the SC14 website: <https://www.wcpfc.int/node/31015>
- J) (Project 68) Estimation of seabird mortality across the WCPO Convention Area
The allocation for “Estimation of Seabird Mortality” was reduced from \$72,500 to \$20,000 at WCPFC13 on the basis that the FAO ABNJ Tuna Project would finance the remainder through co-funding. The project contracted was made between FAO and WCPFC, and between WCPFC and SPC.
- J) (Project 78) Review of shark data and modeling framework to support stock assessments
This project was subcontracted by SPC to Joel Rice Consulting, who will present the findings to SC13. Further work was conducted at no extra cost to the Commission and an updated report will be presented to SC14. Refer to “Report for Project 78: Analysis of Observer and Logbook Data Pertaining to Key Shark Species in the Western and Central Pacific Ocean.” on the SC14 website: <https://www.wcpfc.int/node/30955>
- J) (Projects 81) Further work on bigeye tuna age and growth
SPC sub-contracted CSIRO for a large portion of their biological work. Age and growth work by CSIRO strongly informed the 2017 bigeye stock assessment presented at SC13; additional age and growth work was requested for consideration by SC14.
- J) (Project 82) Yellowfin tuna age and growth
SC13 also recommended similar age and growth studies for yellowfin tuna, which is in progress by the CSIRO and will also be presented to SC14.

IV. Cooperation with other organizations

7. The Secretariat was represented at the following science-related meetings during the last 12 months:
- J) The Third North Pacific Albacore MSE Workshop, 17-19 October 2017, Vancouver, Canada
 - J) Areas Beyond National Jurisdiction: Western and Central Pacific Ocean Tuna Management Workshop, 20-21 February 2018, Nadi, Fiji
 - J) SPC Pre-Assessment Workshop, 17-20 April 2018, Noumea, New Caledonia;
 - J) Pacific Bluefin Tuna Management Strategy Evaluation Workshop, 30-31 May 2018, Yokohama, Japan
 - J) The 18th ISC and its Working Group meetings, 6-16 July 2018, Yeosu, Korea; and
 - J) WPEA Project related workshops and meetings for the review of project consultancies, harvest strategy meetings in Indonesia, Philippines and Vietnam, including tuna data review and annual catch estimates workshops.

V. Research Projects

ABNJ (Common Oceans) Tuna Project-Shark and Bycatch Components

8. The Common Oceans (ABNJ) Tuna Project activities are comprised of shark data improvement and harmonization, shark stock status assessment, and bycatch information and management. In 2017-2018 the Pacific shark post-release mortality tagging study has continued with completion of the tagging in New Zealand and work underway in Fiji, New Caledonia and the Marshall Islands. Final stock status assessments have been completed for Pacific-wide bigeye thresher shark and Southern Hemisphere porbeagle shark, and new assessments are being presented to SC14 for Pacific-wide silky shark and Pacific-wide whale shark. A Bycatch Mitigation Problem-Solving Workshop using BMIS was held in Nouméa in May which was attended by 11 WCPFC CCMs and 7 IGOs/NGOs. Please refer to SC14- RP-ABNJ-01 for the details and other products.

Japanese Trust Fund Project

9. The Japanese Government supported a second one year extension which extended the project into 2018; and USD \$128,849.25 was available to projects in 2018. Five projects approved for funding support were for Tonga (x3), Tuvalu and Vietnam through the WPEA project. Project extensions were granted for Cook Islands and Nauru.

WCPFC Tissue Bank

10. A total of 6 requests to access the WCPFC Tissue Bank have been approved since 2016. Two of those applicants have requested additional samples – one has been approved the other is pending. Dr Karen Evans (CSIRO) has submitted IPs to both SC13 and SC14 (Connectivity of tuna and billfish species targeted by the Australian Eastern Tuna and Billfish Fishery with the broader Western Pacific Ocean: <https://www.wcpfc.int/node/30974>). Sam Williams et al. have published “Misidentification of istiophorid billfishes by fisheries observers raises uncertainty over stock status” in Journal of Fish Biology. Further details of the work of the WCPFC Tissue Bank may be found in “Project 35b: WCPFC Tissue Bank” at SC14: <http://www.wcpfc.int/node/31011>

West Pacific East Asia Project

11. During the last one year, WPEA-SM project continued its activities in Indonesia, Philippines and Vietnam. Key activities include:

- a) Tuna catch data collection from port sampling – WPEA-funded 29 hired enumerators are collecting catch data from six ports, covering most tuna landings from the Pacific Ocean and archipelagic waters; full landing sites are covered by government-funded enumerators; data collection for all nine tuna provinces in Vietnam are covered by over 40 WPEA-funded enumerators.
- b) All three countries conduct an annual data review and audit workshop and an annual total tuna catch estimates workshop;
- c) Consultancies were contracted with local experts on the following issues:
 -) Development of guidelines to adaptively manage the impacts of climate change on tuna fisheries;
 -) Trial application of market-based approaches to sustainable harvesting of oceanic tunas, including characterizing tuna supply chain and establishing certification system;
 -) Development of harvest strategies in the Indonesian archipelagic waters and establishment of certification systems;
 -) Trial application of an EAFM to selected tuna fisheries;
 -) Trial risk analysis on bycatch and ETP species
 -) Review of national fishery laws and regulations in line with WCPFC requirements;
 -) Development of national tuna fishery profile;

-) Development of a sustainable fishing manual; etc.
- d) During the last one year, nine workshops were convened to review the progress of consultancy reports listed above. A total of 480 participants attended these workshops.

VI. Voluntary Contributions from Members and Observers

12. 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 2016/17, approx. USD 1 million for various research projects such as, simulation testing of reference points, estimation of post-release sharks and rays survival on longline and purse seine fisheries and bigeye/yellowfin juvenile by-catch mitigation. The second 5-year programme of the Korean government to support the SPC's Pacific Tuna Tagging Project started in 2014, providing about USD 175,000 per year. During SC14, the Korean delegation has confirmed that they will continue to provide funding support for the Pacific Tuna Tagging Project for another five years (2019-2023).