



**SCIENTIFIC COMMITTEE  
TWENTIETH REGULAR SESSION**

Manila, Philippines  
14 – 21 August 2024

---

**REPORT OF THE PACIFIC TUNA TAGGING PROGRAMME STEERING  
COMMITTEE  
(PROJECT 42)**

---

**WCPFC-SC20-2024/RP-PTTP-02 (Rev.01)  
19 August 2024**

PTTP Steering Committee

## 1. Preliminaries

The 18<sup>th</sup> meeting of the PTTP Steering Committee was held via **video conference** on **1<sup>st</sup> August 2024** in preparation for the Twentieth Regular Session of the WCPFC Scientific Committee held in Manila, Philippines. Joe Scutt Phillips (SPC) chaired the meeting. Present with him in the room were SPC staff Bruno Leroy, Valerie Allain, Matthew Cunningham, Marion Boutigny, Caroline Sanchez and Sebastian Gislard.

### *Background*

The goal of the Pacific Tuna Tagging Programme is to provide data and knowledge for stock assessment and management of skipjack, yellowfin and bigeye tuna in the Pacific Ocean. The objectives of the PTTP, originally specified in [WCPFC-SC6-2010/GN-IP-04](#), and revised in 2016 ([SC12-RP-PTTP-01: PTTP Steering Committee, 2016](#)), are:

1. To obtain data that will contribute to, and reduce uncertainty in, WCPO tuna stock assessments including estimation of overall and local exploitation rates, extent of mixing and appropriate spatial strata for use in assessments.
2. To obtain information to better understand the interactions between tropical tuna species and major fishing gears to support development of mitigation measures (where appropriate) and better interpret fisheries data (e.g., CPUE).

Under these objectives, information collected includes age-specific rates of movement and mixing, movement between assessment regions and other adjacent regions of the Pacific basin, species-specific vertical habitat utilisation by tunas, and the impacts of FADs on their behaviour.

The PTTP Steering Committee was established by SC2 to provide guidance and oversight in the development of firstly the project document (WCPFC Regional Tagging Project Steering Committee, 2006) and subsequently of operational plans, implementation and analytical work. The current donors to the project are the WCPFC, the Republic of Korea, the Pacific Community (SPC) and the European Union.

### *Review and adoption of agenda*

The agenda was reviewed by those in attendance, with no requested changes or additions, and so adopted from the draft.

This adopted agenda is provided in **Annex 1**.

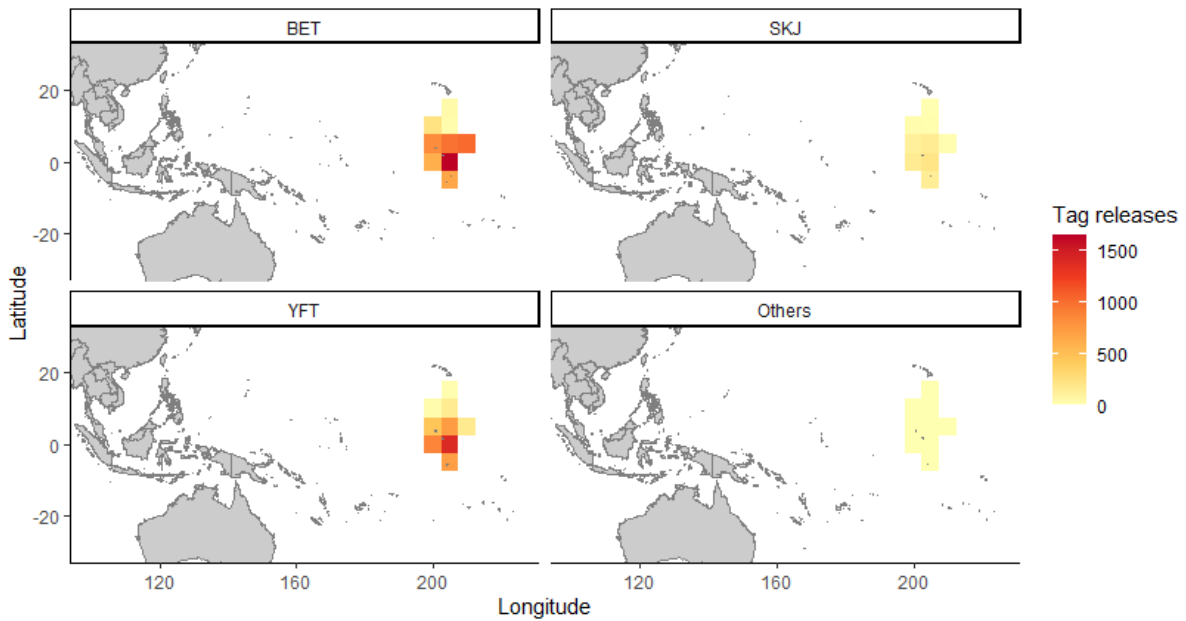
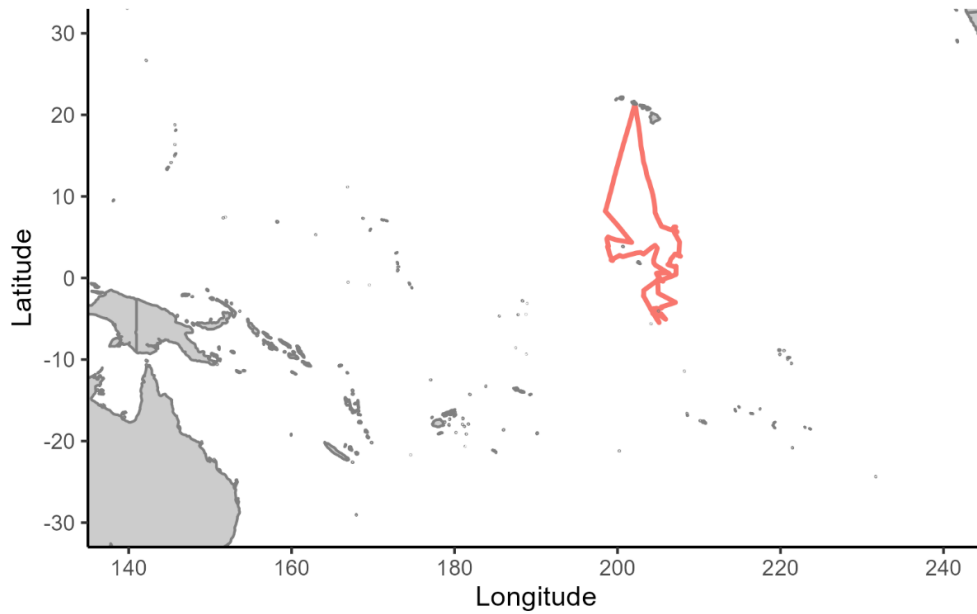
A list of participants is provided in **Annex 2** of this report.

## 2. PTTP Progress Report

SPC provided a presentation of PTTP Activities as described in [WCPFC-SC20-2024/RP-PTTP-01](#). The presentation followed the draft agenda sub-headers. A summary of the presentation is as follows.

### *2.1 2023 CP16 Cruise*

Bruno Leroy began with a brief summary of the wild tagging activities from last year, the Central Pacific 16 cruise. This 45-day cruise departed from Hawaii with no port calls, and tagged fish in the high seas, and EEZs of Kiribati and the USA. 11,319 tuna were tagged, with a notably larger proportion of yellowfin (40%), and smaller fish of around 40cms. A large effort was again made to release good numbers of fish injected with strontium chloride to support growth studies, with 1656 individuals marked using this protocol.

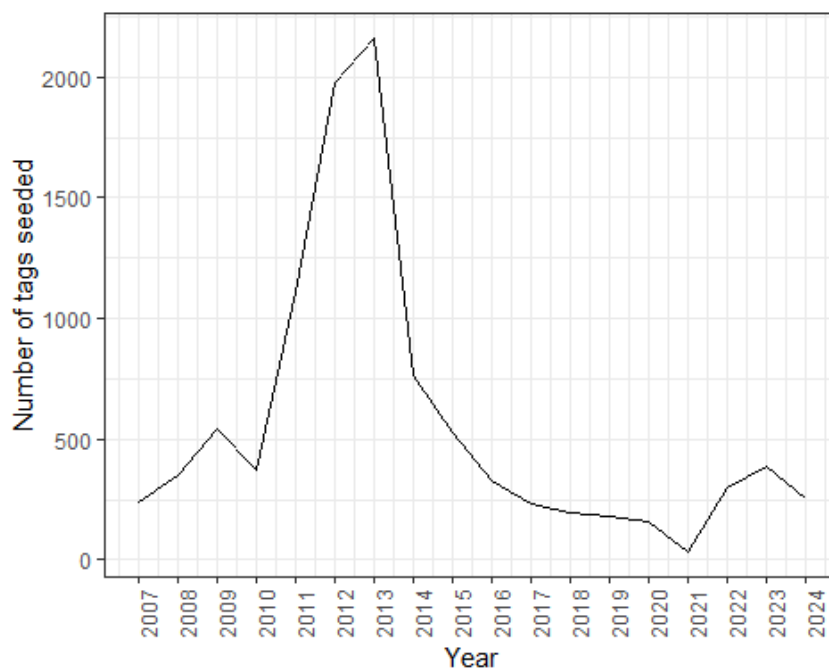


This was the most fish ever tagged and released during a Central Pacific Cruise, and in great part this was due to the collaboration from fishing industry partners sharing real-time access to drifting fish aggregating devices within the area of the research cruise. Over 1400 drifting FADs were shared with the scientific team, of which 76 were visited to tag fish. These FADs came from four separate fishing companies or fishery improvement program groups, who collaborate with SPC to support Pacific tuna science:

- Cape Fisheries
- The US Tuna Group
- Bolton/Trimarine Group, and;
- Oakcity Tuna Fishing Corporation

## 2.2 Tag Seeding

Joe Scutt Phillips gave a brief overview of tag seeding, that is the discrete planting of tags into dead fish by observers aboard fishing vessels, in order to estimate the degree to which these are reported further down the tuna product chain. Tag seeding experiments are implemented by Regional Observer Programmes. They are of critical importance to support the estimation of reporting rate parameters by fleets within WCPO tuna stock assessments, and in some cases can have a considerable effect on the influence of tagging data to the model.



Since 2014, the number of tag seeding experiments carried out in the WCPO has fallen significantly, although this trend has begun to reverse since 2022. Starting in 2024, SPC, as the scientific service provider for WCPFC, will begin supporting a large increase in the numbers of tag seeding experiments undertaken in the WCPO. This includes an experiment design that will aim to promote a ten-fold increase in the number of seeded tags from recent years, and provide good coverage across spatial, flag and tuna product network dimensions to allow more accurate estimation of reporting rates. In response to feedback from observer coordinators, a new 'plain-sight', non-secretive tag seeding protocol has been developed to facilitate easier implementation by observers. These dead fish can be tagged in plain sight of crew if needed, and then placed directly into wells where they cannot be recovered until unloading. A proportion of seeding experiments will continue to follow the original, 'secretive' protocol to allow comparisons between the two approaches, and the examination of the degree of communication between those unloading and fishing crew who may have witnessed the tag seeding.

Nicholas Ducharme-Barth (USA), asked the presenter if any thought had been given to the effect on tag reporting rates of a mass increase in tags being found throughout the fishery.

Joe Scutt Phillips (SPC) answered that it had always been very difficult to control or assume that there existed a constant rate of reporting in space and time, and in reality these rates were likely to change constantly.

Simon Nicol (SPC) also added that reporting rate estimates had become extremely uncertain in recent years, and that although this was a good point to raise, this large upscaling of tag seeding provided us with a real opportunity to calculate some accurate estimates of reporting rates across many factors for the first time.

## 2.3 2023-2024 Tag Recovery and Data Analyses

Joe Scutt Phillips gave a brief overview of recent tag recovery and data analyses, highlighting the recovery rate from the 2022, skipjack-focused WP6 cruise is now the highest on record at over 43%. The previous years' bigeye-focused CP15 cruise has steadily continued to have reported recaptures since its implementation in 2021, and now stands at a 21.7%, the highest on record for a central Pacific cruise since 2012. The most recent cruise, CP16 in 2023, is exhibiting a lower recapture rate, but with delays in reporting and a much different spatial fishing effort in the area tagging during the last 12 months, this may change.

Joe Scutt Phillips highlighted that, particularly in the case of bigeye tuna, longer-term recaptures from recent CP cruises continue to occur, in some cases greater than 18 months. Furthermore, the increased effort of marking fish otoliths using strontium chloride since 2019 has resulted in more biological samples of recaptured fish that can be used in growth validation studies. Archival tagged fish also continue to be recaptured, and the PTTP database for yellowfin tuna has been shared with Japanese colleagues at the Fisheries Research Institute to support development of bioenergetics models for this species (as detailed in Hasegawa et al., SC20-SA-IP-21).

Cruises	Release numbers				Recapture numbers and rate (%)			
	SKJ	YFT	BET	Total	SKJ	YFT	BET	Total
CP15 Jul - Aug 2021	98	1,344	6,445	7,887	1 (1%)	133 (9.9%)	1579 (24.5%)	1713 (21.7%)
WP6 Sep - Oct 2022	16,649	334	2	16,987	7230 (43.4%)	130 (38.9%)	0 (0%)	7360 (43.3%)
CP16 Aug - Sep 2023	815	4,485	5,996	11,296	21 (2.6%)	250 (5.6%)	223 (3.7%)	494 (4.4%)

## 3. Related Tag Activities

### 3.1 Tagging Platforms Update

Bruno Leroy took the floor to provide an update on the tagging platforms that support PTTP research cruises in the region. First of all, he provided a situation update on Western Pacific, pole-and-line vessels that support the large-scale tagging of skipjack tuna.

Since the inception of the PTTP in 2006, the project has chartered pole-and-line vessels from National Fisheries Development in the Solomon Islands. This arrangement has proven invaluable, and in particular FV Soltai 105 has a track record of success in the large-scale and long-range ability to tag skipjack tuna in large numbers. However, the vessel is not currently in a state to fish with this long-range capacity, and so a full refurbishment is required before it can undertake effective tagging activities again. Arrangements for the necessary administrative agreements to be made are in place, and once completed there will be a full refurbishment of the hull, engine, refrigeration and crew accommodation planned for 2024. This will permit the scheduled skipjack-focused PTTP cruise to be implemented at the end of 2024 or early in 2025.

In the medium term, the design of the Pacific Regional Research Vessel continues to advance. In April 2023 a naval architect was recruited to draft the vessel functionality study to respond to the requirements of Pacific countries, and this was used to publish a call of interest for shipyards to

undertake the construction. Five of these were pre-selected in December of 2023, and in 2024 the recruitment process to select the best shipyard and management company has begun. This is anticipated for signature and subsequent start of an 18- to 20-month construction in 2025.

## 4. Other Regional or Sub-Regional Tagging

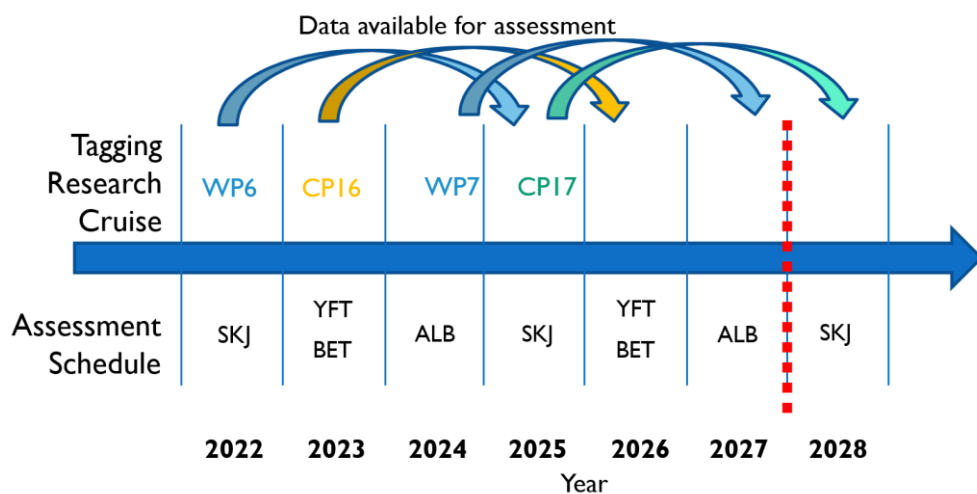
Joe Scutt Phillips told the floor that he had been in contact with parties from two of the regions other significant tagging programmes, the Japanese Tagging Programme, and the Inter-American Tropical Tuna Commission, and had been informed that there were no significant updates for the steering committee at this time. In the case of the Japanese Tagging Programme, equatorial tagging of skipjack has been suspended in 2023 following low recapture rates and this continues to be the case.

## 5. Work Plan 2024-2027

Joe Scutt Phillips continued by providing a short summary of items from the PTPP Report work-plan (SC20-RP-PTTP-01).

### 5.1 Tagging Cruises

A schematic of the research cruise and assessment schedule was provided, showing how data from tagging experiments feed into WCPO stock assessments for each species. Reiterating the planned skipjack-focused, Western Pacific cruise for the end of 2024 or early 2025, he also noted that the scheduled bigeye-focused, central Pacific cruise was also planned for 2025. Discussions with the fishing industry for how the sharing of drifting FADs could continue were already underway, particularly considering the shortening of the FAD-closure period to only 6 weeks since 2023.



### 5.2 Tag Seeding

The support to increase tag seeding deployments will continue in 2024 and into 2025, following the experimental plan mentioned in 2.2 *Tag Seeding*. This will also include the seeding of Japanese conventional tags in equatorial regions where these have historically taken place.

### 5.3 Tag Recovery and Data Analyses

To prepare for the upcoming stock assessment of WCPO skipjack tuna in 2025, a consolidation of historical skipjack recovery data is planned, including the re-examination of recoveries previously marked as unvalidated.

To shorten the chain of data entry between finders, tag recovery officers, SPC and the central database held on the TUFMAN2 platform, direct entry of data by officers into this database will be trialed in 2024. This is in parallel with continued work to develop more automated and objective ways to assure the quality and validation of tag return information, ensuring maximum value for their integration into WCPO stock assessments.

In anticipation of widespread finding of seeded tags, the tag recovery network is also being improved across the Pacific, with communication, online and in-person tag recovery and seeding training and promotional material being updated for several regions.

Several analyses are planned to support the 2025 stock assessment of WCPO skipjack, including updated estimations of tagging effects on mortality, reporting rates for informing priors in MULTIFAN-CL, and updated analysis of tag mixing effects on inclusion of recaptures.

## 6. ADMINISTRATIVE MATTERS AND RECOMMENDATIONS

### 6.1 Administrative matters.

Joe Scutt Phillips continued by providing the recommended budget for 2025, and indicative budget till 2027. As was discussed during the 2023 steering committee, the increasing co-financing of the PTTP by the scientific service provider during recent years has reached up to 38% annually. In order to reach a more sustainable co-financing, SC19 recommended incremental budget increases over a three-year period to bring this contribution to be under 25% by 2026.

The first year of these incremental budget increases for 2024 was approved at WCPFC20, and this was recommended to continue as indicated for 2025.

Budget	2021	2022	2023	2024	2025	2026	2027
<b>Total</b>	USD 1,433,875.00	USD 1,402,880.00	USD 1,450,000.00	USD 1,450,000.00	USD 1,475,000.00	USD 1,475,000.00	USD 1,475,000.00
<b>WCPFC</b>	USD 730,000.00	USD 730,000.00	USD 730,000.00	USD 800,000.00	<b>USD 875,000.00</b>	<b>USD 950,000.00</b>	USD 950,000.00
<b>Republic of Korea</b>	USD 166,000.00	USD 166,000.00	USD 166,000.00	USD 166,000.00	USD 166,000.00	USD 166,000.00	USD 166,000.00
<b>SSP</b>	USD 537,875.00	USD 506,880.00	USD 554,000.00	USD 484,000.00	USD 434,000.00	USD 359,000.00	USD 359,000.00
<b>SSP%</b>	38%	36%	38%	33%	29%	24%	24%

Sung Kwon Soh (WCPFC) pointed out the contribution from the Republic of Korea was not fixed, but rather subject to variation due to currency conversion, so may not be fixed at US\$166,000 annually. Joe Scutt Phillips (SPC) responded that, for the purposes of reducing the co-financing contribution of the SSP to under 25%, if the exact contribution varied to some degree this was not critical.

### 6.2 Recommendations to SC20

Finally, Joe Scutt Phillips presented the recommendations to SC20 as provided in the PTTP Report (SC20-RP-PTTP-01):

- Note the critical importance of effective tag seeding for informing stock assessment and support the increased deployment and fleet coverage of tag seeding experiments through regional and national observer programmes.

- Note the need for member participation and support in tag reporting as both wild and seeded tags continue to be found throughout the fishery.
- Note and support the ongoing regional fisheries research vessel project.
- Consider and support the PTPP work-plan for 2024- 2027.

## **7. ADOPTION OF REPORT**

A draft report of the Steering Committee of the PTPP was provided to members on the 5<sup>th</sup> of August 2024 through email. Steering Committee members were invited to make comment until, and provide endorsement by, the 13<sup>th</sup> of August. These comments were collated into the final report, which was submitted to WCPFC posted to the SC20 website on the 19<sup>th</sup> August 2024.



**PACIFIC TUNA TAGGING PROJECT  
STEERING COMMITTEE**

Electronic Meeting

**1 August 2024 (from 10:00-10:30 hours Pohnpei time (UTC+11 hours))**

---

**ADOPTED AGENDA**

---

**WCPFC-SC20-2024**

**1. PRELIMINARIES**

- 1.1 Review and Adoption of Agenda

**2. PTPP PROGRESS REPORT**

- 2.1 2023 CP16 Cruise
- 2.2 Tag Seeding
- 2.3 2023-2024 Tag Recovery and Data Analyses

**3. RELATED TAG ACTIVITIES**

- 3.1 Tagging Platforms Update

**4. OTHER REGIONAL OR SUB-REGIONAL TAGGING**

- 4.1 Other tagging projects

**5. WORK PLAN 2024-2027**

- 5.1 Tagging Cruises
- 5.2 Tag Seeding
- 5.3 Tag Recovery and Data Analyses

**6. ADMINISTRATIVE MATTERS**

- 6.1 Administrative Matters
- 6.2 Recommendations to SC20

**7. ADOPTION OF REPORT**

## Annex 2. Attendee list of the 2024 PTTP Steering Committee

Name	Affiliation
Joe Scutt Phillips	SPC
Simon Nicol	SPC
Bradley Phillip	SPC
Matthew Cunningham	SPC
Ren-Fen WU	Chinese Taipei
MATSUBARA Naoto	Japan
Elaine G. Garvilles	WCPFC
Valerie Allain	SPC
SungKwon Soh	WCPFC
Leyla Knittweis	New Zealand
Jed Macdonald	SPC
Nicholas Ducharme-Barth (NOAA)	USA
Sebastien Gislard	SPC
FM-NORMA	NORMA
Giulia Anderson	SPC
Mike Batty	Tuvalu
Monte Depaune	Nauru
OKAMOTO Kei	Japan
Caroline Sanchez	SPC
Marion Boutigny	SPC

**Annex 3: Proposed PTPP work-plan for the period 2024-2027.**

		0	2024	2025	2026	2027	Key
Tagging	Skipjack-focused cruise		Pole and Line Western Pacific skipjack-focused cruise	Skipjack-focused cruise	Skipjack-focused cruise		Planned activity
	Bigeye-focused research cruise			Bigeye-focused cruise		Bigeye-focused cruise	Potential activity
	Tag Seeding through Regional Observer Programmes		Upscale in tag seeding effort and coverage		Continued tag seeding		
Tag Recovery	Support and development of tag recovery network		Training of new TRO for Thailand canneries. Support TROs for Americas ports	Increased engagement from east Asian canneries			
	Support and develop tag recovery and validation		Trial integration of cannery data into tuna product flow network	Development of automatic validation tools			
			Consolidation of historical tag validation				
	Implementation and revision of tag reward schemes		Update and restock of tag rewards				
Data management	Tagging data validation using VMS, logbook, and cannery data		Ongoing				
	Maintain and develop PTPP databases and related tools		Migrate tag release data entry software to TUFMAN2	Trial decentralised TUFMAN2 data entry by TROs			
Data Analyses	Provide tagging data for inclusion in stock assessment and related analyses		Integration of yellowfin tagging data into SEAPODYM	Skipjack tagging data provision	Yellowfin and bigeye data provision		
	Reduce uncertainty in WCPO stock assessments			Updated tagging effects, reporting rates and mixing analyses	Updated tagging effects, reporting rates		
	Increase understanding of tuna-fishing gear interactions and interpretation of fisheries data		Exploration of archival tagging for habitat influenced CPUE indices				