WCPFC PACIFIC MARINE SPECIMEN BANK
STEERING COMMITTEE

ELECTRONIC MEETING
26 July 2022 (from 10:00-11:00 hours Pohnpei time (UTC+11 hours)

Report of the Pacific Marine Specimen Bank Steering Committee

WCPFC-SC18-2022/RP-P35b-02

10 August 2022

PMSB Steering Committee

1. PRELIMINARIES

The 4th meeting of the Pacific Marine Specimen Bank Steering Committee was held via video conference through Microsoft Teams at 10-11 am, Noumea time, on 26 July 2022, in preparation for the 18th Regular Session of the WCPFC Scientific Committee (SC18).

A list of meeting participants is provided in Annex 1 of this report.

Background

The WCPFC Pacific Marine Specimen Bank (PMSB; renamed from the Tuna Tissue Bank) is a repository of biological samples from marine specimens collected from across the WCPO, and its ongoing operation is now funded by WCPFC through Project 35b. WCPFC established its PMSB so that national and international fisheries research institutes could access the collections needed to advance our understanding of the dynamics of tuna and related species in the WCPFC region (including analyses to estimate spatially- and temporally-explicit age, growth and reproductive parameters, and to investigate stock structure, for consideration within future stock assessments). In a broader ecosystem context, the collections are also used for trophic analyses, including diet studies, measurement of stable isotopes, mercury and other biochemical elements for exploring trophic structure and movement, in addition to taxonomic studies. The dedicated website of the PMSB is accessible at: https://www.spc.int/ofp/PacificSpecimenBank.

The objective of Project 35b is to maintain the PMSB, with particular emphasis on WCPO bigeye, yellowfin, albacore and skipjack tunas and swordfish, and, to facilitate transmission of samples to specified researchers with due cognizance of the WCPFC PMSB Access Protocols. SPC as the Scientific Services Provider (SSP) is tasked with maintaining and developing the PMSB, and through the biological sampling programme, expanding the inventory of samples held.

In 2018, it was agreed to run the process of PMSB reporting in a similar manner to the PTTP (Project 42) at SC15, with a brief report of the PMSB Steering Committee presented to the SC Plenary by its chair (i.e. this report). This serves to expedite the work of the Scientific Committee whilst giving adequate time to discuss details of the PMSB during the Steering Committee meeting.

1.1: Review and adoption of agenda

The provisional agenda for the PMSB Steering Committee meeting was adopted and is provided in Annex 2.

2. PMSB PROGRESS REPORT

Prior to the PMSB Steering Committee meeting, a progress report to SC18 on PMSB activities during 2021-22 (SC18-RP-35b-01) was finalised, posted on the SC18 website at https://meetings.wcpfc.int/node/16208 and made available to meeting participants. A presentation summarising the progress report was given at the meeting and the presentation file is posted on the SC18 website at https://meetings.wcpfc.int/node/16549. Below we outline the key information presented to participants under Agenda item 2.

2.1: PMSB activities – Between 1 July 2021 and 30 June 2022, 28,121 new biological samples, taken from 5,018 fish, were added to PMSB holdings. SPC now houses 175,857 biological samples taken from 48,749 individual animal specimens.

2.2: Observer-based sampling – From early 2020 opportunities for onboard sample collection in most countries has been limited due to the implementation of National and Regional level restrictions

to prevent the transmission of Covid-19. While the number of observer trips during 2021 matched 2020's numbers, the sampling rate, and consequently the number of fish sampled were both lower in 2021. The 2022 first half-year results are back on the 2020 trajectory

2.3: Port sampling – Port sampling in 2020-21 has been increased to compensate for the ongoing uncertainty around at-sea sample collection. The number of fish sampled in 2021 increased again about 60% on 2020's numbers, and the 2022 first half-year results are already similar to totals for all of 2021.

2.4: Training – Over the past 12 months, 18 observers, port samplers and fisheries officers undertook training in biological sample collection, with a total of 664 samplers trained to date.

New training resources and tools have been developed and released. The Longline Observer Guide (2021) and Purse Seine Observer Guide (2021) were revised by SPC and are now updated from the 2007 versions. The updates were necessary to reflect changes in the observer data forms (version 2018) and data collection protocols. The implementation of new regional Conservation and Management Measures (CMMs) has also changed some of the focus of the observer's role, such as an increasing focus on collecting data on species of special interest (SSIs) and mitigation measures to prevent their capture. Some shark and pelagic ray species have also had their status changed to SSIs, requiring specific catch and interaction data to be collected by observers so that flag states can report on the impact of the fishery on SSIs. A series of 17 video tutorials documenting how to identify, extract and collect biological samples from tunas, mahi mahi, wahoo and billfish, as well as how to correctly record biological sampling data have been produced. These will be used as training material for observers, fisheries officers, fishing captains and crew, and as informative technical material for high school and university science students. The videos will soon be available for viewing on the PMSB website.

2.5: Infrastructure – The PMSB has long-term storage facilities at SPC Headquarters in Nouméa and at CSIRO, Brisbane, Australia. The re-development of infrastructure in Nouméa has recently commenced. Currently, SPC has 75m² of space available for the PMSB and for running other lab-based projects. With the proposed extension of the laboratory, the work area will increase to 210m², including another 20m² of cold storage space.

2.6: *OnShore* and *OLLO* apps – During 2021-22, the ER application *OnShore* was used by port samplers to collect data at landing sites. Also, during 2021-22, the ER application *OLLO* was used by longline fisheries observers to collect data during at sea missions. *OnShore* and *OLLO* allow the collection of data on species and length as well as data about the biological samples collected for each specimen sampled. Data collected using *OnShore* and *OLLO* are uploaded to the regional database TUFMAN2 and then are automatically transferred into BioDaSys.

2.7: PMSB access and outputs – There was two formal requests from third parties to withdraw samples from the PMSB in 2021-22. Several informal enquiries were registered from university-based researchers around sample availability and access rights in the context of future collaborative projects.

At present, 25 projects are classified as 'pending' in accessing samples from the PMSB for WCPFC-related work, led by SPC and/or other national and international organisations. 32 projects using PMSB samples are 'completed' as at 30 June 2022.

Seven additional papers, linked either directly or indirectly to the PMSB, will be submitted to SC18 this year as Information Papers or Research Papers. A total of six other books, peer-reviewed journal articles, conference papers or popular articles associated with PMSB work were published during the 2021-22 reporting period (see SC18-RP-35b-01 for details).

3. WORK PLAN 2022-23

3.1 : General work plan

The PMSB work plan for the coming year was presented. Actions planned for 2022-23 continuing from previous years, include:

- Completion of a document on standard operating procedures for the PMSB.
- Development of infrastructure in Nouméa (i.e. laboratory extension).
- Provision of training to members interested in using *OnShore* and *OLLO* for biological sampling.
- Forward for signature the "Agreement on access and benefit sharing for non-commercial research" to WCPFC members to comply with Nagoya protocol.
- Continue to update and improve training materials for biological sampling.
- Continue the development and enhancement of E-reporting apps.
- Contribute, where practicable, to data collection for related projects (e.g. improvements in 'conversion factor' data collection in the Solomon Islands, linked through WCPFC Project 90).

New actions planned for 2022-23 include:

- Initiate the improvement of our procedures to reach the requirements of the ISO 20387 international standard.
- Development of the PMSB website to better highlight the use of the PMSB samples and associated outputs.
- Development of a WCPO-wide sampler network for the collection of tuna genetics samples.
- Relaunch biological sampling in Marshall Islands, Federated States of Micronesia and Samoa through a Grant Agreement process.

Steering Committee discussion

The Steering Committee asked about the number of observer trips conducted in 2021. SPC clarified that in relation to slide 3 of the presentation that the right-hand y-axis represented observer trips and noted that while the number of samples collected is higher in the last year, the proportion of trips remained low due to Covid-19 restrictions imposed upon observer programmes and port access.

The Steering Committee asked about the funding of the laboratory extension. SPC explained that funding was provided by SPC with additional support potentially from the New Zealand government.

The Steering Committee asked the SSP if it had collaborated with Japan to prepare their information paper SC18-GN-IP-08 (posted on both the SC18 meeting website and the SC18 Online Discussion Forum). This paper proposes a WCPFC agreement on access and benefit sharing for non-commercial research (under the Nagoya Protocol of the CBD). The SSP noted that it did not collaborate with Japan on this proposal. Separate to the SC18-GN-IP-08 information paper, the SSP advised that it was close to establishing appropriate agreements for PMSB operations under the Nagoya Protocol.

The meeting ended with a discussion on future interactions between SPC and IATTC regarding biological sampling activities and the PMSB network. IATTC representatives noted that they expect to continue sampling activities in their jurisdiction with the artisanal shark fisheries (an extension to the Common Oceans ABNJ project) and that broader collaboration with WCPFC was possible, although they noted that they do not yet have the established infrastructure for broad scale sampling in the EPO. The IATTC noted that the MOU that is about to be renewed between WCPFC and IATTC will provide opportunities for collaboration with the PMSB. The IATTC noted that it was still to be determined as to whom within their organisation would represent the IATTC at WCPFC meetings and facilitate collaborations.

The IATTC also noted that the E-reporting applications *OnShore* and *OLLO* could be useful to their work. The SSP responded that it is happy to share the technology. Similarly, IATTC mentioned that it has a length and weight data collection programmes in place which could be linked to WCPFC Project 90.

4. ADMINISTRATIVE MATTERS

4.1: Budget – The annual cost of supporting the PMSB is USD 97,200 baselined in 2018, with an annual inflation adjustment agreed by the Commission in 2018 for out-years.

The Steering Committee was reminded that the approved budget for 2022 was USD 103,204 with indicative annual budgets for 2023 and 2024 are USD 105,269 and USD 107,374 respectively. This comprises 60% for PMSB coordination, information management and training for samplers, 23% for sampling fees and freight, and 17% for the additional storage facility in Brisbane.

The WCPFC Secretariat requested that an Annex be added to this report that summarises the completion of activities as per the WCPFC Services Contract to the SSP for Project 35b activities in 2022. This summary will make the administrative processes of SC18 more efficient. They also requested a summary of the milestones and budget for 2023 activities to be included in this Annex.

This request has been provided as Annex 3 to this report.

4.2: Recommendations to SC18 – The PMSB Steering Committee endorsed the SC18 recommendations specified in SC18-RP-P35b-01:

- Continue to support initiatives to increase rates of observer biological sampling, noting that this contribution is essential to the ongoing success of the WCPFC's work.
- Incorporate the identified budget into the 2023 budget and the 2024-25 indicative budgets, as development of the WCPFC PMSB is intended to be ongoing and is considered essential.
- Support efforts to obtain further super-cold storage capacity to ensure longevity of PMSB samples.
- Endorse that the work plan in Section 4 of this report should be pursued by the SSP, in addition to standard duties associated with maintenance and operation of the WCPFC PMSB in 2022-23. Detailed terms of reference of Project 35b for SC18 consideration are available in SC18-GN-IP-07.

5. ADOPTION OF REPORT

A draft report of the 4th PMSB Steering Committee meeting was sent to meeting participants on 27 July. Comments were invited from registered participants up until 17:00 Pohnpei time (UTC 6:00) on 11 August 2021, following which a final endorsed version was posted on the SC18 website (i.e. this report). Please direct any comments and suggestions to Francois Roupsard and Jed Macdonald at SPC (francoisr@spc.int, jedm@spc.int).

Annex 1 – Registered participation list of the 2022 PMSB Steering Committee.

Name	Delegation
Aoki Yoshinori	FRA Japan
Aurelie Guillou	Pacific Community
Aurélien Panizza	Pacific Community
Bruno Leroy	Pacific Community
Dave Itano	The Nature Conservancy
Elaine G. Garvilles	WCPFC Secretariat
Francois Roupsard	Pacific Community
Graham Pilling	Pacific Community
Jed Macdonald	Pacific Community
Jessica Farley	CSIRO
Joe Scutt Phillips	Pacific Community
John Annala	New Zealand MPI
John Hampton	Pacific Community
John Morrongiello	The University of Melbourne
Jon Lopez	IATTC
Juan Wang	The University of Melbourne
Leanne Fuller	IATTC
Leyla Knittweis	New Zealand MPI
Malo Hosken	Pacific Community
Matsuraba Naoto	FRA Japan
Michael Marsik	NOAA
Ren-Fen Wu	Taiwan FA
Shane Griffiths	IATTC
Simon Nicol	Pacific Community
Stephen Newman	DPIRD Australia
SungKwon Soh	WCPFC Secretariat
Valerie Alain	Pacific Community
Vanille Barthelemy	Pacific Community

Annex 2 – Adopted agenda of the 2022 PMSB Steering Committee.

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ELECTRONIC MEETING
26 July 2022, from 10:00-11:00 hours Pohnpei time (UTC+11 hours)

DRAFT AGENDA

WCPFC-SC18-2022/02

1. PRELIMINARIES

1.1 Review and adoption of agenda

2. PMSB PROGRESS REPORT

2.1 PMSB Activities (WCPFC-SC18-2022/RP-P35b-01)
2.2 Observer-based sampling
2.3 Port sampling
2.4 Training
2.5 Infrastructure
2.6 *OnShore* and *Ollo* apps
2.7 PMSB access and outputs

3. WORK PLAN 2022-23

3.1 General work plan
3.2 Other initiatives

4. ADMINISTRATIVE MATTERS

4.1 Budget
4.2 Recommendations to SC18

5. ADOPTION OF REPORT

Annex 3 – Summarised PMSB activities and achievements for 2022 and indicative milestones and budget for 2023.

2022 SCOPE OF WORK	ACHIEVEMENT	REFERENCE
Maintain and develop: • the public SPC webpage; • a web-accessed database holding non-public data; • a relational database that catalogues the samples to include fishery/sampling metadata; and • the Brisbane (CSIRO) storage site.	See www.spc.int/ofp/PacificSpecimenBank ER systems for observers and port samplers upgraded to include biological sampling	Section 2.5 SC18-RP-P35b-01
Tissue sample utilisation and a record of outcomes/outputs will also be detailed in the relational database	See www.spc.int/ofp/PacificSpecimenBank and section 2.5 and 3 in SC18-RP-P35b-01	SC18-RP-P35b-01
Subject to approval by the WCPFC Executive Director: • metadata will be made available to institutions or organizations responsible for providing scientific advice in fisheries through the web-accessible component of the database, and subsequently, and • SPC-OFP will facilitate the transmission of requested samples to specified researchers/organisations, and the return of unused and/or processed samples to the relevant storage facility	See section 2.3 and Table 3 SC18-RP-P35b-01	SC18-RP-P35b-01
As agreed at SC17RP-P35b-03, the Scientific Services Provider will: • support initiatives to increase rates of observer biological sampling; • provide a background paper with suggested revisions to the access protocols for the PMSB to eliminate any ambiguity associated with depositing or withdrawing samples from the PMSB; and • complete the Work Plan 2021-2022 in WCPFC-SC17-2021/RP-P35b-02.	Port sampling increased to maintain sampling during Covid-19 restrictions New incentive structure created for observer and port-sampling, including adding third-party agents to coordinate and compensate (MRAG Asia Pacific) and the arrangement of Direct Grant Agreements. Workplan completed	SC18-RP-P35b-01
OUTPUTS AND SCHEDULE		
2022 progress report to the WCPFC Secretariat	https://meetings.wcpfc.int/node/16208	SC18-RP-P35b-01
Conduct of the 2022 WCPFC PMSB Steering Committee meeting,	https://meetings.wcpfc.int/node/16345	SC18-RP-P35b-02
Steering Committee meeting report, including 2023-25 WCPFC PMSB work plan,	https://meetings.wcpfc.int/node/16345	SC18-RP-P35b-02
Submission of a 2022 project final report to the WCPFC Secretariat by 31 December 2022.	Due December 2022	

2023 SCOPE OF WORK	Indicative WCPFC Budget (USD)	SPC Third Party* contributions (USD)	CSIRO Contributions (USD)
Tuna tissue bank coordination, information management and training for samplers	63,161	60,000	
Sampling fees and freight	24,212	60,000	
Storage	17,896		

*Third-party contributions include SPC programme funds provided by Australia and New Zealand and those of the European Union's Pacific-European-Union-Marine-Partnership project