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Training observers for elasmobranch biological sampling (Project 109)

WCPFC-SC21-2025/ST-IP-06

SPC[1]
Tim Park

[1] Oceanic Fisheries Programme (OFP),
Pacific Community (SPC), Noumea, New Caledonia

Introduction

The Western and Central Pacific Fisheries Commission's (WCPFC) CMM 2010-07 identified 14 key shark species, including three raised to Species of Special Interest (SSI) status. Additionally, the *Pacific Islands Regional Plan of Action for Sharks* suggests six additional 'high risk' species among the key species (Clarke and Harley (2014), SC10-EB-IP-06 and SC6-EB-WP-01). More recently, six mobulid rays were also included among the key species (Clarke *et al* 2017*;* Park, 2019). The designation of Key Species raises these shark species' status in terms of the need for stock assessment and hence supportive data collection (Clarke *et al*, 2017).

WCPFC SC Project 97 '*2021-2025 Shark Research Plan*' (Brouwer & Hamer, 2020) highlighted gaps in data that are needed for elasmobranch stock assessment. It recommended:

> *The SC develop an "agreed suite" of biological parameters (or upper and lower bounds) and units of measurement (e.g. total length) for use in WCPFC assessments and update the information sheets accordingly*.

Brouwer and Hamer (2020) emphasised that observers be used to collect biological material from dead Key Shark species. Data collected should include standardised length, weight (when possible), ageing material (vertebrate samples), clasper length, uterine condition, number of embryos and embryo lengths. These data are critical for assessing growth rates, maturity, fecundity and pupping areas.

CMM 2024-05 for Sharks under paragraph 24(4) and its predecessor (CMM 2022-04) allow for observers to *take biological samples of protected sharks, oceanic whitetip sharks and silky shark that are dead on haul-back in the WCPO, provided that the samples are part of a research project of that CCM or the SC.*

The 17th Commission Annual Meeting (Anon., 2021) endorsed the 2021-2025 Shark Research Plan and its recommendations, including project X8, as *Project 109: Training Observers for Elasmobranch Biological Sampling*.

The scope of Project 109 included:

> i) the development of material for methods for collection, recording, storing, and measuring of samples; and
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> ii) workshops in selected locations to demonstrate the techniques for the observers, and then provide practical training on the collection of these samples

Protocols for biological sampling of sharks have already been established, such as the collection of shark biological samples (White, 2014), including the efficacy of collecting caudal vertebrae for shark ageing, demonstrated by Joong, *et al* (2018).

SPC develops standardised training materials, facilitates and delivers observer training to Pacific Island Countries and Territories through the Pacific Islands Regional Fisheries Observer (PIRFO) training framework, funded through the Regional Observer Cost Recovery.

PROJECT 109 UPDATE

SPC were contracted to conduct the work of Project 109 with a budget of US$25,000 on February 1, 2021. US $20,000 has been advanced to conduct the work, but the project was suspended during the COVID-19 pandemic. SC19 agreed to a no-cost extension to the project period to the end of December 2024, to complete the consultancy, develop the materials, and implement the protocols in the following year of observer training.

A Request for Quotes (RFQ) for an expert consultancy to develop shark sampling protocols and produce associated training materials was advertised on April 1, 2024. Five bids were received, and one contractor selected. Processing of bids was delayed due to the disruptions to SPC offices and travel during the New Caledonian civil crisis. WCPFC therefore granted a further no-cost extension to allow the completion of the work after the crisis ended.

The main output of Project 109, the Observer Training Guide for the Collection of Shark and Ray Biological Information was submitted in early January 2025 and accepted in early February 2025, with proposed data collection forms (Grant, 2025), posted on the SPC Digital Library as well as the PIRFO website for access by Pacific Islands' Regional Fisheries Observers.
https://www.spc.int/digitallibrary/get/2ai4f
https://www.pirfo.org/index.php/resources/downloads/category/33-manuals

The contractor was subsequently paid for the work completed. The demonstration of the protocols will be done under the current no-cost extension at the PIRFO Trainers Workshop in November 2025.

Ongoing Work

1. The consultant will demonstrate elasmobranch biological sampling protocols to certified observer trainers at PIRFO Trainer and Assessors' workshop in November 2025 under the current no cost extension to the Project 109.
2. Implementation of elasmobranch biological sampling training in the scheduled face-to-face observer and refresher training workshops. This would be linked in with the shark and ray species identification and handling guidelines (Hutchinson, *et al* 2025) in the ongoing PIRFO observer training workshops.

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