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TRAINING OBSERVERS FOR ELASMOBRANCH BIOLOGICAL SAMPLING (PROJECT 109)

WCPFC-SC20-2024/ST-IP-06

SPC-OFP¹
Tim Park

¹ Oceanic Fisheries Programme of the Pacific Community

INTRODUCTION

The Western and Central Pacific Fisheries Commission's (WCPFC) CMM 2010-07 has 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. (See also 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.

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 includes:

- i) the development of material for methods for collection, recording, storing, and measuring of samples; and
- 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 are 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 facilitates and develops standardised materials for observer training in the region through the application of the Regional Observer Cost Recovery. However, shark and ray specific protocols have not yet been compiled and integrated into the Pacific Islands Regional Fisheries Observer (PIRFO) training.

1. 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.

Since late 2022 observer programmes have been returning to normalised observer operations. The 2023 observer programme status survey done by SPC revealed that most programmes have suffered

attrition of field staff during the COVID-19 pandemic period. To meet their capacity needs, national observer programmes have been requesting that SPC conduct and support PIRFO observer training, refresher and debriefer training. Face-to-face observer training resumed from late 2022, this has enabled practical biological sampling tuition to resume in general observer training, as well as specific techniques under SPC projects.

Members are requesting training workshops for the remainder of 2024. Once the material is finalised, shark biological sampling will be included.

The training with respect to sharks will include the three key aspects of observer data collection from the Shark research Plan 2021-2025 (Brouwer and Hamer, 2020):

- i. Biological sampling;
- ii. Shark species identification focusing on the Key Shark Species has been adopted into PIRFO observer training for all PICTs observer programmes, using SPC's Shark and Ray identification;
- iii. collecting morphometric conversion factors data of many species including Key Shark species, as per Project 90 (Macdonald et al, 2023).

A Request for Quotes (RFQ) for an expert consultancy to develop shark sampling protocols and produce associated training materials has circulated, 5 bids received, and one contractor selected at the time of writing. Processing of bids was delayed due to the disruptions to SPC during the current New Caledonian civil crisis and travel into and out of Noumea remains a problem with very limited and irregular flights scheduled. However, a contractor has been selected and it is anticipated that the development of materials will be underway by the time of SC20.

2. PLANNED SCHEDULE

1. Complete short-term consultancy to develop regional elasmobranch sampling protocols and produce associated training materials (Aug-Sept. 2024).
2. Develop standardised protocols for collection of morphometric and biological (age, reproductive) samples (Sept.2024)
3. Trial the utility of protocols (Sept 2024).
4. Introduce elasmobranch biological sampling to certified observer trainers at PIRFO Trainer and Assessors' workshop in late 2024.
5. Implement 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 conversion factors training in the planned 2024-25 PIRFO observer training workshops.

3. REFERENCES

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