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**TRAINING OBSERVERS FOR ELASMOBRANCH BIOLOGICAL SAMPLING
(PROJECT 109)**

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TRAINING OBSERVERS FOR ELASMOBRANCH BIOLOGICAL SAMPLING (PROJECT 109)

1. EXECUTIVE SUMMARY

This paper details the activities undertaken on Project 109 since SC17. The work has been limited due to the cessation of observer placement requirements because of the COVID-19 pandemic, and the related regional restrictions on international travel that have presented the face-to-face training necessary to undertake the work. Following recent regional decisions scheduling the recommencement of observer coverage, and the relaxation of many regional travel restrictions, requests for face-to-face observer refresher training have begun. These will allow practical training such as biological sampling, shark biological sampling to be included. Online observer training material is currently being developed and will support elasmobranch identification, fate, and some background material for biological sampling. A Request for Quotes for a consultancy to develop shark sampling protocols and produce associated training materials has also been drafted and will be released for bids.

Resumption of travel to allow observer deployment and face to face training is necessary for Project 109 implementation. **We therefore request that a no-cost extension to the project period to the end August 2023 be considered to reflect the challenges in undertaking project activities during the COVID19 global health crisis and anticipated return to normal observer operations, and to allow reporting to SC19.**

2. 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 for consideration. (see also 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 their 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.

They 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.

Furthermore, the SC16 Summary Report (Anon., 2020) included among new projects:

Project X8: Training observers for elasmobranch biological sampling. The shark research plan highlighted the large gaps in biological knowledge for many species. The project would develop training material and train observers through workshops.

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 including the efficacy of collecting caudal vertebrae for shark ageing which has been demonstrated by Joong *et al* (2018). However, shark and ray specific protocols have not yet been compiled and integrated into the Pacific Islands Regional Fisheries Observer training.

3. PROJECT 109 WORK TO DATE

SPC were contracted to conduct the work of Project 109 with a budget of US\$25,000. This was signed on February 1, 2021. US \$20,000 has been advanced to conduct the work, but at this time there has been no expenditure in this project given the challenges of the COVID-19 pandemic.

While SPC has conducted observer training in the region during the pandemic, it has been done remotely via Zoom. Training remotely has limited the topics to focus on collecting fishing operational information and species identification. Biological sampling training has not been conducted owing to its practical nature, which requires face-to-face training and assessment. Travel restrictions throughout the region meant that training observers in biological sampling has been postponed until face-to-face training becomes possible.

PICTs² programmes have made very few observer placements since April 2020, when the WCPFC allowed a moratorium on observer coverage for purse seine and transshipment vessels. FFC122 in May 2022 agreed to end the moratorium among their members and return to mandated observer coverage levels by 1 January 2023. This decision was mirrored by the WCPFC, as detailed in WCPFC-SS4-2022-Outcomes. Over the next several months FFA members' programmes will be resuming observer operations as per their *Agreed Minimum Requirements for Safe Observer Redeployment*.

In preparation for their return to normal observer operations, national observer programmes have begun requesting that SPC conduct or support PIRFO observer training, including refresher and debriefer training.

Refresher training of observers is required for redeployment as most of the 800+ PIRFO observers have been unable to meet minimum sea-time requirements. Refresher training will ensure that the returning observers are competent to carry out their duties. As international borders among PICTs are now reopening, these training workshops can be held face-to-face to allow practical training such as biological sampling, shark biological sampling would also 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, 2021).

² Pacific Island Countries and Territories

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4. PLANNED SCHEDULE

1. Complete short-term consultancy to develop regional elasmobranch sampling protocols and produce associated training materials.
2. Develop standardised protocols for collection of morphometric and biological (age, reproductive) samples.
3. Trial utility of protocols.
4. Introduce elasmobranch biological sampling to certified observer trainers at PIRFO Trainer and Assessors' workshop in late 2022.
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 2022 observer training workshops.

5. REFERENCES

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