**SC12 Work Programme and Budget**

**Table 1:** List of SC work programme titles and budget for 2017, and indicative budget for 2018–2019, which require funding from the Commission’s core budget. **Budgets for boldface projects** were approved by the Commission**.**

(Budget in USD; Es.=Essential, Pr.=Priority; priority 1 = low, 3 = high).

| **Project title** | **Terms of references /**  **Scope of work** | **Es.** | **Pr.** | **2016** | **2017** | **2018** | **2019** |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **SPC Oceanic Fisheries Programme Budget** |  | x |  | ~~1,031,200~~  **871,200** | ~~1,031,200~~  **871,200** | ~~1,031,200~~  **871,200** | ~~1,031,200~~  871,200 |
| **Additional Resourcing SPC** | Note: Additional resourcing for harvest strategy evaluation, including stock assessments. |  |  | **160,000** | **160,000** | **160,000** | 160,000 |
| **Project 14. West Pacific East Asia (WPEA) Project** | Note: Co-financed budget to get the GEF-Fund | x |  | **25,000** | **25,000** | **25,000** |  |
| **Project 35. Refinement of bigeye tuna parameters** | TORs annexed |  | 3 | **50,000** |  |  |  |
| **Project 42. Pacific-wide tagging project** | TORs annexed |  | 3 | **10,000** | **10,000** | **10,000** |  |
| **Project 57. Limit reference points (LRPs) Develop proposed limit reference points for elasmobranchs** | TORs to be developed |  | 3 | **25,000** |  |  |  |
| **Project 60: Further paired sampling and unloading data comparisons.**  - Budget would cover at-sea data collection (2nd observer), associated travel, some analytical support. $50,000 in each of 2016 and 2017. | TORs annexed |  | 2 | **50,000** | **50,000** | **0** |  |
| **Project 67: Review of impacts of recent high catches of skipjack on fisheries on the margins of the WCPFC Convention Area** | Draft TORs annexed |  | 2 | **40,000** | **40,000** |  |  |
| **New Projects identified by SC11** |  |  |  |  |  |  |  |
| **Project 35b. Maintenance and enhancement of the WCPFC Tissue Bank** | TORs annexed |  | 3 | **80,000** | **80,000** | **80,000** | 80,000 |
| Review of Shark Length-weight conversion factor for all key shark species | Note: reflected in Shark Research Project as part of a larger package of work |  | 1 | ~~10,000~~ |  |  |  |
| **Project 54. Sharks Monte Carlo mitigation analysis for purse seine, and extension of longline analysis** | TORs annexed |  | 3 | **25,000** |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project title** | **Terms of references /**  **Scope of work** | **Es.** | **Pr.** | **2016** | **2017** | **2018** | **2019** |
| **New Projects identified by SC12** |  |  |  |  |  |  |  |
| **Project 42** Pacific Tuna Tagging Programme (PTTP) | Draft TORs annexed |  |  |  | 1,380,000 | 690,000 | 1,380,000 |
| **Project 68[[1]](#footnote-1)**. Estimation of seabird mortality across the WCPO Convention area | Draft TORs annexed |  |  |  | 70,000-75,000 | 20,000-25,000 | 15,000-20,000 |
| **Project 67**: Review of impacts of recent high catches of skipjack on fisheries on the margins of the WCPFC Convention Area (Japan) | Draft TORs annexed |  |  |  | 40,000 | 40,000 | 30,000 |
| **Project 78 (NEW).** Review of shark data and modelling framework to support stock assessments | Draft TORs annexed |  |  |  | 65,000 |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |  |

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Project title** | **Terms of references /**  **Scope of work** | **Es.** | **Pr.** | **2016** | **2017** | **2018** | **2019** |
| **EU funded projects that require 20% matching funds** |  |  |  |  |  |  |  |
| Technical support for the HSW1  P63. Harvest control rules  P66. Target reference points  (TBC, max. EU contribution: 100,000 euro) | MSE Expert Consultation Meeting, 28-30 June 2016[[2]](#footnote-2) | x |  | ~~190,000~~  **30,000** | ~~160,000~~ |  |  |
| **Project EU-01**  Purse seine bigeye catch mitigation analysis (Simulation testing of reference points).   - Co-funding for expected EU contribution of 200,000 euro total for 2016 and 2017 | Note: Technical aspects of the proposal are complete. Secretariat is supposed to work on the proposal with SPC but neither parties have come up with how this money would be used. | x |  | ~~25,000~~ | ~~25,000~~ |  |  |
| **Project EU-02**  Post release of sharks and rays from longline and purse seine vessels (Estimation of post-release shark and rays survival on longline and purse seine fisheries)  (TBC, max. EU contribution: 400,000 euro for 2016) | Note: It was informed that SPC turned down working on this project in Month/Year  Note: ABNJ has allocated 250,000 USD to post-release mortality tagging of sharks in longline fisheries  Note: A concept note was provided to the EU by ABNJ and SPC on 6 August 2016 |  | 3 | ~~44,000~~ | ~~44,000~~ |  |  |
| **Project EU-03**  New mitigation trials or project for juvenile bigeye and yellowfin by purse seine (Mitigating bycatch of bigeye tuna and yellowfin tuna juveniles by purse seine fisheries)  (TBC, max. EU contribution: 400,000 euro for 2016) | Note: The project design will be influenced by the outcomes of current IATTC tagging work in the EPO. SPC may comment on this? |  | 3 | ~~44,000~~ | ~~44,000~~ |  |  |
|  |  |  |  |  |  |  |  |
| **Unobligated (Contingency) Budget** | Note: Any science-related projects requested by the Commission with no budget allocation |  |  | ~~83,000~~ | **83,000** | **83,000** |  |
| **SC12 TOTAL BUDGET** |  |  |  |  | **2,876,700** | **1,981,700** | **2,538,700** |
| **SC11 TOTAL BUDGET** |  |  |  | **1,732,200** | **1,592,200** | **1,229,200** |  |

**TERMS OF REFERENCE / SCOPE OF WORK**

# Project 35.

# Sampling in support of an age, growth and maturity study of bigeye tuna

SC7 Para 133: SC provided the following guidance for the P35 project design:

* that there should be an emphasis on the central equatorial region (150W – 170 W) for future sampling, but that sampling across the WCPO (30N – 30S) should be done;
* for this central equatorial region, there may be some value in collecting additional samples for maturity studies, but that up to 300 samples might be needed;
* consideration be given to a simulation-based approach to get a better understanding of the potential impact of regional patterns in growth and implications for stock status; and
* the importance of providing training to fishery observers on the collection of biological samples; and a detailed breakdown of the proposed budget should be given to allow the cost of particular activities and sampling in particular areas.

# project 35b

# Collection and evaluation of purse-seine species composition data

The scope of work will include, but not limited to, the following:

* Maintain and develop:
  + the public SPC webpage informing interested parties of the tissue bank, including the rules of procedure to access samples from the tissue bank.
  + a web-accessed database holding non-public data
  + a relational database that catalogues the samples to include fishery/sampling metadata
* Tissue sample utilisation and a record of outcomes/outputs will also be detailed in the relational database.
* 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,
  + 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.

# Project 42

# Commission’s support to the work of the Pacific Tuna Tagging Project in 2015

* Support for one or more tag-release cruises in the western and central equatorial Pacific during 2016
* Support for the development and implementation of a work plan for 2016 tagging activities
* Preparation of PTTP Steering Committee meeting during SC12 and production of the PTTP Progress Report and the 2016 Steering Committee Report

**Project 42 (REVISED PROPOSAL)**

**Pacific Tuna Tagging Programme (PTTP)**

It has been highlighted in SC12-SA-WP-04, SC12-MI-WP-05 and SC12-RP-PTTP-01 that regular tagging is required to support stock assessment and harvest strategy implementation for tropical tuna. SC12-RP-PTTP-01 proposed that skipjack and yellowfin focused tagging using pole-and-line fishing and bigeye tagging using handline fishing be conducted in alternate years.

The following funding support would be required to implement this work, which would target the release of 20,000 SKJ and 5,000 YFT in each pole-and-line cruise and 2,000 BET in each handline fishing cruise. The two budget columns below refer to the alternating years targeting SKJ/YFT and BET:

|  |  |  |
| --- | --- | --- |
| **Budget item** | **SKJ+YFT (PL)** | **BET (HL)** |
| Vessel charter | 600,000 | 300,000 |
| Tags/equipment | 150,000 | 100,000 |
| Personnel | 150,000 | 100,000 |
| Tag recovery | 300,000 | 100,000 |
| Admin/reporting | 180,000 | 90,000 |
| **TOTAL** | **1,380,000** | **690,000** |

**PROJECT 54.**

**Monte Carlo simulation of shark bycatch mitigation approaches**

The Consultant will be expected to carry out the following tasks to progress the examination of mitigation measures for oceanic whitetip and silky shark:

* Based upon and extending the model described in WCPFC-SC11-2015/EB-WP-02, evaluate the likely efficacy of current longline mitigation measures that allow for flag-state choice between prohibition of shark lines and/or of wire leader on longline vessels provided for under CMM 2014-05;
* Develop a new Monte Carlo simulation model to examine potential mitigation measures that could be applied to the purse seine fishery. In the first instance this model will evaluate the impacts of switches between FAD and free school modes of fishing on overall interactions and mortality levels.

# Project 60

# Collection and Evaluation of Purse-Seine Species Composition Data

The scope of work will include, but not limited to, the following items below:

1. Continue to identify key sources of sampling bias in the manner in which species composition data are currently collected from WCPO purse seine fisheries and investigate how such biases can be reduced
2. Review a broad range of sampling schemes at sea as well as onshore; develop appropriate sampling designs to obtain unbiased species composition data by evaluating the selected sampling procedures; extend sampling to include fleets, areas and set types where no representative sampling has taken place; verify, where possible, the results of the paired sampling against cannery, unloading and port sampling data
3. Review current stock assessment input data in relation to purse-seine species composition and investigate any other areas to be improved in species composition data, including the improvements of the accuracy of collected data,
4. Update standard spill sampling methodology if required.
5. Analyse additional data collected to evaluate the benefits of spill sampling compared to corrected grab-sampling.

2016-18 Tasks

This work should be progressed by the following activities:

* Subject to the availability of data, analyse the spill and grab sampling data for the trips conducted on PNG purse seiners in 2014, and compare those results to the estimates of species composition obtained from intensive port sampling.
* Undertake additional observer sampling / unloading comparisons where it is possible to conduct paired sampling trials and obtain accurate estimates of catch by species for the same trips from unloadings.
* Extend the comparisons of grab- and spill-sampling-based species composition with accurate unloadings data to include the comparison of grab samples corrected for selectivity bias with the unloadings data.
* Where possible and logistically feasible, observer programmes should continue to undertake paired sampling trials on a limited basis (say 10 trips per year) to continue to refine estimates of selectivity bias and to support additional simulation modelling.
* Undertake additional simulation modelling to estimate precision and bias of using corrected spill sampling data as the basis for estimating purse seine species composition at various levels of resolution.
* Consider other work in progress to assess the accuracy of cannery records with respect to estimates of species composition at the trip level. If accurate data could be obtained from canneries, it would be an invaluable additional source of information for the estimation of species composition of the purse seine catch.

**Project 67**

**Review of impacts of recent high catches of skipjack on fisheries on the margins of the WCPFC Convention Area**

**(For 2016)**

Data update until 2015 and down scale the new optimization at coarse resolution to the corrected GLORYS + Mercator operational model and conduct fishing impact and connectivity analysis. The progress will be presented at the SC13 as well as preliminary results of otolith data analysis.

**(For 2017-2019)**

SEAPODYM work, Tagging activities, including in sub-tropical and temperate regions, genetic analysis and otolith analysis focusing on early growth rate to provide better information on stock connectivity and movement.

1. SEAPODYM works to investigate spatial fishing impact in the WCPO (continue)
2. Collection and analysis of genetic samples from skipjack around Japan and in various areas of the equatorial fishery, to potentially determine the likely spawning ground origin of skipjack around Japan.
3. Otolith data analysis to identify spawning or hatching area using different growth pattern in different areas (2 years : preliminary analysis using Japanese data and tissue bank data)
4. tagging activities in sub-tropical and template regions to provide better information on stock connectivity and movement (this is in relation to SC11 recommendation)

**Project 78 (NEW)**

**Review of shark data and modelling framework to support stock assessments**

|  |  |
| --- | --- |
| **Objectives** | Implement a review of the data availability, data quality and data gaps for undertaking shark assessments, and the associated need to identify appropriate data assumptions for re-constructing data time-series and appropriate modelling techniques |
| **Rationale** | * Implements recommendations from the South Pacific blue shark, the 2016 SPC data gaps paper and the BDEP paper regarding the need to inspect and clean existing shark data holdings * Assessments usually do not have time for this type of work, and general data management budgets do not provide for this depth of focus * While providing an improved understanding of existing data holdings and their utility for assessments, the project would also improve the modelling framework to be used in shark assessments. |
| **Assumptions** | * Would require either SPC, or a consultant working with SPC, so that all data holdings that are usually accessed for stock assessments can be included. |
| **Scope** | This study should be conducted by a scientist familiar with shark biology and assessment methods (not by a data management generalist). The review should cover all WCPFC key species and include:   * Assess the quality of the data currently held including the spatial and temporal coverage of logbook and observer data, * Identify significant data gaps and the uncertainties which these gaps imply, * Comparing observer and logsheet data with a view to identifying and adjusting for under-reporting, discarding, non-species specific recording and other missing data, * Assess impact of specific shark related CMMs on data quality, * Investigate data reporting patterns by fleet including whether i) annual catches and discards are reported for all key species; ii) whether operational or aggregated logsheet data are provided for all key species; and iii) the extent to which the provided data are estimated and how that might affect their precision, * Identify mechanisms to addressing the current data gaps including identifying potential sources of new historical data, * Identify appropriate data assumptions for re-constructing data time-series and propose methods (e.g. weighting, extrapolation, etc) to adjust for identified biases, * Provide advice on what types of analyses the data can support including advice on appropriate modelling approaches (e.g. CPUE standardisation) where the data is considered sufficient, * Produce a paper containing recommendations, and revised datasets as appropriate, for SC13. |
| **Budget** | $65,000 |

1. Estimation of seabird interaction, bycatch and mortality [↑](#footnote-ref-1)
2. International Seafood Sustainability Foundation (ISSF) funded additional USD 30,000 for this workshop. [↑](#footnote-ref-2)