

## SIOFA Scientific Committee Research Priorities Plan

The SIOFA Scientific Committee (SC) Research Priorities Plan will guide the activities of the SC over the coming 3-5 years, as required to support the SC Work Plan. It will be used to identify work that is necessary to progress the longer-term development and sustainability of relevant fisheries in the SIOFA Area. The Research Priorities Plan should be reviewed every two years or as required.

The Research Priorities Plan contains discussion of implementation, monitoring and review of the plan as well as information on consultation, cooperation and collaboration with other relevant organizations, particularly those with related objectives and that can contribute to the attainment of the SIOFA objectives.

Research priorities are organised below by the themes under the SC Work Plan.

### **1. Scientific data standards for the collection, reporting verification and exchange of data**

Key research activities required may include:

- Development of data collection standards
- Development of verification methods
- Development of methods for estimation of total fishing effort, including incremental increases in effective effort, catches and related mortalities of target and non-target species, stratified, as appropriate, by area, time, species or stock, size, sex and other characteristics
- Review of relevant data, including operational-level catch and effort data, aggregated catch and effort data and size composition data
- Development of programmes to improve accuracy and coverage and to address data gaps that are identified
- Development of programmes for the collection and compilation of related fisheries data, such as gear and vessel attributes, and other information, that can be used to standardize fishing effort and estimate fishing capacity and changes in effective fishing effort
- Sourcing and compiling historical fisheries data and related metadata needed for stock assessment and effort standardisation
- Development and testing of sampling designs, including sampling protocols, for the collection of these data through observer, vessel and port sampling programmes
- Development of programmes to assist Contracting Parties (CPs), Cooperating Non-Contracting Parties (CNCs) and Participating Fishing Entities (PFEs) in meeting data-related MoP obligations
- Development of a database for compilation of relevant data.

### **2. Advice on vulnerable marine ecosystems**

Key research activities may include:

- Mapping by direct observation to identify occurrence of VMEs
- Developing and applying reliable and verifiable methods to identify potential occurrence of VMEs
- Collection and analysis of benthic bycatch data

- Investigation and possible development of spatial management methods to mitigate significant adverse impacts on VMEs
- Assessment of the scientific basis for benthic protected areas (BPAs) for the purpose of developing criteria for future definition and assessment of BPAs
- Assessment of individual bottom fishing activities that would have significant adverse impacts on VMEs, and of possible measures to prevent such impacts. Assessment of CMMs to prevent significant adverse impacts on VMEs where they have been identified.

### **3. Current and historical status of fishing activities**

Key research activities include:

- Contribution to compilation on a report of the historical fishing activity in the SIOFA Area, including catch and effort data if available.

### **4. Stock assessments**

Key research activities required to support stock assessment and modelling may include:

- Identification and prioritisation of key species of interest
- Identification and application of methods for stock assessment, including the characterisation of statistical and structural uncertainty of the models
- Improvement of existing methods and development of new methods
- Identification and refinement of biological reference points for use in stock status determination
- If possible, use of simulation models for testing stock assessment models and to evaluate the sensitivity of stock assessment results to violation of structural assumptions
- Development of survey indices/abundance estimates as inputs to assessment model
- Identification of key biological and ecological parameters.

### **5. Advice on the impacts of fishing on associated and dependent species**

Research activity tasks under this research priority may include:

- Estimation of interaction rates for non-target, associated and dependent species across each fishery
- Identification of the occurrence and distribution of non-target, associated and dependent species and consideration of risks to them from the effects of fishing
- Review of existing mitigation measures (and their performance) being applied in the SIOFA area and in other relevant regional fisheries management organisations (RFMOs), and identify appropriate measures for consideration in SIOFA
- Review of the efficacy of data collection methods for collecting data on fishing impacts on non-target, associated and dependent species
- Consideration of ecosystem models and related tools to assess the combined effects of fishing, other anthropogenic effects, oceanographic variability and socioeconomics
- Consideration of cumulative risk of fishing on stocks dealt with by different organisations.

## Implementation and review of Scientific Committee Research Priorities Plan

Monitoring the implementation of the SIOFA SC Research Priorities Plan will be the responsibility of the Chair of the SC in collaboration with the Secretariat. Members of the SIOFA SC will share responsibility for identification and review of the priorities. Opportunities to take responsibility for activities supporting implementation of components of the Research Priorities Plan will be considered at each meeting of the SC. At each regular session of the SC the themes may also be reviewed. Theme-specific working groups may be formed at SC meetings or proposed by the MoP to work in-session or intersessionally to progress the various objectives of each theme. Themes may be modified, included added or removed, depending on the ongoing objectives of SIOFA, the SC and other related entities.

Opportunities to involve individuals and institutions from developing countries and territories should be a strong feature of the identification and review of research priorities. Promoting such involvement should use available expertise from developing countries, Small Island Developing States and territories and build scientific and technical capacity within those countries and territories.

Full implementation of the Research Priorities Plan may be beyond the means of SIOFA's core budget. Extra-budgetary funds from voluntary contributions of Members and other sources such as the Food and Agriculture Organization's Areas Beyond National Jurisdiction (ABNJ) Deep Seas Project may be required and actively sought by SIOFA. Nevertheless, adoption of the Research Priorities Plan by the SC and subsequent strong support from the MoP is a prerequisite to securing the necessary extra-budgetary funds. An independent external review of the priorities may periodically be requested by the SC. The SC will be responsible for preparing the terms of reference for the review. The SC will present the report of the review to the next regular session of the MoP.

### Relationships with other organisations

There is considerable overlap between the objectives of SIOFA and other RFMOs and entities, particularly those with shared or overlapping boundaries. The SIOFA SC will consult, cooperate and collaborate with other relevant organizations, particularly those with related objectives and which can contribute to the attainment of the SIOFA objectives. In relation to this plan, relationships with the following institutions are of particular significance:

- SIOFA Compliance Committee

The Secretariat, in consultation with the Chairperson of the SC, will ensure that the SIOFA Compliance Committee is consulted on any element of the plan directly relevant to the functions of the Compliance Committee. The Secretariat will provide the Compliance Committee with copies of reports of the SC relating to implementation and review of the plan.

- The Commission for the Conservation of Antarctic Living Marine Resources
- The South Pacific Regional Fisheries Management Organisation
- The Indian Ocean Tuna Commission
- The Southern Indian Ocean Deepsea Fishers' Association
- South East Atlantic Fisheries Organisation
- Food and Agriculture Organization of the United Nations

SOURCE: SC-01 Annex G

- ABNJ Deep Seas Project
  - North Pacific Fisheries VME working group
  - The Deep Sea Conservation Coalition
  - Other associations and regional bodies as appropriate.