

Updated SC work plan

The focus of the SC's work plan are guided by Article 10 of the SPRFMO Convention. In summary, SC functions are to:

- (a) plan, conduct and review scientific assessments of the status of fishery resources;
- (b) provide advice and recommendations to the Commission and its subsidiary bodies based on such assessments;
- (c) provide advice and recommendations to the Commission and its subsidiary bodies on the impact of fishing on the marine ecosystems in the Convention Area;
- (d) encourage and promote cooperation in scientific research; and
- (e) provide such other scientific advice to the Commission and its subsidiary bodies as it considers appropriate.

Jack mackerel

Regarding the scientific advice for 2018 on Jack mackerel stock status, the Commission endorses the research priorities outlined in SC-04 and specifically requests the Scientific Committee undertake the following tasks.

Task	Objectives
<p>Jack mackerel assessment Intersessional work including data call in May with follow-up in July; update finalized at the SC</p>	<p>Conduct an "update" of the jack mackerel stock assessment. Advice from these results should be based on application of SC02's proposed variant of the rebuilding plan adopted by the 2nd Meeting of the Commission.</p> <p>Details include:</p> <ul style="list-style-type: none"> • An evaluation of alternative stock structure hypotheses • Provide progress update on age determination protocols for jack mackerel • Determine if TAC advice should be revised from 493kt maximum recommended for 2018 (perhaps by creating an ensemble model of projection scenarios provided; e.g., in Table 1 of SC04 report). • Evaluate the applicability of acoustics data collected from fishing vessels with a view towards including in the next "full" assessment (e.g., including agreed target strength estimates). • Further developments of oceanographic data and modelling to characterize jack mackerel habitat.

Squid

Since the SC04 appointed a squid working group (Dr. Gang Li to chair) this was broken out as a separate activity.

Task	Objectives
<p>Squid assessment and data requirements Intersessional China, Peru, Chile</p>	<ul style="list-style-type: none"> • Further develop assessment approaches • Identify data needs to achieve spatially integrated assessment • Historical catch data recovery is required • Consider impact of incomplete spatial coverage (e.g., in-zone and SPRFMO area) and/or spatially disaggregated approaches

Deepwater stocks

Task	Objectives
Toothfish review Intersessional, NZ	<ul style="list-style-type: none"> Review data from year 2 of project on exploratory demersal longline fishing for toothfish outside its footprint. Note linkages with CCAMLR research and tagging.
Orange roughy assessment Intersessional NZ, Australia	<ul style="list-style-type: none"> Ensure that catch series are updated to include all catch for orange roughy from study areas and finalise estimates of initial biomass, productivity, and stock status for relevant orange roughy sub-stocks. Consider the recent global review report of ORH biology, stock assessment, and approaches to management.
Modelling VME taxa Intersessional, NZ	<ul style="list-style-type: none"> Report on relevant data and model developments to predict VME indicator taxa
Fishing impact on VME Intersessional, NZ, Chile and Australia	<ul style="list-style-type: none"> Update data available and evaluate the impact of fishing activities on VMEs and EBSAs in the convention area and evaluate spatial management options, including using stakeholder workshops.
CMM 4.03, bottom fishing measure Intersessional, NZ, Chile and Australia	<ul style="list-style-type: none"> Review and recommend modifications, if necessary, to CMM 4.03, the bottom fishing measure based on results of stock assessments, VME modelling and spatial management options.
Demersal Species Assessment Framework Intersessional, Australia, NZ, DWWG	<ul style="list-style-type: none"> Draft a tiered assessment framework for demersal species based on estimable parameters and available information for potential TAC guidance in a CMM. Work towards developing limit and target reference points not inconsistent with the variety of domestic policies and international guidelines / best practices. Develop data collection proposals for increasing information available for different areas/stocks
Ecological Risk of deep water fisheries on deep water sharks Intersessional Australia	<ul style="list-style-type: none"> Draft risk assessment of the impact of deep water fishing on deep water sharks Include fishing mortality or Productivity Susceptibility Analysis Refer to the SPRFMO list of species of concern and proposed provisional additions to help rank species for ID and sampling purposes.

General Issues / reporting

Task	Objectives
Assessment requirements To be done for SC05	<ul style="list-style-type: none"> Review scientific appropriateness of observer coverage by fishery (also consider whether transshipment data would be useful for scientific purposes)
CMM 4.02, data standards Intersessional, NZ, Chile and Australia	<ul style="list-style-type: none"> Review whether the data standards are appropriate for achieving the assessment goals
Seabird monitoring	<ul style="list-style-type: none"> Evaluate the practicality of data collection programs for better understanding fishery and bird interactions in the SPRFMO convention area. This should include considerations of whether estimates of interactions or abundance can be reasonably obtained. For example, in night vs day squid fishing.
EM reporting , Intersessional EU, Australia, NZ, secretariat	<ul style="list-style-type: none"> Review electronic at-sea, study fleet, and “self-sampling” monitoring approaches and consider how each may meet or supplement information in SPRFMO’s data standard Consider practices being developed in other RFMOs

Longer term considerations

The Commission suggested (SPRFMO-COMM-04 (2016)) it would be helpful if the SC develop a rolling multi-annual work plan of research priorities and associated funding needs to assist with future planning and budgeting.

The Commission recognized the following timeline identifying actions and research priorities for the period 2018-2019

2018

- Full benchmark assessment for Jack mackerel including recommendations for data weighting, model alternatives, relative spatial distribution of jack mackerel by regions, and ensemble approaches
- Further development of data limited approaches and assessment models for squid and orange roughy
- Conduct and report on simulation tests to evaluate observer coverage and management objectives.

2019

- Evaluate potential application of VMS data for assessment purposes
- Develop and execute a focussed International fishery-independent survey