

## SIOFA Scientific Committee Operational Work Plan 2018-2021

The SIOFA SC Work Plan is agreed by the MoP and provides direction to the SC activities. The SC Operational Work Plan 2018-2021 contains research priorities that are in progress or to be proposed for 2018-2021.

The Operational Work Plan will be reviewed annually by the SC.

<b>Theme</b>	<b>Research activities</b>	<b>Timeline</b>	<b>Responsibility</b>
<b>1. Scientific data standards for the collection, reporting, verification and exchange of data</b>	<ul style="list-style-type: none"> <li>Review of current data holdings and other relevant research - through an annual data holdings report from the Secretariat that would include information on the quality control process and any issues identified; data inventories in support of species assessments</li> </ul>	<ul style="list-style-type: none"> <li>SC4 - annual data holdings report</li> <li>SC4 - data inventory for Alfonsino and Patagonian toothfish</li> </ul>	<ul style="list-style-type: none"> <li>Secretariat</li> <li>SERAWG and CPs</li> </ul>
	<ul style="list-style-type: none"> <li>Consolidation of historical data from non-CPs, this includes the historical catch data identified through the orange roughy stock assessment</li> </ul>	<ul style="list-style-type: none"> <li>SC4 – report on progress for data sources identified with respect to orange roughy, alfonsino and species from the Saya de Malha Bank</li> </ul>	<ul style="list-style-type: none"> <li>Secretariat to write to relevant non-CPs</li> <li>SERAWG and CPs</li> </ul>
	<ul style="list-style-type: none"> <li>Evaluation of proposed e-monitoring programs for scientific data collection</li> </ul>	<ul style="list-style-type: none"> <li>SC4 – if a CP makes a proposal against the Guidelines</li> </ul>	<ul style="list-style-type: none"> <li>Relevant CP to make a proposal, SC to review against the Guidelines.</li> </ul>

Theme	Research activities	Timeline	Responsibility
	<ul style="list-style-type: none"> <li>• Completion of the database to hold observer data and population from submissions</li> </ul>	<ul style="list-style-type: none"> <li>• SC4</li> </ul>	<ul style="list-style-type: none"> <li>• Secretariat</li> </ul>
	<ul style="list-style-type: none"> <li>• Development and adoption of standard protocols for data collection, such as age frequency information. Including drawing on the FAO guidelines for protocols for fisheries research and the FAO Deep seas Bottom Fisheries Guideline</li> </ul>	<ul style="list-style-type: none"> <li>• SC4 and ongoing</li> </ul>	<ul style="list-style-type: none"> <li>• CPs to propose to protocols to SC for consideration</li> </ul>
	<ul style="list-style-type: none"> <li>• Review of observer data coverage requirements and observer data standards:               <ul style="list-style-type: none"> <li>• Collate background information to consider types and levels of observer coverage in relation to specific research, scientific committee work.</li> <li>• Review of observer data holdings (inventory) of CPs in a consistent template, including collection protocols in place</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Data inventory to be completed prior to SC4</li> <li>• Review of investigation at SC4</li> </ul>	<ul style="list-style-type: none"> <li>• Secretariat and CPs</li> </ul>

Theme	Research activities	Timeline	Responsibility
	<ul style="list-style-type: none"> <li>Investigation of observer coverage type and levels against the requirements of the SC workplan</li> </ul>		
	<ul style="list-style-type: none"> <li>Broaden use of identifications guides for deepsea sharks to enable better collection of data</li> </ul>	<ul style="list-style-type: none"> <li>As soon as possible</li> </ul>	<ul style="list-style-type: none"> <li>CPs to ensure identification guides are in use by observers and crew</li> </ul>
	<ul style="list-style-type: none"> <li>Smart forms for collection of deepsea shark and benthos data</li> </ul>	<ul style="list-style-type: none"> <li>SC4 - Progress report on trials</li> </ul>	<ul style="list-style-type: none"> <li>CI to report on outcomes of trials</li> <li>CPs to consider potential use of Smart forms</li> </ul>
	<ul style="list-style-type: none"> <li>Periodic review of scientific data standards as and when required</li> </ul>	<ul style="list-style-type: none"> <li></li> </ul>	<ul style="list-style-type: none"> <li>Review of Annex B of CMM 2016-02 'Voluntary observer data' in line with CMM 2016-02 (SC-03)</li> </ul>
<b>2. Advice on vulnerable marine ecosystems</b>	<ul style="list-style-type: none"> <li>Contribute information to FAO VME database</li> </ul>	<ul style="list-style-type: none"> <li>Ongoing</li> </ul>	<ul style="list-style-type: none"> <li>Secretariat and CPs as appropriate</li> </ul>
	<ul style="list-style-type: none"> <li>Develop SIOFA definition of VME indicator species: <ul style="list-style-type: none"> <li>Consider VME indicator species identified in other relevant RFMOs or other bodies (e.g. CCAMLR, SPRFMO etc)</li> <li>Test whether these are appropriate for SIOFA area</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>SC5</li> </ul>	<ul style="list-style-type: none"> <li>SC to consider based on papers from CPs</li> </ul>

Theme	Research activities	Timeline	Responsibility
	<ul style="list-style-type: none"> <li>• Mapping of VME/VME indicator species occurrence, including collaboration with ABNJ Deep Seas Project FAO VME database, IUCN and other relevant projects.</li> </ul>	<ul style="list-style-type: none"> <li>• SC5</li> </ul>	<ul style="list-style-type: none"> <li>• Depending on the development of collaboration, particularly with ABNJ Deep Seas Project, through Secretariat.</li> <li>• CPs to identify other opportunities to progress this.</li> </ul>
	<ul style="list-style-type: none"> <li>• Consider benthic sampling protocol for mapping distribution of VME indicator species and predicting benthic community structure</li> </ul>	<ul style="list-style-type: none"> <li>• SC5</li> </ul>	<ul style="list-style-type: none"> <li>• France (Territories) to lead and report to SC for discussion</li> </ul>
	<ul style="list-style-type: none"> <li>• Cumulative impact assessment of SIOFA fisheries:               <ul style="list-style-type: none"> <li>• Refine process to advance, given the disparate nature of information available.</li> <li>• Undertake cumulative impact assessment for groups of fisheries/gear (eg orange roughly bottom trawling, long lining, Saya de Malh trawl) using a consistent methodology across the gear.</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• SC4 – report on progress on cumulative impact assessments for fisheries/gears</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant CPs to progress cumulative impact assessments</li> <li>• Review of cumulative impact assessments by SC</li> </ul>
	<ul style="list-style-type: none"> <li>• Assessment of likely impact of specific gear types –</li> </ul>	<ul style="list-style-type: none"> <li>• Dependent on ABNJ Deep Seas Project timeframe</li> </ul>	<ul style="list-style-type: none"> <li>• Progress report from ABNJ Deep Seas Project global analysis (SC-03)</li> </ul>

Theme	Research activities	Timeline	Responsibility
	potential collaboration with ABNJ Deep Seas Project		
	<ul style="list-style-type: none"> <li>• Revise and improve the SIOFA BFIAS</li> </ul>	<ul style="list-style-type: none"> <li>• SC4 – if proposed changes are brought forward.</li> </ul>	<ul style="list-style-type: none"> <li>• CPs</li> </ul>
	<ul style="list-style-type: none"> <li>• Consider proposals for protected areas against the Standard protocol</li> </ul>	<ul style="list-style-type: none"> <li>• As per process in PAEWG ToR</li> </ul>	<ul style="list-style-type: none"> <li>• Proposals from CPs</li> <li>• PAEWG and SC</li> </ul>
<b>3. Current and historical status of fishing activities</b>	<ul style="list-style-type: none"> <li>• Scientific impact assessments on demersal gillnet operations</li> </ul>	<ul style="list-style-type: none"> <li>• When provided by the CP proposing to commence demersal gillnet operations</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant CP</li> </ul>
	<ul style="list-style-type: none"> <li>• Spatial extent of historical and current fishing</li> </ul>	<ul style="list-style-type: none"> <li>• SC4</li> </ul>	<ul style="list-style-type: none"> <li>• Secretariat</li> </ul>
	<ul style="list-style-type: none"> <li>• Develop advice on reference periods for effort, footprints and spatial control</li> </ul>	<ul style="list-style-type: none"> <li>• SC5 - Recommendations to the MoP on appropriate SIOFA bottom fishing footprint (by 2020)</li> <li>• SC4 - Recommendations to the MoP on the most appropriate response to the VME encounter (by 2019)</li> </ul>	<ul style="list-style-type: none"> <li>• CPs and SC</li> </ul>
	<ul style="list-style-type: none"> <li>• Characterisation of historical and current deepsea shark fisheries (see also theme 5 below)</li> </ul>	<ul style="list-style-type: none"> <li>• If required to refine the ERA for deepsea chondrichthyans</li> </ul>	<ul style="list-style-type: none"> <li>• SERAWG and CPs</li> </ul>
<b>4. Stock assessments for</b>	<ul style="list-style-type: none"> <li>• Implement the tiered assessment framework,</li> </ul>	<ul style="list-style-type: none"> <li>• SC4 – consideration of progress on scoping analyses</li> </ul>	<ul style="list-style-type: none"> <li>• SERAWG and CPs</li> </ul>

Theme	Research activities	Timeline	Responsibility
<b>key targeted species</b>	supported by scoping analyses		
	<ul style="list-style-type: none"> <li>• Orange roughy:               <ul style="list-style-type: none"> <li>• Stock structure delineation</li> <li>• Age frequency data</li> <li>• Target strength for acoustic data</li> <li>• Development of a draft protocol for the collection of orange roughy age/length frequencies and otoliths</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Annually review catch and effort trends</li> <li>• SC4 – progress reports</li> <li>• SC5 – consideration of outcomes</li> </ul>	<ul style="list-style-type: none"> <li>• Stock structure delineation – AUS and CI in collaboration with Victoria University</li> <li>• Age frequency data – CI and AUS</li> <li>• Target strength – CI, possibly in collaboration with ABNJ Deep Seas Project</li> <li>• Draft protocol - CI</li> </ul>
	<ul style="list-style-type: none"> <li>• Alfonsino:               <ul style="list-style-type: none"> <li>• Data inventory</li> <li>• Acoustic data preparations (target strength evaluation and acoustic data analysis and review)</li> <li>• Scoping analysis</li> <li>• Decision on assessment approach</li> <li>• Stock assessment analysis</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• SC4, to provide advice in line with CMM Bottom Fishing (2019)</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant SERAWG, relevant CPs and SC</li> </ul>
	<ul style="list-style-type: none"> <li>• Patagonian toothfish:               <ul style="list-style-type: none"> <li>• Data inventory</li> <li>• Scoping analysis</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• SC4, to provide advice in line with CMM Bottom Fishing (2019)</li> </ul>	<ul style="list-style-type: none"> <li>• Relevant SERAWG, relevant CPs and SC</li> <li>• SC Chair, France (Territories) and relevant CPs to work with the Secretariat to progress collaboration</li> </ul>

Theme	Research activities	Timeline	Responsibility
	<ul style="list-style-type: none"> <li>• Decision on assessment approach</li> <li>• Stock assessment analysis</li> </ul>		with CCAMLR and relevant states (France, South Africa)
	<ul style="list-style-type: none"> <li>• Other teleost species, in particular those caught in the Saya de Mahl Bank:</li> <li>• Apply PSA and SAFE approaches to assess these species</li> </ul>	<ul style="list-style-type: none"> <li>• SC4, to provide advice in line with CMM Bottom Fishing (2019)</li> </ul>	<ul style="list-style-type: none"> <li>• SERAWG, relevant CPs</li> </ul>
	<ul style="list-style-type: none"> <li>• Deepwater chondrichthyans:</li> <li>• Refine the analysis with data from additional CPs and additional biological data.</li> </ul>	<ul style="list-style-type: none"> <li>• SC4, to provide advice in line with CMM Bottom Fishing (2019)</li> </ul>	<ul style="list-style-type: none"> <li>• SERAWG, relevant CPs</li> </ul>
	<ul style="list-style-type: none"> <li>• Collection, analysis and reporting of essential biological and fisheries information, including: <ul style="list-style-type: none"> <li>• Age composition data</li> <li>• Length and age</li> <li>• Growth</li> <li>• Reproductive biology</li> <li>• Maturity ogives</li> <li>• Natural mortality</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing, with priorities determined by species scoping analyses and assessment research plan</li> </ul>	<ul style="list-style-type: none"> <li>• Guidance on priorities from SERAWG</li> </ul>
	<ul style="list-style-type: none"> <li>• Determination of biological reference points and</li> </ul>		<ul style="list-style-type: none"> <li>• SC</li> </ul>

Theme	Research activities	Timeline	Responsibility
	associated development of harvest strategies		
<b>5. Advice on the impacts of fishing on associated and dependent species</b>	<ul style="list-style-type: none"> <li>• Risk assessment of effects of fishing on non-target, associated and dependent species (see also theme 2 above) – through implementation of the tiered assessment framework</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing</li> </ul>	<ul style="list-style-type: none"> <li>• SERAWG</li> </ul>
	<ul style="list-style-type: none"> <li>• Seek advice from expert groups, such as Birdlife International and the Agreement for the Conservation of Albatross and Petrels, in relation to risk assessments completed for species in the SIOFA Area</li> </ul>	<ul style="list-style-type: none"> <li>• Ongoing, request input prior to SC meetings</li> </ul>	<ul style="list-style-type: none"> <li>• Request input prior to SC (Secretariat)</li> </ul>
<b>6. Any other advice that the Meeting of the Parties (MoP) requests</b>	<i>This may be updated following the MoP5</i>		