7th MEETING OF THE SCIENTIFIC COMMITTEE

La Havana, Cuba, 7 to 12 October 2019

SC7-Doc05 rev1

"Expanded" Scientific Committee Multi-Annual Work Plan (2019)

Secretariat

Jack mackerel Working Group

Task	Objective	Timeline	Coordinator	Funding
Jack mackerel assessment data	Review available input data JM assessment	2019	US/EU	In-kind
	Evaluate the impact on age-length keys due to any revisions in age determinations	2019		
	Standardization of commercial tuning indices	2019		
	Review industry data availability and usability (using self-sampling biological data and acoustic data from fishing vessels in the JM assessment).	2019		
Jack mackerel assessment	SC and other funds to support experts	2019 +	SC Chair/ Secretariat	NZ$10k (SC)
	An evaluation of alternative stock structure hypotheses	2019 +		
	Review appropriate data weightings	2019		
	Provide TAC advice	2019		
	Review biological reference points (BRPs), rebuilding plan, commence MSE development to design alternative harvest control rule	2019-20	EU	US$80k (EU)
	Explore alternative stock assessment models (Benchmark/ workshop?)	2020?		
Estimation of growth	Analyse growth estimation in light of spatial-temporal changes using a variety of techniques such as daily increment, carbon dating, tagging	2019-2020		
	Update growth estimation to be provided to the SC intersessional prior to SC07 to allow the SC to schedule a data compilation workshop at its earliest convenient	2019		
Predict recruitment under climatic drivers	Investigate SPRFMO specific drivers of recruitment such as El Nino to improve productivity prediction	2020-2025		
Jack mackerel connectivity	Use modelling and observation data to predict connectivity and seasonal to decadal variability herein	2019-2021		

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Deepwater Working Group

Task	Objective	Timeline	Coordinator	Funding
Orange roughy assessment	Louisville Ridge stock(s): • Explore alternative stock assessment models • Estimate stock status • Provide advice on sustainable catch levels	2019	New Zealand	In-kind
	Relevant Tasman Sea stock(s): • Explore alternative stock assessment models • Estimate stock status • Provide advice on sustainable catch levels	2020		
	Louisville Ridge stock(s): • Explore alternative stock assessment models • Estimate stock status • Provide advice on sustainable catch levels	2021		
Orange roughy assessment data	Ageing of existing and new orange roughy samples	2019-2021		
	Coordinate and design acoustic surveys for relevant stocks (intersessional consideration)	2019-2021		
Deep water stock structure	Provide priority list for deepwater stock structure analyses based on assessment for non-ORY stocks.	2019		
	Use modelling and observation data to predict connectivity: Using genetic, microchemistry, morphometric, parasite prevalence and tagging experiments	2021		US$15k (*Source*)
Other stock assessments, including ecological risk assessment	Propose categorisation of stocks into assessment framework	2019		
	Refine risk assessment of teleost stocks	2019-2020		
	Refine quantitative risk assessment of DW sharks caught in SPRFMO bottom fisheries	2020		
	Recommend relevant reference points and/or management rules for all assessed DW stocks	2020		
VME Encounter	Annual review of benthic and VME indicator taxa	2019 +		
	Design approach for benthic bycatch review	2019 +		
	Annually collect and review VME catch and other benthic sampling data	2020 +		
Spatial management	Update and re-assess VME and habitat suitability modelling as appropriate	2020		
CMM 03 request regarding Encounters with VMEs.	Review all reported VME encounters and: • provide advice on whether each encounter is consistent with the models applied to prevent SIAs on VMEs • determine whether any encounters were unexpected based on the relevant VME habitat suitability models, • provide advice on appropriate management actions (including but not limited to any proposed by the relevant Member or CNCP). This review should include consideration of: • analyses provided by a Member or CNCP; • historical fishing events within 5nm of the	2019		

	encounter, in particular, any previous encounters, and all information on benthic bycatch; • model predictions for all VME indicator taxa; • details of the relevant fishing activity, including the bioregion; and • any other relevant information			
CMM 03 request regarding VME management measures.	Review and provide advice on the effectiveness of the applied management measures, including: • VME indicator thresholds; • The number of encounters; • The number of encounters that were expected based on habitat suitability models; • The appropriateness of the management approach (e.g. scale); • Additional relevant VME indicator species that have not been modelled, assessed or for which thresholds have not been established; • Refinement of the encounter protocol; • Measures to prevent the catch and/or impacts on rare species; and • Anything else the SC considers relevant to ensure the measure is achieving its objective and the objectives of the Convention	2019 - 2020		
CMM 03 request regarding ongoing appropriateness of CMM.	Review all available data and provide advice on the ongoing appropriateness of the management measures to ensure the CMM continues to achieve its objective and the objectives of the Convention	2020 +		
Bottom Fishery Impact Assessment	Revise and update BFIAS	2019		
	Review updated BFIA, including cumulative impacts, from members relative to revised BFIAS	2021		
CMM 03 request regarding Marine mammals, seabirds, reptiles and other species of concern.	The Scientific Committee shall provide advice biennially to the Commission on: • Direct and indirect interactions between bottom fishing and marine mammals, seabirds, reptiles and other species of concern; • Any recommended spatial or temporal closures or spatially/temporally limited gear prohibitions for any identified hotspots of these species; and • Any recommended bycatch limits and/or measures for an encounter protocol for any of these species.	2020 +		

Squid Working Group

Task	Objective	Timeline	Coordinator	Funding
Squid workshop	SC7 in Cuba will be preceded by a 2-day workshop covering squid topics	2019	Cuba	In-kind
	Invite an external expert to attend the Squid workshop	2019	SC Chair/ Secretariat	NZ$10k (SC)
Squid assessment and CMM development	Develop a plan for more detailed within-season fishery monitoring	2019		
	Develop and present alternative assessment approaches	2019-2021		
	Evaluate possible management approaches against Commission objectives	2019+		
Squid assessment data	Identify data needs and recover historical data	2019-2020		
	Sample biological information year-round in its entire distribution area	2019-2020		
	Reconstruct historical total catch records including non-CNCPs and non-members	2019-2020		
	Record and analyse diet data	2019-2020		
	Review on the acoustic surveys for Squid biomass estimation (pros, cons, challenges)	2019-2020		
Squid connectivity	Develop standardised approaches, e.g., for genetic sampling	2019	China	US$15k (China)
	Collect and analyse genetic samplings (Convention area and adjacent EEZs)	2019-2021		
	Use modelling and observation data to predict connectivity and seasonal to decadal variability possibly using genetic, microchemistry, morphometric, parasite prevalence, and tagging experiments	2019-2022		

Habitat Monitoring Working Group

Task	Objective	Timeline	Coordinator	Funding
Evaluate the applicability of data collected from fishing vessels targeting pelagic species	Mapping spatial-temporal population density distribution of jack mackerel using a combination of the existing acoustic survey data and acoustic information as obtained from by industry vessels	2019-2020	Peru/Chile	In-kind
Further developments of standardized oceanographic data products and modelling	Characterize jack mackerel habitat (e.g., past studies done in Peru and Chile)	2019-2020		
	Provide ecosystem status overview for SC at seasonal to decadal scale	2019-2020		
Habitat working group	Review the state of the art of habitat research in order to recommend specific lines of investigation in this topic within the framework of the SPRFMO	2019-2021		
	Explore the concept of CJM habitat through retrospective analysis (including bibliographical analysis)	2019-2021		
	Define a list of existing environmental data: satellite, acoustic surveys, acoustic fisheries surveys, fishing data, fishing vessel data (VMS, Observers…) in time and space that already exist inside the SPRFMO area	2019-2021		
	Explore possibilities to organize a symposium on the topic of pelagic habitat in the 2020s	2020		US$40k (*Source*)
	Organize a workshop on the state of the art of habitat research in the same place as, and immediately before, the SC meeting	2019-2021		
	Habitat suitability modelling of Jack Mackerel	2019-2021		

Other (Crosscutting issues)

Task	Objective	Timeline	Lead	Funding
Observer programme	Analyze observer coverage rates from simulation study for SPRFMO fisheries and recommend values to Commission (periodically review)	2019	China	In-kind
	Evaluate available observer data on seabird interaction rates (jack mackerel, different squid fisheries, demersal) and determine where estimates can be improved	2019		
	Provide advice on the appropriate levels of observer coverage for fisheries for which there is no fishery -specific CMM in force	2019		
Exploratory fishing	Evaluate and review analyses on data collected from first voyages of Cook Islands exploratory lobster/crab fishery and provide advice to Commission	2019	Cook Islands	In-kind
	Evaluate and review the amended Cook Islands proposal due to be presented to SC7	2019		
	Review results from the New Zealand exploratory toothfish fishery and provide advice on progress, including whether any stock indicators show sustainability concerns and what, if any, additional measures might be required to restrict the likely bycatch of deepwater sharks or other non-target species.	2019-2022	New Zealand	In-kind
	Review results from the EU exploratory toothfish fishery and provide advice on progress, including whether any stock indicators show sustainability concerns and what, if any, additional measures might be required to restrict the likely bycatch of deepwater sharks or other non- target species (including VMEs)	2020	EU	In-kind
Seabird / bycatch monitoring	Evaluate available observer data on seabird interaction rates (jack mackerel, different squid fisheries, demersal) and determine where estimates can be improved	2019		
	Progress southern hemisphere quantitative risk assessment (SEFRA)	2019		
EBSA	Evaluate impacts of fishing activities	2019		
CMM17 Marine pollution	SC Members and CNPCs are encouraged to undertake research into marine pollution related to fisheries in the SPRFMO Convention Area to further develop and refine measures to reduce marine pollution and are encouraged to submit to the SC and the CTC any information derived from such efforts	2019+		