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WCPFC Climate Change Workplan 2024 - 2027[1]

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[1] Attachment 13, WCPFC21 Outcomes

Western and Central Pacific Fisheries Commission

WCPFC Climate Change Workplan 2024 - 2027

Objective

Using the WCPFC Convention and Resolution 2019-01 as guides, in response to the WCPFC20 Outcomes, and upon review and input from each subsidiary body (SB), this Workplan will inform the Commission's efforts to address climate change impacts on WCPFC fisheries in the Convention Area.

The following sections describe tasks to be taken by the Commission and its SBs to address climate change impacts on WCPFC fisheries in the Convention Area.

A schedule of ongoing and planned activities related to climate change work within the Commission and the Subsidiary Bodies is included.

Commission

- Consider and discuss appropriate ways to incorporate climate change into the work of the Commission and the SBs.
- Consider the information derived from the CMM Climate Change Vulnerability Assessment.
- Identify and discuss appropriate avenues for incorporating climate change resources available outside the Commission into the work of the Commission in support of executing the work of the Commission.
- Enhance cross-RFMO coordination for climate change discussions, especially with IATTC.

Northern Committee

- Coordinate with ISC as it considers how to incorporate climate change advice into management recommendations to NC
- Consideration of climate change impacts on predator-prey interaction, and ultimately on NC tuna stocks. This would include integration of this information to provide advice to NC and Commission, and engagement with other Pacific Fisheries Bodies

Scientific Committee

- Continue the ongoing work with respect to implementing an ecosystem approach to fisheries management (EAFM), including developing the ecosystem indicator report

cards; climate and ecosystem modelling; enhancing information on essential habitats for WCPFC target and bycatch species, and on the potential changes to species interactions and spatial overlap in target and bycatch species

- Continue the ongoing work in the SC to agree to climate indicators to track the impact of climate change and ecosystem changes, and develop a process to provide advice to the Commission on the performance of those indicators and the impact of climate change on WCPFC target stocks, non-target species and other scientific aspects, and continue to update and discuss the Ecosystem and Climate Indicator Report Card annually;
- Continue exploring ways to enhance data collection systems on environmental and climate information to inform the modelling;
- Consider how the SC structure might be updated to facilitate climate change work while still maintaining other core SC functions, and report on these deliberations and any conclusions to the Commission;
- SC to include as part of the standing agenda on climate change a review of available data to inform the Commission on climate change impacts to stocks and ecosystems in the WCPO, and the potential effects of climate change on related fishing activities, including incorporating climate considerations in the development of harvest strategies and management procedures. The annual review of available data should also provide advice and recommendations to the Commission which identifies information gaps, necessary analyses, and any additional tasks that may further enhance the Commission's ability to account for climate change impacts on WCPFC fisheries;
- Coordinate with SPC, ISC and IATTC in continued consideration of how to incorporate climate change advice into stock assessments and associated management recommendations;
- Consider outcomes from the CMM climate vulnerability assessment and discuss appropriate ways to incorporate scientific advice that may assist in future development of CMMs based on the outcomes of the assessment.

Technical and Compliance Committee

- Consider the outcomes and technical information from the CMM vulnerability assessment, and continue to discuss appropriate ways to incorporate climate change into the work of the TCC.
- TCC to annually review climate change information to provide the Commission with information, technical advice and recommendations relating to the implementation of, and compliance with, conservation and management measures
- TCC's annual review of available information to also provide recommendations to the Commission identifying information gaps, necessary analyses, and any additional tasks to ensure the Commission's conservation and management measures contribute to the long-term sustainability of the stocks in accordance with Article 10 of the Convention.

Finance and Administration Committee

- Consider and prioritize any Commission or Secretariat requests for supplementary funds or other resources needed to carry out expanded scientific work or technical assessments associated with climate change.

Science and Management Dialogues and other WCPFC Intersessional Fora

- Addressing climate change is an underlying question for all WCPFC fora, including the 2024 SMD. Include discussions on the incorporation of climate considerations in the development of management procedures for skipjack and South Pacific albacore.

The tasks defined in this Workplan will be adaptive and flexible to respond to the discussions and needs of the Commission and its Subsidiary Bodies.

Schedule of Activities included in the Workplan

Rows in blue are new activities that will require agreement on timeline. In the final column, where no funds are listed, an activity does not need funds to take place.

Schedule	**Activity**	**Project/link to SB workplan**	**Expected outcome**	**Overall link to advice to Commission (link to policy)**	**Responsible/ Funds assigned-available?**
2024	Climate change expert workshop	WCPFC Project 121: Ecosystem and Climate Indicators (ECI) + Report cards	Test the candidate ECI, progress and refine these, based on expert feedback	Providing key information for monitoring the pathway through which climate change is manifesting in the WCPO, enabling the ground-truthing of oceanographic models, monitoring which physical properties of the Western and Central Pacific Ocean (WCPO) are approaching climate change induced tipping points, and supporting the inputs to and monitoring of implemented harvest strategies.	SSP Funds available under project 121
2025-2027	Indicator Validation				SC Further funds are required

Annually	Ecosystem and Climate Indicator Report Card to be updated and presented annually to the Commission and its subsidiary bodies. (WCPFC20 request)				SSP
2024-25	Review of existing modelling and data to improve understanding of drivers of trends in the early life history of skipjack tuna in the Western	WCPFC Project 115: Exploring evidence and mechanisms for a long-term increasing trend in recruitment of skipjack tuna in the equatorial Pacific and the development and modelling of	Environmental or technological impact on estimated SKJ recruitment trends, to improve the robustness of future stock assessments and inform skipjack OMs	The analysis of CPUE indices in skipjack stock assessments is vital for informing effective fisheries management policies, as misleading stability in these indices—potentially due to effort creep—could mask declines in stock biomass, leading to unsustainable fishing practices.	SSP

	Pacific Warm Pool	defensible effort creep scenarios Tuna Research Plan			
2024-25	Calibrating and evaluating the precision of epigenetic ageing as a tool for rapid and cost-effective ageing of WCPO key tuna stocks	WCPFC Project 100c: Preparing western and central Pacific tuna fisheries for application of close-kin-mark-recapture (CKMR) methods to resolve key stock assessment uncertainties	Provide an improved understanding of connectivity and adaptive potential and variation, which is increasingly important for understanding how stock biomass will respond to climate change and other changes to environmental conditions.	Accurately estimating absolute spawning biomass is a key challenge in WCPFC stock assessments. Close-Kin Mark-Recapture (CKMR) offers a practical solution, providing not only biomass estimates but also insights into population structure, connectivity, and natural mortality to improve management decisions	SSP Funded under the project

Annually	Identifying sampling gaps in biological data (age & growth) stored within the Tuna Tissue Bank and developing a biological sampling plan to collect age and growth information for key WCPFC tuna species	WCPFC Project 117: WCPFC Tuna Biological Sampling Plan	A structured sampling program is expected to directly translate into stock assessments with more reliable estimates of growth and with sufficient temporal observations to identify how growth may be changing as a function of climate change.	A well-designed and comprehensive sampling plan for collecting biological data (e.g., age, growth) will significantly enhance the accuracy of stock assessments, providing a stronger foundation for informed management decisions.	SSP Funded under the project

	Identifying sampling gaps in biological data (age & growth) stored within the Tuna Tissue Bank and developing a biological sampling plan to collect age and growth information for billfish species	WCPFC Project 118: WCPFC billfish biological sampling plan. Billfish Research Plan	A structured sampling program is expected to directly translate into stock assessments with more reliable estimates of growth and with sufficient temporal observations to identify how growth may be changing as a function of climate change.	A well-designed and comprehensive sampling plan for collecting biological data (e.g., age, growth) will significantly enhance the accuracy of stock assessments, providing a stronger foundation for informed management decisions.	SSP Funded under the project

2024-26	Quality checking and resolving issues including collection of samples for estimation of spawning potential through histological analyses of tropical tunas	WCPFC Project 120: Updated reproductive biology of tropical tunas	Establish baselines of reproductive potential for tropical tunas in the WCPO for monitoring the impacts of climate change	Improving the estimation of spawning potential is essential for enhancing the accuracy of stock assessments, which directly informs policy decisions on sustainable harvest strategies and conservation measures. Without reliable data, management policies may be less effective in ensuring the long-term sustainability of tropical tuna stocks, especially in the face of climate change impact	SSP Funded under the project

2025-26	Exploring new tuna stock assessment software	WCPFC Project 123: Scoping the next generation of tuna stock assessment software	Establish a new WCPFC tuna stock assessment software as a successor to the MULTIFAN-CL	Establishing new software for WCPO tuna stock assessments is essential for informing effective management decisions and policies. Enhanced modelling capabilities of the new software can assist in providing options for sustainable harvest strategies and adaptive management practices, particularly in the face of climate change impacts on the tuna population.	SSP Funds are required
2024-27	Continued enhancements to the SEAPODYM	SEAPODYM (Spatial Ecosystem and Population Dynamics Model)	climate-informed stock assessments	SEAPODYM is integrating biological, ecological, and environmental data to help inform policy decisions by projecting the effects of climate change on tuna distribution and abundance, enabling fisheries managers to have information to support adaptive strategies to ensure the long-term viability of tuna resources in WCPO.	SSP
2024-[27]	Collation and curation of regional	Project 35b: WCPFC Pacific Marine Specimen Bank	Time series of biological samples to underpin	Improved estimation of biological parameters is essential for enhancing the accuracy of stock assessments,	SSP Funded under the project, a 2% annual increase is requested

	marine specimens, including genetic samples.		improvements to inputs to stock assessments and monitoring of climate impacts	which directly informs policy decisions on sustainable harvest strategies and conservation measures. Ongoing collection of reliable data allows monitoring of potential climate impacts and informed advice.	
Annually	Tagging and monitoring of tuna and tuna-like species, collection of marine specimens, including genetic samples.	Project 42: Pacific tuna tagging programme	Time series of biological samples to underpin improvements to inputs to stock assessments and monitoring of climate impacts	Improved estimation of biological parameters is essential for enhancing the accuracy of stock assessments, which directly informs policy decisions on sustainable harvest strategies and conservation measures. Ongoing collection of reliable data allows monitoring of potential climate impacts and informed advice.	SSP Funded under the project
Annually	Updates on international and regional fishery bodies developments related to climate change (paragraph			The Commission will get regular updates on other international and regional fisheries bodies activities and relevant news and information regarding climate change that is valuable for WCPFC to engage with.	WCPFC Secretariat

	20 WCPFC20 Outcome document)				
TBD	Explore mechanisms to test the robustness of existing and candidate management procedures under plausible climate change scenarios within the MSE framework.	Harvest Strategy Workplan		Activity to be discussed and refined by SC. TCC to discuss how to provide advice to the Commission regarding MSE and climate change.	TBD
[202#]	Engagement with other Regional Fisheries Management Organizatio	2019-01 WCPFC Resolution on Climate Change	Create a community of practice within the RFB/RFMOs regarding cooperative fisheries	Will inform this workplan, and allow for updates as appropriate.	Commission, Secretariat, SSP, and Members

	ns and the Food and Agriculture Organizatio n and their members to discuss shared challenges, leverage available resources, and identify potential pathways for cooperation on addressing climate change effects on fisheries		management and climate change.		
[2025 - 202#]	CMM Climate Change Vulnerabilit y Assessment		[Identify information GAPS and analysis that need to be further undertaken to understand the implications of	Will provide information for Members consideration on vulnerability to climate change on specific CMM provisions	Consultant with support of Secretariat Funds available through voluntary contributions

			climate change on certain CMM provisions.]		