



**COMMISSION**

**Second Science-Management Dialogue (SMD-02)**

10:00 a.m. – 15:00 p.m., Pohnpei Time, 10-12 September 2024 (Online)

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**Commission's Climate Change Work Plan and  
TOR for the Assessment of CMMs Susceptible to Climate Change Impacts**

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**WCPFC-SMD02-2024/BP-07**  
(WCPFC-SC20-2024/EB-WP-02)  
**31<sup>st</sup> August 2024**

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CLIMATE CO-LEADS



**SCIENTIFIC COMMITTEE  
TWENTIETH REGULAR SESSION**

Manila, Philippines  
14 – 21 August 2024

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**Commission's Climate Change Work Plan and  
TOR for the Assessment of CMMs Susceptible to Climate Change Impacts**

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**WCPFC-SC20-2024/EB-WP-02**

**CLIMATE CO-LEADS' EXPLANATORY NOTE**

This paper provides an update of the work by the Co-leads of the WCPFC climate change workplan which includes:

1. Tasks by WCPFC20
2. Summary of work to date by co-leads
3. Draft workplan (**Attachment A**)
4. Draft CMM assessment TORs (**Attachment B**)

The aim of this paper is to consult the Scientific Committee (SC) on (3) and (4), particularly on the tasks related to the SC and its schedule.

The SC has been discussing climate change since its first meeting in 2005, under the Ecosystem and Bycatch Mitigation theme, where—since 2022 (SC18—it has a placeholder as a standing agenda item. Under this agenda item, the SC mainly looks at environmental and climate indicators developed by the SSP, which, since 2015, assists with generating advice on the impacts of fisheries targeting tuna and tuna-like species on the broader pelagic ecosystem. These indicators will provide the Scientific Committee with key information for implementing harvest strategies and on those physical properties of the Western and Central Pacific Ocean (WCPO) are approaching climate change induced tipping points.

Last year, SC19 discussed the ecosystem and climate indicators workplan for the period 2024-2027, which was recommended for adoption. Climate change was also a topic of discussion in several contexts:

1. The Harvest Strategy for South Pacific Albacore involved general agreement on the need to consider expanded areas of uncertainty when conditioning the Operating Models. This includes climate change scenarios.
2. An overview of the status of the management procedure (MP) for WCPO skipjack tuna identified this as an area requiring additional work within the Operating Model grid (robustness set) to be augmented with climate change scenarios.
3. A research proposal on the reproductive biology and spawning potential of tropical tunas in the WCPO aiming at improving WCPFC stock assessments, establishing baselines of reproductive potential for tropical tunas in the WCPO, and monitoring the impacts of climate change.

### **Tasks by WCPFC20**

During WCPFC20, the Commission

(i) was updated by the SSP on the best available science on potential impacts of climate change on WCPFC fisheries and related ecosystems;

(ii) was updated by the WCPFC Secretariat on work done to incorporate climate change into the management of WCPFC's fisheries and also on activities in other regional fishery bodies ([WCPFC20-2023-12](#)); and

(iii) reviewed the activities of its subsidiary bodies in 2023 to consider climate change and provided advice to its subsidiary bodies to continue their work in 2024 to ensure climate change considerations are adequately reflected in the Commission's work.

Subsequently, WCPFC20 decided the following tasks for future work:

*218. The Commission requested that the Ecosystem and Climate Indicator Report Card be updated and presented annually to the Commission and its subsidiary bodies.*

*219. The Commission recognised that there is increased importance for the Commission to ensure relevant information and data collection is adequate to support improved and updated understanding by the Commission on the impacts of climate change and implications for management of WCPFC fisheries.*

*220. The Commission tasked SC and TCC to include as part of the standing agenda item 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.*

*221. The Commission tasked the Secretariat with continuing to provide a brief that summarises updates on international and regional fishery bodies (RFB) developments.*

*222. The Commission requested the Secretariat with the SSP explore the scope and feasibility of undertaking an assessment of active CMMs and to determine specific CMM provisions that may be susceptible to be impacted by climate change, and present the findings to the Science Committee, the Technical and Compliance Committee and the Commission.*

*223. The Commission recommended co-leads are identified to develop a Commission workplan for addressing climate change on WCPFC fisheries in the Convention Area. The co-leads would use the WCPFC Convention and Resolution 2019-01 as guides for that work. The draft workplan would be discussed and considered by each subsidiary body in 2024, with a view to taking this to WCPFC21 for consideration. The work plan will include, but not be limited to:*

*a. the scoping and feasibility study of an assessment of CMMs and their susceptibility to be affected by climate change*

*b. tasking for the SC to explore:*

*i. how to capture potential effects of climate change on WCPFC fisheries and fish stocks.*

*ii. mechanisms to test the robustness of existing and candidate management procedures under plausible climate change scenarios within the MSE framework.*

*c. Engagement with other Regional Fisheries Management Organizations and the Food and Agriculture Organization and their members to discuss shared challenges, leverage available resources, and identify potential pathways for cooperation on addressing climate change effects on fisheries.*

*224. The co-leads on Climate Change will initially be one representative from the SIDS and one from the USA. The co-leads (RMI and the USA) seek to ensure the workplan addresses the risks of climate change to CMMs and other obligations, taking into account relevant Scientific Committee recommendations and the results of the scoping exercise regarding the assessment of active CMMs' susceptibility to be impacted by climate change.*

*225. In developing the Commission's Climate Change Work Plan, WCPFC20 requested that the co-leads work with members to incorporate ongoing efforts on climate change impact on fisheries from each of the subsidiary bodies and also provide a framework for coordinating Commission-wide work on climate change.*

## **Summary of work by co-leads**

The Republic of the Marshall Islands and the United States of America co-lead the work tasked by WCPFC20 (paragraphs 223-225, WCPFC20 Summary Report).

Co-leads met virtually several times between January to March 2024 to set up the work schedule and begin drafting the *workplan for addressing climate change on WCPFC fisheries in the Convention Area* (“the workplan” hereinafter).

Co-leads also met with WCPFC Secretariat and the SSP in April. The meeting allowed for reaching a common understanding of responsibilities on the tasks by WCPFC20 and getting views from WCPFC Secretariat and SSP on the proposed approach taken by co-leads on the draft workplan as well as on the scope and feasibility study to assess the current CMMs for climate risk (paragraph 222, WCPFC20 Summary Report) .

In June, the Co-leads met with the Chair of the Northern Committee to discuss introducing the draft workplan and draft CMM Climate Risk Assessment Terms of Reference (TOR) during the Northern Committee to solicit input from the NC CCMs on both documents. Co-leads then presented a draft version of the workplan and CMM Climate Risk Assessment TOR at NC20 in July.

In July, co-leads subsequently met with the SC Chair to hear her views on an appropriate approach for the discussion of the draft workplan and also on the proposed tasks assigned by co-leads to the SC and how well these fit within the SC workplan. Co-leads took this opportunity to consult with the SC Chair on the draft Terms of Reference for the Climate Assessment of the CMMs.

Following the SC, the co-leads will incorporate any suggestions and input from the SC into an updated draft Workplan and draft Terms of Reference for the Climate Assessment of the CMMS and submit updated documents to TCC for its consideration.

### **[Draft workplan \(Attachment A\)](#)**

The draft workplan proposed by co-leads is intended to be a living document, as a starting point to set out the tasks and responsibilities to organise and monitor the work on climate change within the WCPFC. The co-leads seek input from the SC during its meeting for the tasks it plans to undertake to incorporate climate change into its work. This version includes initial input from the SC Chair.

### **[Draft Terms of Reference for the CMM assessment \(Attachment B\)](#)**

Following guidance from WCPFC20 (paragraphs 222 and 224, WCPFC20 Summary Report) and with the intention to support discussions in relation to the scope, feasibility and technicalities of the *assessment of CMMs and their susceptibility to be affected by climate change* ([SC20-EB-WP-07](#)), co-leads have drafted Terms of Reference for such study. The co-leads seek input from the SC during its meeting on the draft Terms of Reference for the CMM assessment.

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## WCPFC co-Chairs Draft Climate Change Workplan

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### **Objective**

Using the WCPFC Convention and Resolution 2019-01 as guides, in response to the WCPFC 20 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 actions to be taken by the Commission and its SBs to address climate change impacts on WCPFC fisheries in the Convention Area.

### **Commission**

- Consider and discuss the SB's recommendations regarding the CMM assessment and continue to discuss appropriate ways to incorporate climate change into the work of the Commission and the SBs.
- 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
- [Additional Commission-level tasks identified by subsidiary bodies, if any.]

### **Northern Committee**

- Coordinate with ISC as it considers how to incorporate climate change advice into management recommendations to NC
- [Additional tasks and objectives developed through discussion with the NC Chair]
- [Additional tasks developed through NC]

### **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 modeling; 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 modeling;
- 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 susceptibility assessment and discuss appropriate ways to incorporate scientific advice that may assist in future development of CMMs based on the outcomes of the assessment;
- [PLACEHOLDER FOR ANY ADDITIONAL TASKS DEVELOPED BY THE SC]

#### **Technical and Compliance Committee**

- Consider the outcomes and technical information from the CMM susceptibility 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 [Convention Article 14.1(a)]. Advice relating to the assessment of CMM susceptibility to the impacts of Climate Change would provide a first step towards fulfilling TCC's obligations under Convention Article 14. TCC's annual review of available information should 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.
- [Additional tasks and objectives developed through discussion with the TCC Chair]
- [Additional tasks developed through TCC]

#### **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.
- [Additional tasks and objectives developed through discussion with the FAC Chair]



- [Additional tasks developed through FAC]

### **Science and Management Dialogues and other WCPFC Intersessional Fora**

- Addressing climate change as 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.
- Propose convening a 2025 SMD focused on climate change, including discussions on the incorporation of climate considerations in the development of harvest strategies.
- [Additional tasks developed through the SMDs and other WCPFC Intersessional Fora]

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.

### **Deliverables (from [WCPFC20 Outcomes](#))**

*218. The Commission requested that the Ecosystem and Climate Indicator Report Card be updated and presented annually to the Commission and its subsidiary bodies.*

*219. The Commission recognised that there is increased importance for the Commission to ensure relevant information and data collection is adequate to support improved and updated understanding by the Commission on the impacts of climate change and implications for management of WCPFC fisheries.*

*220. The Commission tasked SC and TCC to include as part of the standing agenda item 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.*

*221. The Commission tasked the Secretariat with continuing to provide a brief that summarises updates on international and regional fishery bodies (RFB) developments.*

*222. The Commission requested the Secretariat with the SSP explore the scope and feasibility of undertaking an assessment of active CMMs and to determine specific CMM provisions that may be susceptible to be impacted by climate change, and present the findings to the Science Committee, the Technical and Compliance Committee and the Commission.*

*223. The Commission recommended co-leads are identified to develop a Commission workplan for addressing climate change on WCPFC fisheries in the Convention Area. The co-leads would use the WCPFC Convention and Resolution 2019-01 as guides for that work. The draft workplan would be discussed and considered by each subsidiary body in 2024, with a view to taking this to WCPFC21 for consideration. The work plan will include, but not be limited to:*

- a. the scoping and feasibility study of an assessment of CMMs and their susceptibility to be affected by climate change
- b. tasking for the SC to explore:
  - i. how to capture potential effects of climate change on WCPFC fisheries and fish stocks.
  - ii. mechanisms to test the robustness of existing and candidate management procedures under plausible climate change scenarios within the MSE framework.
- c. Engagement with other Regional Fisheries Management Organizations and the Food and Agriculture Organization and their members to discuss shared challenges, leverage available resources, and identify potential pathways for cooperation on addressing climate change effect on fisheries.

224. The co-leads on Climate Change will initially be one representative from the SIDS and one from the USA. The co-leads (RMI and the USA) seek to ensure the workplan addresses the risks of climate change to CMMs and other obligations, taking into account relevant Scientific Committee recommendations and the results of the scoping exercise regarding the assessment of active CMMs' susceptibility to be impacted by climate change.

225. In developing the Commission's Climate Change Work Plan, WCPFC20 requested that the co-leads work with members to incorporate ongoing efforts on climate change impact on fisheries from each of the subsidiary bodies and also provide a framework for coordinating Commission-wide work on climate change.

**Workplan & Schedule**

<b>2024 Schedule</b>	<b>Activities</b>	<b>Responsible</b>	<b>Action Needed &amp; Remarks</b>
July - September	Present draft workplan to SBs for review and feedback	Co-leads	NC20, SC20 and TCC20 consider draft workplan and provide input to climate change co-leads.
July - September	Preliminary assessment of two CMMs. Present draft TORs for the CMM assessment.	Secretariat and SSP	NC20, SC20 and TCC20 review the preliminary CMM assessment to inform draft TOR for a 2025 Consultancy.

TBD	Engagement with other Regional Fisheries Management Organizations and the Food and Agriculture Organization and their members to discuss shared challenges, leverage available resources, and identify potential pathways for cooperation on addressing climate change effects on fisheries	Commission, Secretariat, SSP, and Members	TBD
November - December	Submission and consideration of finalized workplan by WCPFC21  WCPFC21 to discuss the draft TORs for the Assessment of CMM climate susceptibility.	Co-leads	WCPFC21 to consider recommendations from NC20, SC20 and TCC20, and to discuss the climate change workplan.  WCPFC21 to consider recommendations from NC20, SC20, and TCC20 on the preliminary CMM assessment and the TOR.
<p>WCPFC21 agrees on a workplan for addressing climate change on WCPFC fisheries in the Convention Area</p> <p>WCPFC21 finalises the on the TOR for the assessment of CMM vulnerability to climate change, depending on the results of the scoping and feasibility study.</p>			

2025 Schedule	Activities	Responsible	Action Needed & Remarks
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January - June	Consultancy undertakes assessment in accordance with TORs adopted at WCPFC 21.	Secretariat & SSP	Secretariat hires consultancy and advises on assessment
TBD	Engagement with other Regional Fisheries Management Organizations and the Food and Agriculture Organization and their members to discuss shared challenges, leverage available resources, and identify potential pathways for cooperation on addressing climate change effects on fisheries	Commission, Secretariat, SSP, and Members	TBD
July - September	Results of the assessment are presented to NC21, SC21, and TCC21.	Subsidiary Bodies and Commission	Develop and discuss recommendations targeting potential decisions for WCPFC22 deliberation.
Consult with SPC to schedule	Development of a subsidiary bodies CC workplans and research plans (for SC, a and b can be included in the SC CC research plan)	TBD	TBD
TBD	a. Explore how to capture potential effects of climate change on WCPFC fisheries and fish stocks	TBD	TBD

	b. Explore mechanisms to test the robustness of existing and candidate management procedures under plausible climate change scenarios within the MSE framework.		
TBD	Capacity building (for managers mainly) and engagement	Commission with assistance of WCPFC Secretariat and SSP	Potential SMD on Climate Change
November - December	Results of the assessment and recommendations from NC21, SC21, and TCC21 are presented to WCPFC22	Commission	Deliberation of advice from subsidiary bodies with respect to addressing climate change.
WCPFC22 agrees on a decision regarding the CMM susceptibility assessment and provides direction to SBs on their tasks to include these findings in their workplans			

<b>TBD Schedule</b>	<b>Activities</b>	<b>Responsible</b>	<b>Action Needed &amp; Remarks</b>
TBD	SC tasks/requirements - report card	SC with assistance from SSP	TBD
TBD	Engagement and Advocacy	TBD	TBD

### **Key Reference Documents for the workplan**

- [WCPFC20 Outcomes](#), climate change outcomes are paragraphs 18-26
  - [Resolution 2019-01](#) - Resolution on Climate Change as it relates to the Western and Central Pacific Fisheries Commission
  - [WCPFC-TCC19-2023-IP12](#) - Ecosystem and Climate Indicator Report Card from SC19
- [Ecosystem and Climate Indicator Presentation to SC19](#)

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**DRAFT**

**Terms of Reference for an Assessment of  
CMM Susceptibility to the Impacts of Climate Change**

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**Background**

1. WCPFC20 affirmed [Resolution 2019-01 on Climate Change as it Relates to the Western and Central Pacific Fisheries Commission](#) (WCPFC), by agreeing to develop a workplan (**Workplan**) and support an assessment (**Assessment**) of the susceptibility of WCPFC Conservation and Management Measures to the impacts of climate change in 2024 ([WCPFC20 Outcomes](#)):

*23. The Commission requested the Secretariat with the SSP explore the scope and feasibility of undertaking an assessment of active CMMs and to determine specific CMM provisions that may be susceptible to be impacted by climate change, and present the findings to the Science Committee, the Technical and Compliance Committee and the Commission.*

*24a. The Commission recommended co-leads are identified to develop a Commission workplan for addressing climate change on WCPFC fisheries in the Convention Area. The co-leads would use the WCPFC Convention and Resolution 2019-01 as guides for that work. The draft workplan would be discussed and considered by each subsidiary body in 2024, with a view to taking this to WCPFC21 for consideration. The work plan will include, but not be limited to; the scoping and feasibility study of an assessment of CMMs and their susceptibility to be affected by climate change...*

2. These terms of reference (TOR) define the Scope & Feasibility, Objectives, Process, Tasks, and Time Frame of the Analysis. The TOR also sets out initial expectations of the Commission with respect to the outputs of the Assessment.

**Scope**

3. In consultation with the Workplan co-Chairs from the Republic of the Marshall Islands and the United States (**co-Chairs**), the WCPFC Secretariat and Scientific Services Provider (SSP) have explored the scope of an Assessment as proposed at WCPFC20 ([WCPFC20-2023-DP08\\_Rev02](#)) and detailed in these TOR.
4. The scope of the Assessment:

- a. is limited to informing (i.e. not advising) the Technical and Compliance Committee, Scientific Committee, and Northern Committee as to whether specific provisions of conservation and management measures (CMMs) of the Commission may be affected by climate change;
- b. does not prejudice or have any effect on members' implementation of obligations arising from specific conservation and management provisions;
- c. is not intended to initiate, or result in, renegotiation of CMMs;
- d. and will be limited to publicly available information such as adopted CMMs, [and] published climate advice of the SSP and Scientific Committee[, and peer-reviewed scientific literature including species climate vulnerability assessments and research on geographic shifts of species distributions].

### **Feasibility**

5. In consultation with the Workplan co-Chairs, the WCPFC Secretariat and Scientific Services Provider (SSP) have explored the feasibility of an Assessment as proposed at WCPFC20 ([WCPFC20-2023-DP08\\_Rev02](#)) and as described in the Objectives, Process, and Tasks of these TOR.
6. The Assessment will be completed by [the SSP or] a consultant hired by the Secretariat and completed with a narrow scope as described above. Funding is available to provide compensation for this work.
7. Based on available information, the Secretariat and the SSP have determined that the Assessment is feasible as outlined in the TOR and will yield beneficial information to the Commission and its members.
8. As a demonstration of this feasibility, the Secretariat and SSP are undertaking a Preliminary Assessment of the tropical tuna and seabird CMMs to present first to NC20, then SC20, and TCC20. Member feedback from this preliminary assessment will inform the Objective, Process, and Tasks of these TORs.

### **Objective**

9. The Assessment will:

**Review all active WCPFC CMMs and identify specific CMM provisions that may require additional discussion among members as being susceptible to be impacted by climate change.**



10. The Assessment is not intended to preclude any future consideration, evaluation, or prioritization of any CMM, including those not immediately deemed the most susceptible to climate change impacts.

### **Process**

11. The Assessment will:

- a. compile available advice from the SSP and Scientific Committee on climate risks to fisheries managed by the Commission;[, and peer-reviewed scientific literature including species climate vulnerability assessments and research on geographic shifts of species distributions].
- b. review and analyze active CMM provisions available via the WCPFC website in the context of 10(a); and
- c. provide to NC21, SC21 and TCC21 a list of active CMM provisions with an explanation of any identified potential climate vulnerabilities associated with specific provisions.

12. The Assessment will be overseen by the WCPFC Secretariat in conjunction with the SSP and will be considered by the Commission and its subsidiary bodies meetings, following the schedule in the adopted WCPFC climate change workplan during the Climate Change agenda item for each meeting.

### **Tasks**

13. The Consultant will develop a rubric by which species, geographic considerations, and gear types are generally prioritized by susceptibility through consideration of both sensitivity and exposure to climate change impacts.

14. The susceptibility to climate change of fisheries conservation and management has not been explored or discussed by the Commission. As a first step towards focusing the work of members, and without taking on the more complex task of ranking each susceptible provision, this Assessment will categorize CMM provisions as either being “Susceptible” or “Not Susceptible” to climate change.

15. The first step will also involve development of definitions for “Susceptible” and “Non Susceptible” based on available science, and this will be the first outcome of the assessment for review by the Scientific Committee.

16. The Susceptibility category will consider, but not limited to, whether provisions of WCPFC CMMs are implemented based on:

- a. certain target of bycatch species,

- b. specific geographic areas,
- c. different gear types,
- d. review period, or
- e. any mention of climate or climate awareness.

17. The Assessment may offer recommendations for further consideration by the Commission as to how to rank or prioritize among the CMM provisions that are identified as “Susceptible” to climate change, but such recommendations will not be implemented in, or as a direct result of, the Assessment.

18. The Consultant will complete the tasks in paragraphs 12-17 based on the process in paragraphs 11 & 12.

**Timeframe**

10. The proposed timing for the Assessment and its consideration by the Commission and its subsidiary bodies is as follows:

<b>Timing</b>	<b>Description</b>
June - September 2024	Draft TORs circulated to Members alongside the Preliminary Assessment of the Tropical Tuna and Seabird Measures.
January 2025	Initiate the Consultancy and Assessment.
June - September 2025	Results presented to NC21, SC21, and TCC21 for review and recommendations to the WCPFC22
WCPFC22 (Dec 2025)	Climate change taskings to subsidiary bodies for 2026.