



**TECHNICAL AND COMPLIANCE COMMITTEE**

**Nineteenth Regular Session**

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Pohnpei, Federated States of Micronesia

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**SC19 OUTCOMES RELEVANT TO TCC**

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**WCPFC-TCC19-2023-25<sup>1</sup>**

**14 September 2023**

**Paper by the Secretariat**

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<sup>1</sup> Based on SC19 Outcomes\_rev1 issued 12 September 2023

## List of [SC19 Outcomes](#) Relevant to TCC

### 1. DATA AND STATISTICS THEME

#### 1.1 Data gaps of the Commission

##### 1.1.1 Minimum data reporting requirements

###### *a. Operational longline data fields (SC19 Outcomes Document, paragraphs 3-4)*

1. SC19 acknowledged the scientific value of the additional longline operational data fields in Table ST-01 and recommended that these fields be considered for inclusion in the “Scientific Data to be Provided by the Commission (SciData)”.

2. However, SC19 noted broad implementation concerns of CCMs with respect to the collection of these data, recommended that **TCC** and the Regular Session of the Commission take account of these concerns, and suggested a possible option would be to include them as voluntary reporting items.

**Table ST-01.** Additional longline operational data fields for CPUE standardization and related analyses

DATA FIELD	Suggested PROTOCOL for data collection
Target species for the set	Record the primary target species, or group of species, for this set.
Number of lightsticks used in set	Record the total number of lightsticks used in the set.
Bait type used in set	Record the FAO code for type of bait used for the set. Example types: <ul style="list-style-type: none"> <li>• Squid (class Cephalopoda)</li> <li>• Sardine or Pilchard (family Clupeidae)</li> <li>• Mackerel (family Scombridae)</li> <li>• Mixed Mackerel and Sardine ...</li> </ul>
Mainline length	Record the mainline length (in kilometres) used in the trip or set, as appropriate.
Length of branch line	Record the average length in metres of the branch lines in the trip or set. (The total length from the mainline to the hook).
Length of float line	Record the average length in metres of the float lines in the set. (The total length from the float to the mainline).
Vessel speed during setting	Record the average speed in knots of vessel during line setting.
Speed of the line setter	Record the speed in knots of the line setter (i.e. the line shooter speed).

###### *b. Additional code for the ACTIVITY field (SC19 Outcomes Document, paragraphs 5-7)*

3. SC19 acknowledged that the proposal for the addition of a new activity code for any day when a "transshipment at sea occurs" would allow the WCPFC's Scientific Services Provider (SSP) to define 'trips' within the operational data submitted to the Commission.

4. SC19 also noted the explanation from the SSP that aggregating the catch by species in the longline operational data at the trip level (when the trip is terminated by an at-sea transshipment) is fundamental for the validation processes using other independent sources of data (e.g. transshipment observers and carrier declarations) to provide more certainty in the data used in assessments and other work of the Commission.

5. **SC19 recommended that this proposal be considered further by TCC and the Regular Session of the Commission.**

*c. Inconsistencies between SciData and CMM operational data reporting requirements (SC19 Outcomes Document, paragraphs 8-10)*

6. SC19 acknowledged the review by the WCPFC SSP of inconsistencies in the data reporting requirements between the Scientific Data to be Provided by the Commission (SciData), and other WCPFC reporting obligations (e.g., in CMMs)

7. This review identified a reporting requirement under CMM 2018-04 (Conservation and Management of Sea Turtles) that does not appear to be specifically covered in operational data requirements of the SciData (refer to CMM 2018-04 paragraph 5 (c) and 7(e)).

8. After discussion and consideration, SC19 noted that the reporting requirement under CMM 2018-04 does not explicitly require operational data. **SC19 recommended that TCC19 consider whether it is necessary to clarify the reporting requirements in the CMM 2018-04, while noting the difficulty of logbook-based data collection for sea turtles.**

*d. Inconsistent reporting of Set Start Time (SC19 Outcomes Document, paragraphs 11-12)*

9. The SC19 working paper on the proposed Billfish Research Plan 2023 - 2027 (SC19-SA-WP-16) noted in a review of available operational data for future billfish research that, "...some fleets record time as ships time, others at UTC and some as country capital time. Clarifying this at a fleet level will be needed before this analysis can be completed with any certainty."

10. The SciData indicates that "the date of start of set and time of start of set: The date and start of set time should be GMT/UTC". Reporting date/time in the GMT/UTC standard is not a binding SciData requirement, so SC19 recommended that the WCPFC CCMs, with assistance from the WCPFC SSP where required, indicate:

- (a) the date/time standard used in their historical operational data submissions to the Commission, and
- (b) the date/time standard in their operational data, when they are submitted each year in the future.

Information to ensure the date/time standard is linked back to GMT/UTC shall also be provided.

*e. Additional Billfish Species (SC19 Outcomes Document, paragraph 13)*

11. **SC19 noted the need for data on short-billed spearfish and sailfish catches, as highlighted in the Billfish Research Plan, and recommended that TCC19 determine how to best accommodate the inclusion of these two species into the Science Data to be provided to the Commission.**

## 2. MANAGEMENT ISSUES THEME

### 2.1 Development of harvest strategy framework for key tuna species

#### 2.1.1 Monitoring strategy for WCPO skipjack tuna ((SC19 Outcomes Document, paragraphs 137 – 146)

12. Noting the Commission’s request to review the elements of the monitoring strategy as set out in ANNEX III of CMM 2022-01, and information provided by the SSP on the elements of the harvest strategy to be included in the monitoring strategy, SC19 reviewed SC19-MI-WP-02 (Monitoring the WCPO skipjack management procedure).

13. SC19 noted the aspects of the MP that may be considered for inclusion in the monitoring strategy and the Commission body at which those considerations can be made (Annex III, Table 2, also shown in Table 1 of SC19-MI-WP-02).

14. In order to simplify and streamline the monitoring process for the Commission and its subsidiary bodies, SC19 supported the concept of compiling a summary monitoring report consisting of a summary table that identifies the elements of the monitoring programme that may require additional work or through which major problems may be identified, along with a few short paragraphs to provide further details of the work required to address those issues. The priority of any issues identified can be determined based on the considered severity of the issue and the amount of work required to address it.

15. An example of such a summary report is attached as **Attachment 3**.

16. While noting that this report covers all the elements of the MP to be reviewed, SC19 also noted a need for both the **TCC** and the Commission to provide input into the development of this report considering the elements of the monitoring strategy that have been assigned to each body to review.

17. SC19 also noted that the initial development and implementation of this monitoring strategy, and the associated report, will likely be an iterative process, with some time-lags before each body will be able to fulfil some of its roles. For example, given the MP will be first implemented in 2024, **TCC** will only first be able to monitor compliance in 2025. Once this initial phase in period is complete, review and updating of the monitoring report should be undertaken annually by each body. However, as the MP and stock assessment are only run every three years, some elements of the monitoring strategy will not be able to be reviewed and updated on an annual basis.

18. SC19 noted that as this is the first year for which this MP has been run, there is limited ability to monitor its full performance now. However, to initiate the development of the monitoring report, SC19 reviewed those elements of the monitoring strategy assigned to the SC. The outcomes of that review are shown in the draft monitoring report listed in Attachment 3 and show that SC19 supported the conclusions of SC19-MI-WP-02, that the outcomes of initial running the skipjack MP were consistent with that predicted by the MSE and that all data requirements were satisfied. Some priorities for future work are also noted.

19. Finally, SC19 noted that the annual review of each element of the monitoring strategy will provide an opportunity for the Commission and its two subsidiary bodies to review, and where necessary (depending on the degree of impact on the MP), update the management objectives to ensure the overall harvest strategy remains appropriate as the nature of the fishery evolves over time.

20. Noting that the Commission is scheduled to adopt a monitoring strategy for skipjack tuna in 2023, **SC19 supported the proposed monitoring strategy as outlined in [SC19-MI-WP-02](#) and**

recommended that it be considered for adoption following further discussion by **TCC** and the Commission.

21. SC19 recommended that the Commission take note of the initial review of the skipjack MP under the proposed monitoring strategy as outlined in [SC19-MI-WP-02](#) and consider the proposed monitoring strategy summary report drafted by SC and **TCC** and advise accordingly.

### 3. ECOSYSTEM AND BYCATCH MITIGATION THEME

#### 3.1 FAD Impacts

##### 3.1.1 FAD Management Options IWG Issues (SC19 Outcomes Document, paragraphs 211-222)

22. SC19 recommended that the FADMO-IWG and **TCC** review the timelines for the stepwise introduction of biodegradable dFADs considering the expected outcomes of projects related to the design, cost-effectiveness and performance of biodegradable dFADs (e.g., jelly FADs) in the WCPO and other oceans.

23. SC19 viewed that moving to biodegradable FADs is important for reducing marine pollution and other impacts. However, SC19 noted that it is challenging for some CCMs, especially for purse seine operators that are going through a major process of eliminating netting in FADs, to meet the non-entangling requirement for 2024 and further noted that trials for biodegradable FADs are still ongoing. In this regard SC19 noted that, for some CCMs, the year 2025 to start the transition to biodegradable FADs implementation may not be viable.

24. SC19 noted IATTC's biodegradable FAD implementation program, which includes timelines with the mandatory use of categories I to IIIb by 2026 (Table FAD-1); and categories I to II by 2029, which could be reviewed by **TCC** and the FADMO IWG for consideration in the WCPO.

**TABLE FAD-1:** Preliminary categories of drifting FADs biodegradability levels (from non-biodegradable to 100% biodegradable) for the gradual implementation of biodegradable drifting FADs. *In year X, FADs of either category III(a) (biodegradable tail) or/and category III(b) (biodegradable raft) are required/implemented simultaneously.*

Categories <sup>2</sup>	Potential Timeline (Suggestion 1)	Potential Timeline (Suggestion 2)	Remarks
Category I. The FAD is made of 100% biodegradable materials.	Year X + 3	Year X + d	Year X will be determined by the WCPFC and subject to review based on available information and availability of materials
Category II. The FAD is made of 100% biodegradable materials except for plastic-based flotation components (e.g., plastic buoys, foam, purse-seine corks).	Year X + 2	Year X + c	Year X will be determined by the WCPFC and subject to review based on available information and availability of materials

<sup>2</sup> The Categories were renumbered as follows: Category III = Category III(a); Category IV = Category III(b) and Category V = Category IV

Category III(a). The subsurface part of the FAD is made of 100% biodegradable materials, whereas the surface part and any flotation components contain non-biodegradable materials (e.g., synthetic raffia, metallic frame, plastic floats, nylon ropes).	Year X	Year X +b	Year X will be determined by the WCPFC and subject to review based on available information and availability of materials
Category III(b). The subsurface part of the FAD contains non-biodegradable materials, whereas the surface part is made of 100% biodegradable materials, except for, possibly, flotation components.	Year X	Year X +a	Year X will be determined by the WCPFC and subject to review based on available information and availability of materials
Category IV. The surface and subsurface parts of the FAD contain non-biodegradable materials.	Current	Year X	

Note\* These definitions do not apply to electronic buoys attached to FADs to track them.

25. SC19 recommended the FADMO IWG and **TCC** consider incentivising the use of biodegradable dFADs.

26. SC19 noted that some CCMs suggested one example of an incentive could be to allow biodegradable dFADs to be deployed during the FAD closure.

27. SC19 noted the limitation in the scientific analyses of FAD tracking data due to the current incomplete data. SC19 noted the importance of complete FAD tracking data, including for historical periods, to support scientific analyses to detect trends in dFAD use; to evaluate the effectiveness of paragraph 21 of the Tropical Tuna Measure (CMM 2021-01); to determine the origin of FADs and buoys found stranded; and to explore spatial management options to reduce stranding events.

28. SC19 supported the suggestion of the FADMO IWG on requiring the provision of the daily location records from buoys attached to dFADs to be provided, including historical periods, to research organizations (SPC), research organizations within CCMs, or to the Commission

29. SC19 noted that, based on the information available, no vessel monitored more than 350 active buoys per day (the current buoy number limit under CMM 2021-01), with 90% of the vessels monitoring less than 130 buoys per day. It was noted these results were limited to the fleets that have provided tracking information since January 2023 and some differences for at least one fleet have been noted. SC19 recommended that the FADMO IWG and **TCC** further discuss the active FAD buoy limit and provide advice to TTMW4 and the Commission on this issue.

30. SC19 recommended that options should be developed by the FADMO IWG and **TCC** for reporting the number of active buoys per vessel (paragraph 21 of CMM 2021-01); and to develop processes to i) report the number of dFADs and buoys deployed and retrieved per year; ii) report lost and abandoned dFAD; and iii) to eventually abandon and deactivate buoy communication (paragraph 22 of CMM 2021-01).

31. SC19 highlighted the need for in-situ data collection to better quantify FAD stranding events and the impacts of FADs on marine and coastal environments; and encouraged the expansion of the in-country stranded FAD data collection programs to other CCMs.

32. SC19 highlighted the need to promote FAD retrieval, preferably by the owner of the buoy attached, and eventually through dedicated programs, before FADs are abandoned or lost and ultimately reach coastal areas. SC19 recommended that options for increased FAD detection and retrieval should be considered, including economic aspects and standards required for programs to be effective. SC19 recommended that a FAD recovery program/strategy be an agenda item for the FADMO IWG.

33. SC19 supported the Pacific-wide collaboration on dFAD research, in particular on harmonising data collection processes, increasing non-confidential data exchanges and collaborating on data analyses.

## **3.2 Seabirds**

### **3.2.1 Review of CMM on seabirds (CMM 2018-03) (SC19 Outcomes Document, paragraph 229)**

34. SC19 noted that Aotearoa New Zealand was offering to lead a review of CMM 2018-03 “To ensure that effective mitigation methods are required and applied across the Convention Area where there is bycatch risk to vulnerable seabirds from longline fishing” and that its proposed scope would include I) the spatial extent of required mitigation methods, II) the Southern Hemisphere mitigation options and specifications, and III) the Northern Hemisphere mitigation options and specifications. To ensure a meaningful and collaborative review of CMM 2018-03, Aotearoa New Zealand was also offering to establish and lead informal intersessional meetings with interested CCMs to review the latest scientific evidence on seabird bycatch mitigation and gather views on the review of CMM 2018-03. Aotearoa New Zealand would aim to draft a revision of CMM 2018-03 for submission to SC20, **TCC20**, and WCPFC21. SC19 supported this approach to the review of CMM 2018-03.

**The Commission for the Conservation and Management of  
Highly Migratory Fish Stocks in the Western and Central Pacific Ocean  
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**WCPO skipjack management procedure monitoring report**

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This summary monitoring report is intended to provide an overview of the status of the management procedure (MP) for WCPO skipjack tuna and to allow for information to be collated progressively as elements of the MP are considered by different groups and Commission bodies (as outlined in the Appendix).

The summary monitoring report lists the elements of the WCPO skipjack MP monitoring programme, the status of those elements after review by the relevant body of the Commission, and identifies those elements that may require additional work or through which problems have been identified. Highlighted elements have a priority placed on the corresponding issue, based on the issue’s considered severity and the amount of work likely required to address it. This is summarised in the table below. This report also includes summary paragraphs following the table, which provide further details of the work required.

Each of the Commission’s bodies is requested to review and update their previous comments on an annual basis, as necessary.

**Monitoring report summary table**

Item	MP element	Commission Body	Status and comments	Priority
<i>1. Review MP performance</i>				
1.1	Comparison with stock assessment	SC19	Will be reviewed following implementation of the MP through the stock assessment scheduled in 2025, noting however that there will only be one year of MP implementation included within that assessment.	
1.2	Data availability & quality	SC19	The level of pole and line CPUE data in tropical regions is declining over time. If this trend continues, there may be insufficient information to inform the MP. Work should begin to evaluate alternative MPs that are robust to this potential decline in pole and line data availability.	<b>High</b>
		TCC19		
1.3	Other sources of data	SC19	No new information noted at SC19.	-
		TCC19		



1.4	EM performance	SC19	The EM showed acceptable performance.	
<b>2. Review of the MP</b>				
2.1	Management objectives	WCPFC20		-
2.2	Scope of the MP	SC19	No new information at the time of SC19.	-
		TCC19		
		WCPFC20		
2.3	Exceptional circumstances	SC19	None identified by SC19.	-
		TCC19		
		WCPFC20		
<b>3. Review MSE framework</b>				
3.1	Operating model grid	SC19	The OM grid (robustness set) to be augmented with climate change scenarios. Further consideration of the OM grid is also suggested given the predicted outcomes of the adopted MP and the 2022 stock assessment showed some departure for the historical period. These issues will be considered for inclusion when the current MP is reviewed.	Medium
3.2	Calculation of performance indicators	SC19	No new information at the time of SC19.	-
3.3	Modelling assumptions	SC19	While no major issues are identified, any re-evaluation of the skipjack EM (identified under 1.2) may require a re-evaluation of the modelling framework.	<b>High</b>
3.4	Data availability and quality	SC19	Generally good	
		TCC19		

## Further Details

### 1. Review MP performance

**1.1 Comparison against stock assessment outcomes:** With the first implementation of MP outputs in 2024, the stock assessment for WCPO skipjack in 2025 will be the first in which the impact of the MP on stock status will be experienced. There will only be one year of MP implementation included within that assessment, so this comparison will be preliminary. A comparison of the MSE predicted outcomes of the adopted MP and the 2022 stock assessment shows good correspondence for the most recent years but shows some departure for the historical period. This is considered under 3.1.

**1.2 Data availability and quality:** Sufficient data were available to run the MP. However, it was noted that pole and line fishing effort in tropical regions continues to decline and this presents a potential problem for the future running of the MP. A re-evaluation of the estimation method is

recommended prior to the next implementation of the MP. This issue is a high priority.

**1.3 Other sources of data:** No other sources of data have been identified.

**1.4 EM performance:** Overall the estimation method performed well and provided estimates of stock status within the prediction range of the MSE.

## **2. Review MP**

**2.1 Management objectives:** No change noted by SC19.

**2.2 Scope of the MP:** No change noted by SC19.

**2.3 Exceptional circumstances:** None identified by SC19.

## **3. Review MSE framework**

**3.1 Operating model grid:** OM grid to be extended to include climate change scenarios (robustness set). In particular the effects of warm pool expansion in WCPO. These analyses require further analysis of the SEAPODYM outputs and may occur over an extended timeframe. This issue is considered to be of medium priority. The comparison of the MSE predicted outcomes of the adopted MP and the 2022 stock assessment did show some departure for the historical period. This is not considered a major problem affecting the MP but some further investigation of the OM grid may be required.

**3.2 Calculation of performance indicators:** No change in performance indicators required at this time.

**3.3 Modelling assumptions:** no issues identified; however, re-evaluation of the skipjack EM (identified above) may require a re-evaluation of the modelling framework (for example the calculation of simulated data used to test the MP). This issue is of high priority.

**3.4 Data availability and quality:** Generally good - some changes may be required depending on the approach adopted to address the decline in pole and line fishing in tropical regions.

**Appendix to Attachment 3.** Elements of the management procedure that may be considered for inclusion in the monitoring strategy and the Commission body at which those considerations can be made. (Table 2 of Annex III, CMM 2022-01).

MP Element	Commission Body	Monitoring Considerations
<b><i>1. Review MP performance</i></b>		
Comparison of predicted MP performance against latest assessment outcomes	SC	Check that the MP is performing as expected
Data availability to run the MP	SC/TCC	Check availability, quantity and quality of data necessary to run the MP (e.g. the estimation method)
Other sources of data to monitor performance	SC/TCC	Identify other data as available, that may not be included in the MSE framework, to inform calculation of performance indicators (economic, social, ecosystem, etc.)
Performance of the estimation method	SC	Confirm the EM is performing well and not subject to estimation failure
<b><i>2. Review of the MP</i></b>		
Management objectives	Commission	Check that overall objectives of the MP remain appropriate
Scope of the management procedure	SC/TCC/Comm	Confirm the fisheries controlled by the MP, and the method of control, remains appropriate
Exceptional circumstances	SC/TCC/Comm	Drawing on all of the above, have events (unexpected, extra-ordinary) occurred such that remedial action is required to either review modify or replace the MP
<b><i>3. Review MSE framework</i></b>		
Operating model grid	SC	Ensure that the most important sources of uncertainty are included in the OM grid
Calculation of performance indicators	SC	Check for appropriate representation of objectives by performance indicators
Modelling assumptions	SC	Consider the technical details of the simulation and testing framework
Data availability to support the MSE framework	SC/TCC	Improvements to data collection to either enhance the OM framework or to reduce uncertainty included in the OM grid

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