



**SCIENTIFIC COMMITTEE  
EIGHTEENTH REGULAR SESSION**

Electronic Meeting  
10 – 18 August 2022

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**PROVISIONAL ANNOTATED AGENDA**

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**WCPFC-SC18-2022/03 (Rev.04)  
9 August 2022**

**AGENDA ITEM 1      OPENING OF THE MEETING**

The Virtual SC18 Meeting will start at 09:00 am Pohnpei time on 10, 11, 17, and 18 August 2022 and 13:00 pm Pohnpei time on 12, 13, and 15 August 2022. There will be no sessions on Sunday, 14 August, and Tuesday, 16 August.

**1.1      Welcome address**

The Commission Chair, SC Chair and the Executive Director will welcome delegations of the WCPFC Members, Cooperating Non-members and Participating Territories (CCMs) and Observers to the Eighteenth Regular Session of the Scientific Committee (SC18).

**1.2      Meeting arrangements**

The SC Chair will outline procedural matters including the meeting schedule, administrative arrangements, and the list of theme conveners. In addition, SC18 will endorse the appointment of new conveners as required.

Chair	Tuikolongahau Halafihi (1); <a href="mailto:supi64t@gmail.com">supi64t@gmail.com</a>
Vice Chair	Vacant
ST Theme	Valerie Post (5); <a href="mailto:valerie.post@noaa.gov">valerie.post@noaa.gov</a>
SA Theme	Keith Bigelow (4); <a href="mailto:keith.bigelow@noaa.gov">keith.bigelow@noaa.gov</a> Hidetada Kiyofuji; <a href="mailto:hkiyofuj@affrc.go.jp">hkiyofuj@affrc.go.jp</a>
MI Theme	Robert Campbell (13); <a href="mailto:robert.campbell@csiro.au">robert.campbell@csiro.au</a> Co-Convenor: TBD
EB Theme	Yonat Swimmer (4); <a href="mailto:yonat.swimmer@noaa.gov">yonat.swimmer@noaa.gov</a> Co-Convenor: TBD

*(x): number of years of convenership*

**1.3      Adoption of agenda**

Posting of the Provisional Agenda for SC18 was delayed awaiting the process of the Commission's intersessional decision on the SC18 meeting arrangements as a result of the continued disruptions caused by the COVID-19 pandemic. Any Member of the Commission, the Chairman, or the Executive Director may request the inclusion of supplementary items in the Agenda at least 30 days before the start of the SC18. A request for the inclusion of a supplementary item in the Provisional Agenda shall be accompanied by a written explanation of the proposed supplementary item, which will be communicated to all CCMs and observers at least 20 days before the opening of the Session.

Other matters to be discussed under Agenda Item 9 may be proposed here. SC18 will review and adopt the Provisional Agenda.

#### **1.4 Reporting arrangements**

A DRAFT Summary Report will be developed and adopted intersessionally with an Executive Summary. The Executive Summary will include a brief overview of the meeting, all theme recommendations adopted during the meeting, including a synopsis of stock status and management advice, and any other initiatives arising from SC (Paragraph 2, Article 12 of the Convention).

In accordance with the Rule 33 of the Commission's Rules of Procedure, the text of all decisions adopted by the SC18 will be distributed in the form of *Outcomes Document* to all CCMs and observers within seven (7) working days following the adoption of such decision.

The WCPFC Secretariat will hire a lead rapporteur to produce the DRAFT Summary Report, and the theme conveners may arrange their own support rapporteurs as required.

## **AGENDA ITEM 2 DATA AND STATISTICS THEME**

### **2.1 Data gaps of the Commission**

#### **2.1.1 Data gaps**

The Scientific Services Provider (SSP) will present the data gaps paper (SC18-ST-WP-01) which includes requests from SC17 (Paragraphs 34 and 36, SC17 Summary Report).

*34. SC17 recommended the SPC (SSP) enhance the scientific data submission guidelines by preparing operational data field tables for longline, purse seine and pole and line operational data for SC18 review.*

*36. SC17 recommended that the SSP add a new annex to the data gaps paper to include a breakdown of the coverage levels for each operational data field by year and fleet.*

SC18 will review the progress and where relevant recommend actions on how to address any identified data gaps.

### **2.2 Other commercial fisheries for bigeye, yellowfin and skipjack tuna**

WCPFC18 noted the presentation by Indonesia and advice of SC17 and TCC17 on the implementation of paragraphs 50 and 51 of CMM 2020-01 with respect to the Indonesian "large-fish" handline fishery for vessels >30GT in the Indonesia's EEZ (WCPFC18-2021-24). SC18 will

review any updated information and provide advice to the Commission on the application of paragraph 47 of CMM 2021-01 for Indonesian “large-fish” handline fishery.

(CMM 2021-01)

*47. CCMs shall take necessary measures to ensure that the total catch of their respective other commercial tuna fisheries for bigeye, yellowfin or skipjack tuna, but excluding those fisheries taking less than 2,000 tonnes of bigeye, yellowfin and skipjack, shall not exceed either the average level for the period 2001-2004 or the level of 2004.*

## **AGENDA ITEM 3      STOCK ASSESSMENT THEME**

### **3.1      WCPO tunas**

An indicator paper SC18-SA-IP-03 (*A compendium of fisheries indicators for target tuna stocks in the WCPFC Convention Area*) provides empirical information on recent patterns in fisheries for all ‘key’ target tuna species (skipjack, bigeye, yellowfin and South Pacific albacore tuna) for those years when a stock assessment is not conducted, with explanatory details for the figures and a brief interpretation of the trends. The SC18 participants will visit the online discussion forum and provide comments and questions for the review of this paper.

#### **3.1.1      Skipjack tuna (*Katsuwonus pelamis*)**

##### **3.1.1.1      Review of 2022 skipjack tuna stock assessment**

The last skipjack tuna stock assessment was conducted in 2019. SC18 will review the results of the 2022 skipjack tuna stock assessment, including progress of SC15 recommendations in Paragraph 223, SC15 Summary Report.

SC18 will consider new findings, suggestions, and any future research needs including budget implications as required, and provide management recommendations for the Commission’s consideration.

##### **3.1.1.2      Provision of scientific information**

SC18 will provide agreed text for the following:

- a. Status and trends
- b. Management advice and implications

#### **3.1.2      Pacific Bluefin Tuna (*Thunnus orientalis*)**

##### **3.1.2.1      Review of 2022 Pacific bluefin tuna stock assessment**

The ISC<sup>1</sup> has conducted the benchmark stock assessment every four years since 2012. In the middle of the consecutive benchmark assessments, ISC also conducts the updated assessment to track the current stock status using additional data observations. Since the last benchmark assessment in 2020, the data update assessment is scheduled in early 2022, and SC18 will review the results of

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<sup>1</sup> International Scientific Committee for Tuna and Tuna-like Species in the North Pacific Ocean

the updated assessment and provide management recommendations for consideration at WCPFC19.

### 3.1.2.2 Provision of scientific information

SC18 will provide agreed text for the following:

- a. Status and trends
- b. Management advice and implications

## 3.2 WCPO sharks

### 3.2.1 Southwest Pacific blue shark (*Prionace glauca*)

#### 3.2.1.1 Towards providing scientific advice for Southwest Pacific blue shark (Project 107b)

SC17 reviewed the results of Southwest Pacific blue shark assessment (Project 107) and recommended improving the manner in which the grid was selected before approving the results for providing management advice and proposed developing objective criteria for evaluating the plausibility of the grid. It was suggested that an attempt be made to use diagnostic tests as criteria for determining the final grid of results to inform management advice and uncertainty in the assessment.

As requested by SC17, Project 107b was designed to present a new procedure leading to the selection of the models to be included in the final grid used for providing management advice for Southwest Pacific blue shark.

SC18 will review the results of Project 107b and provide management advice to the Commission for its consideration at WCPFC19. An addendum to the SC17 paper SC17-SA-WP-03 *Stock assessment of Southwest Pacific blue shark will be added to capture the key outcomes of Project 107b.*

#### 3.2.1.2 Provision of scientific information

SC18 will provide agreed text for the following as needed, pending the outcomes of Project 107b:

- a. Status and trends
- b. Management advice and implications

### 3.2.2 Southwest Pacific shortfin mako shark (*Isurus oxyrinchus*)

#### 3.2.2.1 Review of 2022 Southwest Pacific shortfin mako shark stock assessment (Project 111)

SC18 will review the results of the first stock assessment for Southwest Pacific shortfin mako shark, including reconstruction of catch histories, assessment methods, management quantities, etc., subject to available data quantity and quality.

SC18 will consider new findings, suggestions, and any future research needs including budget implications, and provide recommendations to the Commission.

#### 3.2.2.2 Provision of scientific information

SC18 will provide agreed text for the following:

- a. Status and trends
- b. Management advice and implications

### **3.2.3 North Pacific blue shark (*Prionace glauca*)**

#### **3.2.3.1 Review of 2022 North Pacific blue shark stock assessment**

The last stock assessment was conducted by the ISC in 2017 and report to SC13. In 2022, ISC conducted a benchmark stock assessment for North Pacific blue shark, and SC18 will review the results of the assessment and provide stock status and management recommendations to the Commission.

#### **3.2.3.2 Provision of scientific information**

SC18 will provide agreed text for the following as needed:

- a. Status and trends
- b. Management advice and implications

### **3.3 WCPO billfishes**

#### **3.3.1 North Pacific striped marlin (*Kajikia audax*)**

##### **3.3.1.1 Review of 2022 North Pacific striped marlin stock assessment**

The last assessment was conducted by the ISC in 2019 which was presented to SC15. This year, the ISC will conduct a benchmark stock assessment for North Pacific striped marlin to better formulate and revise the *Interim Rebuilding Plan for North Pacific Striped Marlin* (Attachment L, WCPFC 16 Summary Report). SC18 will review the results of the assessment and provide updated stock status and management advice to the Commission.

##### **3.3.1.2 Provision of scientific information**

SC18 will provide agreed text for the following:

- a. Status and trends
- b. Management advice and implications

### **3.4 Peer review**

#### **3.4.1 Progress of the peer review (Project 65)**

According to the final terms of reference ([SC17-SA-WP-06](#)), key activities of the peer review will occur after the SC18 meeting. SC18 will review the current progress of the peer review, future schedule, and select a preferred process between the following two options proposed in the TOR paper:

- 1) *The review report be presented to the SPC Pre-Assessment Workshop in 2023 to provide the opportunity for CCMs to comment and discuss recommendations and approaches to consider for the 2023 YFT (and BET) assessment. In that case the review report would be formally submitted to SC19 as a supporting document for the 2023 assessment.*
- 2) *Submit the review report sometime after SC18 for intersessional consideration, either through an 'Online Discussion Forum' or an online meeting, or potentially both. Submit*

*the revised report, with responses to comments, to the Secretariat for posting, and then present an overview of the review findings and recommendations at the SPC Pre-Assessment Workshop in 2023.*

### **3.4.2 Characterization of stock assessment uncertainty**

There has been continuing *ad hoc* work to explore improved approaches for characterising stock assessment uncertainty, which has been a key concern in how stock assessments provide management advice to the Commission. SC16 recommended that some workshop(s) be held to develop standard protocols for calculating model weights for assessments that use an uncertainty grid (Paragraph 182, SC16 Summary Report). However, these workshops have not occurred.

A recent assessment (SC17-SA-WP-04 *Stock assessment of Southwest Pacific swordfish*) and the associated paper (SC17-SA-WP-05 *Focusing on the front end: A framework for incorporating uncertainty in biological parameters in model ensembles of integrated stock assessments*) demonstrate alternative approaches to characterizing uncertainty in stock assessment management quantities. Although the methods applied were generally supported by SC17, they may not be readily applicable to other assessments and require further independent review. Further, project 107b<sup>2</sup> will explore more objective criteria for determining the final grid of results to inform management advice and uncertainty in the assessment of southwest Pacific blue shark. The SSP will also consider refining/enhancing the characterisation of uncertainty during the yellowfin tuna assessment peer review.

There is a need to review these recent efforts and consider alternative approaches and their applicability across WCPFC assessments. There are clearly a range of options for presenting uncertainty in stock assessment management quantities, and there is a lack of consistency in the approaches used or guiding principles applied for characterising uncertainty in WCPFC assessments. SSP will also develop a draft TOR to present to SC18 for an independent peer review of how stock assessment uncertainty is characterized for presenting management advice from WCPFC stock assessments.

SC18 will review the progress of the uncertainty-related issues and provide specific recommendations for consideration by the Commission.

## **AGENDA ITEM 4 MANAGEMENT ISSUES THEME**

### **4.1 Development of the Harvest Strategy Framework for key tuna species**

SC18 will note the following updates made by WCPFC18 to the *Indicative Workplan for the Adoption of Harvest Strategies under CMM-2014-06* (Attachment I, WCPFC18 Summary Report):

- The indicative plan has been extended for an additional two years to 2024.
- South Pacific Albacore and Skipjack management procedures remain scheduled for adoption in 2022 (no change) and management procedures for yellowfin and bigeye are now scheduled for adoption in 2024 (new).
- For all species, a new task has been assigned for the SC to formally agree the operating models to be used for management strategy evaluation.
- For all species, some additional and clearer tasking has been assigned for the SC and

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<sup>2</sup> WCPFC Project 107b: Towards Providing Scientific Advice for Southwest Pacific Blue Shark

Commission to develop and implement the monitoring strategy.

Following the recommendation made by SC17 (para.332, SC17 Summary Report) WCPFC18 also agreed to have the first Science-Management Dialogue, on a trial basis, back-to-back with SC18. Recommendations made by SC18 to the Commission related to the agenda items below are likely to be further discussed and reviewed by the Science-Management Dialogue.

#### **4.1.1 Skipjack Tuna**

##### **4.1.1.1 Skipjack tuna TRP analyses**

WCPFC18 reviewed WCPFC18-2021-10 (*Further updates to WCPO skipjack tuna projected stock status to inform consideration of an updated target reference point*) and noted the importance of agreeing on a TRP for skipjack and agreed to progress this work in 2022 (Paragraphs 100-101, WCPFC18 Summary Report).

Considering SC17 recommendations (Para 277, SC17 Summary Report), SC18 will review any additional analyses related to estimated fishing mortality and associated assumptions under the various harvest scenarios and provide advice to the Commission for adoption of the skipjack TRP at WCPFC19.

##### **4.1.1.2 Skipjack operating models**

SC18 will review the current grid of operating models that has been developed to reflect important sources of uncertainty and plausible states of nature for WCPO skipjack, and recommend to the Commission an agreed grid of operating models to be used for the skipjack tuna MSE.

##### **4.1.1.3 Skipjack management procedure (MP) and evaluations**

WCPFC18 agreed to defer consideration of management procedures for skipjack until 2022.

SC18 will review further progress undertaken by SSP on developing and testing the performance of candidate management procedures for WCPO skipjack; in particular candidate HCR designs; evaluations of performance indicators, procedures for selecting the ‘best performing’ MP, definition of fisheries and fishery controls within the harvest strategy, any other technical issues to be addressed in selecting preferred MPs. SC18 will recommend any agreed approaches to the Commission.

##### **4.1.1.4 Skipjack MP implementation**

SSP will present a skipjack MP ‘dry run’ analysis to illustrate the function, performance, and implications of a hypothetical management procedure. The analysis will also show how the latest stock assessment would be used to monitor performance of the MP. SC18 will review the analysis related to the monitoring strategy indicators and provide any technical advice and recommendations to the Commission.

#### **4.1.2 South Pacific Albacore Tuna**

##### **4.1.2.1 South Pacific Albacore TRP**

WCPFC18 noted the advice of SC17 related to the recalibration of the interim TRP for the SP albacore (Para. 171, WCPFC18 Summary Report). WCPFC18 further noted concerns regarding the delayed process to implement an interim TRP adopted in 2018, and the need to take action to rebuild the stock to support the economic viability of fleets and achieve a long-term TRP (Para. 195, WCPFC18 Summary Report).

SC18 will review the updated analyses related to the recalibration of the interim South Pacific albacore TRP and provide advice to the Commission for further consideration at WCPFC19.

#### 4.1.2.2 SP Albacore operating models

SC18 will review the current grid of operating models that has been developed to reflect all important sources of uncertainty and plausible states of nature for South Pacific albacore and try to reach agreement on the grid of operating models to be used for the SP albacore tuna MSE.

#### 4.1.2.3 SP Albacore management procedures

SSP will provide an update on the progress of developing and testing MPs for South Pacific albacore. SC18 will review and discuss methods for estimating stock status and candidate harvest control rule (HCR) designs, definition of fisheries and fishery controls within the harvest strategy, and any other technical issues to be addressed in selecting preferred MPs.

SC18 will recommend any agreed approaches if available for the Commission's consideration.

### 4.1.3 MSE framework

SC17 reviewed an update on the development of mixed fishery MSE framework outlined in SC17-MI-WP-05 (*Mixed-fishery harvest strategy developments*), which demonstrated an initial attempt at considering multi-species and mixed fisheries interactions based on single stock operating models for skipjack, bigeye and yellowfin. This proof-of-concept analysis demonstrated that the technical challenges involved in implementing the multi-species modeling framework can be addressed and the conceptual approach remains tractable.

SC17 further endorsed the work outlined in SC17-MI-WP-05 and noted the next steps to progress this work, including i) building a full suite of OMs for bigeye and yellowfin, ii) developing candidate MPs for bigeye for the tropical longline fishery, iii) the inclusion of South Pacific albacore in the modelling framework, and iv) agreeing multi-species performance indicators (Paragraph 320, SC17 Summary Report).

Considering the complexity of developing the mixed fishery MSE framework in the WCPO, SC18 will review the progress of this approach and provide specific feedback on the approaches for mixed fishery interactions.

#### 4.1.3.1 Bigeye and yellowfin tuna TRP analyses

WCPFC18 noted the results of the analyses on candidate TRPs for bigeye and yellowfin (WCPFC18-2021-11: *Updated WCPO bigeye and yellowfin TRP evaluations*). The Commission also noted the importance of agreeing on TRP for bigeye and yellowfin and agreed to progress this work in 2022.



SC18 will review any updated information on TRPs for bigeye and yellowfin tuna as requested by the Commission including the development of yield and spawning biomass per recruit curves by fishery sector<sup>3</sup>, and provide advice on potential bigeye and yellowfin TRPs for the Commission's adoption at WCPFC19.

#### 4.1.3.2 Mixed fishery update

SC17 reviewed the initial approach for inclusion of mixed fishery interactions into the development of a harvest strategy framework for the four main WCPO tuna stocks. SC18 will review an updated multi-species modelling framework as noted by SC17 and provide recommendations to the Commission for further research.

#### 4.1.3.3 Mixed fishery performance indicators

The multi-species modelling framework will allow the calculation of a range of multi-species performance indicators (SC15-MI-WP-10; SC14-MI-WP-04; SC13 Summary Report; WCPFC14-2017- IP04). For example, multi-species indicators that relate impacts on stock status and catches can be calculated in response to changes in fishing pressure from the individual single stock management procedures. That is, indicators can be developed that evaluate the impacts on the yellowfin and bigeye stocks and catches from changes in purse seine fishing pressure that would be managed through the skipjack MP.

SC18 will review functioning of the mixed fishery performance indicators presented by SSP and provide any specific feedback for further development of the indicators.

### 4.1.4 Review of the WCPFC Harvest Strategy Workplan

WCPFC18 adopted the updated *Indicative Workplan for the Adoption of Harvest Strategies under CMM 2014-06* (Attachment I, WCPFC18 Summary Report). Noting that a re-evaluation and further discussion of the Indicative Workplan would take place during the Science-Management Dialogue, SC18 will review and provide any technical assistance for the Commission's decision to meet the progress of the Workplan.

## 4.2 South Pacific Swordfish Conservation and Management Measure

Noting the updated stock assessment for south-west Pacific broadbill swordfish reviewed by SC17, the review of WCPFC18-2021-20-rev1 (*Southwest Pacific Swordfish projections*) and WCPFC18-2021-21 (*Reference Document for the Review of CMM 2009-03 (Southwest Pacific swordfish)*), and the inter-sessional work led by Australia to strengthen CMM 2009-03, SC18 will review a draft conservation and management measure for southwest Pacific swordfish which has been submitted by Australia for consideration and discussion.

## 4.3 Limit Reference Points for Species Other than Tuna

### 4.3.1 Limit reference points for elasmobranchs

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<sup>3</sup> Refer to: Paragraph 271 in the SC17 Summary Report; and Attachment 1 (List of TTMW2 Approved Requests for Analysis to SSP), TTMW2 Chair's Report.

Noting the request from WCPFC16 to identify appropriate LRPs for elasmobranchs to inform development of LRPs given their importance in harvest strategies<sup>4</sup>, SC17 reviewed the outcomes of Project 103<sup>5</sup> and recommended that the Commission to take note of Project 103 work and recommendations outlined in SC17-MI-WP-07 together with the conclusions reached by SC17 and the need for further work identified in Paragraph 347 of the SC17 Summary Report.

WCPFC18 did not provide any specific instructions on the LRP for elasmobranchs. SC18 may consider how to further address the Commission's request on developing appropriate LRPs for elasmobranchs and provide recommendations to the Commission as needed.

#### **4.3.2 Review of appropriate LRPs for SWP striped marlin and other billfish (Project 104)**

Noting the agreed outcome from WCPFC16 to revisit the identification of an appropriate limit reference point for South Pacific striped marlin<sup>6</sup>, SC17 reviewed the outcomes of Project 104 (SC17-MI-WP-08 *Appropriate LRPs for Southwest Pacific Ocean Striped Marlin and Other Billfish*). SC17 agreed that Project 104 had developed a good framework for progressing the development and identification of appropriate LRP for WCPO billfish and recommended that the Commission take note of the above conclusions reached by SC17 and the need for further work to determine and recommend appropriate LRPs.

WCPFC18 did not provide any specific instructions on the LRP for SWP striped marlin and other billfish. SC18 may consider how to further address the Commission's request on identifying appropriate LRPs for SWP striped marlin and other billfish and provide recommendations to the Commission as needed.

## **AGENDA ITEM 5 ECOSYSTEM AND BYCATCH MITIGATION THEME**

### **5.1 Ecosystem and climate indicators**

There is increasing evidence that WCPO ecosystems and dependent species are affected by both fishing and climate change, including the redistribution of species population centers. SC12 discussed the need to develop indicators that provide a quantitative measure of change in ecosystem properties that are related to the management of WCPFC's fisheries. The SSP will briefly present a preliminary analysis that has identified candidate indicators of the ecosystem affected by the climate change and propose further research areas and a process to refine these to ensure they meet the needs of WCPFC. SC18 will review the research proposal and provide appropriate recommendations to the Commission for further research.

### **5.2 Review of potential mitigation measures to reduce fishing-related mortality on silky and oceanic whitetip sharks (Project 101)**

Based on the analysis in SC10-EB-WP-01<sup>7</sup>, SC10 recommended a new project related to mitigation options as a priority.

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<sup>4</sup> Paragraph 484, WCPFC16 Summary Report

<sup>5</sup> SC17-MI-WP-07 (*Appropriate Limit Reference Points for WCPO Elasmobranchs*)

<sup>6</sup> *The Commission noted with concern the current status of South Pacific striped marlin and agreed to revisit the limit reference point in 2020 at WCPFC17.* (Paragraph 459, WCPFC16 Summary Report)

<sup>7</sup> *Analysis of WCPO longline observer data to determine factors impacting catchability and condition on retrieval of oceanic white-tip, silky, blue, and thresher sharks*

SC11 reviewed SC11-EB-WP-02 (*Monte Carlo simulation modelling of possible measures to reduce impacts of longlining on oceanic whitetip and silky sharks*) and SC12 reviewed two follow-up working papers: SC12-EB-WP-06 (*Potential implications of the choice of longline mitigation approach allowed within CMM 2014-05*<sup>8</sup>) and SC12-EB-WP-03 (*Monte Carlo simulation modelling of purse seine catches of silky and oceanic whitetip sharks*).

SC15 recommended Project 101 (*Updated Monte Carlo simulations of the potential of longline shark mitigation approaches incorporating updated knowledge*) and this project was conducted by the United States with no cost. The Project 101 updated analyses undertaken in SC12-EB-WP-06, incorporating the latest information on shark post release mortality.

SC17 reviewed the results of Project 101 in SC17-EB-WP-01 (*Review of potential mitigation measures to reduce fishing-related mortality on silky and oceanic whitetip sharks – Project 101*). The paper developed and applied a model for how silky shark (*Carcharhinus falciformis*) and oceanic whitetip shark (*C. longimanus*) might interact with longline gear in the WCPO and potential reductions in mortality with two different management measures: 1) removal of shark lines and 2) transition from branchlines with wire leaders to monofilament leaders. SC17 recommended that the Project 101 be continued with suggested modifications in Paragraph 378, SC17 Summary Report.

*378. SC17 recommends that the Project 101 be continued with the following modifications:*

- *Relevant CCMs should consider authorizing the release of their non-ROP longline data (facilitated through SPC) for this study, specifically to provide more complete gear configurations by flag, or collaborating to conduct such an analysis for their flagged vessels, and allow analyses similar to Caneco et al. (2014) to estimate factors affecting shark catchability and condition on longline retrieval to be conducted using a more complete dataset;*
- *Conduct the Monte Carlo analyses with inputs on catchability, condition on longline retrieval and gear configurations by flag;*
- *Conduct updated projections with inputs on the impact of banning shark lines and wire leaders or both and estimates of the probability of post release mortalities of silky and oceanic whitetip sharks (as based on Hutchinson et al. 2021 or other new information);*

*Additionally, results of the analyses should be shared to CCMs that made contributions to those analyses for their review and comments in advance of SC18.*

SC18 will review the updated analyses of Project 101 if available and provide recommendations to the Commission as needed.

### **5.3 Seabird bycatch mitigation**

#### **5.3.1 Seabird bycatch mitigation methods**

SC18 will review available new information related to i) the effectiveness of the streamer-less tori line designs to inform the Commission’s review under CMM 2018-03 and ii) results of any investigation related to application of ‘strategic’ offal discharge and blue-dyed bait to determine the relative efficacy of these seabird bycatch mitigation methods (Paragraphs 393-394, SC17

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<sup>8</sup> Previous CMM for Sharks

Summary Report). SC18 is expected to provide recommendations for Commission's consideration at WCPC19.

*Paragraphs 393-394, SC17 Summary Report:*

*393. SC17 recommends that Commission CCMs with small-scale longline vessels (< 24m) operating north of 23° North provide the SC with information, such as the results of scientific research or EM-based commercial vessel survey, as well as the specific mitigation measures used by those vessels and the associated seabird interaction rates for each mitigation measure, if available, including streamer-less tori lines, and that SC18 review such information, to make findings and recommendations with respect to the effectiveness of the streamer-less tori line designs to inform the Commission's review under CMM 2015-03 (and its successor measures).*

*394. SC17 encourages further experimental investigation of 'strategic' offal discharge and blue-dyed bait to determine the relative efficacy of these seabird bycatch mitigation methods.*

### **5.3.2 ACAP advice on seabird mitigation**

The Agreement on the Conservation of Albatrosses and Petrels ([ACAP](#)) has been assessing and minimising bycatch of albatrosses and petrels in tuna fisheries and provide updates on mitigation and conservation status of albatrosses and petrels. SC18 will review the ACAP's advice and provide recommendations to the Commission as needed.

## **5.4 Issues arising from the Online Discussion Forum**

The following two agenda items will be discussed on Wednesday, 17 August 2022.

### **5.4.1 Graphics associated with the Best Handling Practices for the Safe Handling and Release of Cetaceans**

As requested by SC17 (Para 389, SC17 Summary Report), SC18 ODF reviewed the graphics associated with the cetacean best handling guidelines. SC18 will consider the outcome of the ODF discussions and provide any recommendations to the Commission for possible adoption of the graphics.

*389. SC17 further recommends that the Commission develop graphics to be included with the Best Handling Practices for the Safe Handling and Release of Cetaceans for consideration at WCPFC19.*

### **5.4.2 FAD Management Options IWG issues**

Noting Paragraph 19 of CMM 2021-01, SC18 will review available research results on the use of biodegradable materials on FADs. SC18 is expected to provide specific recommendations for Commission's consideration at WCPC19 in December 2022 on biodegradable FAD definition, timeline for the stepwise introduction of biodegradable FADs, potential gaps/needs and any other relevant information.

*(Paragraph 19, CMM 2021-01 CMM for bigeye, yellowfin and skipjack tuna in the WCPO) 19. The Scientific Committee shall continue to review research results on the use of biodegradable material on FADs and shall provide specific recommendations to the Commission in 2022 including on a definition of biodegradable FADs, a timeline for the*

*stepwise introduction of biodegradable FADs, potential gaps/needs and any other relevant information.*

SC18 will review any proposed recommendations for review and possible adoption on the results of FADMO-IWG communications and the ODF discussions.

## **AGENDA ITEM 6 OTHER RESEARCH PROJECTS**

### **6.1 Pacific Marine Specimen Bank (Project 35b)**

SC18 will note the outcomes of the 4<sup>th</sup> Steering Committee meeting, review any recommendations provided from the Committee and provide recommendations to the Commission for the continuity of the project.

### **6.2 Pacific Tuna Tagging Project (Project 42)**

SC18 will review the progress of the Pacific Tuna Tagging Project (Project 42), the results of its 14<sup>th</sup> PTTP Steering Committee meeting, and provide recommendations to the Commission for the continuity of the project.

### **6.3 WPEA Project Update**

SC18 will review proposed recommendations in the *WPEA-ITM Project Update* (SC18-RP-WPEA-01), including the no-cost project extension into 2024 and preparation of a new WPEA project proposal for the next phase, for SC18's endorsement.

## **AGENDA ITEM 7 FUTURE WORK PROGRAM AND BUDGET**

### **7.1 Development of the 2023 work programme and budget, and projection of 2024-2025 provisional work programme and indicative budget**

SC18 will develop the 2023 SC work programme and budget and provisional work programme and indicative budget for 2024-2025 for the Commission's endorsement. To draft the 2023 work programme, all conveners and relevant agencies will submit proposals and SC Chair will coordinate an informal small group for discussion.

SC18 will note a recommendation from the Finance and Administration Committee to the Commission (Para 71, FAC9 Summary Report) that "*WCPFC12 task SC with carefully considering proposed scientific projects in the context of the indicative budget agreed for the coming year.*"

## **AGENDA ITEM 8 ADMINISTRATIVE MATTERS**

### **8.1 Election of officers of the Scientific Committee**

The SC18 will consider the appointment of the SC Vice-Chair and SC theme conveners as needed for SC19 meeting in 2023.

## **8.2 Next meeting**

At SC17, Tonga offered to host SC19 in 2023. Members are invited to confirm the time and venue for SC19, and to propose a time and venue for SC20 in 2024.

## **AGENDA ITEM 9 OTHER MATTERS**

SC18 will consider any other issues that are raised under Agenda Item 1.3.

### **9.1 Review of online discussion forum outputs**

SC18 will take actions as needed on the results of Online Discussion Forum.

### **9.2 Implications of low observer coverage on stock assessments**

Due to the continued pandemic, there have been low observer coverages and SC18 will consider its implications for moving forward on the upcoming bigeye and yellowfin stock assessments.

## **AGENDA ITEM 10 ADOPTION OF THE SUMMARY REPORT OF THE EIGHTEENTH REGULAR SESSION OF THE SCIENTIFIC COMMITTEE**

SC18 will adopt the recommendations of the Eighteenth Regular Session of the Scientific Committee. The SC18 Summary Report will be adopted intersessionally after the meeting.

## **AGENDA ITEM 11 CLOSE OF MEETING**

The meeting will close at 13:30 on 18 August 2022.