



**SCIENTIFIC COMMITTEE
TWELFTH REGULAR SESSION**
Bali, Republic of Indonesia
3-11 August 2016

PROVISIONAL ANNOTATED AGENDA

WCPFC-SC12-2016/03 (Rev.04)

AGENDA ITEM 1 OPENING OF THE MEETING

The meeting will open at 08:30 on Wednesday, 3 August 2016.

1.1 Welcome address

The Chair will welcome delegations of the WCPFC Members, Cooperating Non-members and Participating Territories (CCMs) and Observers to the Twelfth Regular Session of the Scientific Committee (SC12).

A senior official from Indonesia, the Commission Chair, and the Executive Director will be invited to deliver an opening address.

1.2 Meeting arrangements

The Chair will outline procedural matters including the meeting schedule, administrative arrangements, and the list of theme conveners. In addition, SC12 will endorse the appointment of new conveners as required.

Chair	Berry Muller (1)
Vice Chair	Aisake Batibasaga (1)
ST Theme	Berry Muller (1)
SA Theme	Jon Brodziak (6) and Hiroshi Nishida (2)
MI Theme	Robert Campbell (7)
EB Theme	Aisake Batibasaga (5), John Annala (3)

(x): number of years of convenership

1.3 Issues arising from the Commission

SC12 will be briefed on issues arising from the previous meetings of the Commission and its subsidiary bodies.

1.4 Adoption of agenda

The Provisional Agenda for SC12 was posted on 5 May 2016 in accordance with Rule 1 of the Commission's Rules of Procedure. Any Member of the Commission, the Chairman, or the Executive Director may, at least 30 days before the date for the opening of the Regular Session request the inclusion of supplementary items in the Agenda. 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 12 may be proposed here.

1.5 Reporting arrangements

SC12 will develop a Summary Report which will be adopted intersessionally with an Executive Summary. The Executive Summary will include a synopsis of stock status and management advice and implications, research plans, findings or conclusions on the stock status, reports and recommendations as directed by the Commission or at the initiative of the SC (Paragraph 2, Article 12 of the Convention).

The WCPFC Secretariat will hire a lead rapporteur (Dr Jane Broweleit) to produce a draft summary report, and theme conveners will arrange their support rapporteurs for their draft theme reports.

1.6 Intersessional activities of the Scientific Committee

The Chair, with support from the Secretariat, will report on intersessional activities of the SC.

AGENDA ITEM 2 REVIEW OF FISHERIES

2.1 Overview of Western and Central Pacific Ocean (WCPO) fisheries

The Pacific Community – Oceanic Fisheries Programme (SPC-OFP) and the Pacific Islands Forum Fisheries Agency (FFA) will present an overview of the WCPO key fisheries, including billfish. SC12 will be invited to provide supplementary information, ask questions and provide comments.

2.2 Overview of Eastern Pacific Ocean (EPO) fisheries

The Inter-American Tropical Tuna Commission (IATTC) will present an overview of the fisheries for highly migratory species in the EPO region. SC12 will be invited to provide supplementary information, ask questions and provide comments.

2.3 Annual Report – Part 1 from Members, Cooperating Non-Members, and Participating Territories

All CCMs shall submit Part 1 of the Annual Report (the template is available at <https://www.wcpfc.int/guidelines-procedures-and-regulations>; symbol: SC-01) to the Secretariat (BOTH tony.beeching@wcpfc.int and contact.ar@wcpfc.int) by **04 July 2016**.

It is assumed that all annual reports will have been read prior to the Session. CCMs will be given the opportunity, if needed, to make a brief presentation (maximum of 3 minutes), highlighting recent changes and developments in their fisheries as described in Part 1 of their Annual Report

to the Commission. A short time for questions may be provided at the conclusion of each presentation. Submitted Part 1 reports are posted at the bottom of each WCPFC-SC website.

2.4 Reports from regional fisheries bodies and other organizations

Regional fisheries bodies and other intergovernmental or non-governmental organizations observing SC12 may make a brief presentation (3 minutes) on key issues relevant to the work of the SC. Such presentations need to be arranged with the Chair before the opening of the Session. The deadline is **16 July 2016** for the submission of such meeting documents from regional fisheries bodies and other intergovernmental or non-governmental organizations to the Secretariat (tony.beeching@wcpfc.int).

AGENDA ITEM 3 DATA AND STATISTICS THEME

3.1 Data gaps

3.1.1 Data gaps of the Commission

SPC-OFP will present the data gaps paper. SC12 will consider, comment, and where relevant, recommend actions on how to address any identified data gaps in the data holdings of the Commission.

The Commission tasked SPC with further refining the tier scoring system to provide, among other things, an indicator of compliance of CCMs as a whole with provision of scientific data. SC12 may note the refined tier scoring system if needed.

For SC12's information, IATTC informed that, since April 2016, their public domain data for purse seiners are available at the resolution of flag, month and 1X1 degree strata without any vessel number rule filtering. Paragraph 9 in the WCPFC's Rules and Procedures for the Protection, Access to, and Dissemination of Data Compiled by the Commission is:

9. Data in the public domain shall not reveal the individual activities of any vessel, company or person and shall not contain private information. Catch and Effort data in the public domain shall be made up of observations from a minimum of three vessels.

Issues related with the three-vessel rule include:

- The application of the three-vessel rules filters out a substantial amount of fishing activity from all gear-specific data sets, at 5x5xmonth aggregation, resulting in data sets that do not represent the total catch and effort, and that may be unrepresentative regarding the proportions of catch and effort that they do cover.
- The three-vessel rule removes even more data for finer levels of stratification, e.g. by flag and by 1x1 degree square (for purse seine and pole-and-line), to the point where these agreed levels of stratification cannot be produced.

SC12 may consider revisiting the three-vessel rule if needed.

3.1.2 Species composition of purse-seine catches

a. Review of Project 60 outputs

SC12 will review the research outputs of and plans for the remainder of Project 60 (Collection and evaluation of purse-seine species composition data), including annual estimates of purse seine catches based on: i) unadjusted logsheet method, ii) YFT-BET correction method, iii) SKJ-YFT-BET correction, adjusted by grab sampling, and iv)

SKJ-YFT-BET, unadjusted by grab sampling, and provide key findings and further recommendations, if any, to the Commission.

b. Implementation of observer spill sampling

SC12 will review operational aspects of spill sampling on purse seine vessels and evaluate the benefits of spill sampling compared to corrected grab-sampling.

3.1.3 Potential Use of Cannery Receipt Data for the Work of the WCPFC

SC12 will review the progress of a pilot study on cannery receipt data for the scientific work of the Commission, [and where relevant, provide recommendations to progress this work.](#)

3.2 Regional Observer Programme

3.2.1 ROP longline coverage

As agreed by WCPFC11 (Paragraphs 484-486, WCPFC11 Report), CCMs submitted their longline observer coverage in Annual Report Part 1 using their choice of coverage metric (Attachment L, WCPFC11 Report). SC12 may consider and comment on the compiled information on longline observer coverage and where necessary, provide recommendations to the Commission.

3.3 Electronic monitoring and electronic reporting

The Second WCPFC Electronic Monitoring and Electronic Reporting Intersessional Working Group Meeting (ERandEM-IWG-2) will be held in Bali, Indonesia, 1-2 August 2016. The outcomes of the workshop will be briefly introduced. SC12 will consider, comment and, where relevant, recommend actions to progress WCPFC-related work on ERandEM.

3.4 WCPFC-funded Port Coordinators

WCPFC11 agreed to fund port coordinators, as a trial, to conduct sampling and data collection at five ports, and the relevant Members, SPC-OFP and WCPFC Secretariat are required to jointly report to SC and TCC (in 2015 and 2016), on the implementation of the trial WCPFC port coordinators programme.

TOR in the WCPFC11 Summary Report, Attachment P (SC11-GN-IP-04) says:

If after two years the evaluation proves that the program has been successful the Commission can then take an informed decision to extend the program to other ports in the WCPO, where appropriate.

SC12 will review reports on the implementation of this programme and provide comments and/or recommendations to the Commission.

3.5 Review of Scientific Data to be provided to the Commission

The Commission tasked SC12 to review the elements proposed by the EU in Attachment bb of the WCPFC12 Summary Report (WCPFC12-2015-DP17 / SC12-WCPFC12-05). SC12 will review the proposed revision and provide comments and/or recommendations to the Commission.

~~For SC12's information, IATTC informed that, since April 2016, their public domain data for purse seiners are available at the resolution of flag, month and 1X1 degree strata without any vessel number rule filtering. Paragraph 9 in the WCPFC's Rules and Procedures for the Protection, Access to, and Dissemination of Data Compiled by the Commission is:~~

~~9. Data in the public domain shall not reveal the individual activities of any vessel, company or person and shall not contain private information. Catch and Effort data in the public domain shall be made up of observations from a minimum of three vessels.~~

~~Issues related with the three vessel rule include:~~

- ~~• The application of the three vessel rules filters out a substantial amount of fishing activity from all gear specific data sets, at 5x5xmonth aggregation, resulting in data sets that do not represent the total catch and effort, and that may be unrepresentative regarding the proportions of catch and effort that they do cover.~~
- ~~• The three vessel rule removes even more data for finer levels of stratification, e.g. by flag and by 1x1 degree square (for purse seine and pole and line), to the point where these agreed levels of stratification cannot be produced.~~

~~SC12 may consider revisiting the three vessel rule if needed.~~

3.6 FAD Management Options Intersessional Working Group

The Commission agreed at WCPFC12 that the FADMgmtOptions-IWG should continue in 2016. The FAD Management Options IWG is scheduled to hold its meeting in late September 2016, immediately following TCC12 in Pohnpei.

3.6.1 FAD research plan

According to Para 595, WCPFC12 Summary Report, SC12 will review the draft FAD research plan and provide comments and/or recommendations for the consideration of the Commission.

595. The Commission tasked the Secretariat and Scientific Services Provider to work with the FADMgmtOptions-IWG Chair and Vice-Chair to further develop the draft outline of a research plan in 2016, based on Attachment D of the report of the first meeting of the FADMgmtOptions-IWG (WCPFC12-2015-22_rev2). The draft research plan should be for consideration and input by SC12 and TCC12 before submission to WCPFC13. The draft plan should incorporate some consideration of costs and benefits of various research and data collection activities to assist with prioritizing the work. Consideration should also be given within the plan to addressing both target and non-target species.

3.6.2 Update on consultancy on FAD marking and identification of FADs

An update will be provided to SC12 on [intersessional work by the FADMgmtOptions-IWG through a consultancy on options and considerations for Marking and Identification of FADs to be deployed](#). According to Para 594, WCFPC12 Summary Report, SC12 will provide advice and recommendations as appropriate.

*594. The Commission agreed that a consultancy should be undertaken early in 2016 to produce a report on options and considerations for Marking and Identification of FADs to be deployed, for consideration at SC12 and TCC12. The consultancy should be based on the draft prospectus (**Attachment V**) and among other things take into consideration electronic signature and physical marking aspects from the 2016 PNA trial tracking programme and that used in other tuna RFMOs. The consultancy should also provide advice on the feasibility of options of physical marking of the buoy, physical*

marking of the buoy and the FAD attachment, and electronic identification, along with the costs and benefits of each option. The consultancy should also take into account Attachment E to the report of the first meeting of the FADMgmtOptions-IWG Report (WCPFC12-2015-22_rev2).

3.6.3 FAD data to be provided by vessel operators

According to Para 596 - 598, WCPFC12 Summary Report, an update will be provided to SC12 on the intersessional work by the FADMgmtOptions-IWG to develop a draft list of data fields that should be reported by vessel operators. SC12 will provide advice and recommendations as appropriate.

596. *The Commission agreed that vessel operators should provide data on FADs covering the following two major areas:*

- a. *FAD design and construction of FAD to be deployed or encountered (materials, electronics, size etc)*
- b. *FAD activity (deploying, retrieving, setting, visiting, loss etc).*

597. *The Commission noted that the FADMgmtOptions-IWG recommendations that:*

- a. *the FAD data fields to be reported by vessel operators should be based on the WCPFC ROP Minimum Standard Data Fields and the data fields collected by other RFMOs;*
- b. *data collected by observers on FADs can be used for verification of FAD activities of vessels;*
- c. *the FAD data should be provided to the Commission via flag State electronically using appropriate systems such as FAD e-logbooks or information systems such as PNA iFIMS etc.*

598. *The Commission agreed that a consultancy be undertaken in early 2016, tasked with producing proposed draft data fields to be reported by vessel operators for consideration at SC12 and TCC12.*

3.7 Economic data

FFA will present a paper on analyses and projections of economic conditions in the WCPO fisheries. SC12 will consider and comment on the information in the paper and presentation.

AGENDA ITEM 4 STOCK ASSESSMENT THEME

4.1 WCPO tunas

~~**4.1.0 Tuna biology**~~

~~SC12 will review a recent development of population genetics to differentiate stock structure of the Pacific yellowfin tuna and provide comments for future study.~~

4.1.1 WCPO bigeye tuna (*Thunnus obesus*)

4.1.1.1 Review of research and information

- a. Research on population structure of tropical tunas

SC12 will review a recent development of genetic analysis related with population structure and provenance of tropical tunas and provide comments for future study.

- b. Improvement of MULTIFAN-CL software for stock assessments ~~Progress report on Project 35 (Refinement of bigeye parameters Pacific wide and WCPFC Tissue Bank Access Protocols)~~

Work to improve the MULTIFAN-CL software is ongoing. SC12 will review the progress and provide comments and recommendations as required. ~~SPC-OFP is implementing the fourth year of the multi year Project 35 to characterize bigeye biological parameters. SC12 will review the results of this project to date, plans for finalising the analytical work of the project and any future research needs.~~

SC12 may review refined *WCPFC Tissue Bank Access Protocols*, if necessary, for future application process.

- c. Update of WCPO bigeye stock assessment information ~~Indicator analysis~~

SC12 will review information on indicators for WCPO bigeye tuna as well as retrospective forecasting of the 2014 WCPO bigeye tuna assessment ~~the results of the 2016 bigeye stock indicator analysis, including analyses of catch and effort data, evaluation of the accuracy of short term projections for the provision of stock status advice via a retrospective analysis, and any future research needs.~~

4.1.1.2 Provision of scientific information

SC12 will provide agreed text for the following:

- a. Stock status and trends
- b. Management advice and implications

4.1.2 WCPO yellowfin tuna (*Thunnus albacares*)

4.1.2.1 Review of research and information

- a. Update of WCPO yellowfin stock assessment ~~Indicator analysis~~

SC12 will review information on indicators for WCPO yellowfin tuna ~~the results of the 2016 yellowfin stock indicator analysis, including analyses of catch and effort data, and any future research needs.~~

4.1.2.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.1.3 WCPO skipjack tuna (*Katsuwonus pelamis*)

4.1.3.1 Review of research and information

a. Review of 2016 skipjack tuna stock assessment

SC12 will review the results of the 2016 skipjack tuna stock assessment, including CPUE analysis, retrospective analysis, methodology, etc. SC12 will consider new findings, suggestions, and any future research needs including budget implications, and provide comments and/or recommendations on the process and methodology of stock assessment as required.

~~b. Project 67 (Skipjack fishery impacts on the margins of the Convention Area)~~

~~Project 67 aims to identify the relationship between high catches in the equatorial region and the availability, or trends in abundance, of skipjack tuna to high latitude fisheries. Noting the previous research of this project (WCPFC SC11 2015/SA WP 05), SC12 will review any research plans of CCMs to address the issue and provide comments and/or recommendations as appropriate to the Commission.~~

4.1.3.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.1.4 South Pacific albacore tuna (*Thunnus alalunga*)

4.1.4.1 Review of research and information

~~a. Indicator analysis~~

SC12 will review the recent trends in the South Pacific albacore fishery and the results of the 2016 South Pacific albacore stock indicator analysis, and provide comments and/or recommendations for any future research needs.

4.1.4.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.2 Northern stocks

Annex I of the Commission's Rules of Procedure defines 'northern stocks' to be 'stocks which occur mostly in the area north of 20° north parallel' and currently are 'northern Pacific bluefin¹, northern albacore² and the northern stock of swordfish³'. According to the MOU between

¹ Pacific bluefin tuna

² North Pacific albacore

³ North Pacific swordfish

WCPFC and ISC, the ISC's scientific information and advice will be presented at the annual meetings of the Scientific Committee.

The ISC Chair will be invited to brief SC12 on the activities of ISC since SC11, including [the ISC's 2016 stock assessments and future plans](#).

4.2.1 North Pacific albacore (*Thunnus alalunga*)

4.2.1.1 Review of research and information

~~As requested by NC10, ISC is developing an MSE process for NP albacore. Two MSE workshops were held in Yokohama, the first in April 2015, and the second on fishery objectives and harvest control rules in May 2016.~~

There was no stock assessment conducted in 2016. ~~ISC will focus on technical issues related to model development for the 2017 stock assessment.~~ SC12 may review updated information if available for North Pacific albacore.

4.2.1.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.2.2 Pacific bluefin tuna (*Thunnus orientalis*)

4.2.2.1 Review of research and information

~~A benchmark stock assessment was conducted by the ISC in 2016. SC12 will review the new stock assessment information for Pacific bluefin tuna. ISC completed a full stock assessment for Pacific bluefin tuna in 2016 and will provide the results of that assessment. SC12 will review the results and provide comments and/or recommendations on the stock status and new findings, including the process and methodology of the assessment if needed.~~

4.2.2.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.2.3 North Pacific swordfish (*Xiphias gladius*)

4.2.3.1 Review of research and information

No stock assessment was conducted in 2016. SC12 may review updated information if available for North Pacific swordfish.

4.2.3.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.3 WCPO sharks

4.3.0 Stock status indicators for key shark species

There is no new information on stock status indicators for all key shark species~~The Shark Research Plan notes that this will be done annually once all flag states consistently achieve at least 5% observer coverage. Currently, the next shark indicator analysis is scheduled for 2018 (Table 6 of the Shark Research Plan). SC12 may consider details of future schedule for shark indicator analysis and any other related issues for all key shark species.~~

4.3.1 Oceanic whitetip shark (*Carcharhinus longimanus*)

4.3.1.1 Review of research and information

The last stock assessment was conducted in 2012 and no stock assessment has been conducted since then. SC12 will review any updated information and indicator analysis if available for oceanic whitetip shark.

4.3.1.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.3.2 Silky shark (*Carcharhinus falciformis*)

4.3.2.1 Review of research and information

The last stock assessment was conducted in 2013 and no stock assessment has been conducted since then. SC12 will review any updated information and indicator analysis if available for silky shark.

4.3.2.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.3.3 South Pacific blue shark (*Prionace glauca*)

4.3.3.1 Review of research and information

A new stock assessment was conducted in 2016. SC12 will review ~~the results of the 2016~~stock assessment information for South Pacific blue shark ~~stock assessment and future research needs.~~

4.3.3.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.3.4 North Pacific blue shark (*Prionace glauca*)

4.3.4.1 Review of research and information

- a. Evaluation of North Pacific blue shark as a northern stock

~~Paragraph 7, Article 11 of the Convention says:~~

~~The Commission shall establish a committee to make recommendations on the implementation of such conservation and management measures as may be adopted by the Commission for the area north of the 20° parallel of north latitude and on the formulation of such measures in respect of stocks which occur mostly in this area.~~

At WCPFC12, the Commission tasked the SC to undertake the work on determination of the designation of North Pacific blue shark as a northern stock, based on the information provided by ISC to SC11. In this regard, the Commission tasked the Scientific Services Provider with analyzing the available information and coordinating with ISC if further information is necessary.

As requested, SC12 will review any new relevant information provided by ISC to prioritize work on determining the designation of North Pacific blue shark as a northern stock, including establishing a criteria and process for the designation of northern stocks~~may consider a clear definition of northern stocks and criteria for designation, and evaluate whether North Pacific blue shark can be designated as a northern stock based on any scientific information available.~~

4.3.4.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.3.5 North Pacific shortfin mako (*Isurus oxyrinchus*) ~~Other sharks~~

4.3.5.1 Review of research and information ~~North Pacific shortfin mako (*Isurus oxyrinchus*)~~

ISC conducted an indicator analysis in 2015 and a full assessment is planned in 2018. SC12 will may review any updated additional information, if available ~~for comments and/or recommendations for North Pacific shortfin mako.~~

4.3.6 Pacific bigeye thresher shark (*Alopias superciliosus*)

4.3.6.1 Review of research and information

No stock assessment was conducted in 2016. SC12 may review any additional information, if available~~SC12 will review the results of the 2016 Pacific-wide assessment of the bigeye thresher shark funded by the ABNJ Project, and provide comments and/or recommendations on the stock status and management implications.~~

4.4 WCPO billfishes

4.4.1 South Pacific swordfish (*Xiphias gladius*)

4.4.1.1 Review of research and information

No stock assessment was conducted in 2016. SC12 will review any additional information for South Pacific swordfish, if available.

a. Research on South Pacific swordfish biology – aging, growth and maturity (Project 71)

According to concerns expressed by SC9 (Paras 277 and 278 of the SC9 Summary Report), CSIRO extended their research to include Project 71 in collaboration with the NOAA Pacific Islands Fisheries Science Center to include Hawaii swordfish data in the studies to meet the need expressed above in Para 277.

277. Noting the inconsistencies in the Australian and Hawaii growth schedules, SC9 recommended that additional work on age, growth and age validation be undertaken.

278. The South Pacific swordfish assessment was highly sensitive to growth assumptions. Two different growth models, one from Australia (GA) and the other from Hawaii (GH), were included in alternative model runs. SC could not decide which of these two assumptions was more reliable. Assessment runs using the GA growth data indicated that overfishing was occurring but that the stock was not in an overfished state. Assessment runs using the GH growth data indicate that no overfishing is occurring and that the stock is not in an overfished state.

SC12 will review the results of Project 71 and provide comments and/or recommendations for future South Pacific swordfish stock assessment.

4.4.1.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.4.2 Southwest Pacific striped marlin (*Kajikia audax*)

4.4.2.1 Review of research and information

No stock assessment was conducted in 2016. SC12 may review updated information if available for Southwest Pacific ~~SWP~~-striped marlin.

4.4.2.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.4.3 North Pacific striped marlin (*Kajikia audax*)

4.4.3.1 Review of research and information

ISC conducted a stock assessment for NP striped marlin in 2015 and [no stock assessment was conducted in 2016](#). ~~it was concluded that the WCNPO striped marlin stock is overfished and overfishing is occurring.~~ SC12 will review ~~any~~ updated information if available [for Southwest Pacific striped marlin](#) ~~to provide additional comments and/or recommendations on the stock status.~~

4.4.3.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

4.4.4 Pacific blue marlin (*Makaira nigricans*)

4.4.4.1 Review of research and information

[A new stock assessment was conducted by ISC in 2016](#). ~~ISC conducted a data preparation workshop and an assessment modeling meeting for the update of Pacific blue marlin stock assessment in 2016.~~ SC12 [will review the new stock assessment information for Pacific blue marlin.](#) ~~may review and provide comments and/or recommendations on any updated information if available for Pacific blue marlin~~

4.4.4.2 Provision of scientific information

SC12 will provide agreed text for the following:

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

AGENDA ITEM 5 MANAGEMENT ISSUES THEME

5.1 Development of harvest strategy framework

According to the Commission's decision in December 2015 below, SC's Management Issues Theme will discuss science aspects in developing the harvest strategy framework.

618. The Commission (WCPFC12) agreed that there will not be a Management Objectives Workshop/Harvest Strategy Workshop in 2016, and the harvest strategy-related issues will be included on the WCPFC13 agenda in 2016. In addition, the Commission directed SC12 to include these discussions under the Management Issues theme agenda item, so that the discussion on harvest strategies, in particular, continues.

657. *The Commission adopted the workplan for the adoption of Harvest Strategies under CMM 2014-06 (Attachment Y). The Commission tasked the SC with support from the Scientific Service Provider to undertake the activities specified in the agreed workplan.*

As this is a new agenda item, each element of the harvest strategy will be discussed along with the *Agreed Work Plan for the Adoption of Harvest Strategies under CMM 2014-06 (Attachment Y, WCPFC12 Summary Report)*.

5.1.1 Management objectives

The Commission is scheduled to “record” the management objectives for each fishery or stock (SP albacore, skipjack, yellowfin and bigeye) in 2016. SC12 may ~~review information and~~ provide any comments ~~and/or recommendations~~ for the consideration of the Commission.

5.1.2 Reference points

a. South Pacific albacore

The Commission in 2016 is scheduled to agree a target reference point for South Pacific albacore. SC12 may provide advice on the implications of a range of target reference points for South Pacific albacore for the consideration of the Commission.

b. Bigeye tuna

The Commission in 2016 is scheduled to agree timeframes to rebuild bigeye to the limit reference point. The SC have been requested to provide advice on determining a biologically reasonable timeframe for rebuilding bigeye tuna to [or above] its limit reference point.

5.1.3 Implications of alternative levels of acceptable risk ~~Acceptable levels of risk for breaching limit reference points~~

The Commission is scheduled in 2016 to agree the levels of risk for the four key tuna species in 2016 (SP albacore, skipjack, yellowfin and bigeye). While no specific advice has been requested from the SC by the Commission, SC12 may review information (including a summary of previous work undertaken and the requirements of the ongoing Management Strategy Evaluation work) and provide comments and/or recommendations for the consideration of the Commission.

5.1.4 Performance indicators

For SP albacore and skipjack, the Commission has tasked SC12 with providing advice on a range of performance indicators to evaluate the performance of harvest control rules.

5.1.5 Monitoring strategy

For SP albacore and skipjack, the Commission has tasked SC12 with provide advice on a monitoring strategy to assess performance against reference points.

5.1.6 Harvest control rules and Management Strategy Evaluation

For SP albacore and skipjack, the development of harvest control rules and management strategy evaluation frameworks is scheduled to commence in 2016 and continue through until 2018. SC12 will review progress and information on the development of harvest control rules and management strategy evaluation and if necessary make recommendations for the consideration of the Commission.

In particular, SC12 will consider a report of an expert consultation held at SPC in June on the development of a management strategy evaluation framework for WCPFC tuna stocks. SC12 will be invited to comment on a draft MSE design and make recommendations as appropriate to the Commission.

5.1.7 [Harvest control rules and management strategy evaluation for northern stocks](#)

[Under CMM 2014-06, the Northern Committee is responsible for developing a schedule of actions to adopt harvest strategies for North Pacific albacore and Pacific bluefin tuna. Towards the achievement of this objective, the ISC held an MSE Workshop in Japan in late May 2016. SC12 will be informed of the work that the ISC and the Northern Committee are undertaking on the development of harvest strategies and MSE testing.](#)

5.2 **Limit reference points for WCPFC sharks**

5.2.1 Identifying appropriate limit reference points for elasmobranchs for the WCPFC

The Commission endorsed SC's request of USD 25,000 for the development of limit reference points for elasmobranchs. The Commission tasked SC12 to develop a scope of work to progress development of limit reference points for sharks within the budget allocated for 2016 (Paras 69-70, FAC9 Summary Report).

Including the use of limit reference points, SC12 may also consider in general appropriate management options for shark stocks.

5.3 **Implementation of CMM 2015-01**

5.3.1 Yellowfin tuna catch limit

SC10 recommended that the catch of WCPO yellowfin tuna should not be increased from 2012 levels, which exceeded MSY, and measures should be implemented to maintain current spawning biomass levels until the Commission can agree on an appropriate target reference point (TRP).

According to Paragraphs 28 and 43 of CMM 2015-01, SC12 should provide recommendations for the Commission's formulation and adoption of yellowfin tuna catch limits in December 2016. In this regard, SC12 may consider relevant issues including setting catch limits, identifying species composition, real-time catch reporting, etc., and provide comments/recommendations on how to further develop catch limit options to the Commission.

Yellowfin tuna purse seine catch

28. CCMs agree to take measures not to increase catches by their vessels of yellowfin tuna. At its 2016 regular session the Commission will formulate and adopt appropriate limits for CCMs, based on recommendations from the Scientific Committee, and taking into account other measures in this CMM. At its 2016 regular session the Commission

will also formulate and adopt any in-season reporting requirements needed to support full implementation of these limits.

Yellowfin measures

43. CCMs agree to take measures not to increase catches by their longline vessels of yellowfin tuna. At its 2016 regular session the Commission will formulate and adopt appropriate limits for CCMs, based on recommendations from the Scientific Committee, and taking into account other measures in this CMM. At its 2016 regular session the Commission will also formulate and adopt any in-season reporting requirements needed to support full implementation of these limits.fcha

5.3.2 Other issues related to CMM 2015-01

SC12 may review proposals from CCMs that wish to claim exemption from the 2017 high seas FAD closure on the basis of footnote 5 of CMM 2015-01: “The high seas FAD closure in paragraph 18 does not apply in 2017 to a CCM that has achieved a verifiable reduction in bigeye catches by its purse seine vessels to 55% from current levels (2010-2012), to be reviewed on the basis of the advice of the Scientific Committee.”

SC12 may review and comment on any additional analyses and research, including juvenile tuna catch mitigation research, related to the effectiveness of CMM 2015-01.

AGENDA ITEM 6 ECOSYSTEM AND BYCATCH MITIGATION THEME

6.1 Ecosystem effects of fishing

6.1.1 Review of research and information

6.1.1.1 SEAPODYM

SC12 will consider updates to the SEAPODYM modelling framework, review recent model runs and provide comments and/or recommendations on SEAPODYM, including the process and methodology of the modelling framework if needed.

6.1.1.2 Ecosystem indicators

SC12 will consider fishery and environmental impacts on ecosystem, based on updated information, if available, including the development of ecosystem indicators.

6.2 Sharks

6.2.1 Review of potential mitigation measures to reduce fishing-related mortality on silky and oceanic whitetip sharks

SPC-OFP will present the results of 2016 simulation modelling work conducted under Project 54 (Monte Carlo simulation of mitigation options for longline shark bycatch). The scope of the work included:

- Based upon and extending the model described in WCPFC-SC11-2015/EB-WP-02, evaluate the likely efficacy of current longline mitigation measures that allow for flag-state choice between prohibition of shark lines and/or of wire leader on longline vessels provided for under CMM 2014-05;

- Develop a new Monte Carlo simulation model to examine potential mitigation measures that could be applied to the purse seine fishery. In the first instance this model will evaluate the impacts of switches between FAD and free school modes of fishing on overall interactions and mortality levels.

SC12 will review the results of this work and provide comments and/or recommendations on mitigation measures.

6.2.2 Review of conservation and management measures for sharks

SC12 will review relevant paragraphs of each shark CMM below, and provide comments or recommendations as required to the Commission.

a. CMM 2010-07 (CMM for Sharks)

SC12 will review any updated information and research outputs related with the CMM for Sharks, especially related with Paragraphs 4, 8, and 13 with reference to data provision, fin to carcass ratios, and the need for a revised or new CMM.

b. CMM 2011-04 (CMM for oceanic whitetip shark)

According to Paragraph 5 of the CMM, SC12 will review a detailed proposal, if submitted, for any biological sampling from oceanic whitetip sharks that are dead within longline or purse seine fisheries in the WCPO.

c. CMM 2012-04 (CMM for protection of whale sharks from purse seine fishing operations)

SC12 may consider additional mitigation measures based on CCMs' reports through Annual Report Part 1 on any instances in which whale sharks have been encircled by the purse seine nets of their flagged vessels.

d. CMM 2013-08 (CMM for silky sharks)

According to Paragraph 5 of the CMM, SC12 will review a detailed proposal, if submitted, for any biological sampling from silky sharks that are dead within longline or purse seine fisheries in the WCPO.

According to Paragraph 6 of the CMM, and reviewing reported information in Annual Report Part 1, CCM's and the SC shall continue work on bycatch mitigation measures and live release guidelines to avoid the catch of this species wherever possible, and maximize the number of incidentally caught individuals that can be released alive.

e. CMM 2014-05 (CMM for sharks)

Paragraph 2 of this CMM stipulates that CCMs must develop a management plan for longline fisheries targeting sharks, including specific authorizations to fish and a TAC or other measure to limit the catch of shark to acceptable levels.

SC12 will review draft *Guidance for the development and evaluation of management plans for longline fisheries targeting sharks in association with WCPFC fisheries*

prepared by the Secretariat associated with CMM 2015-04 and elements as stipulated in Attachment J of the WCPFC12 Summary Report, which includes:

- a range of possible definitions of a longline fishery targeting key shark species;
- a list of candidate elements to be considered for the development of management plans; and
- a list of elements to be considered for the evaluation of the management plans.

f. Safe release guidelines

The Commission adopted *Guidelines for the safe release of encircled animals, including whale sharks* (Attachment K, WCPFC12 Summary Report), which will be refined subject to new information. SC12 will continue to develop *New guidelines for the survival of sharks (other than whale sharks) to be released from longline or purse-seine gear* (Attachment G, SC11 Summary Report), based on any updated information and scientific evidence.

6.2.3 Shark Research Plan

a. Progress of shark research plan

The Commission adopted the WCPFC Shark Research Plan in December 2015 (SC11-EB-WP-01). SC12 may review the progress of the Shark Research Plan, including data gaps, schedule of stock assessments and indicator analysis, and mitigation measures.

b. Information on non-key-shark species

SC12 will review available information prepared by SPC-OFP on non-key-shark species, including mobulid species (mantas and devil rays) and their interactions with fisheries managed by the WCPFC. SC12 may consider some of these species for designation as WCPFC key sharks.

6.3 Seabirds

SC12 may review any updated information on seabird interactions with longline fisheries in the Convention Area in relation to the application of CMM 2012-07 (CMM for mitigating impacts of fishing on seabirds). SC12 may also review available research findings, including seabird bycatch rates for longline vessels < 24m and ≥ 24m and assessment on the utility of electronic monitoring by comparing interaction rates with other options, if available.

6.4 Sea turtles

SC12 will review scientific aspects of the CMM 2008-03 (Conservation and management of sea turtles), and consider additional or new mitigation measures of sea turtles if available.

SC12 will review the outcomes of the first workshop on Joint Analysis of Sea Turtle Mitigation Effectiveness in Longline Fisheries, held in Honolulu, Hawaii, USA from 16-19 February 2016.

The workshop report is available at

http://www.commonoceans.org/fileadmin/user_upload/common_oceans/docs/Tuna/FirstSeaTurtleWorkshopReport.pdf

6.5 Bycatch mitigation for other species

SC12 may review research, if available, on bycatch mitigation efforts, including i) mitigation of small bigeye and yellowfin tunas; ii) avoidance or selective release of bycatch species from the net to maximize the chances of survival of released animals; and iii) investigations that scientifically verify the post-release condition of bycatch species using pop-up archival tags and other technology.

6.6 Data exchange

SC12 will review a process to populate the Bycatch Data Exchange Protocol (BDEP) template, and review the first BDEP template for 2013-2015.

AGENDA ITEM 7 OTHER RESEARCH PROJECTS

7.1 West Pacific East Asia Project

SC12 will be briefed on the progress of the WPEA project with Indonesia, Philippines and Viet Nam, and its future plan.

7.2 Pacific Tuna Tagging Project

SC12 will review the progress of the Pacific Tuna Tagging Project and the results of its ninth steering committee meeting.

7.3 ABNJ (Common Oceans) Tuna Project-Shark and Bycatch Components

SC12 will be briefed on the progress of the ABNJ (Common Oceans) Tuna Project-Shark and Bycatch Components, including future work plan.

[7.4 WCPFC Tissue Bank \(Project 35b\)](#)

[SC12 will review the protocols of WCPFC tissue bank project.](#)

AGENDA ITEM 8 COOPERATION WITH OTHER ORGANISATIONS

SC12 will review the status of cooperation with other organizations and provide further recommendations if any for the Commission's consideration.

AGENDA ITEM 9 SPECIAL REQUIREMENTS OF DEVELOPING STATES AND PARTICIPATING TERRITORIES

SC12 will consider intersessional activities for the capacity building in science of developing States and participating territories, including those supported by the Commission's Special Requirements Fund and Japan Trust Fund. CCMs, Secretariat, SPC-OFP and FFA are invited to provide brief reports in this regard.

AGENDA ITEM 10 FUTURE WORK PROGRAM AND BUDGET

10.1 Review of the Scientific Committee Work Programme

SC12 will be briefed on the status of the SC11 work programme.

10.2 Development of the 2017 Work Programme and budget, and projection of 2018-2019 provisional Work Programme and indicative budget

SC12 will develop the 2017 SC work programme and budget and provisional work programme and indicative budget for 2018-2019 for the Commission's endorsement.

SC12 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 11 ADMINISTRATIVE MATTERS

11.1 Process for the independent review of stock assessment

SC12 will review a proposal to establish a formal process and its cost implication to independently review stock assessments.

11.2 Future operation of the Scientific Committee

SC12 will consider proposals, if any, for the efficient operation of the Scientific Committee, including streamlining of the agenda, rapporteuring, process of theme sessions, etc.

11.3 Election of Officers of the Scientific Committee

SC12 will consider nominations for Chair and Vice-Chair and theme conveners as required.

11.4 Next meeting

Members are invited to confirm a time and venue for SC13 in 2017, and to propose a time and venue for SC14 in 2018.

AGENDA ITEM 12 OTHER MATTERS

SC12 will consider any other issues that are raised under Agenda Item 1.4.

AGENDA ITEM 13 ADOPTION OF THE SUMMARY REPORT OF THE TWELFTH REGULAR SESSION OF THE SCIENTIFIC COMMITTEE

SC12 will adopt recommendations of the Twelfth Regular Session of the Scientific Committee. The adoption of SC12 Summary Report will be finalized after the meeting.

AGENDA ITEM 14 CLOSE OF MEETING

The meeting will close at 17:00 on 11 August 2016.