

NINETEENTH REGULAR SESSION

Da Nang, Viet Nam 27 November – 3 December 2022

Reference Document on the Progress of Harvest Strategy Workplan under CMM 2014-06

WCPFC19-2022-19 11 November 2022

Secretariat

A. INTRODUCTION

1. The purpose of this paper is to provide a quick reference guide to the recommendations of the latest Commission (WCPFC18), Scientific Committee (SC18) and the first Science-Management Dialogue (SMD01) of relevance to the discussions in support to the review of the progress in the development of harvest strategies under CMM 2014-06 and the science-management dialogue.

B. HARVEST STRATEGY WORK PLAN

B.1 WCPFC18 – Harvest Strategy Indicative Work Plan (*Paragraphs 256 - 257, WCPFC18 Summary Report*)

2. The Commission adopted the updated *Indicative Workplan for the Adoption of Harvest Strategies under CMM 2014-06* (Attachment A).

3. The Commission noted that a re-evaluation and further discussion of the Indicative Workplan would take place during the Science-Management Dialogue scheduled for 2022.

B.2 SC18 – Review of WCPFC Harvest Strategy Workplan (*Paragraphs 99 – 101, SC18 Outcomes Document*)

4. SC18 noted the adoption by WCPFC18 of the updated *Indicative Workplan for the Adoption of Harvest Strategies under CMM 2014-06* (Attachment I, WCPFC18 Summary Report) and that further discussion on this workplan would more appropriately take place during the upcoming Science-Management Dialogue.

5. Several CCMs noted that the adoption of the skipjack MP remains on track for 2022 but that adoption of TRPs for bigeye and yellowfin tuna and an MP for South Pacific albacore may need to be delayed pending further work. Some concern was also expressed in relation to how such delays may impact on MSC certification.

6. SC18 also noted the views expressed by several CCMs that a better understanding on how the Harvest Strategy Work Plan is progressing had been achieved during SC18, and this should help inform discussions at the Science-Management Dialogue.

C. SCIENCE-MANAGEMENT DIALOGUE

C.1 WCPFC18 – recommendations on the Science Management-Dialogue (*Paragraphs* 270 - 272, *WCPFC18 Summary Report*)

7. The Commission noted the importance and need for a Science-Management Dialogue to expedite the progress of implementation on the Indicative Workplan for the Adoption of Harvest Strategies.

8. The Commission agreed to have the first Science-Management Dialogue, on a trial basis, back-to-back with SC18 in 2022.

9. The Commission supported the following proposed areas of focus for the first Science-Management Dialogue, noting that the drafting the agenda would take into account views of CCMs on the focus of the science-management dialogue:

- (i) General capacity building to support confident and full participation of all CCMs in decision making on harvest strategies.
- (ii) The current state of skipjack and South Pacific albacore management strategy evaluation frameworks and candidate management procedures.
- (iii) Update and capacity building on the mixed fishery (multispecies) approach.
- (iv) Two items from SC17 MI-WP-03 which are:
 - the definition of fisheries and fishery controls within the harvest strategy;
 - procedures for identifying, selecting and implementing the 'best performing' management procedure.
- (v) Determining how Commission decision-making can best be supported by the SC and the Scientific Services Provider. Developing a 'pathway' for supporting decision making on management procedures that fulfills the information and training needs for making informed decisions that balance different management objectives.
- (vi) Planning issues, including: Schedule and focus for future dialogue meetings; Updates to the Harvest Strategy Workplan; Discuss alignment of parallel processes (e.g., allocation) required to support implementation of harvest strategies.

C.2 SMD01 – Recommendations on future Dialogue meetings (*Paragraphs 9 – 11, SMD01 Outcomes Document* (Attachment B))

10. SMD01 agreed on the value and merits of an SMD, but views differed on the future process. Noting that SMD01 was held on a trial basis in accordance with WCPFC18's decision, the Commission will decide whether another SMD is needed; the timing for any SMD; and whether it should be formalised.

11. SMD01 noted that the management procedure for skipjack was on track for adoption at WCPFC19 but work on the harvest strategy for the other stocks was delayed. SMD01 agreed that the Harvest Strategy Workplan would be updated at WCPFC19.

12. SMD01 agreed that decisions about the future of the SMD process and the timing and focus of future meetings was to be decided by the Commission. WCPFC19 will consider this specific issue under Agenda 7.2 with reference paper WCPFC19-2022-20.

Attachment A



INDICATIVE WORK PLAN FOR THE ADOPTION OF HARVEST STRATEGIES UNDER CMM 2014-06¹

- The first Harvest Strategy Workplan was developed in 2015 in accordance with CMM 2014-06. It set out a deliberately ambitious schedule of technical work and Commission decision making for the development of harvest strategies across the four key tuna stocks. The workplan was always intended to be a living document and has been updated annually to reflect actual progress as well as other needs and developments.
- It is acknowledged that delays in the execution of the workplan may occur, noting the complexity of developing harvest strategies for multiple species within the multilateral WCPFC environment as well as the capacity of member CCMs to understand and participate fully in the process. For this reason, all parties are cautioned against an expectation that harvest strategy elements will be completed in specific years. Completion dates have changed in the past and may change in the future.
- This workplan simply schedules decisions noting that it is the Commission's decision as to their interim nature. It is important to understand the implications of single species management procedures within a multi-species fishery context upon application of any of the management procedures.
- There is a very important need for capacity building to allow CCMs to understand and participate fully in the harvest strategy development process and ultimately to have confidence that an adopted harvest strategy is an agreeable balance of their objectives. This is particularly so as the Commission starts to consider the multispecies nature of the fishery and how management procedures will interact.
- For clarity and consistency, the term "Management Procedure" is used from 2020 onward in this workplan in place of the term "Harvest Control Rule (HCR)". A Management Procedure is a key part of a Harvest Strategy comprising a more formal specification of data collection, the associated estimation model (e.g. the estimation of stock status through an analytical or empirical method) together with a Harvest Control Rule. Together these clearly define what management actions are to be made in response to changes in the stock or fishery condition.

¹ As refined and adopted at the Seventeenth Regular Session of the Commission, held online 8-15 December 2020.

2021 Update

- The technical progress of the Scientific Services Provider included the refinement of the MSE framework for skipjack and South Pacific albacore and ongoing testing of management procedures for both, and the development of the mixed fishery harvest strategy framework for WCPO tuna stocks. Harvest strategy capacity building workshops were also conducted, and additional online capacity building material has been developed to try to limit the impacts of the ongoing COVID 19 pandemic.
- As in 2020, the online nature of the SC17 meeting limited the discussion of harvest strategy issues.
- The indicative plan has been extended for an additional two years to 2024.
- South Pacific Albacore and Skipjack management procedures are 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 Commission to develop and implement the monitoring strategy.

Note: Within the tables below, progress in earlier years is in grey. Bold items are the six elements that are referred to in CMM 2014-06 (Objectives, Reference Points, Acceptable Levels of Risk, Monitoring, Harvest Control Rules/Management Procedure and MSE). Items in brackets are related to harvest strategy development and so are part of the plan but are not one of these six elements.

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2015	SC provided advice on implications of a range of Target Reference Points for South Pacific albacore.	Commission agreed an interim Target Reference Point (b).	Commission tasked SC to determine a biologically reasonable timeframe for rebuilding bigeye tuna to [or above] its limit reference	
	Commission agreed to workplan for	or the adoption of harvest strategies	under CMM 2014-06 [WCPFC12 Sur	nmary Report, Attachment Y]

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2016	Commission considered management objectives for the fishery or stock (a).	Commission considered management objectives for the fishery or stock (a).	Commission considered management objectives for the fishery or stock (a).	Commission considered management objectives for the fishery or stock (a).
	 Performance indicators and Monitoring strategy (d). SC provided advice on a monitoring strategy to assess performance against reference points. SC provided advice on a range of performance indicators to evaluate performance of harvest control rules. Commission tasked SPC/SC to develop interim performance indicators to evaluate harvest control rules. [Commission agree to a monitoring strategy to assess performance against reference points.] 	 Performance indicators and Monitoring strategy (d). SC provided advice on a monitoring strategy to assess performance against reference points. SC provide advice on a range of performance indicators to evaluate performance of harvest control rules. Commission agreed interim performance indicators to evaluate harvest control rules. [see WCPFC13 Summary Report Attachment M] [Commission agree to a monitoring strategy to assess 	Commission agreed timeframes to rebuild stock to limit reference point. [see page 8 of HSW]	

Commission agreed to a refined workplan for the adoption of harvest strategies under CMM 2014-06 [WCPFC13 Summary Report Attachment N] Progress Summary:

Recognised the need for some harvest strategy elements to be adopted as 'interim' noting that they be reconsidered as the harvest strategy process develops.

Considered management objectives for the fisheries or stocks and made progress on identifying performance measures for tropical purse seine fisheries. For South Pacific albacore acknowledged the benefit of SPC adapting the same list of indicators to further similar work for south Pacific albacore. Commenced some early discussions on the relationship between harvest strategies for the different species and

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2017	 Performance indicators and Monitoring strategy (d). SC provided advice on a range of performance indicators for the Southern Longline Fishery to evaluate performance of harvest control rules. Commission noted performance indicators for the Southern Longline Fishery to evaluate harvest control rules. 	 Develop harvest control rules (e) and Management strategy evaluation (f). SC provide advice on candidate harvest control rules based on agreed reference points (ongoing). Commission consider advice on progress towards harvest control rules (ongoing). 	 Performance indicators and Monitoring strategy (d). SC provide advice on a range of performance indicators for to evaluate performance of harvest control rules. Commission noted performance indicators for the Tropical Longline Fishery to evaluate harvest control rules [SC report on BET status following updated assessment.] [SC and SPC provide advice to the Gramminian on the libration 	 Performance indicators and Monitoring strategy (d). SC provide advice on a range of performance indicators Fishery to evaluate performance of harvest control rules. Commission noted performance indicators for the Tropical Longline Fishery to evaluate harvest control rules
			the Commission on the likely outcomes of revised tropical tuna measure.]	
	Consider management objectives	for stocks and fisheries (a).		
	rules.	_	line Fishery and the Tropical Longline fi	
	 Agreed on actions to prior 	itise the development and adoption of	f a Target Reference Point for south Pa	cific albacore at WCPFC15.

- Recognized the importance of developing harvest strategies for key stocks in the WCPO. The Commission recognized that this work requires the consideration of fisheries managers and scientists at different stages. The Commission notes that the time required for harvest strategy discussions is substantial but will also vary from year to year and the Commission recognized the need for this to be accommodated.
- Agreed to reprioritise as needed the annual agenda of the Commission and Scientific Committee to allow sufficient additional time for consideration of harvest strategy issues. In addition WCPFC recognised that there may also be a need for a dedicated science/management dialogue.

South Pacific Albacore	Skipjack	Bigeye	Yellowfin
O18 Agree Target Reference Point (b)	Develop harvest control rules (e)	[SC updated advice on BET status.]	[SC and Commission discussion of management objectives for
south pacific albacore. Develop harvest control rules (e) and Management strategy evaluation (f) SC provide advice on performance of candidate harvest control rules. (ongoing). TCC consider the implications of candidate harvest control rules. (ongoing) Commission consider advice on progress towards harvest control rules. (ongoing). [SC updated advice on SP albacore status.] Consider management objective	 harvest control rules. (ongoing). TCC consider the implications of candidate harvest control rules. (ongoing) Commission consider advice on progress towards harvest control rules. (ongoing). 	 [SC and SPC provide advice to the Commission on the likely outcomes of revised tropical tuna measure.] [SC and Commission discussion of management objectives for fisheries and/or stocks, and subsequent development of candidate TRPs for BET and YFT.] 	fisheries and/or stocks, and subsequent development of candidate TRPs for BET and YFT.]

• An interim target reference point (TRP) for south Pacific albacore (0.56 SBF=0) was agreed.

• The Commission agreed to hold a 6-day annual meeting in 2019 with additional time devoted for the Commission to discuss harvest strategies.

2019Develop harvest control rules (e) and Management strategy evaluation (f)Develop harvest control rules (e) and management strategy evaluation (f)Target Reference Point (b).Target Reference Point (b).• SC provided advice on performance of candidate harvest control rules. (ongoing).• Commission considered potential Target Reference Points for bigeye.• Commission considered potential Target Reference Point (b).• Commission considered potential Target Reference Point (b).• Commission considered advice on progress towards harvest control rules. (ongoing).• Commission considered potential Target Reference Point (b).• Commission considered potential Target Reference Point (b).• Updated stock assessment considered py Crist <th></th> <th>South Pacific Albacore</th> <th>Skipjack</th> <th>Bigeye</th> <th>Yellowfin</th>		South Pacific Albacore	Skipjack	Bigeye	Yellowfin
Image: Sec davised on required analyses to support TRP review] Consider management objectives for stocks and fisheries (a).	2019	 and Management strategy evaluation (f) SC provided advice on performance of candidate harvest control rules. (ongoing). TCC considered the implications of candidate harvest control rules. (ongoing). Commission considered advice on progress towards harvest control rules. (ongoing). [Science Service Provider identified a range of alternative catch pathways to the interim this] 	 and Management strategy evaluation (f) SC provided advice on performance of candidate harvest control rules. (ongoing). TCC considered the implications of candidate harvest control rules. (ongoing). Commission considered advice on progress towards harvest control rules. (ongoing). Commission considered advice on progress towards harvest control rules. (ongoing). (mage the formation of the format	 SC provided advice on potential Target Reference Points for bigeye. Commission considered potential Target Reference Points for 	 SC provided advice on potential Target Reference Points for yellowfin. Commission considered potential Target Reference Points for

A range of harvest strategy related research was presented and discussed by WCPFC16. Research and technical documents in areas requested for 2019 are available on the SC15 and WCPFC16 websites. The harvest strategy workplan was subject to a substantial review and update at WCPFC16 to reflect decisions taken (or deferred) at WCPFC16. A schedule of research and technical work was identified to support the consideration of TRPs for skipjack (a revision), bigeye and yellowfin. Science Service Provider to review potential options to capture multi species issues under the HS process.

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2020	Develop management procedures (e) and Management strategy evaluation (f)	Develop management procedures (e) and Management strategy evaluation (f) • [Scientific Committee provide, and Commission consider, advice on range of issues pertaining to the formulation of a revised TRP for skipjack]	 Consider Target Reference Point (b). Scientific Committee provide advice on range of issues pertaining to the formulation of a TRP for bigeye. Commission consider SC advice on range of issues pertaining to the formulation of a TRP for bigeye. [Initiate development of multispecies framework in advance of further harvest strategy development] [Updated stock assessment considered by SC16] 	 Consider Target Reference Point Scientific Committee provide advice on range of issues pertaining to the formulation of a TRP for yellowfin. Commission consider SC advice on range of issues pertaining to the formulation of a TRP for yellowfin. [Initiate development of multispecies framework in advance of further harvest strategy development] [Updated stock assessment considered by SC16]

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
202	1 Develop management procedures (e)	Develop management procedures (e)	[Development of multispecies framework in advance of	[Development of multispecies framework in advance of

and	and	further harvest strategy	further harvest strategy
Management strategy evaluation	Management strategy evaluation	development]	development]
(f)	(f)		
		Agree Target Reference Point (b).	Agree Target Reference Point (b
 SC provide advice on 	 SC provide advice on 	SC provide advice on	SC provide advice on
performance of	performance of	potential Target	potential Target
candidate management	candidate management	Reference Points for	Reference Points for
procedures.	procedures.	bigeye.	yellowfin.
• TCC consider the	• TCC consider the		
implications of candidate	implications of candidate	[Economic and other analysis to support TRP decision	[Economic and other analysis
management procedures.	management procedures.	making]	to support TRP decision
Commission consider	Commission consider and	[[] [] [] [] [] [] [] [] [] [] [] [] []	making]
and refine a candidate	refine a candidate set of		
set of management	management		
procedures.	procedures.		
[Updated stock	Develop and implement		
assessment considered by	relevant elements of the		
SC17]	monitoring strategy.		
[Potential update of TRP following	[Scientific Committee provide, and		
assessment and in accordance	Commission consider, an update to		
with WCPFC15 adopted	paper WCPFC17-2020-11 to		
approach]	include additional candidate		
	skipjack TRPs of 36, 38 and		
	40		
	%SB _{F=0}]		
Consider management objectives	for stocks and fisheries (a).		
Progress Summary: See WCPFC18	-2021-23-rev1 Reference Document o	n the Progress of the Harvest Strateg	y Workplan Under CMM 2014-06
(Secretariat)		5	

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
		Complete review of the Target	Agree Target Reference Point (b).	Agree Target Reference Point (b).
2022	Develop management procedures	Reference Point.	 Commission agree a TRP for 	 Commission agree a TRP for
	(e)		bigeye	yellowfin
	and			

Management strategy evaluation	Develop management procedures	[Continue development of	[Continue development of
(f)	(e)	multispecies framework]	multispecies framework]
 SC agree the operating models for MSE. SC provide advice on performance of candidate management procedures. SC provides advice on relevant elements of the monitoring strategy. TCC consider the implications of candidate management procedures. 	 and Management strategy evaluation (f) SC agree the operating models for MSE. SC provide advice on performance of candidate management procedures. SC provides advice on relevant elements of the monitoring strategy. 	Develop management procedures (e) and Management strategy evaluation (f) • SC provide advice on potential management procedures. [YFT peer review. Relevant to BET operating models.	Develop management procedu (e) and Management strategy evaluati (f) • SC provide advice on potentia management procedures. [YFT peer review. Relevant to operating models.]
Commission review and adopt a management procedure.	• TCC consider the implications of candidate management procedures.		
	Commission review and adopt a management procedure.		
	[Updated stock assessment considered by SC18]		

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2023	Implement management procedure	Implement management procedure	Develop management procedures(e) and	Develop management procedures(e) and
	Commission reviews and adopts the monitoring strategy(d)	Commission reviews and adopts the monitoring strategy(d)	Management strategy evaluation (f)	Management strategy evaluation (f)
	[SC consider multispecies aspects of WCPO harvest strategies and	[SC consider multispecies aspects of WCPO harvest strategies and	 SC agree the operating models for MSE. SC provide advice on 	 SC agree the operating models for MSE. SC provide advice on

implications for the monitoring	implications for the monitoring	performance of potential	performance of potential
strategy]	strategy]	management procedures.	management procedures.
		 SC provides advice on relevant 	 SC provides advice on relevant
		elements of the monitoring	elements of the monitoring
		strategy.	strategy.
		• TCC consider the implications of	• TCC consider the implications of
		candidate management procedures.	candidate management procedures
		Commission consider advice on	 Commission consider advice on
		progress towards management	progress towards management
		procedures.	procedures.
		Develop and implement relevant	Develop and implement relevant
		elements of the monitoring	elements of the monitoring
		strategy(d)	strategy(d)
		[Updated stock assessment	[Updated stock assessment
		considered by SC19]	considered by SC19]

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2024	Implement management	Implement management	Dovelon management	Douglan management
2024	Implement management	Implement management	Develop management	Develop management
	procedure	procedure	procedures(e)	procedures(e)
			and	and
	Implement Monitoring Strategy (d)	Implement Monitoring Strategy (d)	Management strategy evaluation(f)	Management strategy evaluation(f)
		[SC consider multispecies aspects of	 SC provide advice on 	
	[SC consider multispecies aspects	WCPO harvest strategies and	performance of candidate	 SC provide advice on
	of WCPO harvest strategies and	implications for the monitoring	management procedures.	performance of candidate
	implications for the monitoring	strategy]	• SC provides advice on relevant	management procedures.
	strategy]	571	elements of the monitoring	• SC provides advice on relevant
	071		strategy.	elements of the monitoring
			• TCC consider the implications of	strategy.
			candidate management procedures.	50.000071

	Commission consider and refine a candidate set of management procedures. Commission ADOPT a management procedure.	 TCC consider the implications of candidate management procedures. Commission consider and refine a candidate set of management procedures.
		Commission ADOPT a management procedure.
Progress Summary:		

Attachment B



COMMISSION SCIENCE-MANAGEMENT DIALOGUE FIRST MEETING

Electronic Meeting 10:00am-14:00pm, 19 and 22 August 2022

OUTCOMES DOCUMENT

WCPFC19-2022-SMD01-01 24 August 2022

AGENDA ITEM 1 OPENING OF THE MEETING

1. SMD01 agreed to the agenda for SMD01 (WCPFC-SMD01-2022/02).

AGENDA ITEM 2 OBJECTIVES OF SMD01

2. SMD01 agreed to the objectives for SMD01 (WCPFC-SMD01-2022/BP-01).

AGENDA ITEM 3 BACKGROUND INFORMATION

3. SMD01 acknowledged the work of the Scientific Services Provider (SSP) provided to date and noted the work of the Scientific Committee (SC) as presented by the Management Issues Theme Convener.

AGENDA ITEM 4 PRIORITISE MANAGEMENT PROCEDURES

4.1 Management procedures for skipjack

4.1.1 Interrogation of performance indicators (e.g., using PIMPLE) and identification of preferred outcomes

- 4. SMD01 agreed on the following activities for the skipjack management procedures (MPs):
 - (a) retain HCRs 1, 2, 5, 6, 9 for skipjack MPs, and provide equivalent results, with a 10% constraint in place for all of these, noting CCMs' differing preferences.
 - (b) analyse the use of effort controls for the pole and line fishery, rather than using catch, and assume a baseline of the 2001-2004 average.
 - (c) use P&L effort for TRP presentations to WCPFC19.
 - (d) analyse the status of small-scale fisheries (<2000 MT) and fisheries in territorial waters within MP controls.

4.1.3 Additional work to be conducted by the SSP to support decision-making on MPs

- 5. SMD01 agreed that SSP would do the following additional work prior to WCPFC19:
 - (a) Run MPs (HCRs) 6 & 9 with a 10% constraint.
 - (b) Perform specific robustness set runs (see SC outcomes).
 - (c) Perform evaluations with effort-based P&L control.
 - (d) Provide performance indicators for P&L CPUE in PIMPLE.

4.2 Management procedures for South Pacific albacore

https://meetings.wcpfc.int/node/17178

4.2.2 Additional work to be conducted by the SSP to support decision-making on MPs

6. Regarding the geographic application of the SPA MP, SMD01 asked SSP to include the EPO for work done between now and WCPFC19, to include the entire area south of the equator, and to use the 2021 stock assessment, and regarding the application of the SPA MP to fisheries, to examine how large an impact the troll fishery has.

AGENDA ITEM 5 PATHWAYS TO COMMISSION DECISION-MAKING

7. SMD01 requested that SSP provide further capacity building on HS, and to consider enhancements of PIMPLE and/or other tools that would support improved understanding of HS by managers.

8. SMD01 agreed that the roles of the SMD are to bridge the gap between science and managers to enhance their understanding of the harvest strategy approach so they can make informed decisions on harvest strategies; capacity building focused on bridging this gap; and the addition of tools and workshops to enhance the understanding of managers.

9. SMD01 agreed on the value and merits of a SMD, but views differed on the future process. Noting that SMD01 was held on a trial basis in accordance with WCPFC18's decision, the Commission will decide whether another SMD is needed; the timing for any SMD; and whether it should be formalised.

10. The SMD01 noted that the MP for skipjack was on track for adoption at WCPFC19, but work on the HS for the other stocks was delayed. SMD01 agreed that the HS Workplan would be updated at WCPFC19.

AGENDA ITEM 6 ADMINISTRATIVE MATTERS

11. SMD01 agreed that decisions about the future of the SMD process and the timing and focus of future meetings was to be decided by the Commission.