



**SCIENTIFIC COMMITTEE
THIRTEENTH REGULAR SESSION**

**Rarotonga, Cook Islands
9 – 17 August 2017**

**AGREED WORK PLAN FOR THE ADOPTION OF HARVEST STRATEGIES UNDER
CMM 2014-06**

**SC13-WCPFC13-07
(WCPFC13 Summary Report Attachment N)**



**COMMISSION
TWELFTH REGULAR SESSION**
Bali, Indonesia
3-8 December 2015

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

This plan is intended to give effect to the requirements contained in paragraph 13 of CMM 2014-06:

“The Commission shall agree a workplan and indicative timeframes to adopt or refine harvest strategies for skipjack, bigeye, yellowfin, South Pacific albacore, Pacific bluefin and northern albacore tuna by no later than the twelfth meeting of the Commission in 2015. This workplan will be subject to review in 2017. The Commission may agree timeframes to adopt harvest strategies for other fisheries or stocks.”

A proposed schedule of actions to adopt or refine harvest strategies is provided for skipjack, bigeye, yellowfin and South Pacific albacore (it is noted that under the CMM the Northern Committee will be responsible for developing a schedule for Pacific bluefin and north Pacific albacore). These actions in the draft work plan are based upon the “Elements of a harvest strategy” in paragraph 7 of CMM 2014-06:

“Elements of a harvest strategy

7. Each harvest strategy developed in accordance with this CMM shall, wherever possible and where appropriate, contain the following elements:

- a. Defined operational objectives, including timeframes, for the fishery or stock (‘management objectives’)*
- b. Target and limit reference points for each stock (‘reference points’)*
- c. Acceptable levels of risk of not breaching limit reference points (‘acceptable levels of risk’)*
- d. A monitoring strategy using best available information to assess performance against reference points (‘monitoring strategy’)*
- e. Decision rules that aim to achieve the target reference point and aim to avoid the limit reference point (‘harvest control rules’), and*
- f. An evaluation of the performance of the proposed harvest control rules against management objectives, including risk assessment (‘management strategy evaluation’).”*

¹ As refined and adopted at the Thirteenth Regular Session of the Commission, Denarau, Fiji 5-9 December 2016.

Explanatory Notes

For detailed information on the objectives, principles and elements of harvest strategies, members are referred to CMM2014-06 and its annex.

Stocks or Fisheries?

This work plan anticipates that the Commission will agree initial harvest strategy elements on a stock basis (limit reference points and acceptable levels of risk of breaching a limit reference point). All other harvest strategy elements, including objectives, target reference points, Harvest Control Rules, and monitoring strategies, may be developed for stocks and/or fisheries. As such, this work plan is organized assuming that harvest strategies will be initially developed on a stock-specific basis, but the Commission will reorganise it as needed if harvest strategy elements are adopted on a fishery-specific basis. Any harvest control rules developed for fisheries should be designed and evaluated to achieve the TRP for each of the [main] stocks caught by that fishery.

The plan also reflects the different level of progress amongst the four tuna stocks included in the work plan. More rapid progress on harvest strategy elements for some stocks should not undermine the progress on other elements.

Rationale for Sequencing

The sequencing of the harvest strategy elements through the plan has been designed to allow efficient development of harvest strategies. Under the plan, the recording of management objectives and agreement on target reference points and risks of breaching limits reference points are planned to be undertaken first and these are followed by the development of harvest control rules. Management strategy evaluation is planned to ensure that harvest control rules meet objectives and target reference points. It is anticipated that management strategy evaluation and the development of harvest control rules will be an iterative process.

It is recognised that, for south Pacific albacore and skipjack tuna, the development of target reference points early has been dependent on a substantial body of analysis and modelling to explore the candidate targets suitability and alignment with objectives. Similar preparatory analysis will be required before adoption of target reference points for yellowfin and bigeye tunas. The work plan for bigeye tuna differs from the other stocks to reflect its current status (below limit reference point). The first steps in the plan for bigeye tuna relate to rebuilding the stock above its limit reference point.

Recording Objectives

It is proposed that the Commission can initially 'record' a range of candidate management objectives rather than 'agree' management objectives. This will allow development of relevant performance measures for management strategy evaluation. It is noted that the Commission has previously recorded a range of candidate objectives for tuna stocks and fisheries, including those in the final 'Report of the Expert Working Group Management Objectives, Performance Indicators and Reference Points' (MOW2-IP/01Rev 1), which was developed in the course of the first two Management Objectives Workshops (2012 and 2013) and accepted by WCPFC10.

Review and Amendment of the plan

It is recognised that there is a need for some flexibility in the plan as work progresses. The workplan should be considered a living document and it is proposed that progress against the plan be reviewed annually by the Commission as a permanent agenda item. The plan may be amended following this review or following the advice of a subsidiary body.

WCPFC13 Summary Report Attachment N

	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 point.	
	Commission agreed to workplan for the adoption of harvest strategies under CMM 2014-06 [WCPFC12 Summary Report, Attachment Y]			

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2016	<p>Commission considered management objectives for the fishery or stock (a).</p> <p>Performance indicators and Monitoring strategy (d).</p> <ul style="list-style-type: none"> • 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. • <i>[Commission agree to a monitoring strategy to assess performance against reference points.]</i> 	<p>Commission considered management objectives for the fishery or stock (a).</p> <p>Performance indicators and Monitoring strategy (d).</p> <ul style="list-style-type: none"> • 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] • <i>[Commission agree to a monitoring strategy to assess performance against reference points.]</i> 	<p>Commission considered management objectives for the fishery or stock (a).</p> <p>Commission agreed timeframes to rebuild stock to limit reference point. [see page 8 of HSW]</p>	<p>Commission considered management objectives for the fishery or stock (a).</p>
	Commission agreed on interim maximum acceptable risk level for breaching the LRP (c). [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]			
	<p>Progress Summary:</p> <p>Recognised the need for some harvest strategy elements to be adopted as ‘interim’ noting that they be reconsidered as the harvest strategy process develops.</p> <p>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 multispecies issues.</p>			

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2017	<p>Agree Target Reference Point (b).</p> <ul style="list-style-type: none"> Commission agree a Target Reference Point for south pacific albacore. <p>Develop harvest control rules (e) and Management strategy evaluation (f).</p> <ul style="list-style-type: none"> SC provide advice on candidate harvest control rules based on agreed reference points. Commission consider advice on progress towards harvest control rules. 	<p>Develop harvest control rules (e) and Management strategy evaluation (f).</p> <ul style="list-style-type: none"> SC provide advice on candidate harvest control rules based on agreed reference points. Commission consider advice on progress towards harvest control rules. 	<p>Agree performance indicators and Monitoring strategy (d).</p> <ul style="list-style-type: none"> SC provide advice on a range of performance indicators to evaluate performance of harvest control rules. Commission agree interim performance indicators to evaluate harvest control rules <p>[SC report on BET status following updated assessment.]</p> <p>[SC and SPC provide advice to the Commission on the likely outcomes of revised tropical tuna measure.]</p>	<p>Agree performance indicators and Monitoring strategy (d).</p> <ul style="list-style-type: none"> SC provide advice on a range of performance indicators to evaluate performance of harvest control rules. Commission agree interim performance indicators to evaluate harvest control rules
Consider management objectives for stocks and fisheries (a).				

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2018	<p>Develop harvest control rules (e) and Management strategy evaluation (f)</p> <ul style="list-style-type: none"> • SC provide advice on performance of candidate harvest control rules. • TCC consider the implications of candidate harvest control rules. • Commission consider advice on progress towards harvest control rules. 	<p>Develop harvest control rules (e) and Management strategy evaluation (f)</p> <ul style="list-style-type: none"> • SC provide advice on performance of candidate harvest control rules. • TCC consider the implications of candidate harvest control rules. • Commission consider advice on progress towards harvest control rules. 	<p>[SC and SPC provide advice to the Commission on the likely outcomes of revised tropical tuna measure.]</p>	<p>Agree Target Reference Point (b).</p> <ul style="list-style-type: none"> • SC provide advice on a range of Target Reference Points for yellowfin. • Commission agree a Target Reference Point for yellowfin. <p>Develop harvest control rules (e).</p> <p>Management strategy evaluation (f).</p>

	South Pacific Albacore	Skipjack	Bigeye	Yellowfin
2019	<p>Develop harvest control rules (e) and Management strategy evaluation (f)</p> <ul style="list-style-type: none"> • SC provide advice on performance of candidate harvest control rules. • TCC consider the implications of candidate harvest control rules. • Commission consider advice on progress towards harvest control rules. 	<p>Develop harvest control rules (e) and Management strategy evaluation (f)</p> <ul style="list-style-type: none"> • SC provide advice on performance of candidate harvest control rules. • TCC consider the implications of candidate harvest control rules. • Commission consider advice on progress towards harvest control rules. 	<p>Agree Target Reference Point (b).</p> <ul style="list-style-type: none"> • SC provide advice on a range of Target Reference Points for bigeye. • Commission agree a Target Reference Point for bigeye. <p>Agree monitoring strategy (d). Develop harvest control rules (e). Management strategy evaluation (f).</p> <ul style="list-style-type: none"> • SC provide 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 agree to a monitoring strategy to assess performance against reference points. <p>Commission agree performance indicators to evaluate harvest control rules</p>	<p>Agree performance indicators and Monitoring strategy (d).</p> <ul style="list-style-type: none"> • SC provide advice on a monitoring strategy to assess performance against reference points. • Commission agree to a monitoring strategy to assess performance against reference points.

Annex: Record of outcomes from WCPFC13 related to the Harvest Strategy Workplan

Agreed interim performance indicators to evaluate Harvest Control Rules

1. The Commission accepted the suggested initial list of performance indicators for tropical purse-seine fisheries as developed by the Small Working Group on Management Objectives at WCPFC13 for the purpose of the evaluation of harvest control rules (This list is attached at **WCPFC13 Summary Report Attachment M**).

Reference: WCPFC13 Summary Report, paragraph 286

Acceptable levels of risk (all stocks)

2. After discussion of the proposals of the FFA members and the USA, and based on the recommendation of the working group the Commission agreed to:
 - i) not specify, at this time, acceptable levels of risk of breaching the limit reference point for each stock;
 - ii) consider any risk level greater than 20 percent to be inconsistent with the LRP related principle in UNFSA (as referenced in Article 6 of the Convention) including that the risk of breaching limit reference points be very low; and
 - iii) determine the acceptability of potential HCRs where the estimated risk of breaching the limit reference point is between 0 and 20%.

Reference: WCPFC13 Summary Report, paragraph 296

Rebuilding timelines (bigeye)

3. In accordance with the workplan for the adoption of harvest strategies under CMM 2014-05 the Commission is scheduled to agree a timeframe for rebuilding bigeye tuna to [or above] its LRP.
4. The Commission agreed to an interim timeframe of up to ten years for rebuilding the bigeye tuna stock to the agreed Limit Reference Point of $0.2SB_{F=0}$.

5. The Commission shall use this timeframe in its development and evaluation of strategies and conservation and management measures relevant to the rebuilding of bigeye tuna. Amongst other matters, the Commission will consider the probability of the bigeye stock being at or above the limit reference point at the end of the rebuilding timeframe.

Reference: WCPFC13 Summary Report, paragraphs 304 - 306

Target reference point (South Pacific albacore)

6. WCPFC13 requested that existing analyses of the implications of different TRP levels – in terms of total catch and effort changes required – should be re-circulated to CCMs by FFA before the end of December 2016, and that the Scientific Services Provider assist CCMs in understanding the economic implications of different TRPs for their vessels before SC13.
7. WCPFC13 agreed to defer the possible adoption of an interim Target Reference Point for the South Pacific Albacore stock, which had originally been agreed to take place in 2015 under the Harvest Strategy Work Plan, until December 2017 at the latest.
8. The Commission directed that further discussion of the TRP should take place over the course of 2017 as part of the ongoing consultative process for the development of a Bridging Measure for the Conservation and Management of the South Pacific Albacore stock, and should include a report on progress by the Convenor of that process to the 13th WCPFC Scientific Committee.

Reference: WCPFC13 Summary Report, paragraphs 313 - 315

Harvest Strategy Workplan

9. The Commission adopted the Updated Harvest Strategy Work Plan (**WCPFC13 Summary Report Attachment N**). The Secretariat was tasked with documenting progress achieved under the Harvest Strategies agenda item in the form of an annex to the Harvest Strategy Work Plan to serve as a reference document to track progress against the agreed work plan.

Reference: WCPFC13 Summary Report, paragraph 326
