

REVISION OF THE WPTT PROGRAM OF WORK

PREPARED BY: IOTC SECRETARIAT¹, 14 OCTOBER 2014

PURPOSE

To ensure that the participants at the 16th Working Party on Tropical Tunas (WPTT16) revise the Program of Work for the WPTT by taking into consideration the specific requests of the Commission and Scientific Committee.

BACKGROUND

Scientific Committee

At the 16th Session of the SC:

- (Para. 192) The SC **NOTED** paper IOTC–2013–SC15–16 which outlined the proposed research priorities for each of the Working Party meetings held in 2013, with the aim of developing an IOTC Science Work Plan for 2014, and future years.
- (Para. 193) The SC **NOTED** the proposed work plans and priorities of each of the Working Parties and **AGREED** to the revised work plans as outlined in Appendix XXXIV [of the SC16 Report]. The Chairs and Vice-Chairs of each working party shall ensure that the efforts of their working party is focused on the core areas contained within the appendix, taking into account any new research priorities identified by the Commission at its next Session.
- (Para. 194) The SC **REQUESTED** that all Working Parties provide their work plans with items prioritised based on the requests of the Commission of the SC.
- (Para. 195) The SC **ADOPTED** a revised assessment schedule, ecological risk assessment and other core projects for 2014–18, for the tuna and tuna-like species under the IOTC mandate, as well as the current list of key shark species of interest, as outlined in Appendix XXXV [of the SC16 Report].
- (Para. 196) The SC **REQUESTED** that the IOTC Secretariat develop a template for each working party to use in developing their works plans in 2014, with the aim of standardising the way in which each working party presents a prioritised plan each year for the SC's consideration.

Commission

At Sessions of the Commission, Conservation and Management Measures adopted contained elements that call on the Scientific Committee, via the WPTT, to undertake specific tasks. These requests will need to be incorporated into a revised Program of Work for the WPTT:

Resolution 13/10 On interim target and limit reference points and a decision framework

- (para. 1) When assessing stock status and providing recommendations to the Commission, the IOTC Scientific Committee should apply the following interim target and limit reference points for the species of tuna and tuna-like species listed in **Table 1**. B_{MSY} refers to the biomass level for the stock that would produce the Maximum Sustainable Yield; F_{MSY} refers to the level of fishing mortality that produces the Maximum Sustainable Yield.

Table 1. Interim target and limit reference points.

Stock	Target Reference Point	Limit Reference Point
Albacore	$B_{MSY}; F_{MSY}$	$B_{LIM} = 0.40 B_{MSY}; F_{LIM} = 1.40 F_{MSY}$
Bigeye tuna	$B_{MSY}; F_{MSY}$	$B_{LIM} = 0.50 B_{MSY}; F_{LIM} = 1.30 F_{MSY}$
Skipjack tuna	$B_{MSY}; F_{MSY}$	$B_{LIM} = 0.40 B_{MSY}; F_{LIM} = 1.50 F_{MSY}$
Yellowfin tuna	$B_{MSY}; F_{MSY}$	$B_{LIM} = 0.40 B_{MSY}; F_{LIM} = 1.40 F_{MSY}$
Swordfish	$B_{MSY}; F_{MSY}$	$B_{LIM} = 0.40 B_{MSY}; F_{LIM} = 1.40 F_{MSY}$

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- (para. 2) These interim target and limit reference points shall be assessed and further reviewed by the IOTC Scientific Committee and the results shall be presented to the Commission for adoption of species-specific reference points. If applicable, the IOTC Scientific Committee should endeavour to apply the interim reference points in the provision of advice on the status of stocks and on recommendations for management measures.
- (para. 3) The IOTC Scientific Committee shall assess, as soon as possible and more particularly through the management strategy evaluation process (MSE) process, the robustness and the performance of the interim reference points, specified under paragraph 1 and other reference points based on the guidelines of International agreements taking into account: i) the nature of these reference points – target or limits, ii) the best scientific knowledge on population dynamics and on life-history parameters, iii) the fisheries exploiting them, and iv) the various sources uncertainty.
- (para. 4) In addition the IOTC Scientific Committee shall develop and assess potential harvest control rules (HCRs) to be applied, considering the status of the stocks against the reference points assessed in paragraph 3 for albacore, bigeye tuna, skipjack tuna, yellowfin tuna and swordfish. Based on the results of the MSE and considering the guidelines set forth in the UNFSA and in Article V of the IOTC Agreement, the IOTC Scientific Committee will recommend to the Commission HCRs for these tuna and tuna-like species...

DISCUSSION

Participants at the WPTT16 are requested to consider the priorities set by the Commission and the Scientific Committee, via Conservation and Management Measures, and revise its Program of Work (previously outlined in paper IOTC–2014–WPTT16–03) to match those priorities.

RECOMMENDATION/S

That the WPTT:

- 1) **NOTE** paper IOTC–2014–WPTT16–08, which encouraged the WPTT to further develop and refine its Program of Work for 2015–2019 to align with the requests and directives from the Commission and Scientific Committee.
- 2) **RECOMMEND** a revised Program of Work for 2015–2019 to the Scientific Committee for its consideration and potential endorsement.

APPENDICES

[Appendix A](#): DRAFT: Working Party on Tropical Tunas Program of Work (2015–2019)

APPENDIX A

DRAFT: WORKING PARTY ON TROPICAL TUNAS PROGRAM OF WORK (2015–2019)

The following is the Draft WPTT Program of Work (2015–2019) and is based on the specific requests of the Commission and Scientific Committee, and will need to be modified to incorporate topics identified during the WPTT16. The Program of Work consists of the following, noting that a timeline for implementation would be developed by the SC once it has agreed to the priority projects across all of its Working Parties:

- **Table 1:** Priority topics for obtaining the information necessary to develop stock status indicators for tropical tunas in the Indian Ocean;
- **Table 2:** High priority topics, by project for tropical tunas in the Indian Ocean; and
- **Table 3:** Stock assessment schedule.

Table 1. Priority topics for obtaining the information necessary to develop stock status indicators for tropical tunas in the Indian Ocean

Topic	Sub-topic	Priority
Stock structure (connectivity)	Research to describe the population structure and connectivity of tropical tunas within the Indian Ocean (and adjacent Pacific Ocean waters as appropriate)	High
	➤ Next Generation Sequencing (NGS) (function of new EU funding)	High
	➤ Otolith microchemistry/isotope research	Med
	➤ Tagging studies	Low
Biological information (parameters for stock assessment)	Age and growth research	High
	Age-at-Maturity	High
	Fecundity-at-age/length relationships	Medium
Ecological information	Spawning time and locations	High
Historical data review	Changes in fleet dynamics	High
	Species identification	Med
CPUE standardisation	Develop and/or revise standardised CPUE series for each tropical tuna species and fishery for the Indian Ocean	
	Bigeye tuna: High priority fleets: TBD	High
	Skipjack tuna: High priority fleets: TBD	High
	Yellowfin tuna: High priority fleets: TBD	High
Stock assessment / Stock indicators	Develop and compare multiple assessment approaches to determining stock status for all tropical tunas	High
Target and Limit reference points	To advise the Commission, by end of 2016 at the latest on Target Reference Points (TRPs) and Limit Reference Points (LRPs).	High
Management measure options	To advise the Commission, by end of 2016 at the latest, on potential management measures having been examined through the Management Strategy Evaluation (MSE) process.	High

Table 2. High priority topics, by project for tropical tunas in the Indian Ocean.

Topic	Sub-topic and project	Priority
Stock structure (connectivity)	<p>Research to describe the population structure and connectivity of billfish within the Indian Ocean (and adjacent Pacific and Atlantic waters as appropriate)</p> <ul style="list-style-type: none"> ➤ Next Generation Sequencing (NGS) to determine tropical tuna stock structure, and migratory range. Determine the degree of shared stocks for tropical tunas in the Indian Ocean with the Pacific Ocean. 	High
Biological information (parameters for stock assessment)	<p>Age and growth research</p> <ul style="list-style-type: none"> ➤ CPCs to provide further research reports on tropical tuna biology, namely age and growth studies including using through the use of fish otoliths, either from data collected through observer programs or other research programs. 	High
	<p>Age-at-Maturity</p> <ul style="list-style-type: none"> ➤ Quantitative biological studies are necessary for tropical tunas throughout their range to determine key biological parameters including age/size-at-maturity and fecundity-at-age/length relationships, which will be fed into future stock assessments. 	High
Ecological information	<p>Spawning time and locations</p> <ul style="list-style-type: none"> ➤ Collect gonad samples from tropical tunas to confirm the spawning time and location of the spawning area that are presently hypothesized for each tropical tuna species 	High
Historical data review	<p>Changes in fleet dynamics need to be documented by fleet.</p> <ul style="list-style-type: none"> ➤ Priority fleets: Japan and Taiwan,China LL 	High
CPUE standardisation	<p>Develop standardised CPUE series for each tropical tuna fleet/fishery for the Indian Ocean</p> <p>There is an urgent need to investigate the CPUE issues as detailed for bigeye tuna, skipjack tuna and yellowfin tuna in the WPTT15 report, and for these to be a high priority research activity for the tropical tuna resources in the Indian Ocean.</p> <p>That standardised CPUE index for juvenile yellowfin tuna and bigeye tuna caught by the EU purse seiner fleets, be estimated and submitted to the WPTT before the next round of stock assessments of tropical tunas.</p> <p>The standardisation of purse seine CPUE be made where possible using the operational data on the fishery.</p> <p>Develop and/or revise standardised CPUE series for each tropical tuna species and fishery for the Indian Ocean</p> <ul style="list-style-type: none"> ➤ Bigeye tuna: High priority fleets: TBD ➤ Skipjack tuna: High priority fleets: TBD ➤ Yellowfin tuna: High priority fleets: TBD 	High
Stock assessment / Stock indicators	<p>Develop and compare multiple assessment approaches to determining stock status for tropical tunas</p>	High
Target and Limit reference points	<p>To advise the Commission, by end of 2016 at the latest on Target Reference Points (TRPs) and Limit Reference Points (LRPs).</p> <ul style="list-style-type: none"> ➤ Used when assessing tropical tuna stock status and when establishing the Kobe plot and Kobe matrices 	High
Management measure options	<p>To advise the Commission, by end of 2016 at the latest, on potential management measures having been examined through the Management Strategy Evaluation (MSE) process.</p> <ul style="list-style-type: none"> ➤ These management measures will therefore have to ensure the achievement of the conservation and optimal utilisation of stocks as laid down in article V of the Agreement for the establishment of the IOTC and more particularly to ensure that, in as short a period as possible and no later than 2020, (i) the fishing mortality rate does not exceed the fishing mortality rate allowing the stock to deliver MSY and (ii) the spawning biomass is maintained at or above its MSY level. 	High

Table 3. Assessment schedule for the IOTC Working Party on Tropical Tunas (WPTT)

Species	2015	2016	2017	2018	2019
<i>Working Party on Tropical Tunas</i>					
Bigeye tuna	Indicators	Full assessment	Indicators	Indicators	Full assessment
Skipjack tuna	Indicators	Indicators	Full assessment	Indicators	Indicators
Yellowfin tuna	Full assessment	Indicators	Indicators	Full assessment	Indicators