



PROGRESS MADE ON THE RECOMMENDATIONS OF WPTmT03

PREPARED BY: IOTC SECRETARIAT, 16 JULY 2012

PURPOSE

To provide an update on the progress made in implementing the recommendations from the previous Working Party on Temperate Tunas (WPTmT) which were endorsed by the Scientific Committee (SC), and to provide alternative recommendations for the consideration and potential endorsement by participants as appropriate given any progress.

BACKGROUND

At the Third Session of the WPTmT, participants agreed on a series of actions to be taken by participants, CPCs, and the Secretariat on a range of issues. The subsequent table developed and agreed to by the WPTmT was provided to the SC for its endorsement.

DISCUSSION

The Rules of Procedure of the SC include the following seven core tasks, which are to be supported by the various Working Parties.

- a) recommend policies and procedures for the collection, processing, dissemination and analysis of fishery data;
- b) facilitate the exchange and critical review among scientists of information on research and operation of fisheries of relevance to the Commission;
- c) develop and coordinate cooperative research programmes involving Members of the Commission in support of fisheries management;
- d) assess and report to the Commission on the status of stocks of relevance to the Commission and the likely effects of further fishing and of different fishing patterns and intensities;
- e) formulate and report to the sub-commission, as appropriate, on recommendations concerning conservation, fisheries management and research, including consensus, majority and minority views;
- f) consider any matter referred to by the Commission;
- g) to carry out other technical activities of relevance to the Commission.

Noting the core tasks of the SC, and hence the WPTmT, and the fact that the SC, Commission and CPCs in general have struggled to implement previous recommendations from the WPTmT, the Chair and Secretariat undertook a review and subsequent revision of recommendations from the WPTmT03 meeting, endorsed by the SC, in an attempt to provide clearer direction and delegation of responsibility for each recommendation as appropriate.

The revised recommendations are contained in Appendix A for the consideration and potential endorsement by the WPTmT.

RECOMMENDATION

That the WPTmT **NOTE** the progress made in implementing the recommendations of the WPTmT03, and consider the proposed draft revisions to those recommendations yet to be completed.

That the WPTmT **AGREE** to the revised recommendations, and for these to be combined with any new recommendations arising from WPTmT04, noting that these will be provided to the SC for their endorsement.

APPENDICES

Appendix A: Progress made on the recommendations of WPTmT03 and SC14.





APPENDIX A

#	Recommendation from WPTmT03	Adopted by SC	Revise	Proposed revision for consideration at WPTmT04	Responsibility	Due date
1	 Review of the data available for temperate tuna species WPTmT03.01 (para. 13): The WPTmT NOTED the main albacore data issues that are considered to negatively affect the quality of the statistics available at the IOTC, by type of dataset and fishery, which are provided in <u>Appendix V</u>, and RECOMMENDED that the CPCs listed in the Appendix, make efforts to remedy the data issues identified and to report back to the WPTmT at its next meeting. Progress: Updated table provided in paper IOTC-2012-WPTmT04-07 for consideration by the WPTmT04 participants. 	Yes	Yes	Develop at WPTmT04 taking into account the points outlined in paper: IOTC–2012–WPTmT04–07.	All CPCs fishing for albacore.	Annually
2	Logbook coverage WPTmT03.02 (para. 23): The WPTmT RECOMMENDED that the WPDCS monitor that CPCs ensure that logbooks used for their fleets are compliant with the minimum data requirements contained in Resolutions 08/04 <i>concerning the recording of catch by longline</i> <i>fishing vessels in the IOTC area</i> and 10/03 <i>concerning the recording of catch by fishing vessels</i> <i>in the IOTC area</i> of the Commission (noting Recommendation 11/06 <i>concerning the recording</i> <i>of catch and effort by fishing vessels in the IOTC area of competence</i>), and to ensure that logbook coverage is appropriate to produce acceptable levels of precision (CV to be initially set at less than 20%) in their catch and effort statistics for temperate tuna species. Progress: Referred to the WPDCS and then SC. New requirements adopted by the Commission <i>in 2012 as part of Resolution 12/03 On The Recording Of Catch And Effort By Fishing Vessels</i> <i>In The IOTC Area Of Competence</i> .	Yes	No	_	All CPCs.	Ongoing
3	WPTmT03.03 (para. 24): The WPTmT RECOMMENDED that the main fleets catching albacore (Japan, Taiwan, China and Indonesia) collect biological information on albacore caught in their fisheries, preferably through observer programmes, and provide this information (including the raw data) to the Secretariat in 2012. <i>Progress: China has continued an active research program using observer data and will present a paper at the meeting.</i>	Yes	Yes	Develop at WPTmT04, noting that this was already requested for the 2012 meeting.	Japan Taiwan,China Indonesia	2013
4	Catch-and-effort and Size data WPTmT03.04 (para. 25): The WPTmT RECOMMENDED that as a matter of priority, India provide catch-and-effort data and size data for temperate tuna, in particular from its commercial longline fleet, as soon as possible, noting that this is already a mandatory reporting	Yes	Yes	Develop at WPTmT04, noting that this was already requested for the 2012 meeting.	India	2013

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	requirement. Progress: India has reported highly incomplete catches for its commercial longline fishery in 2010 and 2011. Levels of monitoring of Indian longliners remain extremely low in spite of the continuous increase of the number of longliners recorded since the mid-nineties.					
5	WPTmT03.05 (para. 2): The WPTmT RECOMMENDED that as a matter of priority, Indonesia and Malaysia provide catch-and-effort data and size data for temperate tuna, in particular for their fresh tuna and/or deep-freezing longline fleets, as soon as possible, noting that this is already a mandatory reporting requirement. Reporting should also include data from their vessels operating from other CPCs. <i>Progress: Nil</i>	Yes	Yes	Develop at WPTmT04.	Indonesia Malaysia	2012 and 2013
6	WPTmT03.06 (para. 29): The WPTmT RECOMMENDED that size data for albacore from the Japanese longline fleet are collected and reported to the IOTC Secretariat in 2012, with a summary to be provided to the WPTmT. <i>Progress: Nil</i>	Yes	Yes	Develop at WPTmT04.	Japan	2012
7	WPTmT03.07 (para. 30): The WPTmT RECOMMENDED that Japan and Taiwan, China analyse the size samples collected from their longline fisheries for albacore in order to verify if the length frequencies derived from such samples are representative of their fisheries. In particular Japan to compare length frequency distributions derived from samples collected:	Yes	Yes	Develop at WPTmT04.	Japan Taiwan,China	2012
	by fishermen on commercial vessels					
	 by observers on commercial vessels by scientists on research and training vessels.					
	• by scientists on research and training vessels. <i>Progress: Review is under way. The IOTC Secretariat will participate in a meeting to look into the issues identified. The report from the meeting will be presented to the SC in 2012.</i>					
8	WPTmT03.08 (para. 31): The WPTmT RECOMMENDED that as a matter of priority, the Philippines provide size data for temperate tuna, noting that this is already a mandatory reporting requirement. <i>Progress: Nil</i>	Yes	Yes	Develop at WPTmT04.	Philippines	2012
9	Observer data from China	Yes	Yes	Develop at WPTmT04.	China	2012
1	WPTmT03.09 (para. 37): Noting that the current information available on albacore biology from the Indian Ocean is limited, the WPTmT RECOMMENDED that China provide further updates on research carried out as part of its national observer program, at the next session of the WPTmT and ENCOURAGED other CPCs to provide similar research reports on albacore biology, either from data collected through observer programs or other research programs, at	105				2012

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	the next WPTmT meeting.					
	Progress: No information provided to date.					
10	WPTmT03.10 (para. 39): Noting that there are difficulties faced by some CPCs in collecting gonad samples from albacore – albacore is generally frozen whole and not gutted, the WPTmT RECOMMENDED that CPCs, in particular Japan, collect gonad samples from albacore to confirm the spawning time and location of the spawning area that are presently hypothesized for albacore, over the coming year and to report findings at the next WPTmT. <i>Progress: Nil</i>	Yes	Yes	Develop at WPTmT04.	Japan Others	2012
11	Korean catch and effort for albacore	Yes	Yes	Develop at WPTmT04.	Rep. of Korea	2012
	WPTmT03.11 (para. 41): Noting that the nominal catch (NC) data provided at the WPTmT03 meeting was found to conflict with the NC data history provided by the Republic of Korea for all years prior to 1994, and for catch-and-effort data for most of the history of the longline fleet, the WPTmT RECOMMENDED that the Rep. of Korea liaise with the Secretariat to provide a fully justified revised catch history which will replace the data currently held by the Secretariat before the end of 2011.					
	Progress: Korea informed that they are reviewing their catch and effort data set and will report revised CE data soon.					
12	Indonesian longline fishery	Yes	Yes	Develop at WPTmT04.	Indonesia	2012
	WPTmT03.12 (para. 49): Noting that Indonesian catches represent more than 40% of the total albacore catches in the Indian Ocean, determined from the revised catch history developed by the Secretariat, the WPTmT RECOMMENDED that Indonesia further strengthen sampling efforts on its coastal and off-shore fisheries in early 2012, where required, and liaise with the Secretariat in order to better determine the catches of albacore by the Indonesian longline fleet.					
	Progress: The IOTC Secretariat and Indonesia are looking at the issues identified by the WPTmT. The IOTC Secretariat is collecting data from canning factories under the ISSF scheme on albacore imports from both the Indian and Pacific oceans, as it believes that Indonesia is allocating caches of albacore from the Indian Ocean to the Pacific Ocean.					
13	WPTmT03.13 (para. 50): The WPTmT RECOMMENDED that as a matter of priority, India, Indonesia and Japan increase sampling coverage to attain at least the coverage levels recommended by the Commission, including:	Yes	No	-	-	-
	• catches sampled or observed for at least 5% of the vessel activities, including collection of catch, effort and size data for IOTC species and main bycatch species;					
	• implementation of logbook systems for offshore fisheries.					





IOTC-2012-WPTmT04-06 The information collected through the above activities should allow India, Indonesia and Japan to estimate catches by gear and species. Progress: Levels of coverage remain unchanged. The IOTC-OFCF Project is planning to visit Indonesia during the first quarter of 2012 to follow-up on these issues. As this matter is covered under a binding IOTC Resolution, there is no need for this Recommendation from the WPTmT to be renewed. Develop at WPTmT04. **Piracy in the Indian Ocean** Yes Yes Japan 2012 Rep. of Korea WPTmT03.14 (para. 52): The WPTmT **RECOMMENDED** that given the potential impacts of piracy on the albacore fishery through the relocation of longliners into traditional albacore Taiwan.China fishing grounds, specific analysis should be carried out and presented at the next WPTmT meeting by CPCs most affected by these activities, including Japan, Republic of Korea and Taiwan, China. Progress: Nil Yes **CPUE discussion summary** Yes Develop at WPTmT04. A11 2012 WPTmT03.15 (para. 61): The WPTmT **RECOMMENDED** that the following matters be taken into account when undertaking CPUE standardisation analysis: • The WPTmT AGREED that changes in species targeting is the most important issue to address in CPUE standardisations, and that the following points should be taken into consideration: i. While hooks between floats (HBF) provides some indication of setting depth, it is generally considered not to be a sufficient indicator of species targeting. HBF is just one aspect of the setting technique, which can vary by species, area, set-time, and other factors. ii. Highly aggregated (e.g. 5x5 degrees) data can make it difficult to observe the factors driving CPUE in a fishery, in particular the targeting effects. Operational data provides additional information that may allow effort to be classified according to fishing strategy (e.g. using cluster analyses or regression trees to estimate species targeting as a function of spatial areas, bait type, catch species composition, set-time, vessel-identity, skipper, etc.). Operational data also permits vessel effects to be included in analyses. iii. The inclusion of other species as factors in a Generalized Linear Model (GLM) standardization may be misleading, because the abundance of all species changes over time. Including these factors may also fail to resolve problems due to changes in targeting, particularly when modeling aggregated data. However, comparing models with and without the other species factors can be useful to identify whether there is likely to be a targeting problem.

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as fish density (and targeting practices) ca it can be misleading to assume that large a	patial structure needs to be considered carefully in be highly variable on a fine spatial scale, and reas are homogenous when there are large shifts e following points should also be taken into		
i. Addition of finer scale (e.g. 5x5 degree account for heterogeneity within sub-reg	s) fixed spatial effects in the model can help to tions.		
	al units that are relatively homogeneous in terms nt possible (e.g. uniform catch size composition		
	separate analyses for different sub-regions. The ion (e.g. proportion of zero sets), and there may lanatory variables.		
composition of the population, it may into a regional index (e.g. albacore pop caught predominantly in the equat	ns (e.g. due to spatial variability in the age not be appropriate to pool sub-regional indices pulations seem to be partitioned with spawners orial/tropical regions and juveniles caught nd the two age categories could have somewhat		
identification of a fishery with hom worthwhile. However, it may not be po	ative 'space-time' window: if this leads to the ogeneous targeting practices, it is probably ssible to identify an appropriate window, or the representative of the larger population (or has a		
catch, it is worth considering models whic zero observations (e.g. negative binomial, constant to the lognormal model may be	many observations with positive effort and zero h explicitly model the processes that lead to the zero-inflated or delta models). Adding a small okay if there are few zeroes, but may not be nes (e.g. north of 10° S). Sensitivity to the choice		
standardization is an ongoing research to variables do not have as much explanator spatial effects. This may indicate that mod	e inclusion of environmental variables in CPUE opic. The WPTmT AGREED that often these by power as, or may be confounded with, fixed el-derived environmental fields are not accurate be careful consideration of the mechanisms of ost informative way.		





The WPTmT AGREED that it is difficult to prescribe analyses in advance, and model building should be undertaken as an iterative process to investigate the processes in the fishery that affect the relationship between CPUE and abundance. Specifically: i. Model building should proceed with a stepwise introduction of explanatory terms, in which the net effect of each level of complexity is presented. Parameter estimates should be presented and examined to see if the mechanism makes sense and the contribution has a practical influence. ii. Simulations have shown that model selection using Akaike Information Criterion (AIC) tends to recommend over-parameterized models. *Progress: To be updated at WPTmT04 following presentation of assessments.* 16 WPTmT03.16 (para. 64): The WPTmT also ENCOURAGED data to be used in stock Yes Yes Develop at WPTmT04. All 2013 assessments, including CPUE standardisations, be made available not less than three months before each meeting by CPCs and where possible, data summaries no later than two months prior to each meeting, from the IOTC Secretariat; and **RECOMMENDED** that data to be used in stock assessments, including CPUE standardisations be made available not less than 30 days before each meeting by CPCs. Progress: The IOTC Secretariat published the data for the assessments more than two months before the meeting. CPUE Standardisations have not been provided by scientists by this specified date. WPTmT03.17 (para. 65): The WPTmT **RECOMMENDED** that a dedicated workshop on 17 No No _ CPUE standardization, including issues of interest for other IOTC species should be carried out before the next round of stock assessments in 2012, possibly coordinated under the IOTC Working Party on Methods, and that where possible it should include a range of invited experts, including those working on CPUE standardisation in other ocean/RFMOs. Progress: The SC agreed that such a meeting should be deferred until 2013. Yes Develop at WPTmT04. 2013 18 Stock assessment Yes A11 WPTmT03.18 (para. 67): Noting that the only stock assessment for albacore was not made available by the authors until the 19th September, 2011 which did not allow the other participants of the meeting to adequately review the methodology, the WPTmT reminded working party participants of the 2010 Scientific Committee RECOMMENDATION that stock assessment papers need to be provided to the Secretariat for posting to the IOTC website no later than 15 days before the commencement of the relevant meeting. Progress: Various stock assessment model results will be presented during the WPTmT04 meeting.





19	WPTmT03.19 (para. 68): The WPTmT AGREED that there is value in undertaking a number of different modelling approaches to facilitate comparison, and RECOMMENDED that spatially structured integrated models, which are capable of more detailed representation of complicated population and fishery dynamics, and integrate several sources of data and biological research that cannot be considered in the simpler production models, be carried out for the next WPTmT. <i>Progress: As above.</i>	Yes	Yes	Develop at WPTmT04.	All	2013
20	Albacore: Indian Ocean Stock – Management advice WPTmT03.20 (para. 78): The WPTmT RECOMMENDED the following management advice for albacore in the Indian Ocean, for the consideration of the Scientific Committee, noting that there remains considerable uncertainty about the relationship between abundance and the standardized CPUE series, and about the total catches over the past decade. <i>Stock status.</i> Trends in the Taiwan, China CPUE series suggest that the longline vulnerable biomass has declined to about 39% of the level observed in 1980. There were 20 years of moderate fishing before 1980, and the catch has more than doubled since 1980. Catches have increased substantially since the previous albacore assessment when there was considered to be a risk that SB <sb<sub>MSY, so the risk will have increased further. It is considered likely that recent catches have been above MSY, recent fishing mortality exceeds F_{MSY} ($F_{2010}/F_{MSY} > 1$). There is a moderate risk that total biomass is below B_{MSY} ($B_{2010}/B_{MSY} \approx 1$). <i>Outlook.</i> Maintaining or increasing effort will probably result in further declines in biomass, productivity and CPUE. The impacts of piracy in the western Indian Ocean has resulted in the displacement of a substantial portion of longline fishing effort into the traditional albacore fishing areas in the southern and eastern Indian Ocean. It is therefore unlikely that catch and effort on albacore will decline in the near future. <i>Progress:The Commission endorsed the management advice at its 16th Session. However, comment was made that the WPTmT and SC should be providing specific management advice based on information available.</i></sb<sub>	Yes	Yes	Develop at WPTmT04.	_	_
21	 WPTmT03.21 (para. 79): The WPTmT RECOMMENDED that the Scientific Committee consider the following: The available evidence indicates considerable risk to the stock status at current effort levels. The two primary sources of data that drive the assessment, total catches and CPUE are highly uncertain and should be investigated further as a priority. 	Yes	Yes	Develop at WPTmT04.	_	-
	 Current catches (average ~41,000 t over the last five years, ~44,000 t in 2010) likely exceed MSY (29,900 t, range: 21,500–33,100 t). Maintaining or increasing effort will 					





probably result in further declines in biomass, productivity and CPUE. A Kobe 2 Strategy matrix was calculated to quantify the risk of different future catch • scenarios (Table 3). However, a number of inconsistencies between the model and data were noted for future investigation. Progress: N/A 22 **Update of species Executive Summaries** No No _ WPTmT03.22 (para. 85): The WPTmT **RECOMMENDED** that the Scientific Committee: • **NOTE** the current definition of overfishing used by the IOTC, where fishing mortality is in excess of F_{MSY} ($F_{curr}/F_{MSY} > 1$) is considered overfishing; • **NOTE** that fishing mortality in excess of F_{MSY} is not always defined as overfishing (within tRFMOs) if the stock is well above the B_{MSY} level, although no specific threshold has been defined: • **CONSIDER** the current definition of overfishing ($F_{curr}/F_{MSY} > 1$), and determine that if in situations where the biomass of a given stock is well above B_{MSY} , but $F_{curr}/F_{MSY} > 1$, under what circumstances should a stock be classified as subject to overfishing; • NOTE the draft resource stock status summary for albacore (Thunnus alalunga) -Appendix VI. Progress: The SC did not agree to the first three dot points above. The SC did note the draft Executive Summary. 23 WPTmT03.23 (para. 86): The WPTmT **RECOMMENDED** that the IOTC Secretariat N/A N/A update the draft stock status summary for albacore with the latest 2010 catch data, and for these to be provided to the Scientific Committee as part of the draft Executive Summaries, for its consideration. Progress: The Secretariat updated the draft Executive Summary with the latest catch and effort figures prior to the SC14 and WPTmT04 meetings. 24 Development a draft work plan for the WPTmT Yes No WPTmT03.24 (para. 90): The WPTmT **AGREED** that there was an urgent need to carry out revised stock assessments for the albacore resource in the Indian Ocean in 2012, and **RECOMMENDED** that the Scientific Committee consider recommending that the Commission consider approving funds for this purpose. Progress: Funds were not approved by the Commission. 25 WPTmT03.25 (para. 91): Noting that at present very little is known about the population Yes Noting that at present very little is All CPCs fishing 2013 No structure and migratory range of albacore in the Indian Ocean, other than the possible known about the population structure for albacore

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	connectivity with the southern Atlantic, the WPTmT RECOMMENDED that the Scientific Committee develop a research plan that includes the determination of albacore stock structure, migratory range and movement rates in the Indian Ocean as a high priority research project, at its 2011 annual meeting. <i>Progress: The SC agreed to this however no funds were allocated by the Commission.</i>			and migratory range of albacore in the Indian Ocean, other than the possible connectivity with the southern Atlantic, the WPTmT RECOMMENDED that the Scientific Committee develop a research plan that includes the determination of albacore stock structure, migratory range and movement rates in the Indian Ocean as a high priority research project, at its 2011 annual meeting.		
26	 WPTmT03.26 (para. 92): The WPTmT RECOMMENDED that the Scientific Committee add the following core topic areas as priorities for research over the coming year: Size data analyses Growth rates and ageing studies Stock status indicators – exploration of indicators from available data Collaborate with SPC-OFP to examine their current simulation approach to determine priority research areas. <i>Progress: The SC agreed.</i> 	Yes	Yes	Develop at WPTmT04.	_	_
27	Ongoing research projects by CPCs for 2012 WPTmT03.27 (para. 93): The WPTmT NOTED the lack of research programs on albacore currently being undertaken by CPCs in the IOTC area of competence and RECOMMENDED CPCs who did not have participants present at the WPTmT03, to provide details of current research projects on albacore to the Scientific Committee at its meeting in December 2011. <i>Progress: No CPC provided an indication of research being undertaken at the SC14</i> .	Yes	No	_	-	-
28	Date and place of the Fourth Session of the Working Party on Temperate Tunas WPTmT03.28 (para. 96): Following a discussion on who would host the Fourth Session of the WPTmT, the WPTmT RECOMMENDED that the IOTC Secretariat liaise with ICCAT to determine if it would be feasible to hold the next meeting of the WPTmT in conjunction with the equivalent ICCAT meeting in September or October 2012. It was AGREED that if this was not possible, then the next WPTmT meeting be held in conjunction with the WPTT or WPB meeting. The exact dates and meeting location will be confirmed and communicated by the IOTC Secretariat to the Scientific Committee for its consideration at its next session to be	No	Yes	Develop at WPTmT04.	_	-





	held in December 2011. Progress: ICCAT was contacted prior to the WPTmT04 in an attempt to bring one of their stock assessment scientists to the WPTmT04 without success. ICCAT was not receptive to the option of holding a joint albacore working group in 2013.					
29	 Development of priorities for an Invited Expert at the next WPTmT meeting WPTmT03.29 (para. 98): The WPTmT RECOMMENDED the following core areas of expertise and priority areas for contribution that need to be enhanced for the next meeting of the WPTmT in 2012, by an Invited Expert: Expertise: experience with CPUE analysis and standardisation for albacore. 	Yes	Yes	Develop at WPTmT.	-	
	• Priority areas for contribution: stock assessment for albacore. Progress: An Invited Expert was not recruited for the WPTmT due to a lack of funds from the Commission.					
30	Election of a Chairperson and Vice-Chairperson of the WPTmT for the Next Biennium WPTmT03.30 (para. 101): The WPTmT RECOMMENDED that the Scientific Committee note the new Chair (Dr. Zang Geun Kim) and Vice-Chair (Dr. Tsutomu Nishida) of the WPTmT for the next <i>biennium</i> . <i>Progress: The Vice-Chair elect of the WPTmT resigned due the potential for a perceived</i> <i>conflict of interest with his role at the SC Chair.</i>			_	_	_
31	Review of the draft, and adoption of the Report of the Third Session of the Working Party on Temperate Tunas WPTmT03.31 (para. 102): The WPTmT RECOMMENDED that the Scientific Committee consider the consolidated set of recommendations arising from WPTmT03, provided at Appendix IV. Progress: Not applicable.			_	_	_