



CCSBT-EC/1410/09

Report from the Extended Scientific Committee

Purpose

To consider the Report of the Nineteenth Meeting of the Scientific Committee (SC19), incorporating the Extended Scientific Committee (ESC).

Introduction

The Report of the Nineteenth Meeting of the Scientific Committee (SC19) is provided to this meeting as CCSBT-EC/1410/Rep02. The ESC Chair's presentation of this report is provided to this meeting as CCSBT-EC/1410/18.

The ESC meeting provided advice to the Extended Commission (EC) for management of SBT and in relation to the CCSBT's Scientific research Program.

(1) SBT Management Advice

The ESC conducted a full stock assessment for its September 2014 meeting and has provided the following SBT management advice to the EC:

Current stock status

The stock remains at a very low state estimated to be 9% of the initial Spawning Stock Biomass (SSB) and below the level to produce maximum sustainable yield (MSY). However there has been some improvement since the 2011 stock assessment and fishing mortality is below the level associated with MSY. The total biomass of 10 year old SBT and above (B10+) relative to initial is estimated to be 7% which is up from the estimate of 5% in 2011.

Exceptional circumstances

As detailed in Agenda Item 10.1 of the ESC report, it appears that significant levels of unaccounted mortality may have occurred which were not considered in the design of the Management Procedure (MP). If these levels are indeed true, they would amount to exceptional circumstances because the probability of rebuilding under the MP will be well below what was intended by the EC.

The ESC also noted that continuing to follow the MP as proposed does lead to continued rebuilding in the short term even if the circumstances of the hypothesised additional unaccounted mortality are true. Hence, the ESC advised the EC to continue to follow the MP as formulated but, as a matter of urgency, to take steps to quantify all sources of unaccounted SBT mortality. If substantial levels of unaccounted mortality are confirmed, then there will be a need to retune the MP to achieve the EC's stated rebuilding objective. In addition, the ESC advised the EC to take steps to ensure adherence to its TACs.

MP TAC Recommendations

Based on the results of the MP operation for 2015-17 in 2013 and the outcome of the review of exceptional circumstances in Agenda Item 10.1 of the ESC report, the ESC recommended that there is no need to revise the EC's 2013 TAC decision regarding the TACs for 2016-17. The recommended annual TAC for the years 2016-2017 is 14,647.4 t.

Other Advice

The ESC recommended to the EC that a Research Mortality Allowance allocation of 5.95 t in 2015 be made to cover mortality associated with approved research projects.

The ESC drew attention to the suggestions made in **Attachment 5** of its report in regard to further possible initiatives to improve the estimation of any unaccounted mortality in the surface fishery, of catches by non-members, and of (unreported) catches by members by improved market monitoring. The ESC encouraged all countries to make their CDS data and information on market monitoring available to facilitate and improve analyses. However, any items related to the details of individual vessels are not required.

The ESC updated the annual report on biology, stock status and management of SBT that it prepares for provision to FAO and the other tuna RFMOs.

(2) Update of the Scientific Research Program

The ESC revised its Scientific Research Program (SRP) during its September 2014 meeting and provided a workplan for 2015 (**Attachment A**) together with an indicative workplan for 2015-2017 (**Attachment B**). Costs for the indicative workplan are provided in paper CCSBT-EC/1410/06. The ESC recommended that the EC note the following:

- The importance of the close-kin (CK) method for also potentially providing information on key uncertainties in the OM on the Indonesian fishery selectivity, fecundity, and adult mortality for use in the OM.
- High priority items for 2015 are 1) further work on the genotyping approaches to inform decisions on the longer-term approach for CK, 2) an expert review workshop on the CK approaches, 3) gene tagging design study, 4) aging of otoliths and 5) continued collection of close-kin samples.
- The costs of the SRP will increase over the three years of the program, but the ESC notes that the Performance Review of the CCSBT suggests that the CCSBT costs are extremely low compared to the value of the fishery and that the cost increase for the ESC's proposed 3 year research plan is well justified.

Proposed Workplan of the Extended Scientific Committee for 2015

Activity	Approximate Period	Resources or approximate budgetary implications ¹
Continuation of tag recovery efforts.	Tag recovery is continuous.	\$1,000 for tag rewards on the basis that few recaptures are expected to occur.
Provide SBT Stock Status report to the other tuna RFMOs.	Aug - Nov 14	No additional cost
Collation of information on unreported mortalities and categorising this information in accordance with OM "fleets"	Jan - Jun 15	Members
Proposed SRP activities for 2015 (<i>priorities for new CCSBT funded projects are shown in parentheses</i>): <ul style="list-style-type: none"> • Continued collection of close-kin samples (1) • Work on genotyping approaches to inform decisions on long-term approach (2) • Expert review workshop on long-term approach to genotyping • Design study for future gene-tagging studies (3) • Aging Indonesian otoliths² (4) • Scientific aerial survey 	Jan - Dec 15	<ul style="list-style-type: none"> • Close-kin: CCSBT (\$35,000) • Genotyping: CCSBT \$85,000 • Australia (CSIRO) • Design study: CCSBT (\$75,000) • Aging: CCSBT \$15,000 • Survey: CCSBT contribution up to \$800,000
Routine OMMP code Maintenance/Development	Jan-Jul 15	Australia / Consultant 5 days.
CPUE Webinar to review progress of the intersessional CPUE work.	Apr 15	Intersessional work by Japan, Australia, New Zealand, Taiwan, Korea and possibly Indonesia. Three panel days.
Develop requirements for MP review in 2017	Jan – Jul 15	Members
Standard Scientific Data Exchange.	Apr – Jul 15	No additional costs
Evaluation of possible changes in the OM structure	2 day technical W/S immediately prior to ESC (30-31 Aug)	Two panel members, 1 Secretariat staff
Extended Scientific Committee for the 21 st meeting of the Scientific Committee. The meeting will conduct its regular review of: fishery indicators; evaluation of MP meta-rules; specify requirements for the MP review in 2017; and review results of SRP activities.	5 day ESC 1-5 Sep (Incheon, Korea)	ESC Chair, full panel, full interpretation and 3 Secretariat staff.

¹ Where a Member is listed, it is assumed that the Member will cover any associated costs.

² If aging of these otoliths is deferred to 2016, it is assumed that \$30,000 would be spent in 2016 to age an additional year of otolith samples.

Three year workplan for projects to be funded by the CCSBT

(abbreviations: WS=Workshop, Sec=Secretariat Staff, Interp=Interpretation, Chair=ESC Chair, P=Independent Advisory Panel, IE=Invited Expert, P=Participants, Cat=Catering)

		Costs and/or resources required for projects to be funded by CCSBT		
		2015	2016	2017
1	ESC Meeting	5 days, Chair, full panel, full Interp, 3 Sec	6 days, Chair, full panel, full Interp, 3 Sec	6 days, Chair, full panel, full Interp, 3 Sec
2	OMMP Meeting		4 days, 3 Panel, OMMP consultant, Cat for 20 P, no Interp, No Sec	4 days, 3 Panel, OMMP consultant, Cat for 20 P, no Interp, no Sec
4	CPUE Webinar	3 Panel days	3 Panel days	3 Panel days
5	Routine OMMP Code Maintenance / Development	5 Consultant days	5 Consultant days	5 Consultant days
6	Evaluation of possible changes in the OM structure	2 day technical WS, immediately prior to ESC. 2 Panel, Cat for 20 P, no Interp, no Sec		
7	Continued close-kin sample collection ³	\$35,000	\$35,000	\$35,000
8	Scientific Aerial Survey ⁴	Up to \$800,000 ⁵	Up to \$800,000 ⁵	Up to \$800,000 ⁵
9	Aging Indonesian Otoliths ³	\$15,000 ⁶	\$15,000	\$15,000
10	Review of otolith sampling design & age estimation calibration		3 day WS in Bali ⁷ , 2 Interp (whispering), 1 IE ⁸ , Cat for 15 P, no Sec	
11	Design/feasibility study of gene tagging for providing absolute recruitment estimates ³	\$75,000		
12	Pilot gene tagging project for for providing absolute recruitment estimates ³		\$265,000	\$265,000
13	Preparatory work for expert review of which genotyping technique to use for further Close-Kin (see item 14): preliminary calculation of numbers of loci needed in different techniques; lab- and desk-based investigations of Dart genotyping results; preparation of report suitable for non-CCSBT ³	\$85,000		
15	Further locus development and validation (conditional on 13-14) ³		<\$230,000	
16	Process accumulated backlog of close-kin samples (4-6 years), then conduct annual processing for long-term time series. (conditional on 13-14) ³			\$250,000/year (~6 years to process backlog), then \$150,000/year for annual processing
17	Independent estimate of maturity schedule		3 day WS on maturity criteria in Bali ⁷ , Cat for 15 P, no Interp, no Sec + \$70,000 for otolith preparation & reading ³ + \$30,000 - 0.2 FTE for histology reading biologist ³	\$15,000 – 0.1 FTE for experienced statistician ³

³ This work would be conducted by CSIRO under contract to the CCSBT.

⁴ This work would be conducted by the Australian Department of Agriculture and its sub-contractors under contract to the CCSBT.

⁵ \$800,000 is the total cost for this survey. CCSBT is currently contributing \$100,000/year. Australia has paid the remaining amount but has requested full funding from CCSBT.

⁶ If aging of Indonesian otoliths is not funded in 2015, this will add an additional \$15,000 to this item for 2016.

⁷ Venue to be provided for free at Indonesia's Research Institute for Tuna Fisheries.

⁸ from Fish Ageing Services Pty Ltd, Australia.