REVISION OF THE PROGRAM OF WORK (2018–22) FOR THE IOTC SCIENCE PROCESS

PREPARED BY: IOTC SECRETARIAT, SC CHAIR AND WP CHAIRS, 15 NOVEMBER 2017

PURPOSE

To provide the Scientific Committee (SC) with a proposed Program of Work for each of its Working Parties (WP), including preliminary prioritisation of the elements requested by each WP. The aim is to develop an overall Program of Work Plan for 2018–22 which will deliver the information the Commission has requested to meet the objectives of the IOTC.

BACKGROUND

Scientific Committee

At the 19th Session of the SC:

(Para. 169) The SC NOTED paper IOTC–2016–SC19–09 which provided the Scientific Committee (SC) with a proposed Program of Work for each of its Working Parties (WP), including prioritisation of the elements requested by each WP.

(Para. 170) The SC **NOTED** the proposed Program of Work and priorities for the Scientific Committee and each of the Working Parties and **AGREED** to a consolidated Program of Work as outlined in Appendix XXXIVa-g. The Chairpersons and Vice-Chairpersons of each working party shall ensure that the efforts of their working party are 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. 172) The SC **AGREED** on the consolidated table of priorities across all Working Parties, as developed by each WP Chair, and **REQUESTED** that the IOTC Secretariat, in consultation with the Chair and vice-Chair of the SC and relevant Working Parties, develop ToRs for the specific projects to be carried out.

(Para. 174) The SC NOTED that the WPM has selected five species for MSE (albacore, yellowfin, bigeye, skipjack and swordfish). While these species are equally prioritised in terms of science, swordfish has been labelled as the first priority in Table 4 given that it is the only species currently lacking funding.

DISCUSSION

The SC is requested to consider the priorities set by the Commission, via Conservation and Management Measures, and consider and revise as necessary, its Program of Work to match those priorities.

The draft schedule of stock assessments for IOTC species and species of interest from 2018–2022, and for other working party priorities is provided in Appendix I. The highest three (3) priority projects by each Working Party are presented in Appendix II and all the priority projects agreed to by each WP meeting in 2017 are referred to in Appendix III.

RECOMMENDATION

That the Scientific Committee:

1) **NOTE** paper IOTC–2017–SC20–09, which encouraged the SC to further develop and refine its Program of Work for 2018–22, which is based on those of its Working Parties, to ensure it is aligned with the requests and directives from the Commission.

2) **ADOPT** a revised Program of Work for 2018–22.

APPENDICES

Appendix I: Draft: Schedule of stock assessments for IOTC species and species of interest from 2018–2022, and for other WP priorities.

Appendix II: IOTC Working Parties – references to the Program of Work appendices.

Appendix III: Top 3 priority list of projects for each IOTC Working Party.

APPENDIX I
DRAFT: SCHEDULE OF STOCK ASSESSMENTS FOR IOTC SPECIES AND SPECIES OF INTEREST FROM 2018–2022, AND FOR OTHER WORKING PARTY PRIORITIES

Working Party on Neritic Tunas					
Species	**2018**	**2019**	**2020**	**2021**	**2022**
Bullet tuna	Data-poor assessment	Indicators	Data-poor assessment	Indicators	Indicators
Frigate tuna	Data-poor assessment	Indicators	Data-poor assessment	Indicators	Indicators
Indo-Pacific king mackerel	Data-poor assessment *	Indicators	Data-poor assessment	**Full assessment***	Indicators
Kawakawa	**Full assessment***	Data-poor assessment	Indicators	**Full assessment***	Indicators
Longtail tuna	Indicators	**Full assessment***	Indicators	Indicators	**Full assessment***
Narrow-barred Spanish mackerel	Indicators	Data-poor assessment	**Full assessment***	Indicators	Data-poor assessment
Working Party on Billfish					
Species	**2018**	**2019**	**2020**	**2021**	**2022**
Black marlin	**Full assessment**		**Full assessment**		**Full assessment**
Blue marlin		**Full assessment**			**Full assessment**
Striped marlin	**Full assessment**			**Full assessment**	
Swordfish		Indicators	**Full assessment**		
Indo-Pacific sailfish		**Full assessment***		**Full assessment***	
Working Party on Tropical Tunas					
Species	**2018**	**2019**	**2020**	**2021**	**2022**
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
Working Party on Ecosystems and Bycatch					
Species	**2018**	**2019**	**2020**	**2021**	**2022**
Blue shark	Revisit ERA		Indicators	**Full assessment***	Indicators
Oceanic whitetip shark	Revisit ERA	Indicators	**Full assessment***	Revisit ERA	Indicators
Scalloped hammerhead shark	Revisit ERA		–	Revisit ERA	Indicators
Shortfin mako shark	Revisit ERA	Indicators–	**Full assessment*–**	Revisit ERA	_
Silky shark	Indicators; Revisit ERA	**Full assessment***	–	Indicators; Revisit ERA	**Full assessment***

Bigeye thresher shark	Revisit ERA	–	–	Revisit ERA	–
Pelagic thresher shark	Revisit ERA	–	–	Revisit ERA	–
Porbeagle shark	–	–	–	–	–
Marine turtles	Revisit ERA	–	Review of mitigation measures in Res. 12/04	Revisit ERA	–
Seabirds	–	ERA; Review of mitigation measures in Res. 12/06	–	-	Review of mitigation measures in Res. 12/06
Marine Mammals	Indicators; Results from Common Oceans Gillnets project	Report from the IWC	–	ERA	–
Ecosystem Based Fisheries Management (EBFM) approaches	Preliminary report cards	–	–	–	–

*Including data poor stock assessment methods; Note: the assessment schedule may be changed dependent on the annual review of fishery indicators, or SC and Commission requests.

Working Party on Temperate Tunas*					
Species	**2017**	**2018**	**2019**	**2020**	**2021**
Albacore	–	Data preparatory meeting	**Stock assessment**	–	Data preparatory meeting

* This Working Party did not meet in 2017.

APPENDIX III
REFERENCES TO THE INDIVIDUAL IOTC WORKING PARTY PROGRAMS OF WORK

Report number	Report title	Appendix number
IOTC–2017–WPNT07–R	Report of the 7th Session of the Working Party on Neritic Tunas	Appendix VI
IOTC–2017–WPB15–R	Report of the 15th Session of the Working Party on Billfish	Appendix XI
IOTC–2017–WPEB13–R	Report of the 13th Session of the Working Party on Ecosystems and Bycatch	Appendix XIX
IOTC–2017–WPM08–R	Report of the 8th Session of the Working Party on Methods	Appendix V
IOTC–2017–WPDCS13–R	Report of the 13th Session of the Working Party on Data collection and Statistics	Appendix V
IOTC–2017–WPTT19–R	Report of the 19th Session of the Working Party on Tropical Tunas	Appendix IX

APPENDIX II

TOP THREE PRIORITY PROJECTS FOR EACH IOTC WORKING PARTY

PR	WPTT (2016) Budget (potential source)		WPEB Budget (potential source)		WPN Budget (potential source)		WPTmT (2016) Budget (potential source)		WPB Budget (potential source)		WPDCS (2016) Budget (potential source)		WPM Budget (potential source)	
1	**5.** Develop standardised CPUE series for each tropical tuna for the Indian Ocean (PS and Joint LL)	US$ 30K	**1.2.1** Connectivity, movements, and habitat use, including identification of hotspots and investigate associated environmental conditions affecting the sharks distribution, making use of conventional and electronic tagging (PSAT).	Partially funded (153,000€ IOTC + 100.000€ EU/DCF	**1.** Collate and characterise operational level data for the main neritic tuna fisheries in the Indian Ocean to investigate their suitability to be used for developing standardised CPUE indices.	CPCs	**2.1.** Age and growth to construct catch at age and growth curves to use in the stock assessments.		**1.1** Genetic research to determine the connectivity of billfish throughout their distribution (including in adjacent Pacific and Atlantic waters as appropriate) and the effective population size.	1.3 m € (EU)	**1.**- Artisanal fisheries data collection	$?? (TBD)	**1.5.** SWO MSE	$?? (TBD)
2	**6.4.** Size frequency data of LL/PS and spatial assumptions including potential effects of limited tag mixing on stock assessment outcomes (analysis of tagging data)	US$ 30K	**2.1** Historical data mining for the key species and IOTC fleets (e.g. as artisanal gillnet and longline coastal fisheries) .		**2.** Develop standardised CPUE series for the main fisheries for longtail, kawakawa, Indo-Pacific King mackerel and Spanish mackerel in the Indian Ocean, with the aim of developing CPUE series for stock assessment purposes.	CPCs directly	**4.1.** Develop standardized CPUE series for each albacore fishery for the Indian Ocean, with the aim of developing a single CPUE series.		**1.2** Tagging research to determine connectivity, movement rates and mortality estimates of billfish.	US$ 100 K	**6.1.1** Support the adoption of the ROS e-Reporting and ROS national database tools by countries not having any existing observer data collection and management system in place 6.2 ROS Regional Database 6.2.1 Incorporate all historical observer data 6.2.2 Add import / export capabilities from	$?? (TBD) US$20K US$35K	**1.2.** Review and progress of SKJ MSE	$?? (TBD)

											proprietary data collection 6.2.2 Implement dissemination best-practices for all data	US$20K		
3	**2.** Ageing of YFT and BET to calculate age/length keys and catch at age for using in the stock assessments.	US$ 150K	**2.2** Implementation of the Pilot Project (Resolution 16/04) for the Regional Observer Scheme	Partly funded (EC)	**3.** Develop and compare multiple assessment approaches to determine stock status for longtail tuna, kawakawa and Spanish mackerel (SS3, ASPIC etc).	IOTC Regular budget	**1.1.** Genetic research to determine the connectivity of albacore throughout its distribution and the effective population size	1.3 m € (EU)	**6.2 S**tock assessment of billfish species in 2017 and 2018	US$ 16250	3. 5.1 Develop software libraries to simplify access to the new IOTC Remote data services by scientists 5.2 Identify and add descriptive metadata to main IOTC data sets	US$30K (IOC/IRD?)	**1.4.** YFT MSE	Funded to Dec 2018 (ABNJ/ CSIRO)

TABLE 1. Priority topics for obtaining the information necessary to develop stock status indicators for all Working Parties. Numbering (in bold) represents numbers of each specific WP workplan where further details can be found in the WP reports for 2017 (except WPTmT report from 2016).