

PROGRESS MADE ON THE RECOMMENDATIONS OF WPEB09

PREPARED BY: IOTC SECRETARIAT, 30 SEPTEMBER 2014

PURPOSE

To provide an update on the progress made in implementing the recommendations from the previous Working Party on Ecosystems and Bycatch (WPEB), which were endorsed by the Scientific Committee (SC), and to provide alternative recommendations for the consideration and potential endorsement by participants.

To provide participants at the 10th Session of the WPEB with an update on the progress made in implementing the recommendations from the previous WPEB meeting which were endorsed by the SC, and to provide alternative recommendations for the consideration and potential endorsement by participants as appropriate given any progress.

BACKGROUND

The Rules of Procedure of the Scientific Committee 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 and other interested parties, 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.

Process:

- 1) **WPEB** At the 9th Session of the WPEB, participants agreed on a series of actions to be taken by participants, CPCs, and the IOTC Secretariat on a range of issues;
- 2) SC The recommendations were considered by the SC in December 2013. At the SC16 meeting, the recommendations of the WPEB09 were either rejected or revised and then adopted as those of the SC;
- 3) **Commission** The refined recommendations were then passed to the Commission for its consideration and possible endorsement.

DISCUSSION

Noting the core tasks of the SC, and hence the WPEB, participants are reminded that any recommendations developed during a Session, must be carefully constructed so that each contains the following elements:

- 1) a specific action to be undertaken (deliverable);
- 2) clear responsibility for the action to be undertaken (i.e. a specific CPC of the IOTC, the IOTC Secretariat, another subsidiary body of the Commission or the Commission itself);
- 3) a desired time from for delivery of the action (i.e. by the next working party meeting, or other date).

The IOTC Secretariat has undertaken a review of the recommendations arising from the previous WPEB meeting and compared them against those endorsed by the SC Appendix A. Any subsequent actions taken



by the Commission at the most recent meeting have also been added to the Appendix. In cases where a recommendation is yet to be fulfilled, a proposal for consideration at the WPEB meeting has been provided.

RECOMMENDATION

That the WPEB:

- 1) **NOTE** paper IOTC–2014–WPEB10–06 which detailed the progress made in implementing the recommendations of the WPEB09, taking into consideration the recommendations from the SC and decisions of the Commission;
- 2) **AGREE** to consider and revise as necessary, the recommendations, and for these to be combined with any new recommendations arising from the WPEB10, noting that these will be provided to the SC for their endorsement.

APPENDICES

Appendix A: Progress made on the recommendations of WPEB09.



APPENDIX A

Progress made on the recommendations of WPEB09

WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
WPEB09.01 (para. 3)	Meeting participation fund NOTING that the IOTC Meeting Participation Fund (MPF), adopted by the Commission in 2010 (Resolution 10/05 On the establishment of a Meeting Participation Fund for developing IOTC Members and non-Contracting Cooperating Parties), was used to fund the participation of 11 national scientists to the WPEB09 meeting (7 in 2012), all of which were required to submit and present a working paper at the meeting, the WPEB RECOMMENDED that this fund be maintained into the future.	SC16.54 (para. 133)	Meeting participation fund NOTING that the IOTC Meeting Participation Fund (MPF), adopted by the Commission in 2010 (Resolution 10/05 On the establishment of a Meeting Participation Fund for developing IOTC Members and non-Contracting Cooperating Parties), was used to fund the participation of 58 national scientists to the Working Party meetings and SC in 2013 (42 in 2012), all of which were required to submit and present a working paper at the meeting, the SC strongly RECOMMENDED that this fund be maintained into the future. The MPF is currently funded through accumulated IOTC budgetary funds and voluntary contributions by CPCs. The Commission may need to develop and implement a procedure for supplying funds to the MPF in the future, as specified in Resolution 10/05.	S18 (para. 89, 90)	The Commission REQUESTED that the Secretariat seek voluntary contributions from Contracting Parties and other interested groups to supplement the MPF. The Commission AGREED that any cost savings made on the annual IOTC budget, shall also be used to further supplement the \$60,000 currently budgeted for the MPF. The priorities for the funds use shall be consistent with the 75:25 split between the science meetings (SC and its Working Parties) and nonscientific meetings of the Commission, in accordance with the Rules adopted by the Commission. Update: 9 Applications were received by the due date at the IOTC Secretariat. 5 were approved and 4 were rejected for budget reasons.
WPEB09.02 (para. 5)	NOTING that the Commission had directed the Secretariat (via Resolution 10/05) to ensure that the MPF be utilised, as a first priority, to support the participation of scientists from developing CPCs in scientific meetings of the IOTC, including Working Parties, rather than non-science meetings, the WPEB RECOMMENDED that the Secretariat strictly adhere to the directives of the Commission contained in Resolution 10/05, including paragraph 8 which states that 'The Fund will be allocated in such a way that no more than 25% of the expenditures of the Fund in one year is used to fund attendance to non-scientific meetings.' Thus, 75% of the annual MPF shall be allocated to facilitating the attendance of developing CPC scientists to the Scientific Committee and its Working Parties.	SC16.55 (para. 134)	NOTING that the Commission had directed the Secretariat (via Resolution 10/05) to ensure that the MPF be utilised, as a first priority, to support the participation of scientists from developing CPCs in scientific meetings of the IOTC, including Working Parties, rather than nonscience meetings, the SC RECOMMENDED that the Secretariat strictly adhere to the directives of the Commission contained in Resolution 10/05, including paragraph 8 which states that "The Fund will be allocated in such a way that no more than 25% of the expenditure of the Fund in one year is used to fund attendance to nonscientific meetings." Thus, 75% of the annual MPF shall be allocated to facilitating the attendance of developing CPC scientists to the Scientific Committee and its Working Parties.	S18 (para. 88)	NOTING that the Commission had directed the Secretariat to ensure that the MPF be utilised, as a first priority, to support the participation of scientists from developing Contracting Parties in scientific meetings of the IOTC, including Working Parties, rather than non-science meetings, the Commission REQUESTED that the Secretariat strictly adhere to the directives of the Commission contained in Rule XVI in the IOTC Rules of Procedure (2014)), including paragraph 5 which states that 'The Fund will be allocated in such a way that no more than 25% of the expenditures of the Fund in one year is used to fund attendance to non-scientific meetings.' Thus, 75% of the annual MPF shall be allocated to facilitating the attendance of developing Contracting Parties scientists to the Scientific Committee and its Working Parties. The Commission AGREED that the IOTC MPF exclude funding for Cooperating Non-Contracting Parties, as they currently do not contribute to the IOTC budget.



NOTING the rapidly increasing scientific workload at the IOTC Secretariat, including a wide range of additional duties on ecosystems and bycatch assigned to it by the SC and the Commission, and that the new Fishery Officer (Science) supporting the IOTC scientific activities has not been given a mandate by the Commission to work on ecosystems and bycatch matters, the WPEB strongly RECOMMENDED that the Commission approve the hiring of a Fishery Officer (Bycatch) to work on bycatch matters in support of the scientific process. WPEB09.04 (para.35) WPEB RECOMMENDED that the Compliance Committee and Commission consider how to address the lack of implementation of regional observer schemes by CPCs for their fleets and reporting to the IOTC Secretariat as per the provision of Resolution 11/04 on a Regional	I .					
NOTING the rapidly increasing scientific workload at the IOTC Secretariat, including a wide range of additional duties on ecosystems and bycatch assigned to it by the SC and the Commission, and that the new Fishery Officer (Science) supporting the IOTC scientific activities has not been given a mandate by the Commission to work on ecosystems and bycatch matters, the WPEB strongly RECOMMENDED that the Commission approve the hiring of a Fishery Officer (Bycatch) to work on bycatch matters in support of the scientific process. WPEB09.04 (para.35) WPEB RECOMMENDED that the Compliance Committee and Commission consider how to address the lack of implementation of regional observer schemes by CPCs for their fleets and reporting to the IOTC Secretariat as per the provision of Resolution 11/04 on a Regional				Recommendation adopted by the SC16		
NOTING the rapidly increasing scientific workload at the IOTC Secretariat, including a wide range of additional duties on ecosystems and bycatch assigned to it by the SC and the Commission, and that the new Fishery Officer (Science) supporting the IOTC scientific activities has not been given a mandate by the Commission approve the hiring of a Fishery Officer (Bycatch) to work on been given a matters in support of the scientific process. WPEB09.04 (para.35) WPEB RECOMMENDED that the Compliance Committee and Commission consider how to address the lack of implementation of regional observer schemes by CPCs for their fleets and reporting to the IOTC Secretariat as per the provision of Resolution 11/04 on a Regional	WPEB09.03	Employment of a Fisheries Officer	SC16.27	Employment of a Fisheries Officer (Bycatch)	_	Not considered by the Commission as it was not
(para.35) The WPEB RECOMMENDED that the Compliance Committee and Commission consider how to address the lack of implementation of regional observer schemes by CPCs for their fleets and reporting to the IOTC Secretariat as per the provision of Resolution 11/04 on a Regional	(para.12)	IOTC Secretariat, including a wide range of additional duties on ecosystems and bycatch assigned to it by the SC and the Commission, and that the new Fishery Officer (Science) supporting the IOTC scientific activities has not been given a mandate by the Commission to work on ecosystems and bycatch matters, the WPEB strongly RECOMMENDED that the Commission approve the hiring of a Fishery Officer (Bycatch) to work on bycatch	(<u>para. 56</u>)	IOTC Secretariat, including a wide range of additional duties on ecosystems and bycatch assigned to it by the SC and the Commission, and that the new Fishery Officer (Science) supporting the IOTC scientific activities has not been given a mandate by the Commission to work on ecosystems and bycatch matters, the SC RECOMMENDED that the Commission approve the hiring of a Fishery Officer (Bycatch) to work on bycatch		included in the budget proposed by the IOTC Secretariat to the Standing Committee on Administration and Finance (SCAF).
Committee and Commission consider how to address the lack of implementation of regional observer schemes by CPCs for their fleets and reporting to the IOTC Secretariat as per the provision of Resolution 11/04 on a Regional Committee and the Commission consider how to address the continued lack of compliance with the implementation of regional observer schemes by CPCs for their fleets and lack of reporting to the IOTC Secretariat as per the	WPEB09.04	Regional observer scheme	SC16.64	Implementation of the Regional Observer Scheme	N/A	Nil action taken by the CoC.
<u>VI</u> . Scheme, noting the update provided in <u>Appendix XXXII</u> .	(para.35)	Committee and Commission consider how to address the lack of implementation of regional observer schemes by CPCs for their fleets and reporting to the IOTC Secretariat as per the provision of Resolution 11/04 on a Regional Observer Scheme, noting the update provided in Appendix	(<u>para. 176</u>)	Committee and the Commission consider how to address the continued lack of compliance with the implementation of regional observer schemes by CPCs for their fleets and lack of reporting to the IOTC Secretariat as per the provision of Resolution 11/04 on a Regional Observer		
WPEB09.05 The WPEB RECOMMENDED that as a priority, the SC16.65 The SC RECOMMENDED that as a priority, the IOTC N/A The new Fishery Officer (Science) is spend.	WPEB09.05	The WPEB RECOMMENDED that as a priority, the	SC16.65	The SC RECOMMENDED that as a priority, the IOTC	N/A	The new Fishery Officer (Science) is spending
IOTC Secretariat should immediately commence work with CPCs that are yet to develop and implement a Regional Observer Scheme that would meet the requirements contained in Resolution 11/04, and provide an update at the next session of the WPEB. Secretariat should immediately commence work with CPCs that are yet to develop and implement a Regional Observer Scheme that would meet the requirements contained in Resolution 11/04, and provide an update at the next session of the WPEB.	(para.37)	with CPCs that are yet to develop and implement a Regional Observer Scheme that would meet the requirements contained in Resolution 11/04, and provide	(<u>para. 177</u>)	CPCs that are yet to develop and implement a Regional Observer Scheme that would meet the requirements contained in Resolution 11/04, and provide an update at		approximately 50% of her time working on the ROS.
WPEB09.06 Identification cards for shark, seabirds and marine SC16.59 Identification cards for shark, seabirds and marine Yes See below.	WPEB09.06	Identification cards for shark, seabirds and marine	SC16.59		Yes	See below.
turtles The WPEB EXPRESSED its thanks to the IOTC Secretariat and other experts involved in the development of the identification cards for marine turtles, seabirds and sharks and RECOMMENDED that the cards be translated into the following languages, in priority order: Farsi, Arabic, Spanish and Portuguese, and that the Commission allocate funds for this purpose. (para. 143) turtles The SC EXPRESSED its thanks to the IOTC Secretariat and other experts involved in the development of the identification cards for marine turtles, seabirds and sharks and RECOMMENDED that the cards be translated into the following languages, in priority order: Farsi, Arabic, Spanish, Portuguese and Indonesian, and that the Commission allocate funds for this purpose.	(para.38)	The WPEB EXPRESSED its thanks to the IOTC Secretariat and other experts involved in the development of the identification cards for marine turtles, seabirds and sharks and RECOMMENDED that the cards be translated into the following languages, in priority order: Farsi, Arabic, Spanish and Portuguese, and that the	(<u>para. 143</u>)	The SC EXPRESSED its thanks to the IOTC Secretariat and other experts involved in the development of the identification cards for marine turtles, seabirds and sharks and RECOMMENDED that the cards be translated into the following languages, in priority order: Farsi, Arabic, Spanish, Portuguese and Indonesian, and that the		
WPEB09.07 The WPEB RECOMMENDED that the Commission SC16.60 The SC RECOMMENDED that the Commission allocate Yes The SCAF and Commission endorsed the proposed	WPEB09.07	The WPEB RECOMMENDED that the Commission	SC16.60	The SC RECOMMENDED that the Commission allocate	Yes	
further sets of the shark, seabird and marine turtle sets of the shark, seabird and marine turtle identification IOTC budget.	(para.39)	further sets of the shark, seabird and marine turtle	(<u>para. 144</u>)	sets of the shark, seabird and marine turtle identification		_
TABLE 2. Estimated translation, production and printing TABLE 2. Estimated translation, production and printing						





WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	costs for 1000 sets of identification guides for marine turtles, seabirds and sharks.		costs for 1000 sets of identification guides for marine turtles, seabirds and sharks.		
	Description Unit Units Total price required		Description Unit Units Total price required		
	Translation (per language) \$1000 3 3,000		Translation (per language) \$1000 3 3,000		
	Typesetting \$1000 3 3,000		Typesetting \$1000 3 3,000		
	Marine turtles ID cards \$5 1000 5,000 Seabird ID cards \$7 1000 7,000		Marine turtles ID cards \$5 1000 5,000 Seabird ID cards \$7 1000 7,000		
	Seabird ID cards \$7 1000 7,000 Shark ID cards \$7 1000 7,000		Seabird ID cards \$7 1000 7,000 Shark ID cards \$7 1000 7,000		
	Total estimate (US\$) 24,000		Total estimate (US\$) 24,000		
WPEB09.08 (para.52)	Regional review of the current and historical data available for gillnet fleets operating in the Indian Ocean	SC16.1 (para. 38)	Regional review of the current and historical data available for gillnet fleets operating in the Indian Ocean	No	_
	The WPEB reiterated its previous RECOMMENDATION that the Commission considers allocating funds to support a regional review of the current and historical data available for gillnet fleets operating in the Indian Ocean. As an essential contribution to this review, scientists from all CPCs having gillnet fleets in the Indian Ocean, in particular those from I.R. Iran, Oman, Pakistan and Sri Lanka, should collate the known information on bycatch in their gillnet fisheries, including sharks, marine turtles and marine mammals, with estimates of the likely order of magnitude where more detailed data are not available. A consultant should be hired for 30 days to assist CPCs with this task (budget estimate: Table 3). TABLE 3. Estimated costs for the hiring of a consultant to undertake a regional review of gillnet fleets. Description Description Unit Units requir Total vinted ed to the cost of the price ed to the cost of the cost of the likely of the price of the likely of		The SC reiterated its previous RECOMMENDATION that the Commission considers allocating funds to support a regional review of the current and historical data available for gillnet fleets operating in the Indian Ocean. As an essential contribution to this review, scientists from all CPCs having gillnet fleets in the Indian Ocean, in particular those from I.R. Iran, Oman, Pakistan and Sri Lanka, should collate the known information on bycatch in their gillnet fisheries, including sharks, marine turtles and marine mammals, with estimates of the likely order of magnitude where more detailed data are not available. A consultant should be hired for 30 days to assist CPCs with this task (budget estimate: Table 3). TABLE 3. Estimated costs for the hiring of a consultant to undertake a regional review of gillnet fleets. Description Unit Units requir Total Contract days \$350 30 10,500 10,000 1		
WPEB09.09 (para.64)	Training for CPCs having gillnet fleets on species identification, bycatch mitigation and data collection methods and also to identify other potential sources of assistance – Development of plans of action	SC16.15 (para. 39)	Training for CPCs having gillnet fleets on species identification, bycatch mitigation and data collection methods and also to identify other potential sources of assistance – Development of plans of action	Yes	The Commission approved US\$19,000 for this project in 2014 under the IOTC budget.
	The WPEB RECOMMENDED that the Commission allocate funds in its 2014 and 2015 budgets for the IOTC Secretariat to carry out training for CPCs having gillnet		The SC RECOMMENDED that the Commission allocate funds in its 2014 and 2015 budgets for the IOTC		





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WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	fleets on bycatch mitigation methods, species identification, and data collection methods (budget estimate: Table 4). TABLE 4. Estimated costs for CPCs with large gillnet fleets on bycatch mitigation methods, species identification and data collection methods. Two training workshops: I.R. Iran/Oman and Sri Lanka.		Secretariat to facilitate training for CPCs having gillnet fleets on bycatch mitigation methods, species identification, and data collection methods (budget estimate: Table 4). TABLE 4. Estimated costs for CPCs with large gillnet fleets on bycatch mitigation methods, species identification and data collection methods. Two training workshops: I.R. Iran/Oman and Sri Lanka.		
	Description Unit Units Total price required		Description Unit Units Total		
	Production of training material \$1,000 1 1,000 Travel costs (IOTC Staff) \$1,000 2 12,000		Production of training material \$1,000 1 1,000		
	(I.R.Iran/Oman, Sri Lanka) 54,000 5 12,000 Travel costs (Experts)		Travel costs (IOTC Staff) \$4,000 3 12,000 (I.R.Iran/Oman, Sri Lanka)		
	(I.R.Iran/Oman, Sri Lanka) \$4,000 3 12,000 Workshop venue – to be paid by hosts \$0 2 \$0		Travel costs (Experts) \$4,000 3 12,000 (LR.Iran/Oman, Sri Lanka)		
	Total estimate (US\$) 25,000		Workshop venue – to be paid by hosts \$0 2 \$0		
			Total estimate (US\$) 25,000		
WPEB09.10	Sharks and rays	SC16.16	Sharks and rays	N/A	_
(para.68)	Review of new information on the status of sharks and rays	(<u>para. 40</u>)	Review of new information on the status of sharks and rays		
	NOTING that the information on retained catches and discards of sharks contained in the IOTC database remains very incomplete for most fleets despite their mandatory reporting status, and that catch-and-effort as well as size data are essential to assess the status of shark stocks, the WPEB RECOMMENDED that all CPCs collect and report catches of sharks (including historical data), catch-and-effort and length frequency data on sharks, as per IOTC Resolutions, so that more detailed analysis can be undertaken for the next WPEB meeting.		NOTING that the information on retained catches and discards of sharks contained in the IOTC database remains very incomplete for most fleets despite their mandatory reporting status, and that catch-and-effort as well as size data are essential to assess the status of shark stocks, the SC RECOMMENDED that all CPCs collect and report catches of sharks (including historical data), catch-and-effort and length frequency data on sharks, as per IOTC Resolutions, so that more detailed analysis can be undertaken for the next WPEB meeting.		
WPEB09.11 (para.69)	NOTING that there is extensive literature available on pelagic shark fisheries and interactions with fisheries targeting tuna and tuna-like species, in countries having fisheries for sharks, and in the databases of governmental or non-governmental organisations, the WPEB AGREED on the need for a major data mining exercise in order to compile data from as many sources as possible and attempt to rebuild historical catch series of the most commonly caught shark species. In this regard, the WPEB RECOMMENDED that the Commission allocates funds for this activity, in the 2014 and 2015 IOTC budgets	SC16.17 (<u>para. 41</u>)	NOTING that there is extensive literature available on pelagic shark fisheries and interactions with fisheries targeting tuna and tuna-like species, in countries having fisheries for sharks, and in the databases of governmental or non-governmental organisations, the SC AGREED on the need for a major data mining exercise in order to compile data from as many sources as possible and attempt to rebuild historical catch series of the most commonly caught shark species, in particular blue shark and oceanic whitetip shark. In this regard, the SC	Yes	The Commission approved US\$60,000 for this task in 2015 under the IOTC budget.



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WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	(budget estimate: Table 5). TABLE 5. Estimated costs for the hiring of a consultant to undertake a literature review of shark interactions. Description Unit price Units required Total		RECOMMENDED that the Commission allocates funds for this activity, in the 2014 and 2015 IOTC budgets (budget estimate: Table 5). TABLE 5. Estimated costs for the hiring of a consultant to undertake a literature review of shark interactions. Description Unit price Units required Total		
WPEB09.12 (para.117)	Review new information on the biology, stock structure, bycatch mitigation measures, fisheries and associated environmental data	SC16.62 (<u>para. 147</u>)	Fishing hook identification cards NOTING the continued confusion in the terminology of	Yes	The Commission approved US\$16,500 for this task in 2014 under the IOTC budget.
	Noting the continued confusion in the terminology of various hook types being used in IOTC fisheries, (e.g. tuna hook vs. J-hook; definition of a circle hook), the WPEB RECOMMENDED that the Commission allocate funds in the 2014 IOTC Budge to develop an identification guide for fishing hooks and pelagic fishing gears used in IOTC fisheries. The total estimated production and printing costs for the first 1000 sets of the identification cards is around a maximum of US\$16,500 (Table 6). The IOTC Secretariat shall seek funds from potential donors to print additional sets of the identification cards at US\$5,500 per 1000 sets of cards. TABLE 6. Estimated production and printing costs for 1000 sets of identification guide for fishing hooks and pelagic fishing gears used in IOTC fisheries. Description Unit Units Total		various hook types being used in IOTC fisheries, (e.g. tuna hook vs. J-hook; definition of a circle hook), the SC RECOMMENDED that the Commission allocate funds in the 2014-15 IOTC Budget to develop an identification guide for fishing hooks and pelagic fishing gears used in IOTC fisheries. The total estimated production and printing costs for the first 1000 sets of the identification cards is around a maximum of US\$16,500 (Table 16). The IOTC Secretariat shall seek funds from potential donors to print additional sets of the identification cards at US\$5,500 per 1000 sets of cards. TABLE 16. Estimated production and printing costs for 1000 sets of identification guide for fishing hooks and pelagic fishing gears used in IOTC fisheries. Description Unit Unit		Update: IOTC Secretariat considers this a lower priority and deferred the project.
WPEB09.13 (para.123)	Ecological Risk Assessment: review of current knowledge and potential management implications The WPEB RECOMMENDED that the Commission	SC16.19 (para. 43)	Ecological Risk Assessment: review of current knowledge and potential management implications	Yes	Noted. Yet to be incorporated into Res. 13//03
	note the list of the 10 most vulnerable shark species to		The SC RECOMMENDED that the Commission note the		





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WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	longline gear (Table 7) and purse seine gear (Table 8) in the Indian Ocean, as determined by a productivity susceptibility analysis, compared to the list of shark species/groups required to be recorded for each gear, contained in Resolution 13/03 on the recording of catch and effort by fishing vessels in the IOTC area of competence. At the next revision to Resolution 13/03, the Commission may wish to add the missing species/groups of sharks and rays.		list of the 10 most vulnerable shark species to longline gear (Table 7) and purse seine gear (Table 8) in the Indian Ocean, as determined by a productivity susceptibility analysis, compared to the list of shark species/groups required to be recorded for each gear, contained in Resolution 13/03 on the recording of catch and effort by fishing vessels in the IOTC area of competence. At the next revision to Resolution 13/03, the Commission may wish to add the missing species/groups of sharks and rays.		
		SC16.20 (para. 46)	The SC RECOMMENDED that, in line with Recommendation 12/15 on the best available science, the list of shark species (or groups of species) for longline gear under Resolution 13/03 (<u>Table 7</u>) should be supplemented with the silky shark (<i>Carcharhinus falciformis</i>), which was estimated to be at risk in longline fisheries by the ERA conducted in 2012 (ranked as the 4 th most vulnerable species to longline gear). The SC REQUESTED the Commission to define the most appropriate means of collecting this additional information.		
		SC16.21 (<u>para. 47</u>)	The SC RECOMMENDED that, in line with Recommendation 12/15 on the best available science, the list of shark species (or groups of species) for purse seine gear under Resolution 13/03 (Table 8) should be supplemented with the silky shark (Carcharinus falciformis), make sharks (Isurus spp.), hammerhead sharks (Sphyrna spp.), pelagic stingray (Pteroplatytrygon violacea), dusky shark (Carcharhinus obscurus), tiger shark (Galeocerdo cuvier), which were estimated to be at risk in purse seine fisheries by the ERA conducted in 2012. The SC ADVISED the Commission to define the most appropriate means of collecting this additional information.		
WPEB09.14 (para.138)	Review of data needs and way forward for the evaluation of shark stocks			Yes	Yet to be incorporated in Res. 10/02
	NOTING that Resolution 10/02 mandatory statistical requirements for IOTC Members and Cooperating Non-Contracting Parties (CPC's), makes provision for data to be reported to the IOTC on "the most commonly caught				





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WPEB09 Rec. No.		SC16	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
WPEB09.15 (para.141)	shark species and, where possible, to the less common shark species", without giving any list defining the most common and less common species, and recognising the general lack of shark data being recorded and reported to the IOTC Secretariat, the WPEB RECOMMENDED that Resolution 10/02 is revised in order to include the list of most commonly caught elasmobranch species (Table 10) for which nominal catch data shall be reported as part of the statistical requirement for IOTC CPCs. TABLE 10. List of the most commonly elasmobranch species caught. Common name	SC16.31 (para. 67)	Best practice guidelines for the safe release and handling of encircled whale sharks The SC RECOMMENDED the following Guidelines for the safe release and handling of encircled whale sharks,	at S18	consideration at WPEB10
	IOTC shark identification guides: • The methods listed below depend on the condition of the particular purse seine set, e.g. the size and orientation of the encircled animal, size of fish in the purse seine set and operation style. • Cutting the net when the whale shark is at the surface and separated from the tuna and when the operation presents no danger for the crew; • Standing the animal on the net and rolling it outside the bunt. A rope placed under the animal and attached to the float line could help rolling the whale shark out of the net;		that should be added as an additional page in the IOTC shark identification guides: The methods listed below depend on the condition of the particular purse seine set, e.g. the size and orientation of the encircled animal, size of fish in the purse seine set and operation style. • Cutting the net when the whale shark is at the surface and separated from the tuna and when the operation presents no danger for the crew; • Standing the animal on the net and rolling it outside the bunt. A rope placed under the animal and attached to the float line could help rolling the whale shark out of the net; • Brailing sharks (only for small individual less than 2–3 meters).		





					101C-2014-WPEB10-06
WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	 Brailing sharks (only for small individual less than 2–3 meters). The crew should never: Pull up the shark by its tail; Tow the shark by its tail. 	SC16.32 (para. 68)	The crew should never: • Pull up the shark by its tail; • Tow the shark by its tail. The SC RECOMMENDED that the Commission allocates funds in its 2014 budget, to produce and print the IOTC best practice guidelines for the safe release and handling of encircled whale sharks, and for these to be incorporated into the existing IOTC "Shark and ray identification in Indian Ocean pelagic fisheries", identification cards.		
WPEB09.16	Marine Turtles	-	NOTED	N/A	_
(para.148)	Review of data available at the Secretariat for marine turtles The WPEB RECOMMENDED that the SC note that the lack of data from CPCs on interactions and mortalities of marine turtles in the Indian Ocean is a substantial concern, resulting in an inability of the WPEB to estimate levels of marine turtle bycatch. There is an urgent need to quantify the effects of fisheries for tuna and tuna-like species in the Indian Ocean on marine turtle species, and it is clear that little progress on obtaining and reporting data on interactions with marine turtles has been made. This data is necessary to allow the IOTC to respond and manage the adverse effects on marine turtles, and other bycatch species.				
WPEB09.17 (para.166)	Ecological Risk Assessment: review of current knowledge and potential management implications The WPEB RECOMMENDED that the ERA for marine turtles be kept under review, and that consideration be given to updating it periodically in light of newly received data and other information.	-	Incorporated into the program of Work	N/A	_
WPEB09.18 (para.168)	Review of Resolution 12/04 on the conservation of marine turtles The WPEB RECOMMENDED that at the next revision of IOTC Resolution 12/04 on the conservation of marine turtles, the measure is strengthened to ensure that where possible, CPCs report annually on the total estimated level of incidental catches of marine turtles, by species, as	SC16.22 (para. 51)	The SC RECOMMENDED that at the next revision of IOTC Resolution 12/04 on the conservation of marine turtles, the measure is strengthened to ensure that where possible, CPCs report annually on the total estimated level of incidental catches of marine turtles, by species, as provided at Table 9. TABLE 9. Marine turtle species reported as caught in	Yes	Not yet incorporated into Res. 12/04



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WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	provided at <u>Table 12</u> .		fisheries within the IOTC area of competence.		
	TABLE 12. Marine turtle species reported as caught in fisheries within the IOTC area of competence.		Common name Scientific name		
	Common name Scientific name		Flatback turtle Natator depressus Green turtle Chelonia mydas		
	Flatback turtle Natator depressus		Hawksbill turtle Eretmochelys imbricata		
	Green turtle Chelonia mydas		Leatherback turtle Dermochelys coriacea		
	Hawksbill turtle Eretmochelys imbricata		Loggerhead turtle Caretta caretta		
	Leatherback turtle Dermochelys coriacea		Olive ridley turtle Lepidochelys olivacea		
	Loggerhead turtle Caretta caretta				
WPEB09.19	Resolution 10/02 Mandatory statistical [reporting] requirements for IOTC Members and Cooperating	_	Noted and included in other recommendations	N/A	_
(para.169)	Non-Contracting Parties (CPCs)				
	NOTING that Resolution 10/02 does not make provisions				
	for data to be reported to the IOTC on marine turtles, the WPEB RECOMMENDED that Resolution 10/02 is				
	revised in order to make the reporting requirements				
	coherent with those stated in Resolution 12/04 on the conservation of marine turtles and Resolution 13/03 on				
	On the recording of catch and effort by fishing vessels in				
	the IOTC area of competence.				
WPEB09.20	Requests contained in IOTC Conservation and	SC16.24	Requests contained in IOTC Conservation and	Yes	Noted.
(para.171)	Management Measures	(<u>para. 53</u>)	Management Measures		
	The WPEB RECALLED and updated its previous RECOMMENDATION that the SC note the following in		The SC RECOMMENDED that the Commission note the		
	regards to the requests to the WPEB outlined in paragraph		following in regards to the requests to the SC and WPEB outlined in paragraph 11 of Resolution 12/04:		
	11 of Resolution 12/04:		a) Develop recommendations on		
	a) Develop recommendations on appropriate mitigation measures for gillnet, longline		appropriate mitigation measures for		
	and purse seine fisheries in the IOTC area		gillnet, longline and purse seine fisheries in the IOTC area		
	Gillnet: The absence of data for marine turtles, fishing		Gillnet: The absence of data for marine turtles, fishing		
	effort, spatial deployment and bycatch in the IOTC area of competence makes any recommendation		effort, spatial deployment and bycatch in the IOTC area of competence makes it difficult to provide		
	regarding mitigation measures for this gear premature.		management advice for gillnets. However, possible		
	Improvements in data collection and reporting of		mitigation measures to avoid marine turtle mortality in		
	marine turtle interactions with gillnets, and research on		gillnets would be possible and, thus, the group		



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WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	the effect of gear types (i.e. net construction and		suggested that research in gillnet mitigation measures		
	colour, mesh size, soak times, light deterrents) are		(e.g. using lights on gillnets) will be considered as a		
	necessary.		research priority. Moreover, improvements in data		
	Longline: Current information suggests inconsistent		collection and reporting of marine turtle interactions		
	spatial catches (i.e. high catches in few sets) and by		with gillnets, and research on the effect of gear types		
	gear/fishery. The most important mitigation measures		(i.e. net construction and colour, mesh size, soak		
	relevant for longline fisheries are to:		times, light deterrents) are necessary.		
	1. Encourage the use of circle hooks, whilst		Longline: Current information suggests inconsistent		
	developing further research into their		spatial catches (i.e. high catches in few sets) and by		
	effectiveness using a multiple species approach.		gear/fishery. The most important mitigation measures		
	2. Release live animals after careful		relevant for longline fisheries are to:		
	dehooking/disentangling/line cutting (See		Encourage the use of circle hooks, whilst developing further research into their effectiveness		
	handling guidelines in the <i>Marine turtle</i>		using a multiple species approach.		
	identification cards for Indian Ocean fisheries).		2. Release live animals after careful		
	Purse seine: see c) below		dehooking/disentangling/line cutting (See handling		
			guidelines in the <i>Marine turtle identification cards</i>		
	b) Develop regional standards covering data collection, data exchange and training		for Indian Ocean fisheries).		
	1. The development of standards using the IOTC		Purse seine: see c) below		
	guidelines for the implementation of the Regional		b) Develop regional standards covering data		
	Observer Scheme should be undertaken, as it is		collection, data exchange and training		
	considered the best way to collect reliable data		1. The development of standards using the IOTC		
	related to marine turtle bycatch in the IOTC area		guidelines for the implementation of the Regional		
	of competence.		Observer Scheme should be undertaken, as it is		
	2. The Chair of the WPDCS to work with the		considered the best way to collect reliable data		
	IOSEA MoU Secretariat, which has already		related to marine turtle bycatch in the IOTC area		
	developed regional standards for data collection,		of competence.		
	and revise the observer data collection forms and		2. The Chair of the WPDCS to work with the IOSEA		
	observer reporting template as appropriate, as		MoU Secretariat, which has already developed		
	well are current recording and reporting		regional standards for data collection, and revise		
	requirements through IOTC Resolutions, to		the observer data collection forms and observer		
	ensure that the IOTC has the means to collect		reporting template as appropriate, as well are		
	quantitative and qualitative data on marine turtle		current recording and reporting requirements		
	bycatch.		through IOTC Resolutions, to ensure that the		
	3. Encourage CPCs to use IOSEA expertise and		IOTC has the means to collect quantitative and		
	facilities to train observers and crew to increase		qualitative data on marine turtle bycatch.		
	post-release survival rates of marine turtles.		3. Encourage CPCs to use IOSEA expertise and facilities to train observers and crew to increase		
	c) Develop improved FAD designs to reduce		post-release survival rates of marine turtles.		
	the incidence of entanglement of marine		c) Develop improved FAD designs to reduce		
	turtles, including the use of biodegradable		the incidence of entanglement of marine		
	materials				
	materials		turtles, including the use of		



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WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	All FAD-directed purse seine fisheries should rapidly change to only use ecological FADs¹ based on the principles outlined in Annex III of Resolution 13/08 Procedures on a fish aggregating devices (FADs) management plan, including more detailed specification of catch reporting from FAD sets, and the development of improved FAD designs to reduce the incidence of entanglement of non-target species.		biodegradable materials All FAD-directed purse seine fisheries should rapidly change to only use ecological FADs ² based on the principles outlined in Annex III of Resolution 13/08 Procedures on a fish aggregating devices (FADs) management plan, including more detailed specification of catch reporting from FAD sets, and the development of improved FAD designs to reduce the incidence of entanglement of non-target species.		
WPEB09.21	Marine mammals	SC16.25	Review of Resolution 00/02 On a survey of predation of	Yes	Revoked. Effective 8 October 2014.
(para.207)	Review of Resolution 00/02 On a survey of predation of longline caught fish NOTING that the requirements contained in Resolution 00/02 on a survey of predation of longline caught fish was completed by the WPEB and SC in past years, the WPEB RECOMMENDED that Resolution 00/02 be revoked by the Commission.	(<u>para. 54</u>)	longline caught fish NOTING that the requirements contained in Resolution 00/02 on a survey of predation of longline caught fish was completed by the WPEB and SC in past year's, the SC RECOMMENDED that Resolution 00/02 be revoked by the Commission.		
WPEB09.22	Development of technical advice for marine mammals	SC16.26	Development of technical advice for marine mammals	Yes	Not yet incorporated into Res. 13/03
(para.213)	The WPEB RECOMMENDED that depredation events be incorporated into Resolution 13/03 at its next revision, so that interactions may be quantified at a range of spatial scales. Depredation events should also be quantified by the regional observer scheme.	(<u>para. 55</u>)	The SC RECOMMENDED that depredation events be incorporated into Resolution 13/03 at its next revision, so that interactions may be quantified at a range of spatial scales. Depredation events should also be quantified by the regional observer scheme.		
WPEB09.23	Revision of the WPEB work plan	SC16.33	Shark Year (multi-year research) Program	Yes	The Commission budgeted US\$10,000 ofr this project.
(para.250)	The WPEB RECOMMENDED that a small working group of shark experts and the IOTC Secretariat further develop the draft Shark Year Program (SharkYP) and to present the proposal at the next SC meeting to be held in December 2013. The overall objective is to: "The Shark Year Program (SharkYP) represents a further step to align with the work of the WPEB with	(<u>para. 74</u>)	The SC ENDORSED the Indian Ocean Shark Year Program (multi-year research initiative) provided at Appendix I of paper IOTC–2013–SC16–18 and RECOMMENDED that a detailed multi-year shark research program be prepared (by a small group of shark experts and the IOTC Secretariat) covering the various aspects raised in paper IOTC–2013–SC16–18. The IOTC		Update: workshop held. See paper IOTC-2014-IO-ShYP01-R
	IOTC Conservation and Management Measures (CMMs), particularly to the recently adopted Resolution 13/06 on a scientific and management framework on the conservation of shark species caught		budget for 2014 should include funding support to allow the small group of shark experts and the IOTC Secretariat to attend a short ad-hoc meeting (<u>Table 10</u>).		

This terms means improved FAD designs to reduce the incidence of entanglement of bycatch species, using biodegradable material as much as possible. This terms means improved FAD designs to reduce the incidence of entanglement of bycatch species, using biodegradable material as much as possible.



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WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	in association with IOTC managed fisheries. Moreover, the SharkYP aims to provide guidance to WPEB researchers, by prioritising issues related to data collection and research on species biology/ecology, fisheries and mitigation measures. Finally, by promoting cooperation and coordination among WPEB researchers, the SharkYP aims to improve the quality of the scientific advice on sharks provided to the Commission, and to better assess the impact on these species of the current CMMs."				
WPEB09.24 (para.252)	The WPEB RECOMMENDED that the SC consider and endorse the workplan and assessment schedule for the WPEB for 2014, and tentatively for future years, as provided at <u>Appendix XIX</u> and <u>Appendix XX</u> , respectively.	SC16 (para. 193)	Revision of the WPB workplan 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. 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.	N/A	Update: To be discussed at WPEB10
WPEB09.25	Format of future WPEB Sessions	_	NOTED by the SC	N/A	_
(para.253)	The WPEB RECOMMENDED that the SC note the following:		-		
	 The WPEB DISCUSSED the future format in order to focus the efforts of scientists working on different groups of bycatch species to address more efficiently, the mandate of the group. The WPEB CONSIDERED a range of options which the SC is asked to consider: 				
	Option 1: The current WPEB be split into two; A dedicated Working Party on Sharks (WPS) and a Working Party on Ecosystems and Bycatch (WPEB).				
	Option 2: Retaining the WPEB in its current form, with alternating focus of sharks in one year, followed by other ecosystem and bycatch issues in the next year.				
	Option 3: Maintaining the WPEB with clear guidelines to deal with sharks every year, as well as other issues and bycatch groups in				





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WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10			
	alternate years or as required. The WPEB AGREED that shark issues were important to address on a yearly basis.							
WPEB09.26 (para.257)	Development of priorities for an Invited Expert/s at the next Working Party on Ecosystems and Bycatch meeting The WPEB RECOMMENDED that two Invited Experts be brought to the WPEB in 2014 so as to further increase the capacity of the WPEB to undertake work on sharks at the next meeting, and for this to be included in the IOTC budget for 2014.	SC16.28 (para. 60)	Invited Expert/s at the next Working Party on Ecosystems and Bycatch meeting The SC RECOMMENDED that two Invited Experts be brought to the WPEB in 2014 so as to further increase the capacity of the WPEB to undertake work on sharks at the next meeting, and for this to be included in the IOTC budget for 2014.	Yes	The Commission budgeted US\$23,500 for Invited Experts to attend WP meetings in 2014, including the costs for 2 experts to attend the WPEB. Update: 1 Invited Expert was funded by the IOTC Secretariat.			
WPEB09.27 (para.263)	Election of a Chairperson and Vice-Chairperson for the next biennium The WPEB RECOMMENDED that the SC note the new Chairperson, Dr. Rui Coelho (EU,Portugal) and Vice-Chairperson, Dr. Evgeny Romanov (La Réunion), of the WPEB for the next biennium.	SC16.73 (para. 210)	Election of a Chairperson and a Vice-Chairperson for the next biennium The SC RECOMMENDED that the Commission note the re-election of Dr Tom Nishida (Japan) as Chairperson, and Mr Jan Robinson (Seychelles) as Vice-Chairperson of the SC for the next biennium, as well as the Chairs and Vice-Chairs of each of the Working Parties as provided in Appendix VII.	Yes	N/A			
WPEB09.28 (para.265)	Report of the Ninth Session of the Working Party on Ecosystems and Bycatch The WPEB RECOMMENDED that the Scientific Committee consider the consolidated set of recommendations arising from WPEB09, provided at Appendix XXI, as well as the management advice provided in the draft resource stock status summary for each of the seven shark species, as well of those for marine turtles and seabirds: Sharks Blue sharks (Prionace glauca) – Appendix X Oceanic whitetip sharks (Carcharhinus longimanus) – Appendix XI Scalloped hammerhead sharks (Sphyrna lewini) – Appendix XII Shortfin mako sharks (Isurus oxyrinchus) – Appendix XIII Silky sharks (Carcharhinus falciformis) – Appendix XIV Bigeye thresher sharks (Alopias superciliosus) – Appendix XV		NOTED	N/A				





WPEB09 Rec. No.		SC16 Rec. No.	Recommendation adopted by the SC16	Endorsed at S18	Commission response / suggestions for consideration at WPEB10
	o Pelagic thresher sharks (Alopias pelagicus) -				
	Appendix XVI				
	Other species/groups				
	 Marine turtles – <u>Appendix XVII</u> 				
	○ Seabirds – <u>Appendix XVIII</u>				