OUTCOMES OF THE THIRTEENTH SESSION OF THE SCIENTIFIC COMMITTEE

PREPARED BY: IOTC SECRETARIAT, 14 JULY, 2011

PURPOSE

To inform the Working Party on Ecosystem and Bycatch (WPEB) of the recommendations arising from the Thirteenth Session of the Scientific Committee, held from 6–10 December 2010, specifically relating to the work of the WPEB.

BACKGROUND

At the 13th Session of the Scientific Committee (SC), the recommendations contained in Attachment A, that relate mainly to the data and research activities of the national scientists were endorsed by the SC. The SC considered the recommendations contained in Appendix A as priority items compared to the complete list of data and research activities recommended by the Working Party on Ecosystem and Bycatch at its meeting in October 2010. The SC also made a number of other general recommendations to the Commission, provided in Attachment B.

DISCUSSION

In addition to the recommendations outlined in Attachment A and B, participants at the WPEB are asked to note the lack of clarity in the way most of the recommendations from the SC are provided to the Commission. This lack of clarity often stems from the manner in which recommendations are developed and passed from the WPEB. As such, in making new recommendations in 2011 the WPEB is asked to carefully consider how best to empower the SC to make the most appropriate, scientifically based recommendations to the Commission.

The Scientific Committee also adopted revised Executive Summaries for sharks, seabirds and marine turtles, and these will be discussed under Agenda items 9, 10 and 11.

RECOMMENDATION

That the Working Party on Ecosystem and Bycatch **NOTE** the recommendations of the Thirteenth Session of the Scientific Committee on data and research, and consider how to progress these issues at the present meeting.

ATTACHMENTS

Attachment A: Summary of the Scientific Committee recommendations on data and research in 2010, relevant to the Working Party on Ecosystem and Bycatch.

Attachment B: Summary of general recommendation from the Scientific Committee to the Commission in 2010, relevant to the Working Party on Ecosystem and Bycatch.

ATTACHMENT A

Extract of the Report of the Thirteenth Session of the Scientific Committee

(IOTC-2010-SC13-R; SECT. 16.1, PAGES 41-42)

16. SUMMARY OF THE SC RECOMMENDATION IN 2010

16.1. RECOMMENDATIONS – ON DATA AND RESEARCH

278. The following recommendations relate mainly to data and research activities of WPs and national scientists. They should be considered as priority items compared to the complete list of data and research activities recommended by the WPs (Appendix IV).

3. Moreover, the SC noted that the bycatch reported in the national report [of China] was not reported to the Secretariat, and encouraged that this data is submitted timely. (paragraph 19)

6. The SC noted that Thailand does not collect data for bycatch species, recommending Thailand to make the necessary arrangements for this information to be collected and reported to the IOTC following the agreed standards. (paragraph 29)

12. The SC recommended that, in addition to the implementation of the Regional Observer Scheme, the collection of scientific data by all other means available including auto-sampling (collection of data by trained crew) and electronic monitoring (sensors and video cameras) be encouraged and developed as a mechanism to improve data collection on bycatch. (paragraph 50)

13. The SC encouraged CPC's to continue research on major pelagic species (*e.g.* blue sharks, silky sharks and oceanic whitetip sharks) and that the possibilities of using a wide range of research techniques (including tags of all types, genetics, stable isotopes), be explored to provide information required for shark assessments. (paragraph 70).

14. The SC recommended that work be carried out by the WPEB to collect and analyse data, and to conduct research, which could contribute towards and assessment of whale sharks, and in particular to determine if purse-seine setting on whale sharks is still not a problem in the Indian Ocean. The SC also recommended that the WPEB explore the potential for further work on manta rays (paragraph 76).

15. The SC recommended that further work to identify catch and catch rate trends and any other indicators of stock status of sharks be carried out and reviewed by the WPEB and that the Ecological Risk Assessment (ERA) undertaken last year on bycatch of sharks in the purse-seine and longline fisheries should be updated for next years' SC meeting, and as resources permit, expand the ERA to other gears. (paragraph 77).

16. The SC recommended that additional research be carried out in this regard [on negative impacts on catch rates of tuna and tuna-like species]. (paragraph 88)

17. The SC recommended that work on a Level 2 or possibly a Level 3 Risk Assessment be carried out to highlight areas of elevated risk to at risk seabird species, acknowledging that a Level 3 assessment would require the provision of additional funding to develop a quantitative model-based approach. (paragraph 94)

18. The SC recommended that CPCs conducting gillnet and driftnet fishing should collect information on seabird interactions and report to the WPEB in 2011. (paragraph 98).

19. The SC agreed with the recommendation by the WPEB to carry forward all recommendations from the 2009 WPEB report, that have yet to be completed (*i.e.* purse-seine fisheries to use ecological[1] FADs, longline vessel are equipped with the necessary tools to remove hooks from turtles to ensure safe release and minimize post-release mortality). (paragraph 101).

20. The SC recommended that more research is conducted on longline mitigation measures, and a review of information on interactions and mitigation measures is conducted. (paragraph 102).

21. The SC noted that whales and tunas sometimes associate. The SC recommended that the WPEB carry out an analysis of existing whale sightings data available from the purse-seine fishery, to better understand aspects of this

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

relationship. (paragraph 107).

22. The SC recommended that countries with tuna driftnet fisheries to study and report on cetacean bycatch (paragraph 108).

23. The SC recommended that more research and monitoring is conducted on the subject of depredation in the Indian Ocean (paragraph 110).

24. The SC encouraged further work on other fish species commonly caught as bycatch in the purse-seine fisheries, *i.e.* oceanic triggerfish, rainbow runners, dolphin fish to be carried out and reported to the WPEB (paragraph 111).

Table 1. Steps to improve the certainty of fisheries statistics for SHARKS

Data / information / work required	Fishery	Major fleets involved
Retained catches:		
Historical catch-and-effort information	Fresh-tuna and/or deep-freezing longliners	Taiwan,China, Indonesia, Japan, China, Seychelles, Malaysia, Oman, Philippines, South Korea and India.
	Longliners targeting swordfish	EU-Spain, Seychelles
	Artisanal fisheries with large catches of pelagic sharks	Sri Lanka, Pakistan, Iran, Indonesia, Yemen
Historical catch level estimates by species and year	Fresh-tuna and/or deep-freezing longliners	Taiwan,China, Indonesia, Japan, South Korea
	Purse seine	EC and the Seychelles (before 2003)
Logbook coverage set to produce acceptable levels of precision (CV to be initially set at less than 20%) in the catch-and-effort statistics for the main species of sharks.	All industrial fleets	
Research on identification of shark species from fins and processed body parts.	All fleets	
Discard levels:		
Implementing levels of observer coverage as requested by the Commission (*i.e.* 5% of the fishing events on Industrial fisheries and 5% of the fishing trips on artisanal fisheries).	All fleets	
Estimates of historical discard levels for sharks by species and year	All industrial fleets	
Size frequency data:		
Collecting and reporting size frequency information for the main shark species caught by their fisheries, including all historical data available	All industrial fleets, notably longline fleets	
Observers collecting size frequency data for main shark species, including discards	All industrial fleets	
Biological data:		
Collecting data that can be used to derive length-weight keys (where appropriate by season and sex), ratios of fin-to-body weight, non-standard measurements-fork length keys and processed weight-live weight keys.	All fleets	
Research required while fins are unloaded detached from carcasses:		
Identification of sharks through fins validated by using DNA techniques The use of shark fins to derive catch estimates in weight by species/species group and fishery. The use of shark fins to derive length frequencies by species.	All fleets	

Table 2. Steps to improve the certainty of statistics on incidental catches of SEABIRDS

Data / information / work required	Fishery	Major fleets involved
Provision of historical data on incidental catches of seabirds, by species and fishing area, indicating the type of mitigation measure/s used in each case.	Industrial longline fisheries All fisheries using gillnets on the high seas	Longline: Taiwan,China, Japan, Indonesia, Malaysia, Philippines, Spain, Portugal, Seychelles and South Korea Iran, Pakistan, Sri Lanka
Provision of data collected through observer programmes, as specified by the Commission.		
Detailed estimation of seabird bycatch, by species and year, including the precision of such estimates.		
Research on the effect of seabird bycatch mitigation measures.		

Table 3. Steps to improve the certainty of statistics on incidental catches of MARINE TURTLES

Data / information / work required	Fishery	Major fleets involved
Provision of data collected through observer programmes and estimates of total levels of bycatch of marine turtles, as specified by the Commission.	Countries having industrial longline fisheries	China, Taiwan,China, Indonesia and Japan
	Gillnet / gillnet-longline	Gillnet fisheries operating on the high seas (Pakistan and Iran) Gillnet fisheries operating in coastal waters (India, Indonesia, Oman and Yemen)

		Gillnet/longline fishery of Sri Lanka
	Industrial purse seine fleets	EU (before 2003), Seychelles, Iran, Japan and Thailand
Further research on interactions between Fish Aggregating Devices (FADs) and marine turtles, including mortality rates by species, area and type of FAD used	Industrial purse seine fleets	EU, Seychelles, Iran, Japan, Thailand
Further research on marine turtle bycatch mitigation measures for longline fisheries, *e.g.* examination of setting techniques and hook types.	Countries having industrial longline fisheries	Taiwan,China, Indonesia and Japan
Initiate research on marine turtle bycatch monitoring and mitigation measures for gillnet fisheries	Gillnet fisheries on the high seas Coastal gillnet fisheries	Iran, Pakistan and Sri Lanka India, Indonesia, Oman and Yemen

Table 4. Steps to improve the certainty of statistics on incidental catches of MARINE MAMMALS

Data / information / work required	**Fishery**	**Major fleets involved**
Provision of historical data on incidental catches of marine mammals, by species and fishing area.	Industrial longline fisheries	Longline: Taiwan,China, Japan, Indonesia, Malaysia, Philippines, Spain, Portugal, Seychelles and South Korea
Provision of data collected through observer programmes, as specified by the Commission.	Gillnet fisheries on the high seas	Iran, Pakistan, Sri Lanka

ATTACHMENT B

Extract of the Report of the Thirteenth Session of the Scientific Committee

(IOTC-2010-SC13-R; SECT. 16.1, PAGES 44-46)

16.2. RECOMMENDATIONS TO THE COMMISSION – GENERAL

ON BYCATCH DATA

3. The SC urged all CPCs to comply with data collection and reporting requirements as outlined in the relevant Resolutions relating to ecosystems and bycatch. The SC stressed that this recommendation is made by the WPEB and endorsed the SC every year since 2006 and, therefore, asked the Commission to consider appropriate mechanisms to encourage members to comply with reporting requirements, and to provide historical data. (paragraph 48)

4. The SC recommended that the actions described in Table 1, Table 2, Table 3 and Table 4 on sharks, seabirds, marine turtles and marine mammals respectively, be taken by CPCs to improve the standing of the data on non-tuna species held by the Secretariat. (paragraph 49)

ON SHARKS

5. The SC recalled its previous advice that the fins to body ratio requirement has no clear scientific basis as a conservation measure for sharks in the Indian Ocean, rather it appears to be aimed at slowing down the rate of fishing or to deter finning. (paragraph 55)

6. Consensus was not reached as to replace the current 5% fin to body ratio rule by the landing of sharks with fins naturally attached. The majority of the SC members agreed that the best way to reduce or avoid the practice of shark finning, ensure accurate catch statistics, and facilitate the collection of biological information is to ensure that all sharks are landed with fins naturally attached to the trunk. (paragraph 57)

7. The SC encouraged IOTC to take the lead in introducing innovative measures for discussion at this joint TRFMO technical working group. (paragraph 59)

8. Although the SC could not reach consensus on a single approach, the SC proposed three options to be envisaged by the Commission to progress on this issue (paragraph 65).

Option 1: The list of shark species contained in Resolution 08/04, requiring mandatory reporting in longline logbooks, be revised to include eight additional species and species groups as follows:

Under Resolution 08/04	**Under new proposal**	
	Common name	Scientific name
Blue shark	Blue shark	*Prionace glauca*
Mako shark	Mako sharks	*Isurus* spp.
Porbeagle	Porbeagle	*Lamna nasus*
	Great white shark	*Carcharodon carcharias*
	Crocodile shark	*Pseudocarcharias kamoharai*
	Thresher sharks[2]	*Alopias* spp.
	Tiger shark	*Galeocerdo cuvier*
	Oceanic whitetip shark	*Carcharhinus longimanus*
	Other Requiem sharks	*Carcharhinus* spp.
	Hammerhead Sharks	*Sphyrna* spp.
Other sharks	Other sharks	
	Pelagic stingray	*Pteroplatytrygon violacea*

Option 2: A second list of shark species to be included in Resolution 08/04 as a separate section requesting CPCs to report on these additional species/groups on a voluntary basis until CPCs have the capacity to better train crew to identify these shark species/groups. This option would not require changing the current logbook:

Under Resolution 08/04	**Under new proposal**	
No list to be recorded on a voluntary basis in the current Resolution	Common name	Scientific name
	Great white shark	*Carcharodon carcharias*
	Crocodile shark	*Pseudocarcharias kamoharai*

[2] As per IOTC Resolution 2010/12, catch of Thresher sharks have to be reported but not kept (*i.e.* released if alive of discarded if dead)

	Thresher sharks[Error! Bookmark not defined.]	*Alopias* spp.
	Tiger shark	*Galeocerdo cuvier*
	Oceanic whitetip shark	*Carcharhinus longimanus*
	Other Requiem sharks	*Carcharhinus* spp.
	Hammerhead Sharks	*Sphyrna* spp.
	Pelagic stingray	*Pteroplatytrygon violacea*

Option 3: The list of shark species contained in Resolution 08/04, requiring mandatory reporting in longline logbooks, to be revised to include eight additional species and species groups, as in option 1, EXCEPT for CPCs having a sufficient observer coverage that would be absolve of reporting on this new extended list.

9. The SC noted requests made by several coastal states for technical support in obtaining training materials to improve shark identification, and recommended that the identification cards under current development by the Secretariat are finalized and circulated in 2011. (paragraph 67)

10. The SC recommended that shark assessment experts be identified by the Secretariat for participation at the next WPEB and for consideration to be given to funding their attendance. (paragraph 69)

11. The SC recommended that the remaining CPCs provide updates on the progress of developing or implementing NPOA-sharks at the WPEB in 2011. (paragraph 72).

12. The SC recommended that the IOTC should continue to collaborate with the CMS MoU on sharks (paragraph 75).

ON SEABIRDS

13. The SC, with the exception of Japan, China and Korea, agreed that in the absence of any scientific information on the effectiveness of line shooters in reducing incidental mortality of seabirds, line shooters should be removed from the list of accepted seabird bycatch mitigation measures in Table 1 of Resolution 10/06 on reducing the incidental bycatch of seabirds in longline fisheries. (paragraph 84)

14. The SC agreed that a revisited line weighting regime should be pushed forward as an efficient mitigation measure but recommended that more experiments are conducted in order to assess the impact on target species. (paragraph 89)

15. The SC, with the exception of Japan, Korea and China, recommended that in the absence of any scientific observation on the effectiveness of offal discharge management in reducing the incidental mortality of seabirds, that it could be removed from the list of mitigation measures in Table 1 of the Resolution 10/06. (paragraph 91)

16. From the above (paragr.84, 87 and 91), the SC will recommend a major revision of the current Resolution 10/06 on reducing the incidental bycatch of seabirds in longline fisheries once line weighting options are assessed. (paragraph 92).

17. The SC urged the Secretariat to complete the seabird identification card project for the consideration of the WPEB in 2011 (paragraph 95).

18. The SC encouraged the CPCs to develop systems, such as retention of carcasses for later identification, or establish photo identification processes, to improve identification of seabirds to species level, and recommended for this to be reflected in paragraph 7 of Resolution 10/06. (paragraph 97).

19. The SC noted that 4 CPCs have developed and implemented NPOA-seabirds and that 1 is in the process of finalizing its NPOA-seabird. (paragraph 100).

ON MARINE TURTLES

20. The SC recommended that the IOTC Secretariat, its CPCs and IOSEA, increase cooperation, in particular with regard to reviewing and exchanging available information on tuna fisheries-marine turtle interactions and mitigation, and that the Secretariat should attend the International Symposium on 'Circle Hooks in Research, Management and Conservation' to be held in Miami, USA from 4-6 May 2011, and to report to be to the WPEB in 2011 (paragraph 103).

21. The SC recommended that distant water fishing nations should join the IOSEA MoU, which had initially been directed toward Indian Ocean coastal countries. (paragraph 104).

22. The SC recommended that the marine turtle identification sheets be finalized by the Secretariat before the next Session of the WPEB, in cooperation with other relevant organizations. (paragraph 105).

23. The SC recommended that more marine turtle experts should participate at the next Session of the WPEB (paragraph 106).

24. The SC recommended that marine mammal experts, for example from NGOs and IGOs with an interest in the Indian Ocean such as International Whaling Commission, to be encouraged to participate in future meetings of the WPEB (paragraph 109).