

## REVIEW OF CURRENT CONSERVATION AND MANAGEMENT MEASURES RELATING TO ECOSYSTEMS AND BYCATCH

PREPARED BY: IOTC SECRETARIAT, 16 AUGUST 2012

### PURPOSE

To encourage the Working Party on Ecosystems and Bycatch (WPEB) to review the existing Conservation and Management Measures (CMM) relating to ecosystems and bycatch (Resolutions 05/05, 10/02, 11/04 and Recommendation 10/03) noting the CMMs contained in document IOTC–2012–WPEB08–04; and as necessary to 1) provide recommendations to the Scientific Committee on whether modifications may be required; and 2) recommend whether other CMMs may be required.

### BACKGROUND

In addition to the CMMs outlined in document IOTC–2012–WPEB08–04, ecosystems and bycatch in the Indian Ocean are currently subject to six other CMMs adopted by the Commission:

#### Sharks:

**Resolution 05/05:** *Concerning the conservation of sharks caught in association with fisheries managed by IOTC.* This resolution includes minimum reporting requirements for sharks, calls for full utilisation of sharks and includes a ratio of fin-to-body weight for shark fins retained onboard a vessel ([Appendix A](#)).

#### Seabirds:

**Recommendation 05/09:** *On incidental mortality of seabirds* – While not superseded, this Recommendation is considered obsolete (not provided as will be superseded by Resolution 12/06 on July 1<sup>st</sup>, 2014).

**Resolution 10/06:** *On reducing the incidental bycatch of seabirds in longline fisheries.* This Resolution introduced amendments to Resolution 08/03 *On reducing the incidental bycatch of seabirds in longline fisheries* in changing the limit of the area in which longline vessels have to implement mitigation measures from 30°S to 25°S to better encompass the area of overlap between the distribution area of endangered species of seabirds and the longline fishing grounds. The resolution includes a range of methods should be used in combination to achieve a reduction in seabird bycatch (not provided as will be superseded by Resolution 12/06 on July 1<sup>st</sup>, 2014).

#### Data:

**Resolution 10/02:** *Mandatory statistical requirements for IOTC Members and Cooperating non-Contracting Parties (CPC's).* This resolution sets out mandatory minimum requirements for the annual submission of fisheries statistics to the IOTC Secretariat. This resolution applies to all tuna and tuna-like species, including all billfish species ([Appendix B](#)).

#### Other:

**Resolution 11/04:** *On a regional observer scheme.* This resolution puts in place a programme comprising national observer schemes to collect verified catch data and other scientific data related to the fisheries for tuna and tuna-like species in the IOTC area. The programme initially covers 5% of the operations of the vessels over 24 m and will include, progressively up to 5% of their operations in 2013, vessel under 24 m that fish outside their EEZs. Artisanal fishing landings shall also be progressively monitored at port by observers. Australia noted that a significant number of vessels less than 24 m long fish on the high seas in the IOTC Area, and the exclusion of these vessels at the start of the programme will result in a considerable loss of valuable information ([Appendix C](#)).

**Recommendation 10/13:** *On the implementation of a ban on discards of skipjack tuna, yellowfin tuna, bigeye tuna, and non targeted species caught by purse seiners.* This Recommendation requests that all CPCs

encourage retention onboard the purse-seiners and landing of all skipjack, bigeye and yellowfin tuna as well as of all non-targeted species. Although this proposal was originally intended to become a binding resolution, there was no consensus among Members to do so ([Appendix D](#)).

## **DISCUSSION**

As part of best practice, the WPEB is obliged to review existing CMMs and consider whether their science-based components need to be revised. If this is the case, then the WPEB should provide clear, science-based recommendations for the Scientific Committee's consideration.

## **RECOMMENDATION**

That the WPEB **NOTE** paper IOTC–2012–WPEB08–05 which aimed to encourage the WPEB to review the existing Conservation and Management Measures (CMMs) relating to the WPEB, and as necessary to 1) provide recommendations to the Scientific Committee on whether modifications may be required; and 2) recommend whether other CMMs may be required.

## **APPENDICES**

- Appendix A:** [Resolution 05/05: Concerning the conservation of sharks caught in association with fisheries managed by IOTC](#)
- Appendix B:** [Resolution 10/02 mandatory statistical requirements for IOTC Members and Cooperating non-Contracting Parties \(CPC's\)](#)
- Appendix C:** [Resolution 11/04: On a regional observer scheme](#)
- Appendix D:** [Recommendation 10/13: On the implementation of a ban on discards of skipjack tuna, yellowfin tuna, bigeye tuna, and non targeted species caught by purse seiners](#)

## APPENDIX A

**RESOLUTION 05/05**  
**CONCERNING THE CONSERVATION OF SHARKS CAUGHT IN ASSOCIATION WITH FISHERIES**  
**MANAGED BY IOTC**

**The Indian Ocean Tuna Commission (IOTC),**

RECALLING that the United Nations Food and Agriculture Organisation (FAO) International Plan of Action of Sharks calls on States, within the framework of their respective competencies and consistent with international law, to cooperate through regional fisheries organisations with a view to ensuring the sustainability of shark stocks as well as to adopt a National Plan of Action for the conservation and management of sharks (defined as elasmobranchs);

CONSIDERING that many sharks are part of pelagic ecosystems in the IOTC area, and that tunas and tuna-like species are captured in fisheries targeting sharks;

RECOGNISING the need to collect data on catch, effort, discards and trade, as well as information on the biological parameters of many species, in order to conserve and manage sharks;

ADOPTS, in accordance with paragraph 1 of Article IX of the IOTC Agreement that:

1. Contracting Parties, Cooperating non-Contracting Parties (CPCs) shall annually report data for catches of sharks, in accordance with IOTC data reporting procedures, including available historical data.
2. In 2006 the Scientific Committee (in collaboration with the Working Party on Bycatch) provide preliminary advice on the stock status of key shark species and propose a research plan and timeline for a comprehensive assessment of these stocks.
3. CPCs shall take the necessary measures to require that their fishermen fully utilise their entire catches of sharks. Full utilisation is defined as retention by the fishing vessel of all parts of the shark excepting head, guts and skins, to the point of first landing.
4. CPCs shall require their vessels to not have onboard fins that total more than 5 % of the weight of sharks onboard, up to the first point of landing. CPCs that currently do not require fins and carcasses to be offloaded together at the point of first landing shall take the necessary measures to ensure compliance with the 5 % ratio through certification, monitoring by an observer, or other appropriate measures.
5. The ratio of fin-to-body weight of sharks described in paragraph 4 shall be reviewed by the scientific committee and reported back to the Commission in 2006 for revision, if necessary.
6. Fishing vessels are prohibited from retaining on board, transshipping or landing any fins harvested in contravention of this Resolution.
7. In fisheries that are not directed at sharks, CPCs shall encourage the release of live sharks, especially juveniles and pregnant sharks, to the extent possible, that are caught incidentally and are not used for food and/or subsistence.
8. CPCs shall, where possible, undertake research to identify ways to make fishing gears more selective (such as the implications of avoiding the use of wire traces).
9. CPCs shall, where possible, conduct research to identify shark nursery areas.
10. The Commission shall consider appropriate assistance to developing CPCs for the collection of data on their shark catches.
11. This resolution applies only to sharks caught in association with fisheries managed by the IOTC.
12. This provision to apply without prejudice to many artisanal fisheries which traditionally do not discard carcasses.

## APPENDIX B

## RESOLUTION 10/02

## MANDATORY STATISTICAL REQUIREMENTS FOR IOTC MEMBERS AND COOPERATING NON-CONTRACTING PARTIES (CPC'S)

**The Indian Ocean Tuna Commission (IOTC)**

GIVEN that the Agreement for the implementation of the Provisions of the United Nations Convention on the Law of the Sea relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (UNFSA) encourages coastal States and fishing States on the high seas to collect and share, in a timely manner, complete and accurate data concerning fishing activities on, inter alia, vessel position, catch of target and non-target species and fishing effort.

NOTING that the United Nations Food and Agricultural Organisation (FAO) Code of Conduct for Responsible Fishing provides that States should compile fishery-related and other supporting scientific data relating to fish stocks covered by subregional or regional fisheries management organizations and provide them in a timely manner to the organization.

RECALLING the commitment made by members under Article V of the IOTC Agreement to keep under review the conditions and trends of the stocks and to gather, analyse and disseminate scientific information, catch and effort statistics and other data relevant to the conservation and management of the stocks and to fisheries based on the stocks covered by the Agreement.

COGNISANT that the above commitment can only be achieved when members meet the requirements of Article XI of the IOTC Agreement i.e. to provide statistical and other data and information to minimum specifications and in a timely manner.

ACKNOWLEDGING that the IOTC Scientific Committee has repeatedly stressed the importance of the timeliness of data submissions.

GIVEN that the activities of supply vessels and the use of Fish Aggregating Devices (FAD) are an integral part of the fishing effort exerted by the purse seine fleet.

CONSIDERING the provisions set forth in *Resolution 08/01 on mandatory statistical requirements for IOTC Members and Cooperating non-Contracting parties (CPCs)*, adopted by the Commission in 2008;

CONSIDERING the deliberations of the 12<sup>th</sup> Session of the IOTC Scientific Committee held in Victoria, Seychelles from 30 November to 4 December 2009

ADOPTS, in accordance with the provisions of Article IX, paragraph 1 of the IOTC Agreement, the following:

1. CPC's shall provide the following information to the IOTC Secretariat according to the timelines specified in paragraph 6:
2. **Nominal catch data:**  
Estimates of the total annual catch by species and gear for all species under the IOTC mandate.
3. **Catch and effort data:**
  - a) **For surface fisheries:** catch weight by species and fishing effort shall be provided by 1° grid area and month strata. Purse seine fishery data shall be stratified by fishing mode (e.g. free swimming schools or schools in association with floating objects). The data shall be extrapolated to the total national monthly catches for each gear. Documents describing the extrapolation procedures (including raising factors corresponding to the logbook coverage) shall also be submitted routinely.
  - b) **Longline fisheries:** catch by species, in numbers or weight, and effort as the number of hooks deployed shall be provided by 5° grid area and month strata. Documents describing the extrapolation procedures

(including raising factors corresponding to the logbook coverage) shall also be submitted routinely. For the work of relevant working parties under the IOTC Scientific Committee, longline data should be of a resolution of 1° grid area and month or finer. These data would be for the exclusive use of IOTC scientists, subject to the approval of the data owners and IOTC Resolution 98/02 *Data confidentiality policy and procedures*, and should be provided for scientific use in a timely fashion.

- c) **For coastal fisheries:** available catch by species, fishing gear and fishing effort shall be submitted frequently and may be provided using an alternative geographical area if it better represents the fishery concerned.

These provisions, applicable to tuna and tuna-like species, shall also be applicable to the most commonly caught shark species and, where possible, to the less common shark species. CPC's are also encouraged to record and provide data on species other than sharks and tunas taken as bycatch.

#### 4. **Size data:**

Size data shall be provided for all gears and for all species covered by the IOTC mandate according to the guidelines set out by the IOTC Scientific Committee. Size sampling shall be run under strict and well described random sampling schemes which are necessary to provide unbiased figures of the sizes taken. Sampling coverage shall be set to at least one fish measured by ton caught, by species and type of fishery, with samples being representative of all the periods and areas fished. Alternatively, size data for longline fleets may be provided as part of the Regional Observer Scheme where such fleets have at least 5% observer coverage of all fishing operations. Length data by species, including the total number of fish measured, shall be submitted by a 5° grid area by month, by gear and fishing mode (e.g. free swimming schools or schools in association with floating objects for the purse seiners). Documents covering sampling and raising procedures shall also be provided, by species and type of fishery.

5. Given that the activities of supply vessels and the use of **Fish Aggregating Devices** (FAD) are an integral part of the fishing effort exerted by the purse seine fleet, the following data shall be provided:

- a) The number and characteristics of supply vessels: (i) operating under their flag, (ii) assisting purse seine vessels operating under their flag, or (iii) licensed to operate in their exclusive economic zones, and that have been present in the IOTC Area.
- b) Number of days at sea by supply vessels by 1° grid area and month to be reported by the flag state of the supply vessel.
- c) The total number and type of FADs set by the supply vessel and purse seine fleet per quarter. Types of FADs are defined as 1) drifting log or debris, 2) drifting raft or fad with a net, 3) drifting raft or fad without a net, 4) other (e.g. Payao, dead animal etc). All types monitored by a tracking system.

These data would be for the exclusive use of IOTC scientists, subject to the approval of the data owners and Resolution 98/02 *Data confidentiality policy and procedures*, and should be provided in a timely fashion.

#### 6. **Timeliness of data submission to the IOTC Secretariat:**

- a) Longline fleets operating in the high seas shall provide provisional data for the previous year no later than 30 June. Final data shall be submitted no later than 30 December.
- b) All other fleets (including supply vessels) shall submit their final data for the previous year no later than 30 June.
- c) In case where the final statistics cannot be submitted by that date, at least preliminary statistics should be provided. Beyond a delay of two years, all revisions of historical data should be formally reported and duly justified. These reports should be made on forms provided by the Secretariat and reviewed by the Scientific Committee. The Scientific Committee will advise the Secretariat if revisions are then accepted for scientific use.

7. This Resolution supersedes Resolution 08/01 on *Mandatory statistical requirements for IOTC Members and Cooperating non-Contracting parties (CPCs)*.

## APPENDIX C

RESOLUTION 11/04  
ON A REGIONAL OBSERVER SCHEME**The Indian Ocean Tuna Commission (IOTC),**

TAKING INTO ACCOUNT the need to increase the scientific information, in particular to provide the IOTC Scientific Committee working material in order to improve the management of the tuna and tuna-like species fished in the Indian Ocean;

REITERATING the responsibilities of flag States to ensure that their vessels conduct their fishing activities in a responsible manner, fully respecting IOTC conservation and management measures;

CONSIDERING the need for action to ensure the effectiveness of the IOTC objectives;

CONSIDERING the obligation of all IOTC Members and Co-operating Non-contracting Parties (hereinafter CPCs) to fully comply with the IOTC conservation and management measures;

AWARE of the necessity for sustained efforts by CPCs to ensure the enforcement of IOTC's conservation and management measures, and the need to encourage non-Contracting Parties (NCPs) to abide by these measures;

UNDERLINING that the adoption of this measure is intended to help support the implementation of conservation and management measures as well as scientific research for tuna and tuna-like species;

CONSIDERING the provisions set forth in Resolution 10/04 *On A Regional Observer Scheme*, adopted by the Commission;

CONSIDERING the deliberations of the 12<sup>th</sup> Session of the IOTC Scientific Committee held in Victoria, Seychelles from 30 November to 4 December 2009

ADOPTS, in accordance with the provisions of Article IX, paragraph 1 of the IOTC Agreement, the following:

**Objective**

1. The objective of the IOTC observer scheme shall be to collect verified catch data and other scientific data related to the fisheries for tuna and tuna-like species in the IOTC area of competence.

**Observer Scheme**

2. In order to improve the collection of scientific data, at least 5 % of the number of operations/sets for each gear type by the fleet of each CPC while fishing in the IOTC area of competence of 24 meters overall length and over, and under 24 meters if they fish outside their EEZs shall be covered by this observer scheme. For vessels under 24 meters if they fish outside their EEZ, the above mentioned coverage should be achieved progressively by January 2013.
3. When purse seiners are carrying an observer<sup>1</sup> as stated in paragraph 1, this observer shall also monitor the catches at unloading to identify the composition of bigeye catches. The requirement for the observer to monitor catches at unloading is not applicable to CPCs already having a sampling scheme, with at least the coverage set out in paragraph 2.
4. The number of the artisanal fishing vessels landings shall also be monitored at the landing place by field samplers<sup>2</sup>. The indicative level of the coverage of the artisanal fishing vessels should progressively increase

<sup>1</sup> Observer: a person who collects information on board fishing vessels. Observer programmes can be used for quantifying species composition of target species, bycatch, by-products and dead discards, collecting tag returns, etc.

<sup>2</sup> Field sampler: a person who collects information on land during the unloading of fishing vessels. Field sampling programmes can be used for quantifying catch, retained bycatch, collecting tag returns, etc.

towards 5% of the total levels of vessel activity (i.e. total number of vessel trips or total number of vessels active).

5. CPCs shall:
  - a) Have the primary responsibility to obtain qualified observers. Each CPC may choose to use either deployed national or non-national of the flag State of the vessel on which they are deployed;
  - b) Endeavour that the minimum level of coverage is met and that the observed vessels are a representative sample of the gear types active in their fleet;
  - c) Take all necessary measures to ensure that observers are able to carry out their duties in a competent and safe manner;
  - d) Endeavour to ensure that the observers alternate vessels between their assignments. Observers are not to perform duties, other than those described in paragraphs 10 and 11 below;
  - e) Ensure that the vessel on which an observer is placed shall provide suitable food and lodging during the observer's deployment at the same level as the officers, where possible. Vessel masters shall ensure that all necessary co-operation is extended to observers in order for them to carry out their duties safely including providing access, as required, to the retained catch, and catch which is intended to be discarded.
6. The cost of the observer scheme in paragraph 2 and 3 shall be met by each CPC.
7. The sampling scheme referred in paragraph 4 will be covered by the Commission's accumulated funds and voluntary contribution on a provisional basis. The Commission will consider an alternative for the financing of this scheme.
8. If the coverage referred in paragraphs 2 and 3 is not met by a CPC, any other CPC may, subject to the consent of the CPC who has not met its coverage, place an observer to fulfil the tasks defined in the paragraphs 1 and 2 until that CPC provides a replacement or the target coverage level is met.
9. CPCs shall provide to the Executive Secretary and the Scientific Committee annually a report of the number of vessels monitored and the coverage achieved by gear type in accordance with the provisions of this Resolution.
10. Observers shall:
  - a) Record and report fishing activities, verify positions of the vessel;
  - b) Observe and estimate catches as far as possible with a view to identifying catch composition and monitoring discards, by-catches and size frequency;
  - c) Record the gear type, mesh size and attachments employed by the master;
  - d) Collect information to enable the cross-checking of entries made to the logbooks (species composition and quantities, live and processed weight and location, where available); and
  - e) Carry out such scientific work (for example, collecting samples), as requested by the IOTC Scientific Committee.
11. The observer shall, within 30 days of completion of each trip, provide a report to the CPCs of the vessel. The CPCs shall send within 150 days at the latest each report, as far as continuous flow of report from observer placed on the longline fleet is ensured, which is recommended to be provided with 1°x1° format to the Executive Secretary, who shall make the report available to the Scientific Committee upon request. In a case where the vessel is fishing in the EEZ of a coastal State, the report shall equally be submitted to that coastal State.
12. The confidentiality rules set out in the resolution 98/02 Data confidentiality policy and procedures for fine-scale data shall apply.
13. Field samplers shall monitor catches at the landing place with a view to estimating catch-at-size by type of

boat, gear and species, or carry out such scientific work as requested by the IOTC Scientific Committee.

14. The funds available from the IOTC balance of funds may be used to support the implementation of this programme in developing States, notably the training of observers and field samplers.
15. The elements of the Observer Scheme, notably those regarding its coverage, are subject to review and revision, as appropriate, for application in 2012 and subsequent years. Basing on the experience of other Tuna RFMOs, the Scientific Committee will elaborate an observer working manual, a template to be used for reporting (including minimum data fields) and a training program.
16. This Resolution supersedes Resolution 10/04 *On A Regional Observer Scheme*.



## APPENDIX D

## RECOMMENDATION 10/13

## ON THE IMPLEMENTATION OF A BAN ON DISCARDS OF SKIPJACK TUNA, YELLOW FIN TUNA, BIGEYE TUNA AND NON TARGETED SPECIES CAUGHT BY PURSE SEINERS

**The Indian Ocean Tuna Commission (IOTC),**

RECOGNIZING the need for action to ensure the achievement of IOTC objectives to conserve and manage skipjack, yellow fin and bigeye tuna in the IOTC area of competence;

RECOGNIZING that the international community has recognized both ethical concerns and policy regarding discards of species in several international instruments and statements, including United Nations General Assembly resolutions (A/RES/49/118 (1994); A/RES/50/25 (1996); A/RES/51/36 (1996); A/RES/52/29 (1997); A/RES/53/33 (1998); A/RES/55/8 (2000); and A/RES/57/142 (2002)), United Nations Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea (UNCLOS) relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (United Nations Fish Stocks Agreement); The Rome Consensus on World Fisheries adopted by the FAO Ministerial Conference on Fisheries, Rome, 14–15 March 1995; the Code of Conduct for Responsible Fisheries, the FAO International Plan of Action (IPOA) on sharks; the Convention on Biological Diversity (CBD);

RECALLING that the United Nations Fish Stock Agreement has underlined the importance of ensuring the conservation and optimum utilization of highly migratory species through the action of regional fishery bodies such as the IOTC, and provides that “*States should minimize ... discards, ..., catch of non target species, both fish and non-fish species, and impacts on associated or dependent species, in particular endangered species ...*”;

RECALLING that The Rome Consensus on World Fisheries adopted by the FAO Ministerial Conference on Fisheries, Rome, 14–15 March 1995, provides that “*States should...reduce bycatches, fish discards...*”;

RECALLING that the FAO Code of Conduct for Responsible Fisheries provides that “*States should take appropriate measures to minimize waste, discards...collect information on discards ...; ... take account of discards (in the precautionary approach) ...; develop technologies that minimize discards ...; use of selective gear to minimize discards*”;

CONCERNED about the morally unacceptable waste and the impact of unsustainable fishing practices upon the oceanic environment, represented by the discarding of tunas and non-target species in the purse-seine fishery for tunas in the Indian Ocean;

CONSIDERING the important volume of tuna and non targeted species discarded in the purse-seine fishery for tunas in the Indian Ocean;

RECOMMENDS, in accordance with the provisions of Article IX, paragraph 8 of the IOTC Agreement, the following:

**Retention of tuna species**

1. Contracting Parties and Cooperating non-Contracting Parties should encourage all purse-seine vessels to retain on board and then land all bigeye, skipjack, and yellowfin tuna caught, except fish considered unfit for human consumption.
2. Procedures for the implementation of full retention requirements include:
  - a) No bigeye, skipjack, and/or yellowfin tuna caught by purse-seine vessels may be discarded after the point in the set when the net is fully pursed and more than one half of the net has been retrieved. If equipment malfunctions affect the process of pursing and retrieving the net in such a way that this rule cannot be complied with, the crew must make efforts to release the tuna as soon as possible.
  - b) The following two exceptions to the above rule shall apply:

- i. Where it is determined by the captain of the vessel that tuna (bigeye, yellowfin or skipjack) caught are unfit for human consumption, the following definitions shall be applied:
  - "unfit for human consumption" includes, but is not limited to, fish that:
    - is meshed or crushed in the purse-seine; or
    - is damaged due to depredation; or
    - has died and spoiled in the net where a gear failure has prevented both the normal retrieval of the net and catch, and efforts to release the fish alive;
  - "unfit for human consumption" does not include fish that:
    - is considered undesirable in terms of size, marketability, or species composition; or
    - is spoiled or contaminated as the result of an act or omission of the crew of the fishing vessel.
- ii. Where the captain of a vessel determines that tuna (bigeye, yellowfin or skipjack) was caught during the final set of a trip and there is insufficient well space to accommodate all tuna (bigeye, yellowfin or skipjack) caught in that set. This fish may only be discarded if:
  - the captain and crew attempt to release the tuna (bigeye, yellowfin or skipjack) alive as soon as possible
  - and no further fishing is undertaken after the discard until the tuna (bigeye, yellowfin or skipjack) on board the vessel has been landed or transshipped.

#### **Retention of species other than those specified under Para 2, a)**

3. Contracting Parties and Cooperating non-Contracting Parties should encourage all purse-seine vessels to retain on board and then land all non targeted species (other tunas, rainbow runner, dolphinfish, triggerfish, billfish, wahoo, and barracuda) except fish considered unfit for human consumption (as defined in paragraph 2, b), i). A single exception shall be the final set of a trip, when there may be insufficient well space remaining to accommodate all the fish caught in that set.

#### **Implementation**

4. Contracting Parties and Cooperating non-Contracting Parties should encourage full compliance by their respective fleets with the requirements of this recommendation.
5. Contracting Parties and Cooperating non-Contracting Parties are encouraged to take appropriate actions to promote better data collection and reporting on discards from all gears, to allow the WPEB to estimate the level of discards of both purse seine and longline fisheries.
6. The Scientific Committee is encouraged to provide advice at its 2010 session, on the management of discards in both purse seine and longline fisheries.