
PROCEDURES ON A FISH AGGREGATING DEVICES (FADS) MANAGEMENT PLAN

SUBMITTED BY: MAURITIUS, 06 APRIL 2013

Explanatory Memorandum

Since many years, Mauritius and several coastal States have developed a fishery associated with anchored Fish Aggregating Devices targeting tuna and tuna-like species. Following the successful implementation of the FAD fishery and encouraging catch rates, other coastal States in the regional are in the process of developing their FADs fishery with the view to enhance the livelihood of the artisanal fishermen. The anchored FADs are set in the Exclusive Economic Zones and generally in the open sea at depth ranging from 50m to above 3000m. The fishing gears are handlines, trolling, horizontal and vertical longlines (e.g. Mauritius) and pole and line fishing (e.g. Maldives) which are passive and selective gears. The small-scale artisanal fishermen use boats, 6–7m in length propelled by outboard engines while the advanced coastal fishermen, (including Sport's fishery) use boats above 12m but less than 24m in length. The anchored FADs are made of sturdy materials to increase their lifespan. The anchored FADs are costly and are funded by Government institutions, regional organisations (e.g. SWIOFP) and fishermen associations.

The number of anchored FADs deployed for the artisanal fishermen are limited, taking into consideration the range of operation of the small boats and the optimal distances between FADs for effective aggregation. On the other hand, drifting FADs are mostly set on the high seas and used by large purse seiners and the number of FADs deployed per purse seine vessel may exceed 500 units. Moreover, the purse seine fishing gear is non-selective; both in terms of juvenile fish and bycatch caught, while mainly targeted fish are caught on anchored FADs.

Thus, due to their specificity in terms of user, number of FADs deployed, type of boat, fishing method and gear and materials used in their construction, drifting and anchored FADs should be addressed separately in Resolution 12/08 relating to Procedures on Fish Aggregating Devices Management Plans for reasons mentioned above. AFADs and DFADs should have separate Management Plans and also the reporting requirements.

RESOLUTION 1312/XX08
PROCEDURES ON A FISH AGGREGATING DEVICES (FADS) MANAGEMENT PLAN

The Indian Ocean Tuna Commission (IOTC),

BEARING IN MIND 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 Organization (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 organisations and provide them in a timely manner to the organisation;

RECOGNIZING that all gears deployed to target resources under IOTC competence should be managed to ensure sustainability of fishing operations;

AWARE that the Commission is committed to adopt conservation measures to reduce juvenile bigeye tuna and yellowfin tuna mortalities from fishing effort on Fish Aggregating Devices (FADs);

AWARE that the availability of adequate information is fundamental to carrying out the objectives of the IOTC Agreement laid down in its Article V;

NOTING that the Scientific Committee advised the Commission to conduct an investigation of the feasibility and impacts of a temporary FAD closure as well as other measures in the context of Indian Ocean fisheries and stocks;

RECALLING that the objective of the IOTC Agreement is to ensure, through appropriate management, the conservation and optimum utilization of stocks covered by the mentioned Agreement and encouraging sustainable development of fisheries based on such stocks and minimizing the level of bycatches;

RECALLING FURTHER that Commission agreed through Resolution 12/04 that at its annual session in 2013 it would consider the recommendations of the Scientific Committee regarding the development of improved FAD designs, together with socio-economic considerations, with a view to adopting further measures to mitigate interactions with marine turtles in fisheries covered by the IOTC Agreement.

RECOGNIZING that in 2012 the Scientific Committee advised that only non-entangling FADs, both drifting and anchored, should be designed and deployed to prevent the entanglement of sharks, marine turtles and other marine species;

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

1. CPCs having vessels fishing on Fish Aggregating Devices (FADs) shall submit, to the Commission, by the end of 2013, Management Plans for the use of FADs by their purse seiners, ~~and~~ bait boat vessels or any other type of boat/vessel. Due to their specificity in terms of users, number deployed, type of boat/vessel involved, fishing method and gear used and materials used in their construction, the Management Plans and Reporting Requirements for Drifting FADs (DFAD) and Anchored FADs (AFAD) shall be addressed separately for the purposes of this Resolution. The Plans shall at a minimum meet the Suggested Guidelines for Preparation for FAD Management Plans by each CPC as provided for DFADs at Annex I and AFAD at Annex II. The Plans shall at a minimum meet the Suggested Guidelines for Preparation for FAD Management Plans for each CPC (Annex 1). For the purposes of this Resolution, the term Fish Aggregation Device (FAD) means drifting or anchored floating or submerged objects deployed by fishermen for the purpose of aggregating target tuna species.
2. The Management Plans shall include initiatives or surveys to investigate, and to the extent possible minimize the capture of small bigeye tuna and yellowfin tuna and non-target species associated with fishing on FADs.

To reduce the entanglement of sharks, marine turtles and other non-target species, [starting in 2014] CPCs shall require operators of purse seine vessels flying their flags to design and deploy FADs using the specifications set out in Annex V. [Starting in 2015], CPCs shall prohibit operators of purse seine vessels flying their flags to deploy FADs that do not meet the specifications set out in Annex V.

- ~~3.~~ These Plans shall be analysed by the Compliance Committee at its 2014 session. ~~The information provided in these Plans will be submitted to the Commission, consistent with the IOTC standards for the provision of catch and effort data and will be made available for analysis to the Scientific Committee on the aggregation level set by Resolution 10/02, and under the confidentiality rules set by Resolution 12/02.~~
- ~~4.~~ All CPCs shall ensure that by 2014 all purse seine vessels and support vessels flying their flag, when deploying or retrieving DFADs and when fishing in association with DFADs, shall record and report the specific data elements found in Annex III in a “FAD-logbook” or other comparable reporting mechanism. CPCs may modify current reporting mechanisms to include the relevant data fields found in Annex III. CPCs who have developed a fishery associated with AFADs shall record and submit data elements found in Annex IV.
- ~~5.~~ All CPCs shall:
 - ~~a)~~ ensure that the data referred to in paragraph 4 are collected and made available to national authorities and scientists within 90 days of vessel unloading or transshipping; and for AFADs on an annual basis.
 - ~~a)b)~~ ensure that the data elements found in Annexes III and IV are complete.
- ~~2.~~ From 2015 on, CPCs shall submit to the Commission, 60 days before the Annual Meeting, a report on the management of FADs, including any reviews of the initially submitted Management Plans.
- ~~3-6.~~ [Starting in 2014,] CPCs shall submit the data elements prescribed in Annex III to the Commission, consistent with the IOTC standards for the provision of catch and effort data, and these data and shall be made available for analysis to the Scientific Committee on the aggregation level set by Resolution 10/02 (or any subsequent superseding Resolution), and under the confidentiality rules set by Resolution 12/02 (or any subsequent superseding Resolution).
- ~~7.~~ In 2014, ~~the~~ Scientific Committee will analyse ~~these data and any other relevant information provided in the Management Plans, when available,~~ and provide scientific advice on ~~additional~~ FAD management options for consideration by the Commission in 2015.
- ~~8.~~ In 2015, CPCs shall submit to the Commission, 60 days before the Annual Meeting, a report on the management of FADs, including any reviews of the initially submitted Management Plans. At its Annual Meeting in 2015, the Commission shall consider adopting further measures to monitor and manage the use of FADs in the IOTC area of competence.
- ~~9.~~ CPCs and the IOTC Secretariat shall work together to ensure that all FAD data collected is consistent with what is required by this Resolution, in Annex II, when it is collected by observers placed in accordance with Resolution 11/04 **and Recommendation 13/XX**. CPCs shall ensure that these data are submitted to the IOTC Secretariat as soon as possible and in any event no later than 150 days after observer disembarkation from the vessel.
- ~~10.~~ A detailed report on the status of the FAD data collected by observers shall be presented by the Secretariat at each regular annual session of the Compliance Committee and the Scientific Committee for these committees’ review and consideration.
- ~~11.~~ Beginning in [January 2015], CPCs shall require all FADs deployed or modified by their flagged purse seine fishing vessels in the IOTC area of competence to be marked in accordance with a detailed marking scheme. The marking scheme shall be developed and considered for adoption by the Commission at the Commission’s regular annual session in 2014, based on recommendations provided by the Compliance Committee at its regular annual session in 2014. The marking scheme should take into account, at a minimum, the following:
 - ~~a)~~ All FADs shall be marked with a unique identification number, with a specific numbering system and format to be adopted by the Commission.
 - ~~b)~~ The marking should be easy to read by the observer before the vessel operator engages in any FAD-related activity (e.g. setting on the FAD, retrieving the FAD, servicing the FAD), but if not visible for

any reason, (time of day, weather, etc.), the vessel operator shall assist the observer in obtaining the unique FAD identifier as soon as feasible.

c) The marking should be easy to apply to the FAD, but should be applied in such a manner that it will not become unreadable or disassociated with the FAD.

4.12. Resolution 12/08 procedures on a fish aggregating devices (FADs) management plan is superseded by this Resolution.

Annex I

GUIDELINES FOR PREPARATION OF **DRIFTING** FISH AGGREGATING DEVICE (**DFAD**) MANAGEMENT PLANS

To support obligations in respect of the **DFAD** Management Plan (**DFAD**–MP) to be submitted to the IOTC Secretariat by CPCs with fleets fishing in the IOTC area of competence, associated to **DFADs** (~~anchored or drifting~~), **DFAD**–MP should include:

1. An objective
2. Scope:

Description of its application with respect to:

 - a) Vessel-types and support and tender vessels
 - ~~b) FAD types (anchored (AFAD) AND drifting (DFAD))~~
 - ~~e)b) FAD numbers and/or FADs beacons numbers to be deployed (per FAD type)~~
 - ~~d)c) reporting procedures for AFAD and DFAD deployment~~
 - e)d) catch reporting from FAD sets (consistent with the IOTC’s Standards for the provision of and Effort Data)
 - ~~f) distance between AFADs~~
 - ~~g)e) incidental bycatch reduction and utilization policy~~
 - ~~h)f) consideration of interaction with other gear types~~
 - ~~i)g) plans for monitoring and retrieval of lost FADs~~
 - ~~j)h) statement or policy on “FAD ownership”~~
3. Institutional arrangements for management of the FAD Management Plans:
 - a) Institutional responsibilities
 - b) application processes for FAD and /or FAD beacons deployment approval
 - c) Obligations of vessel owners and masters in respect of FAD and /or FAD beacons deployment and use
 - d) FAD and/or FADs beacons replacement policy
 - e) reporting obligations
 - f) observer acceptance obligations
4. FAD construction specifications and requirements

- a) FAD design characteristics (a description of both the floating structure and the underwater structure, if any, with special emphasis on any netting materials used)
- b) FAD markings and identifiers, including FADs beacons
- c) Lighting requirements
- d) radar reflectors
- e) visible distance
- f) radio buoys (requirement for serial numbers)
- g) satellite transceivers (requirement for serial numbers)
- ~~g~~h) echo sounder

5. Applicable areas

- a) Details of any closed areas or periods e.g. territorial waters, shipping lanes, proximity to artisanal fisheries, etc

6. Applicable period for the DFAD–MP

7. Means for monitoring and reviewing implementation of the DFAD–MP

Annex II

GUIDELINES FOR PREPARATION OF ANCHORED FISH AGGREGATING DEVICE (AFAD) MANAGEMENT PLANS

To support obligations in respect of the AFAD Management Plan (AFAD–MP) to be submitted to the IOTC Secretariat by CPCs with fleets fishing in the IOTC area of competence, associated to AFADs

AFAD–MP should include:

1. An objective

2. Scope:

3. Description of its application with respect to:

- a) Vessel types
- b) AFAD numbers and/or FADs beacons numbers to be deployed (per AFAD type)
- c) reporting procedures for AFAD deployment
- d) catch reporting from AFAD (consistent with the IOTC’s Standards for the provision of Catch and Effort Data)
- e) distances between AFADs
- f) incidental bycatch reduction and utilization policy
- g) consideration of interaction with other gear types
- h) plans for monitoring and retrieval of lost AFADs
- i) statement or policy on “AFAD ownership”

4. Institutional arrangements for management of the AFAD Management Plans:

- a) Institutional responsibilities

b) Regulations applicable to the setting and use of AFADs

c) AFAD replacement policy

d) Data collection system

e) reporting obligations

5. AFAD construction specifications and requirements:

a) AFAD design characteristics (a description of both the floating structure and the underwater structure, with special emphasis on any netting materials used)

b) Anchorage used for mooring

c) AFAD markings and identifiers, including FAD beacons if any

d) Lighting requirements if any

e) radar reflectors

f) visible distance

g) radio buoys if any (requirement for serial numbers)

h) satellite transceivers (requirement for serial numbers)

i) echo sounder

6. Applicable areas

a) Coordinates of mooring site

b) Charts depicting mooring sites

c) Details of any closed areas e.g., shipping lanes, Marine Protected Areas, reserves etc.

~~7.~~ Means for monitoring and reviewing implementation of the AFAD-MP

Annex III

DFAD DATA TO BE REPORTED BY VESSEL OPERATORS IN A 'LOGBOOK' OR OTHER REPORTING MECHANISM

CPCs are required to ensure vessels flying their flag report:

1. An inventory of the DFADs present on the vessel specifying in particular for each DFAD:

a) DFAD identifier (i.e., FAD Marking or beacon ID or any information allowing to identify the owner)

b) DFAD design characteristics (dimension and material of the floating part and of the underwater hanging structure),

2. Any visit on DFADs. For each visit on a DFAD, whether followed or not by a set, the,

a) position,

b) date,

c) hour,

d) DFAD identifier (i.e., FAD Marking or beacon ID or any information allowing to identify the owner)

- e) DFAD type (drifting natural FAD, drifting artificial FAD),
 - f) DFAD design characteristics (dimension and material of the floating part and of the underwater hanging structure),
 - g) type of the visit (deployment, hauling, retrieving, loss, intervention on electronic equipment).
3. If the visit is followed by a set, the results of the set in terms of catch and bycatch.

Annex IV

ANCHORED FAD DATA TO BE REPORTED BY CPCs

CPCs having a fishery associated with AFADs are required to report:

- 1. An inventory of the AFADs deployed
 - a) Number of AFADs deployed
 - b) Coordinates of mooring site
 - c) FAD identifier (i.e., FAD Marking or beacon ID or any information allowing its identification)
 - d) AFAD design characteristics (dimension and material of the floating part, anchorage, mooring ropes and underwater hanging appendages used to structure)
 - e) Radar reflector
 - f) Date set, date lost and date reset
- 2. Repairs and maintenance:
 - a) Maintenance schedule
 - b) Status of AFAD (floating structure, mooring ropes etc.)
 - c) Damages and servicing effected

Annex V

REQUIREMENTS FOR DESIGN AND DEPLOYMENT OF NON-ENTANGLING FADS

- 1. The surface structure of any FAD shall not be covered, or only covered with non-meshed material.
- 2. If a sub-surface component is used, it shall not be made from netting but from non-meshed materials such as ropes or canvas sheets.
- 3. To reduce the amount of synthetic marine debris, the use of natural or biodegradable materials (such as hessian canvas, hemp ropes, etc.) for drifting FADs should be promoted.