



ON MANAGEMENT OF ANCHORED FISH AGGREGATING DEVICES (AFADS)

SUBMITTED BY: KENYA

Explanatory memorandum

Management of FADs in the IOTC started with simple requirements for a FAD management plan with data reporting requirements – see Resolution 13/08. However, as a result of subsequent revisions to the Resolution (Res 15/08, 17/08, 18/08, and 19/02) and recent concerns regarding the impact of increased usage of drifting FADs by purse seine vessels on yellowfin tuna stock rebuilding, many of the provisions in Resolution 19/02 are now irrelevant to anchored FADs. There is therefore a clear need to treat the management of anchored FADs separately from drifting FADs.

While the overarching objectives of national AFAD programmes differ between CPCs, it is generally recognised that anchored FADs (AFADs) have a role in supporting coastal fisheries management activities and can help to enhance food security and improve livelihoods by increasing the economic return for fishers and improving safety at sea.

Unlike drifting FADs (DFADs) which occur in large numbers on the high seas, anchored FADs are tethered to the ocean floor and in the IOTC area of competence are always deployed within the areas of national jurisdiction of CPCs. Due to their fixed locations, anchored FADs are also easier to monitor than drifting FADs which can move in and out of the EEZs of many different coastal states throughout their lifetime. Moreover, while drifting FADs are constructed to have a lifespan of around one year, anchored FADs are designed to have a long lifespan.

Furthermore, requirements regarding the use of biodegradable materials in the construction of FADs are inconsistent with the function and purpose of anchored FADs. Unlike drifting FADs, anchored FADs are designed to remain in place for as long as possible to prevent their loss, thereby minimising any negative environmental impacts they might cause. Anchored FADs can also be expensive to deploy, and it does not make sense for them to be constructed from biodegradable material which could lead to higher loss rates. Instead, the buoy and anchor line should be constructed from robust and non-degradable materials so as to withstand strong ocean currents and rough sea conditions. Unlike drifting FADs, anchored FADs do not have large or heavy attractants under the surface as this would increase the drag on their mooring lines, leading to a higher likelihood of loss which is something that AFAD owners wish to avoid. In addition, anchored FADs do not have netting, so they are by design non-entangling.

It is noted that AFADs can escape their mooring, and therefore like DFADs have the potential to cause damage to marine habitats. However, management options for minimizing habitat damage caused by AFADs are likely to be more straightforward than for DFADs, and there is likely to be a greater incentive for AFAD owners to reduce incidences of loss.

Clearly therefore, the management requirements of anchored and drifting FADs should be treated separately. It would be incongruent for the IOTC to expect a one-size-fits-all measure for DFADs and AFADs, which is why the proponent felt it necessary to submit the following stand-alone proposal.

RESOLUTION 22/XX
ON MANAGEMENT OF ANCHORED FISH AGGREGATING DEVICES (AFADS)

Keywords: Precautionary Approach, anchored FADs, stock rebuilding

The Indian Ocean Tuna Commission (IOTC)

BEARING IN MIND that Article 5 of 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) requires coastal States and States fishing 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, as well as information from national and international research programmes;

NOTING that the United Nations Food and Agricultural Organization (FAO) Code of Conduct for Responsible Fisheries provides that States should compile fishery-related and other supporting scientific data relating to fish stocks covered by sub-regional or regional fisheries management organisations and provide them in a timely manner to the organisation;

RECALLING that the objective of the IOTC Agreement is to ensure, through appropriate management, the conservation and optimum utilisation of stocks covered by the IOTC Agreement and encouraging sustainable development of fisheries based on such stocks while minimising the level of bycatch;

RECALLING that Resolution 19/02, *Procedures on a Fish Aggregating Devices (FADs) Management Plan* requires CPCs to develop FAD management plans and report relevant data on their management;

NOTING that the 2nd Ad-hoc Working Group on FADs highlighted data reporting gaps in anchored fisheries;

COGNIZANT that the operational aspects of anchored FADS and drifting FADS are very different and therefore that the requirements of drifting FAD management, such as those relating to the materials used in FAD construction, monitoring frequency and reporting, would be incompatible with the normal operation of anchored FADS.

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

Definitions

1. For the purpose of this Resolution:
 - a. Fish Aggregating Device (FAD) means a permanent, semi-permanent or temporary object, structure or device of any material, man-made or natural, which is deployed and/or tracked, for the purpose of aggregating target tuna species for consequent capture.
 - b. Anchored Fish Aggregating Devices (AFADs) means a FAD tethered to the bottom of the ocean. It usually consists of a very large buoy and is anchored to the bottom of the ocean with a chain.
 - c. Abandoned AFAD means an AFAD that is deliberately left at sea due to *force majeure* or reasons beyond control of the owner or operator.
 - d. Without prejudice to paragraph 1c), Discarded AFAD means an AFAD that is deliberately released or left at sea without any attempt for further control or recovery by the owner or operator.

Applications

2. This Resolution applies to all CPCs that either deploy AFADs or whose flag vessels use AFADs.

AFAD management

3. CPCs shall develop an AFAD Management Plan in accordance with the Guidelines in Annex I and shall submit this AFAD Management Plan to the IOTC Executive Secretary.
4. AFAD Management Plans shall be reviewed by the IOTC Compliance Committee which shall advise CPCs on areas of improvement.
5. CPCs shall submit to the Commission, 60 days prior to the Annual Meeting, a report on their progress of their AFAD management plans, including, if necessary, reviews of the previously submitted management plans.
6. Until a scheme to operationalise the FAO Voluntary Guidelines on the Marking of Fishing Gear (VGMFG) is developed in accordance with the *Proposal of Terms of Reference for developing a scheme to operationalise the FAO Voluntary Guidelines on the Marking of Fishing Gear (VGMFG); IOTC-2020-CoC17-14*, CPCs shall ensure that their vessels only use AFADs whose buoys contain a physical and unique reference number that identify the CPC and that are clearly visible.
7. CPCs shall maintain a register of lost, abandoned, and discarded AFADs and report this data to the IOTC Executive Secretary in their annual Implementation Report.
8. CPCs shall conduct inspections at sea to ensure that the buoys of AFADs are clearly marked.

Data reporting and analysis

9. CPCs shall submit the data elements provided in Annex II to the IOTC Executive Secretary, consistent with the IOTC standards for the provision of catch and effort data, and this data shall be made available for analysis to the IOTC Scientific Committee on the aggregation level set by Resolution 15/0 and Resolution 15/02 *Mandatory statistical requirements for IOTC Members and Cooperating Non-Contracting Parties (CPC's)* (or any subsequent superseding Resolutions), and under the confidentiality rules set by Resolution 12/02 *Data Confidentiality Policy and Procedures* (or any subsequent superseding Resolution).
10. The IOTC Scientific Committee will analyse the information, when available, and provide scientific advice on additional AFAD management options for consideration by the Commission, including recommendations on the number of AFADs to be operated, the use of biodegradable materials in new and improved AFADs design. When assessing the impact of AFADs on the dynamic and distribution of targeted fish stocks and associated species and on the ecosystem, the IOTC Scientific Committee may, where relevant, use all available data on Abandoned and Discarded DFADs.

Site selection and construction of AFADs

11. CPCs deploying new AFADs or replacing existing ones, shall take into account the nature and profile of the sea bottom when choosing a site and, where possible, avoid sites with steep slopes to minimise the risk of AFAD loss.
12. CPCs should aim to undertake AFAD deployments during calm weather and low current conditions.
13. CPCs shall ensure that the upper floatation of AFADs is suitable for offshore, high current deployments by using designs which are streamlined to reduce drag and resistance to currents and waves.
14. CPCs shall consider using a buoy with appropriate radar reflector and/or strobe light on AFADs to assist in locating its low-profile upper floatation system and to reduce its navigational hazard.

15. CPCs shall consider using a combination of nylon (sinking) and polypropylene (floating) ropes to create a catenary curve in the mooring system, acting as a shock-absorber to counter elements of the sea (storms, waves, currents).
16. CPCs should ensure that AFADS are provided with supplementary buoyancy when deployed at depths less than 1,500 m to lift the mooring line off the ocean floor.
17. CPCs shall consider using AFAD designs where the weight of the anchor is at least three times the buoyancy of the floatation system to counter the constant upward pull on the main line and anchor system.
18. CPCs shall ensure that only non-entangling materials (with no netting) are used in the sub-surface aggregates of AFADs. It is recommended that, where sub-surface aggregators are attached to the mooring line, these are constructed from biodegradable materials such as biodegradable aggregator rope or coconut fronds.
19. It is recommended that AFADs are constructed from materials that will ensure increased longevity so that they continue to retain their integrity for the longest lifespan possible.

Data reporting and analysis

20. CPCs shall submit the data elements provided in Annex II to the IOTC Executive Secretary, consistent with the IOTC standards for the provision of catch and effort data, and this data shall be made available for analysis to the IOTC Scientific Committee on the aggregation level set by Resolution 15/0 and Resolution 15/02 *Mandatory statistical requirements for IOTC Members and Cooperating Non-Contracting Parties (CPC's)* (or any subsequent superseding Resolutions), and under the confidentiality rules set by Resolution 12/02 *Data Confidentiality Policy and Procedures* (or any subsequent superseding Resolution).
21. The IOTC Scientific Committee shall analyse the information, when available, and provide scientific advice on additional AFAD management options for consideration by the Commission, including recommendations on the number of AFADs to be operated and the use of biodegradable materials in new and improved AFADs design. When assessing the impact of AFADs on the dynamic and distribution of targeted fish stocks and associated species and on the ecosystem, the IOTC Scientific Committee may, where relevant, use all available data on Abandoned and Discarded DFADs.

ANNEX 1: AFAD Management Plans

AFAD Management Plans shall include:

1. An objective
2. Scope:
 - Description of its application with respect to:
 - a) Vessel types
 - b) AFAD numbers and/or AFAD beacon numbers to be deployed (per AFAD type)
 - c) reporting procedures for AFAD deployments
 - d) incidental bycatch reduction and utilisation policy
 - e) consideration of interaction with other gear types
 - f) plans for monitoring and retrieval of lost AFADs
 - g) statement or policy on “AFAD ownership”
3. Institutional arrangements for management of the AFAD Management Plans:
 - a) institutional responsibilities
 - b) regulations applicable to the setting and use of AFADs
 - c) At-sea AFAD repairs, maintenance rules and replacement policy
 - d) data collection system
 - e) reporting obligations
4. AFAD construction specifications and requirements:
 - a) AFAD design characteristics (a description)
 - b) AFAD markings and identifiers, including AFAD beacons if any
 - c) lighting requirements if any
 - d) radar reflectors
 - e) visible distance
 - f) radio buoys if any (requirement for serial numbers)
 - g) satellite transceivers (requirement for serial numbers)
 - h) echo sounder
5. Applicable areas:
 - a) details of any closed areas e.g., shipping lanes, Marine Protected Areas, reserves etc.
6. Means for monitoring and reviewing implementation of the AFAD–MP.
7. AFAD logbook template (data to be collected specified in Annex II).

Annex II: DATA COLLECTION FOR AFADS

- a) Any fishing activity around an AFAD.
- b) For each activity on an AFAD (including repair, intervention consolidation, etc.), whether followed or not by a set or other fishing activities, the,
 - i. Position (as the geographic location of the event (Latitude and Longitude) in degrees and minutes)
 - ii. Date (as DD/MM/YYYY, day/month/year)
 - iii. AFAD identifier (i.e. AFAD Marking or beacon ID or any information allowing to identify the owner).
- c) If the visit is followed by a set or other fishing activities, the results of the set in terms of catch and bycatch, whether retained or discarded dead or alive.