# ON MANAGEMENT OF FISH AGGREGATING DEVICES IN THE IOTC AREA OF COMPETENCE

Submitted by: Kenya, Sri Lanka.
Pending: Indonesia, Maldives, Somalia, Tanzania, Mauritius, Comoros, Pakistan

**Explanatory Memorandum**

The proposed amendments are to strengthen Resolution 19/02 to mitigate the ecological impacts associated with drifting FADs, especially its stranding, damage to coral reefs, and inshore habitats and its contribution to marine debris. It is also aimed to reduce juveniles of tropical tuna and to facilitate rebuilding of Indian Ocean yellowfin tuna – Resolution 19/01

From the 2017 Scientific Committee report, it was requested that FAD ownership should form part of the mandatory information to be collected by IOTC as this was considered necessary to model and report the tracking status of all FADs. This aspect is strengthened and revised in this proposal.

Noting that IOTC, along with other tuna RFMOs, recommended and adopted resolutions to promote reduction of the amount of synthetic marine debris using natural or biodegradable materials for drifting FADs, the proposal also strengthen addressing of this this issue.

Cf Resolution 19/02.

# RESOLUTION ~~19/02~~21/xx
# ~~PROCEDURES~~ ON ~~A~~MANAGEMENT OF FISH AGGREGATING DEVICES (FADS) ~~MANAGEMENT PLAN~~IN THE IOTC AREA OF COMPETENCE

***Keywords:*** FAD, FAD Management, FAD monitoring, active instrumented buoy.

**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;

MINDFUL of the call upon States, either individually, collectively or through regional fisheries management organisations and arrangements in the United Nations General Assembly Resolution 67/79 on Sustainable fisheries to collect the necessary data in order to evaluate and closely monitor the use of large-scale fish aggregating devices and others, as appropriate, and their effects on tuna resources and tuna behaviour and associated and dependent species, to improve management procedures to monitor the number, type and use of such devices and to mitigate possible negative effects on the ecosystem, including on juveniles and the incidental bycatch of non-target species, particularly sharks and marine turtles;

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 sub-regional or regional fisheries management organisations and provide them in a timely manner to the organisation;

RECOGNISING that Fish Aggregating Devices (FADs) under the competence of IOTC should be managed to ensure the sustainability of fishing operations;

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

CONSIDERING the concern of the 20th Session of the Working Party on Tropical Tuna held in Seychelles, 29 October – 3 November 2018, on the change in strategy of increased usage of DFADs by purse seine vessels to maintain catch level targets, which has led to a substantial increase of juvenile yellowfin tuna and bigeye tuna being caught;

AWARE that the Commission is committed to adopt Conservation and Management Measures to reduce juvenile Bigeye tuna and Yellowfin tuna mortalities from fishing effort on ~~Fish Aggregating Devices (FADs);~~DFADs;

RECALLING that Resolution 12/04 established that the Commission at its annual session in 2013 should consider the recommendations of the IOTC Scientific Committee as regards the development of improved ~~FAD~~DFAD designs to reduce the incidence of entanglement of marine turtles, including the use of biodegradable materials, 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;

RECALLING that Resolution 13/08 [superseded by Resolution 15/08, by Resolution 17/08, then by Resolution

18/08 ~~and then by Resolution 19/02]]~~ established procedures on a ~~fish aggregating device (~~FAD~~)~~ management plan, including more detailed specifications of catch reporting from ~~FAD~~DFAD sets, and the development of improved ~~FAD~~DFAD designs to reduce the incidence of entanglement of non-target species;

NOTING that the IOTC Scientific Committee advised the Commission that only non-entangling ~~FADs~~DFADs, both drifting and anchored, should be designed and deployed to prevent the entanglement of sharks, marine turtles and other species;

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

*CONCERNED* of the impact of Abandoned, Lost or Otherwise Discarded Fishing Gear (ALDFG) and plastic residues in the ocean greatly affecting marine life and the need to facilitate the identification and recovery of such gear;

*HAVING REGARD* to the Voluntary Guidelines on the Marking of Fishing Gear endorsed by the Committee on Fisheries (COFI) of the FAO at its thirty-third Session, held at FAO headquarters, Rome, Italy, from 9 to13 July 2018 and the incorporation of FADs in these Guidelines.

*RECALLING* that the International Convention for the Prevention of Pollution from Ships (MARPOL) seeks to eliminate and reduce the amount of garbage being discharged into the sea from ships and that its Annex V applies to all vessels;

FURTHER NOTING that fishing gear that is released into the water, such as FADs, traps and static nets, should not be considered garbage or accidental loss in the context of MARPOL Annex V as long as these are deployed with the intention of later retrieval. Deliberate abandonment of FADs in the oceans, if made of synthetic materials, would therefore be in contravention of MARPOL Annex V.

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

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

***1. Definitions***

***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) Drifting Fish Aggregating Devices (DFADs) means a FAD not tethered to the bottom of the ocean. A DFAD typically has a floating structure (such as a bamboo or metal raft with buoyancy provided by buoys, corks, etc.) and a submerged structure (made of old netting, canvass, ropes, etc.).

c) Anchored Fish Aggregating Devices (AFADs) means a FAD tethered to the bottom of the ocean. It usually consists of a very large buoy and anchored to the bottom of the ocean with a chain.

d) Instrumented buoy means a buoy with a clearly marked with a unique reference number allowing identification of its owner and equipped with a satellite tracking system to monitor its position.

e) Operational buoy means any instrumented buoy, previously activated, switched on and deployed at sea on

a drifting FAD or log, which transmit position and any other available information such as eco–sounder estimates.

f) Activation of a buoy means the act of initializing satellite communication service, which is done by the buoy supplier company at the request of the vessel owner or manager.

g) Deactivation of a buoy means the act of cancelling satellite communications service, which is done by the buoy supplier company at the request of the vessel owner or manager.

h) Buoy owner means any legal or natural person, entity or branch, who is paying for the communication service for the buoy associated with a FAD, and/or who is authorized to receive information from the satellite buoy, as well as to request its activation and/or deactivation.

i) Reactivation: the act of re-enabling satellite communications services by the buoy supplier company at the request of the buoy owner or manager.

j) Buoy in stock means an instrumented buoy acquired by the owner which has not been made operational.

k) "Abandoned DFAD" means a DFAD over which the owner/operator has control and that could be retrieved by the owner/operator, but that is deliberately left at sea due to force majeure or other reasons.

l) "Lost DFAD" means a DFAD over which the owner/operator has no control and that cannot be located and/or retrieved by the owner/operator.

m) "Discarded DFAD" means fishing gear that is released at sea without any attempt for further control or recovery by the owner/operator.

***Application***

2. This Resolution shall apply to CPCs having purse seine vessels and fishing on Drifting Fish Aggregating Devices (DFADs), equipped with instrumented buoys for the purpose of aggregating target tuna species, in the IOTC area of competence. Only purse seiners and associated supply or support vessels are allowed to deploy DFADs in the IOTC Area of Competence.

3. This resolution requires the use of instrumented buoy, as per the above definition, on all DFADs and prohibits the use of any other buoys, such as radio buoys, not meeting this definition.

***FAD limits and management***

4. This Resolution sets the maximum number of operational buoys followed by any purse seine vessel at ~~300~~150 at any one time. The number of instrumented buoys that may be acquired annually for each purse seine vessel is set at no more than ~~500~~300. No purse seine vessel shall have more than ~~500~~300 instrumented buoys (buoy in stock and operational buoy) at any time. An instrumented buoy shall be made operational only when physically present on board the purse-seine vessel to which it belongs or its associated supply or support vessel, and the event shall be recorded in the appropriate logbook, specifying the instrumented buoy unique identification number and the date, time and geographical coordinates of its deployment.

5. A CPC may adopt a lower limit than the one set out in paragraph 4 for vessels flying its flag. Further, any CPC may adopt a lower limit for DFADs deployed in its EEZ than that stated in paragraph 4. The CPC shall review the adopted limit to ensure that such limit is not more than the limit fixed by the Commission.

6. CPCs shall ensure that as from the effective date of this Resolution, each of its purse seiners already in operation does not exceed the maximum number of operational and instrumented buoys at any one time as set out in paragraph 4.

7. All purse seine vessel, supply or support vessel shall declare to its respective CPC, the number of instrumented buoys onboard, including each unique identifier of the instrumented buoy before and after each fishing trip.

8. Reactivation of an instrumented buoy shall only be possible once it has been brought back to port, either by the vessel tracking the buoy/ associated supply or support vessel or by another vessel and has been authorized by the CPC.

9. Notwithstanding the completion of any study undertaken at the request of the Commission including the study to be undertaken by the Working Group adopted at Resolution 15/09 in relation to FADs, the Commission may review the maximum number of instrumented buoys set out in paragraph 4.

10. CPCs shall require vessels flying their flag and fishing on DFADs to annually submit the number of operational buoys followed by vessel, lost and transferred (total number of DFADs tagged at sea, by deploying an instrumented buoy on a log or another vessel DFAD already in the water) by 1° by 1° grid area and month strata and DFAD type under the confidentiality rules set by Resolution 12/02 (or any subsequent superseding Resolution).

11. All CPCs shall ensure that all fishing vessels as referred to in paragraph 2 shall record fishing activities in association with FADs using the specific data elements found in Annex III (DFAD) and Annex IV (AFAD) in the section of the "“FAD-logbook". ”.

12. CPCs having vessels flying their flag and fishing on FADsDFADs shall submit, to the Commission, on an annual basis, Management Plans for the use of FADsDFADs. Due to their specificity in terms of users, 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 follow the Guidelines for Preparation for FAD Management Plans by each CPC as provided for DFADs in Annex I and AFADs in Annex II.

13. The Management Plans shall be analysed by the IOTC Compliance Committee.

14. The Management Plans shall include initiatives or surveys to investigate, and to the extent possible minimise the capture of small bigeye tuna and yellowfin tuna and non-target species associated with fishing on FADs. Management Plans shall also include guidelines to prevent, to the extent possible, the loss or abandonment of FADs.

15. In addition to the Management Plans, all CPCs shall ensure that all fishing vessels flying their flag and fishing on FADs, including supply vessels, shall record fishing activities in association with FADs using the specific data elements found in Annex III (DFAD) and Annex IV (AFAD).

16. CPCs shall submit to the Commission, 60 days before the Annual Meeting, a report on the progress of the management plans of FADs, including, if necessary, reviews of the initially submitted Management Plans, and including reviews of the application of the principles set out in Annex III.

***FAD area closure***

17. With the objective of reducing the fishing mortality of juvenile yellowfin tuna, purse seine vessels and associated supply or support vessels fishing for bigeye, yellowfin and skipjack tunas in association with DFADs in the high seas or EEZs shall be prohibited to fish on DFADs or deploy DFADs during a three-month period between 0000hrs of 1 July and 0000hrs 30th September each year.

18. In the event that DFAD owners retrieve the electronic equipment on DFADs during the FAD closure period they shall retrieve the entire DFAD which must be kept on board the vessel until landed in port or until end of the of the FAD closure period.

19. Each CPC shall further ensure that its vessels do not deploy DFADs during a period of 15 days prior to the beginning of the closure period mentioned in paragraph 17.

~~17.~~20. For the purpose of the DFAD closure, the definition of a DFAD shall be interpreted as including "any object or group of objects, of any size, that has or has not been deployed that is living or non-living, including but not limited to buoys, floats, netting, webbing, plastics, bamboo, logs and whale sharks floating on or near the surface of the water that fish may associate with"

21. During the DFAD closure period specified above, no purse seine vessel or supply or support vessel shall conduct any part of a set within five nautical miles of a DFAD. That is, at no time may the vessel or any of its fishing gear or tenders be located within five nautical miles of a DFAD while a set is being conducted.

22. The operator of a vessel shall not allow the purse seine vessel or supply or support vessel to be used to aggregate fish, or to move aggregated fish including using underwater lights and chumming.

23. The measures stipulated in paragraph 15 and 16 shall be reviewed and, if necessary, revised based on advice by the Scientific Committee taking into account monthly trends in free school and DFAD-associated catches

***Non-entangling and biodegradable FADs***

~~18.~~24. To reduce the entanglement of sharks, marine turtles or any other species, CPCs shall require their flagged vessels to use non-entangling designs and non-mesh materials in the construction of FADs as outlined in Annex V.

~~19.~~25. To reduce the amount of synthetic marine debris, the use of natural or biodegradable materials in DFAD construction should ~~be promoted~~ be mandatory. CPCs shall ~~encourage~~ ensure that their flag vessels ~~to~~ use only biodegradable ~~FADs~~DFADs in accordance with the guidelines ~~at~~in Annex V~~ with a view to transitioning to the use of biodegradable FADs, with the exception of materials used for the instrumented buoys, by their flag vessel from 1 January 2022.~~. CPCs ~~shall, from 1 January 2022, encourage~~should direct their flag vessels to remove from the water, retain onboard and only dispose of in port, all traditional ~~FADs~~DFADs when encountered at sea (e.g. those made of entangling materials or designs). ~~The reference year prescribed above shall be reviewed in light of the Scientific Committee's recommendation pursuant to Resolution 18/04 On BioFAD experimental project.~~

1. ~~CPCs are encouraged to conduct trials using biodegradable materials to facilitate the transition to the use of only biodegradable material for DFADS construction by their flagged vessels. The results of such trials shall be presented to the Scientific Committee who shall continue to review research results on the use ofbiodegradable material on FADs and shall provide specific recommendations to the Commission as appropriate.~~

26. To further reduce the ecosystem impacts of DFADs the substructure should be limited to a length of 50 meters.

***FAD Marking***

~~2. A new marking scheme shall be developed by the ad-hoc FAD working group and shall be considered by the Commission at its regular annual session in 2020.~~

27. A scheme to operationalise the FAO Voluntary Guidelines on the Marking of Fishing Gear (VGMFG) is currently under development – refer to 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.*.

~~20.~~28. Until the marking scheme referred to in paragraph ~~20~~22 is adopted, CPCs shall ensure that the instrumented buoy attached to the DFAD contain a physical, unique reference number marking (ID provided by the manufacturer of the instrumented buoy) and the vessel unique IOTC registration number clearly visible.

29. The raft and the structure underneath the raft of the DFAD must have a permanent label showing the unique vessel IOTC registration number attached to it. Each label must be: (i) at least 75mm x 65mm in size (ii) made of durable material and (iii) securely fixed to the DFAD and not removable.

30. The practice of buoy exchanges where purse seiners and their supply vessels routinely attach their own satellite buoys when they encounter DFADs with satellite buoys belonging to other vessels, shall be prohibited. The change in ownership which happens when taking over control of a DFAD in such a manner from the company that had previously been tracking it creates confusion around ownership responsibilities and the limits on the maximum number of operational buoys that should be deployed per vessel referred to in paragraph 4.

31. All DFADs should be considered as posing a significant threat to the marine environment or navigation1 and any loss of a DFAD, or the materials used in the construction of a DFAD, should therefore be reported by the FAD owner to the flag State and the coastal State, if the loss occurred in the EEZ of a coastal state. Before reporting the loss of a DFAD, or part of a DFAD, the owner must attempt to retrieve it as soon as possible and must carry equipment on board their vessel to do so.

32. If lost DFADs cannot be retrieved, the DFAD owner must inform the flag state of the vessel, as well as the coastal State where the loss occurred, if within the EEZ of a coastal, within 24 hours of the following:
    a) unique reference number of the instrumented buoy
    b) unique IOTC Vessel registration number and name of the fishing or supply vessel
    c) time when the DFAD or part thereof was lost
    d) position where the DFAD or part thereof was lost
    e) measures taken to retrieve the DFAD or part thereof
    f) Any perceived threats of the imminent beaching of the DFAD
    g) Geographical position (degrees, minutes and seconds) of potential location of beaching
    h) Plans to recover beached DFADs and how the recovery costs will be collected and shared

33. All incidences of DFAD loss stipulated in para 26 and 27 should be reported by the relevant CPCs to the Secretariat within one month of the loss occurring.

34. Any additional information for all lost, discarded and abandoned DFADs should be recorded as specified in Annex III

35. Inspections should be conducted, both at sea and at port, to ensure that gear marking and other requirements are being complied with. Deployed DFADs found without required marks should be reported to the relevant authority. Port State inspection of fishing gear should be conducted in accordance with the procedures set out in Annex B, paragraph e) of the FAO Agreement on Port State Measures to Prevent, Deter and Eliminate Illegal, Unreported and Unregulated Fishing. This includes conditions relating to marking of the fishing gear.

***Data reporting and analysis***

~~21.~~36. CPCs shall submit the data elements prescribed in Annex III and Annex IV to the Commission, consistent with the IOTC standards for the provision of catch and effort data, and these data shall be made available for analysis to the IOTC Scientific Committee on the aggregation level set by Resolution 15/02 (or any subsequent superseding Resolution), and under the confidentiality rules set by Resolution 12/02 (or any subsequent superseding Resolution).

~~22.~~37. The IOTC Scientific Committee will analyse the information, when available, and provide scientific advice on additional FAD management options for consideration by the Commission, including recommendations on the number of FADs to be operated, the use of biodegradable materials in new and improved FADs design. When assessing the impact of FADs on the dynamic and distribution of targeted fish stocks and associated species and on the ecosystem, the IOTC Scientific Committee will, where relevant, use all available data on abandoned FADs (i.e. FADs without a beacon or which have drifted outside the fishing zone).

[1] 7 MARPOL Annex V, supra note 183, at Regulation 10.6.

***Supply Vessels***

38. Consistent with Resolution 19/01, CPCs shall gradually reduce supply or support vessels by 31 December 2022. Flag States shall submit the status of reducing the use of supply or support vessels as part of the Implementation Report to the Compliance Committee.

39. After 31 December 2022, no supply or support vessels shall support purse seine vessels in the IOTC area of competence.

***FAD Tracking and Recovery Procedures***

~~23.~~40. In order to support the monitoring of compliance with the limitation established in Paragraph 4, while protecting business confidential data, the instrumented buoy supplier company or the CPCs shall, ~~starting 1 January 2020,~~ report~~, or require their vessels to report, daily~~ real-time information on ~~all active FADs~~the geographical location (in degrees, minutes and seconds) to the Secretariat~~.~~, or an authorized independent third party appointed by the Commission, of each operational buoy in 6-hourly intervals. Such positional information shall also contain, the date, instrumented buoy ID~~,~~ and the name and registration number of the assigned vessel~~ and daily position, which shall be compiled at monthly intervals, to be submitted with a time delay of at least 60 days, but no longer than 90 days~~.

~~3. The Commission shall establish a DFAD tracking and recovery policy at its annual session in 2021, on the basis of recommendations from the ad-hoc FAD working group. The policy shall define DFAD tracking, reporting of lost DFADs, arrangements to alert coastal States of derelict/lost DFADs at risk of beaching in near real-time, how and who recovers the DFADs, how the recovery costs are collected and shared.~~

41. The instrumented buoy supplier company or the CPCs shall also report real-time information on the geographical location (in degrees, minutes and seconds), the date, the instrumented buoy ID and the name and registration number of the , assigned vessel to the Secretariat, or an authorized independent third party appointed by the Commission, of each operational buoy when it is activated or deactivated.

42. The IOTC Secretariat shall submit a report, on an annual basis, to the IOTC Compliance Committee on the level of compliance of each CPC with operational buoy limits, annual limits of instrumented buoys purchased~~.~~, the details of abandoned DFADs, including the FAD owner, the date and position of abandonment.

~~24.~~43. This resolution shall be reviewed by the Commission, at the latest, at its session in 2022, based on recommendations from the Scientific Committee.

44. This resolution shall enter into force on 1 September ~~January~~ ~~2020.~~2021.

~~25.~~45. Resolution ~~18~~19/~~08~~ 02 *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* 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, DFAD–MP should include:

1. An objective
2. Scope

   Description of its application with respect to:

   - vessel-types and support and tender vessels
   - DFAD numbers and DFADs beacon numbers to be deployed
   - reporting procedures for DFAD deployment
   - incidental bycatch reduction and utilisation policy
   - consideration of interaction with other gear types
   - plans for monitoring and retrieval of lost DFADs
   - statement or policy on "DFAD ownership"
3. Institutional arrangements for management of the DFAD Management Plans:
   - institutional responsibilities
   - application processes for DFAD and /or DFAD beacons deployment approval
   - obligations of vessel owners and masters in respect of DFAD and /or DFAD beacons deployment and use
   - DFAD and/or DFADs beacons replacement policy
   - reporting obligations
4. DFAD construction specifications and requirements:
   - DFAD design characteristics (a description)
   - DFAD markings and identifiers, including DFADs beacons
   - lighting requirements
   - radar reflectors
   - visible distance
   - radio buoys (requirement for serial numbers)
   - satellite transceivers (requirement for serial numbers)
5. Applicable areas:
   - 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.

DFAD logbook template (data to be collected specified in Annex III).

# 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:

   Description of its application with respect to:

   a) vessel types
   b) AFAD numbers and/or AFADs beacons numbers to be deployed (per AFAD type)
   c) reporting procedures for AFAD deployment
   d) distances between AFADs
   e) incidental bycatch reduction and utilisation policy
   f) consideration of interaction with other gear types
   g) the establishment of inventories of the AFADs deployed, detailing AFAD identifiers, characteristics and equipment of each AFAD as laid down in point 4 of the present Annex, coordinates of the AFAD's mooring sites, date of set, lost and reset
   h) plans for monitoring and retrieval of lost AFADs
   i) 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) 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 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 AFAD 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
5. Applicable areas:

   a) coordinates of mooring sites, if applicable
   b) 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.

   AFAD logbook template (data to be collected specified in Annex IV).

# ANNEX III
## DATA COLLECTION FOR DFADS

a) For each activity on a DFAD, whether followed by a set or not, each fishing, support and supply vessel to report the following information:
   i. Vessel (name and registration number of the fishing, support or supply vessel)
   ii. Position (as the geographic location of the event (Latitude and Longitude) in degrees and minutes)
   iii. Date (as DD/MM/YYYY, day/month/year)
   iv. DFAD identifier (DFAD or beacon ID)
   v. DFAD type (drifting natural FAD, drifting artificial FAD),
   vi. DFAD design characteristics
      - Dimension and material of the floating part and of the underwater hanging structure
   vii. Type of the activity, (visit deployment, hauling, retrieving, loss, intervention to service electronic equipment).

~~b)~~ If the visit is followed by a set, the results of the set in terms of catch and bycatch, whether retained or discarded dead or alive. CPCs to report this data aggregated per vessel at 1*1 degree (where applicable) and monthly to the Secretariat

b) The following information should be recorded for all lost, abandoned and lost DFADs:
   i. Vessel (name and registration number of the fishing, support or supply vessel)
   ii. Position (as the geographic location of the event (Latitude and Longitude) in degrees and minutes)
   iii. Date (as DD/MM/YYYY, day/month/year)
   iv. DFAD identifier (DFAD or beacon ID)
   v. DFAD type (drifting natural FAD, drifting artificial FAD),
   vi. DFAD design characteristics
      - Dimension and material of the floating part and of the underwater hanging structure
   vii. time when the DFAD or part thereof was lost
   viii. measures taken to retrieve the DFAD or part thereof

# ANNEX IV
## DATA COLLECTION FOR AFADS

a) Any activity around an AFAD.

b) For each activity on an AFAD (repair, intervention consolidation, etc.), whether followed or not by a set or other fishing activities, the,

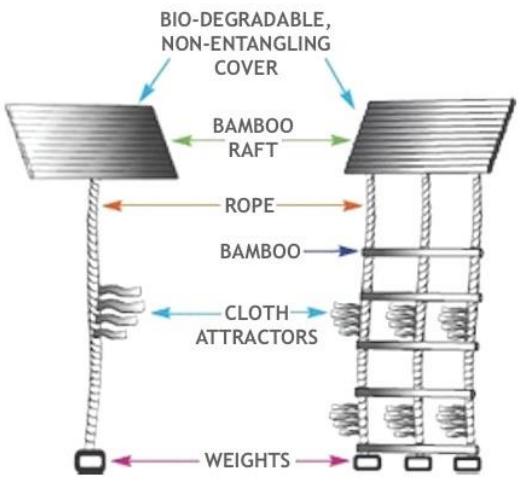
   i. Position (as the geographic location of the event (Latitude and Longitude) in degrees and minutes)
   ii. Date (as DD/MM/YYYY, day/month/year)
   iii. AFAD identifier (i.e. AFAD Marking or beacon ID or any information allowing to identify the owner).

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.

# ANNEX V

## PRINCIPLES FOR DESIGN AND DEPLOYMENT OF FADS

### EXAMPLE OF NON-ENTANGLING FAD




1. The surface structure of the FAD shall not be covered, or only covered with non-meshed material

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.