ON MANAGEMENT OF DRIFTING FISH AGGREGATING DEVICES (DFADS) IN THE IOTC AREA OF COMPETENCE

SUBMITTED BY: EUROPEAN UNION

Explanatory Memorandum

This proposal tries to address the fracture created in the IOTC on the subject of the management of drifting fish aggregating devices (FADs) by amending and replacing Resolution 23/02 on the Management of DFADs. The proposal is based on the real life experience and knowledge of the fleets using DFADs, of the managers implementing the measures existing in different RFMOs and of the scientists following this issue closely. The main objective is to adopt a management framework, which addresses potential loopholes and avoids uncertainties due to unclear provisions.

On potential ways forward to reduce the impact of FADs fisheries on juvenile tuna, the text tasks the Scientific Committee to explore the effectiveness of different mitigation measures. The Scientific Committee is requested to express itself on the expected outcomes of establishing a closure. At its 2024 annual meeting, the Commission shall take into account the conclusions of the SC and act in consequence. Through this stepwise way forward the IOTC will follow a science-based approach in its decision making. Should the SC not be able to provide a clear advice, the Commission will in any case decide the way forward at its next annual meeting in 2024.

The concept of the register introduced by Resolution 23/02 has been adapted with the objective to transform it into a tool that will improve reporting of DFAD deployments, taking into account the concrete implementation needs and transparency. While Resolution 23/02 based the limit of buoy deployed on their registration without clear process for deregistration, the proposal is based on the current practices of counting operational buoys with the help of the newly created register. Concerning the number of DFADs deployed per Purse Seine vessel, the text proposes a final reduction of the current limit to 240 buoys operational.

Many of the provisions of Resolution 23/02 that were acceptable and implementable have been taken up in this proposal, in particular those on biodegradability. These new requirements will allow to reduce the negative impact of DFAD losses and introduce more accountability for the fleets using them.

RESOLUTION 23/XX
ON MANAGEMENT OF DRIFTING FISH AGGREGATING DEVICES (DFADS) IN THE IOTC AREA OF COMPETENCE

Keywords: *DFAD, FAD management, FAD registry, FAD limits, FAD closure period, FAD monitoring system.*

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) was adopted in conscience of the need to avoid adverse impacts on the marine environment, preserve biodiversity, maintain the integrity of marine ecosystems and minimise the risk of long-term or irreversible effects of fishing operations;

RECALLING that Articles 5 and 6 of the UNFSA require States to apply the precautionary approach widely to conservation, management and exploitation of highly migratory fish stocks in order to protect the living marine resources and preserve the marine environment;

RECALLING that, in applying the precautionary approach, Article 6 of the UNFSA requires States to be more cautious when information is uncertain, unreliable or inadequate and prohibits the use of an absence of adequate scientific information as a reason for postponing or failing to take conservation and management measures, and that this is reiterated in the United Nations Food and Agricultural Organization (FAO) Code of Conduct for Responsible Fisheries;

RECALLING that, in applying the precautionary approach, Article 6 of the UNFSA requires States to take into account, inter alia, uncertainties relating to the size and productivity of the stocks, levels and distribution of fishing mortality and the impact of fishing activities on non-target and associated or dependent species, as well as existing and predicted oceanic, environmental and socio-economic conditions;

RECALLING that Article 5 of the UNFSA requires States to assess the impacts of fishing, other human activities and environmental factors on target stocks and species belonging to the same ecosystem or associated with or dependent upon the target stocks and to adopt, where necessary, conservation and management measures for species belonging to the same ecosystem or associated with or dependent upon the target stocks, with a view to maintaining or restoring populations of such species above levels at which their reproduction may become seriously threatened;

BEARING IN MIND that Article 5 of the UNFSA requires 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, as well as information from national and international research programmes, and that the 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;

MINDFUL of the call upon States, either individually, collectively or through regional fisheries management organisations and arrangements in United Nations General Assembly Resolution 76/71 on Sustainable fisheries of 2021 to collect the necessary data in order to evaluate and closely monitor the use of large-scale fish aggregating devices (FADs) and other devices, 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;

RECALLING that Articles 192 and 194 of the United Nations Convention on the Law of the Sea (UNCLOS) require States to protect and preserve the marine environment and to take, individually or jointly as appropriate, all measures consistent with UNCLOS that are necessary to prevent, reduce and control pollution of the marine environment from any source, and that these measures shall include those necessary to protect and preserve rare or fragile ecosystems as well as the habitat of depleted, threatened or endangered species and other forms of marine life;

RECOGNISING that, in accordance with the UNFSA, FADs under the competence of IOTC must be managed to ensure the sustainability of fishing operations and to avoid adverse impacts on the marine environment, preserve biodiversity, maintain the integrity of marine ecosystems and minimise the risk of long-term or irreversible effects of fishing operations;

CONCERNED of the impact of Abandoned, Lost or 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;

NOTING that releasing fishing devices into the water, such as FADs, does not contravene to the International Convention for the Prevention of Pollution from Ships (MARPOL) Annex V or the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention) and the Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Protocol) as long as such device is deployed with the intention of later retrieval;

RECOGNISING that, in accordance with MARPOL Annex V and the London Convention and Protocol, FADs under the competence of the IOTC must be managed to ensure that they are exclusively deployed with the intention of later retrieval and that they are not abandoned at sea except in situations of force majeure;

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;

GIVEN that the activities of supply and support vessels and the use of Drifting Fish Aggregating Devices (DFADs) form 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;

CONSIDERING the concerns of the 2nd IOTC Ad-hoc Working Group on FADs, on the need for clarity around data submitted to IOTC on FADs;

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 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 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, by Resolution 18/08 and then by Resolution 19/02] established procedures on a FAD management plan, including more detailed specifications of catch reporting from DFAD sets, and the development of improved 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 DFADs 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 DFAD closure period as well as other measures restricting the use of DFADs in the context of Indian Ocean fisheries and stocks;

NOTING that the 2nd Ad-hoc Working Group on FADs highlighted the gaps, inconsistencies in data collection, reporting and analysis of the DFAD data;

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

Definitions

1. For the purpose of this Resolution:

"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 and may aggregate fish.

"Drifting Fish Aggregating Devices (DFADs)" means a FAD not tethered to the bottom of the ocean.

"Log" means a floating object of natural source or accidentally lost from anthropic activities and that was not built and deployed for the purpose of aggregating and/or locating target tuna species for subsequent capture.

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

"activation of a buoy" means the act of initialising satellite communication service, which is done by the buoy supplier company at the request of the buoy owner. The buoy can be transmitting or not, depending if it has been manually switched on.

"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.

"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 buoy owner.

"buoy owner" means any legal or natural person, entity or branch, who is paying for the communication service for the buoy associated with a DFAD that is registered on the DFAD Register, and/or who is authorised to receive information from the satellite buoy, as well as to request its activation and/or deactivation.

"reactivation" means the act of re-enabling satellite communications services by the buoy supplier company at the request of the buoy owner.

"abandoned DFAD" means a DFAD that was initially deployed with the intention of later retrieval but that is deliberately left at sea due to force majeure or other reasons.

"lost DFAD" means a DFAD over which the buoy owner has lost control and that cannot be located and/or retrieved by the buoy owner.

"discarded DFAD" means a DFAD that is released at sea without any attempt for further control or recovery by the buoy owner.

"biodegradable materials" means renewable lignocellulosic and biobased materials (i.e., plant dry matter - here described as natural material). Those materials shall degrade in normal conditions of the use of DFADs and both be biodegradable in marine environments in accordance with international relevant standards for full biodegradability in marine environments and on land under natural environmental conditions. In addition, the substances resulting from the degradation of these materials shall not be toxic for the marine and coastal ecosystems or include heavy metals in their composition.

Application

2. This Resolution shall apply to Contracting Party and Cooperating Non-Contracting Party (CPC) flag vessels fishing on DFADs aggregating target tuna species in the IOTC area of competence as well as associated supply1 vessels. Only purse seiners and associated supply vessels are allowed to deploy and use DFADs and instrumented buoys in the IOTC Area of Competence.

DFAD Registration and reporting

3. The IOTC Secretariat shall maintain a register for all instrumented buoys and DFADs deployed in the IOTC area of competence (DFAD Register). The IOTC Secretariat shall provide detailed guidelines and a dedicated technological tool to be presented at the 2024 annual session of the Commission. When drafting the guidelines, the IOTC Secretariat shall explore, among others, how existing DFAD monitoring and reporting tools (DFAD logbook, IOTC 3BU and 3FA forms) can be adapted for that purpose, so as to avoid double or conflicting declarations.

4. To ensure a proper functioning of the DFAD register, the technological tool should be made available as of 1 January 2025 for a six months pre-implementation test period. The DFAD register shall be fully effective as of the 1 July 2025, provided that the guidelines are adopted and that the technological tool is operational.

5. Once the register is effective, CPCs shall submit electronically to the IOTC Secretariat, for each of their flag purse seine vessels that is authorised to operate in the IOTC area of competence, after acquisition and before deployment, the following information for inclusion in the DFAD Register:

a. DFAD biodegradability category or log;
b. IOTC DFAD unique identifier (not applicable if the buoy is attached to a log);
c. instrumented buoy's unique reference number that will allow the identification of its owner attached to the DFAD or log;
d. Name and IMO number of the purse seine vessel to which the DFAD is assigned;
e. name of the buoy owner;
f. manufacturer of the instrumented buoy;
g. model name of the instrumented buoy; and
h. date, time and geographical coordinates of its deployment.

6. Buoy owner shall inform within 24 hours, through the above-referred electronic register, the IOTC Secretariat and the flag CPC when an instrumented buoy is activated, switched on while on board and deployed at sea on a DFAD together with the IOTC DFAD unique identifier as referred to in paragraph 36 or if it has been deployed with a log. Once the IOTC secretariat receives this information, the relevant instrumented buoys shall appear as operational in the electronic register.

7. Buoy owner shall inform within 72 hours, through the above-referred electronic register, the IOTC Secretariat and the flag CPC when an instrumented buoy is deactivated, including whether the DFAD and instrumented buoy were retrieved. Once the IOTC secretariat receives this information, the instrumented buoy shall not be considered operational anymore. If an operational buoy attached to a DFAD is deactivated or lost without being retrieved, the buoy owner shall notify the Secretariat, together with the above mentioned deactivation notification and through the DFAD register, the date, time, last location of the buoy and the reasons for deactivating it.

8. Until the entry into force of the DFAD register, any instrumented buoy, previously activated, switched on and deployed at sea on a drifting FAD instrumented buoy shall be counted as operational. Instrumented

[1] Supply vessel includes both the notion of supply and support vessel.

buoys deployed before the entry into force of the vessel register and at sea on the 1 July 2025 shall be registered at the entry into effect of the register.

9. If an operational buoy is deactivated while its last known location is in the EEZ of a coastal state, an automatic notification shall immediately be sent to the authorities of the coastal State. Before reporting the loss of a DFAD or an instrumented buoy, if feasible, vessels and buoy owners shall attempt to locate and retrieve DFADs and attributed buoys as soon as possible and carry equipment on board for these purposes.

10. For each purse seine vessel, the maximum number of operational instrumented buoys on the DFAD Register, as per paragraphs 5 and 6, shall not exceed 280 as of 1 January 2024, 260 as of 1 January 2026 and 240 as of 1 January 2028 (DFAD Limits) at any one time. The maximum number of instrumented buoys that may be acquired annually for each purse seine vessel shall not exceed 400. Notwithstanding the completion of any study undertaken at the request of the Commission, the Commission may review the DFAD Limits. This paragraph is without prejudice to the right of CPCs to adopt more stringent DFAD Limits for their flag vessels or within their EEZ.

11. The Secretariat shall maintain the DFAD Register and make the information available to concerned Coastal CPCs and simultaneously to flag CPCs upon justified request and in accordance with Resolution 12/02 On data confidentiality policy and procedures. The reasons for requesting access to this information shall be the following:

a. Encounter of a non-compliant FAD design; or
b. Encounter of a stranded DFAD and/or an operational buoy in the area under the jurisdiction of a CPC.

DFAD Management

12. CPCs shall ensure that their flag vessels activate instrumented buoys only when physically present on board the purse seine vessel to which they are registered or its associated supply vessel.

13. CPCs shall ensure that their flag purse seine vessels exclusively deploy instrumented buoys registered to them in the DFAD Register.

14. CPCs shall ensure that all DFADs are deployed together with an operational buoy.

15. CPCs shall prohibit the use of any other buoys, such as radio buoys.

16. CPCs shall ensure that their flag vessels do not deploy instrumented buoys on DFADs which were deployed before the entry into force of this Resolution and which do not comply with the requirements of this Resolution.

17. CPCs shall ensure that their flag purse seine vessels and associated supply vessels encountering DFADs that do not comply with the requirements of this Resolution retrieve such DFADs.

18. CPCs shall ensure that no DFAD and associated operational buoy are discarded by the buoy owner. CPCs shall ensure that when an operational buoy is retrieved from the sea, no DFAD is left without an operational buoy, so that the DFAD is also retrieved if no other operational buoy is attached.

19. CPCs shall ensure that their flag vessels record any type of activity in association with DFADs using the specific data elements found in Annex I. For the deployment of DFADs and their associated instrumented buoy, vessels shall record in the appropriate logbook, until the FAD register is implemented the instrumented buoy unique reference number and the date, time and geographical coordinates (decimal degrees) of its deployment.

20. CPCs shall ensure that their flag vessels reactivate instrumented buoys only once this has been authorised by the flag CPC and once the instrumented buoys have been brought back to port.

21. CPCs shall ensure that their flag vessels fishing on DFADs annually submit the number of instrumented buoys assigned to them by the end of each calendar year. This shall include instrumented buoys which have been lost or abandoned by 1° by 1° grid area and month strata and DFAD type.

22. In order to support the monitoring of compliance with this Resolution and to improve scientific data collection flag and while protecting business confidential data, CPCs shall ensure that the instrumented buoy supplier company or their vessels report daily information on all operational buoys. CPCs shall submit these information in compiled form to the IOTC Secretariat with a time delay of at least 60 days, but no longer than 90 days. Such information shall contain:

a. the geographical location (decimalised degrees);
b. the date;
c. the time;
d. IOTC FAD Registry number;
e. the name and IMO number of the vessel assigned to the instrumented buoy in the DFAD register.

23. The information above-mentioned in paragraph 22 shall be stratified by fleet, year, month and 1x1 degrees grid, and expressed as the average daily number of operational buoys in each stratum and made available by the Secretariat to support scientific analysis in line with the confidentiality rules set by Resolution 12/02 On data confidentiality policy and procedures. Upon justified request by the IOTC Scientific Committee for specific analysis, and following the agreement by the Commission, data on DFAD trajectories shall be made available.

24. CPCs shall report any factual information showing reasonable grounds for suspicion of violations against paragraphs 12 to 22 to the IOTC Secretariat.

DFAD Management Plans

25. CPCs with flag vessel fishing on DFADs shall submit to the IOTC Secretariat, each year in their Annual Implementation Report, a DFAD Management Plan for the use of DFADs and associated technologies in accordance with the Guidelines for Preparation of FAD Management Plans as provided for DFADs in Annex II.

26. The objectives of the DFAD Management Plan shall be, to the extent possible, to monitor and keep at sustainable levels the impact on small bigeye tuna and yellowfin tuna and non-target species associated with fishing on DFADs and to prevent the loss or abandonment of DFADs. The Management Plan shall include initiatives or surveys to achieve the above-mentioned objectives.

27. The IOTC Compliance Committee and the IOTC Scientific Committee shall analyse the Management Plans and report the results of this analysis, including any potential best practices, to the Commission.

Scientific work on mitigation measures

28. The IOTC Scientific Committee shall provide advice and recommendations no later than 31 December 2023 on appropriate DFAD management options. The IOTC Scientific Committee shall consider the potential reduction of fishing mortality of juvenile tropical tuna, the recovery and/or management objectives of the yellowfin and bigeye tuna stocks and other relevant impacts on IOTC fishery of a FAD closure. At its 2024 annual session, the Commission shall take into account any advice and recommendation made by the Scientific Committee and revise this Conservation and Management Measure if necessary.

29. In producing its advice and recommendations, the IOTC Scientific Committee shall take into account, *inter alia*:

a. available IOTC fisheries data, considering either their quantity and quality, with the support of the IOTC Secretariat;
b. experiences of implementing similar management measures with similar objectives, including FAD closures, from other RFMOs;
c. fishing behaviours/patterns in the Indian Ocean, both historically and those anticipated as a consequence of the implementation of any new management measures, including a FAD closure; and
d. the impact of the different currently used fishing gears and fleets to the stocks' state and juvenile mortality.

30. If the IOTC Scientific Committee concludes that it does not currently possess access to sufficient scientific data to provide recommendations to the Commission, it shall provide advice on the data necessary for science-based recommendations. At its 28th Session, the Commission shall discuss the outcome of the Scientific Committee and take any deliberation that it considers necessary, including a potential temporary FAD closure.

31. The IOTC Scientific Committee shall provide scientific advice to the Commission by:

a. assessing the impact that fishing gears or fishing using FADs have on juvenile mortality and provide adequate advice to the Commission. This assessment shall include, but not be limited to:
    i. a comparative analysis of the contribution of all fishing gears to the juvenile mortality of targeted tunas; and
    ii. an estimate of reference points for fishing mortality of juveniles of yellowfin and bigeye tunas with the view of recovering or maintaining stock size above levels which can produce the MSY and keep the risk of violating/exceeding limit reference points to a low probability;
b. providing an analysis of the efficiency of current operational buoy limits, and examining the potential efficiency of alternative/complementary options to limit the number of FADs at sea. This will include, among other options, an advice on the definition and expected effectiveness of a measure to control the number of sets under DFAD.

Non-entangling and Biodegradable DFADs

32. To reduce the entanglement of sharks, marine turtles or any other species, CPCs shall ensure that the design and construction of any DFADs to be deployed in the IOTC area of competence shall comply with the following specifications in accordance with Annex III:

a. the use of mesh materials shall be prohibited for any part of a DFAD;
b. only non-entangling material and designs shall be used; and
c. the sub-surface structure shall be limited to a length of 70 meters.

33. To reduce the amount of synthetic marine debris, CPCs shall ensure that their flag vessels:

a. use only DFADs of biodegradability categories I, II and III, as defined in Annex III;
b. no longer deploy any DFADs of category IV, as defined in Annex III;
c. as of 1 January 2026, use only DFADs of categories I and II, as defined in Annex III; and
d. as of 1 January 2027, use only DFADs of category I, as defined in Annex III.

34. CPCs are encouraged to share their experiences and scientific knowledge on the use of biodegradable materials in DFADs.

35. CPCs shall ensure that any observers deployed on their flag purse seine vessels collect detailed information on the DFAD design used and whether this design is in line with the requirements set out in Annex III prior to the deployment of each DFAD.

DFAD Marking

36. Until a scheme to operationalise the FAO Voluntary Guidelines on the Marking of Fishing Gear (VGMFG) is endorsed by the Commission, CPCs shall implement the measures provided for in the following paragraphs.

37. CPCs shall ensure that the instrumented buoy attached to the DFAD contains a physical, unique reference number marking (ID provided by the manufacturer of the instrumented buoy) and marked permanently and clearly visible the vessel's IMO number.

38. As of 1st of January 2025, and with the specific objective to collect information on how to mitigate FAD loss and abandonment, in addition to the marking of the instrumented buoy, CPCs shall ensure that each DFAD is permanently marked with a specific IOTC DFAD unique identifier. This IOTC DFAD unique identifier shall be attributed by the Secretariat to the CPC who will communicate them to the master of the vessel. The marking shall be separate from the instrumented buoy. The standards for the individual marking of DFADs shall be developed by the IOTC Scientific Committee, following preparatory work by the ad hoc working group on FADs and in close collaboration with the Secretariat, at the latest at its 2024 session. These standards shall take into account the requirements of paragraph 33 on DFAD biodegradability to avoid the erasing or loss of the marking and the work to operationalise the FAO Voluntary Guidelines on the Marking of Fishing Gear.

39. CPCs shall require the responsible buoy operator to declare the end of use (retrieved, lost or abandoned) of the DFADs marked with an IOTC DFAD unique identifier which they deployed with their operational buoy.

40. CPCs shall ensure that their flag vessels only use DFADs whose raft and the sub-surface structure underneath the raft have a permanent mark showing the unique vessel IOTC registration number attached to it. Each mark must be:

a. at least 75mm x 65mm in size;
b. made of durable material; and
c. securely fixed to the sub-surface structure and not removable.

41. In 2027, notwithstanding the endorsement of the scheme mentioned in paragraph 36, the IOTC Secretariat should report to the Commission on the implementation of the marking of DFADs and suggest any potential improvement in this respect.

42. CPCs shall endeavour to conduct inspections, both at sea and at port, to ensure that their flag vessels comply with gear marking and other requirements. CPCs shall report deployed DFADs found without required markings to the relevant flag CPC, if possible, and the IOTC Secretariat. CPCs shall conduct port State inspections of fishing gear 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 (PSMA), including with respect to conditions relating to the marking of fishing gear.

Data Reporting and Analysis

43. CPCs shall submit the data elements provided in Annex I 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).

44. The IOTC Scientific Committee will analyse the information and data gathered under this Resolution, when available, and provide scientific advice on additional DFAD management options for consideration by the Commission, including recommendations on the number of DFADs to be operated and new and improved DFAD designs. When assessing the impact of DFADs on the dynamics 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, lost and discarded DFADs.

Entry Into Force

45. Without prejudice to paragraphs 28 to 30, this Resolution shall be reviewed by the Commission, at the latest, at its Session in 2028 based on recommendations from the IOTC Scientific Committee.

46. The IOTC Scientific Committee shall undertake evaluation of the effectiveness of the measures detailed in this Resolution. In addition to paragraph 30, the IOTC Scientific Committee shall, if it lacks sufficient scientific evidence which may prevent it from formulating management advice on DFADs, provide advice to the Commission.

47. With the exception of paragraphs 28 to 30, which shall enter into force immediately after the adoption of this Resolution, this Resolution shall enter into force on 1 January 2024.

48. 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 all the obligations under this Resolution.

49. Resolution 23/02, On Management of drifting *Procedures on a fish aggregating devices (DFADs) in the IOTC area of Competence*, is superseded by this Resolution.

ANNEX I DATA COLLECTION FOR DFADS

1. For each activity on a DFAD, floating object and/or instrumented buoy, whether followed by a set or not, each fishing, supply vessel shall report the following information:

a) Vessel (name and registration number of the fishing, supply vessel)

b) Position of the floating object or the buoy at the time of the operation (as the geographic location of the event (Latitude and Longitude) in degrees and minutes)

c) Date (as DD/MM/YYYY, day/month/year)

d) Type of floating object (as defined in Table 1)

e) Type of activity with the floating object

f) In the case of floating objects that are DFADs, information on the design characteristics, including the, the biodegradability category, the materials and the dimensions. These information are mandatory at the time of DFAD deployment. They should be provided to the extent possible during DFAD visits (i.e. without having to lift the DFAD out of the water)

g) the DFAD unique identifier number

h) the instrumented buoy unique identifier

i) the type of buoy activity and, in the case of buoy deactivation, the cause (DFAD is either retrieved from the sea, abandoned or lost)

2. 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 shall report these data aggregated per vessel at 1*1 degree (where applicable) and monthly to the Secretariat.

3. Classification of Floating Objects

Code	Description	Example	Type of impact
DFAD	Drifting FAD	Bamboo or metal raft	Fishing effort, habitat modification, pollution
AFAD	Anchored FAD	Anchored floating platform	Fishing effort, habitat modification, pollution
FALOG	Artificial log resulting from fishing activities	Nets, wreck, ropes	Fishing effort, pollution
HALOG	Artificial log resulting from other human activities	Wooden board, oil tank	Fishing effort, pollution
ANLOG	Natural log of animal origin	Dead whale	Fishing effort
VNLOG	Natural log of plant origin	Branches, palm leaf	Fishing effort

4. Classification of activities with floating object and buoys

Code	Name	Description
floating object	Deployment	Deployment of a FAD at sea
	Encounter	Random encounter (without fishing) of a floating object belonging to another vessel or not equipped with a buoy
	Visit	Visit (without fishing) of a floating object (known position, owned by the vessel)
	Consolidation	Deployment of a FAD on a floating object (e.g. to enhance floatability)
	Fishing	Fishing set on the floating object
	Retrieval	Retrieval of the floating object
	Loss	Unvoluntary end of use of the floating object (end of transmission of the buoy)
	Abandonment	Deliberate end of use of the floating object due to a case of force majeure or the floating object is unreachable (buoy still present and able to transmit)
BUOY	Deployment	Deployment (tagging) of a buoy on a floating object already drifting at sea without buoy or deployment of a FAD equipped with a buoy
	Transfer	Replacement of the buoy owned by another vessel by a buoy of the vessel
	Retrieval	Retrieval of the buoy on a floating object drifting at sea
	Loss	Involuntary end of use of the buoy (lost or involuntary end of transmission of the buoy)
	Abandonment	Voluntary end of use of the buoy (buoy still able to transmit)

5. Classification of outcome of DFADs deployed

	DFAD is deployed + buoy activated					
	↓					
	Buoy is operational					
	Signal is active and buoy can be located				Signal is lost and buoy cannot be located	
	DFAD can be retrieved		DFAD cannot be retrieved		DFAD cannot be located, so not retrievable	
Reason to deactivate buoy	DFAD and buoy are taken from the sea	Buoy owner decides not to recover the DFAD	Not reachable (e.g. in the EEZ of another country)	Buoy is robbed but signal is active	DFAD is robbed	Buoy is broken/technical issue
Final status of the DFAD	Retrieved FAD	Discarded DFAD	Abandoned DFAD	Lost DFAD		

ANNEX II 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.
8. DFAD logbook template (data to be collected specified in Annex I).

ANNEX III PRINCIPLES FOR NON-ENTANGLING AND BIODEGRADABLE DESIGNS OF DFADS

1. The surface structure of the DFAD shall not be covered, or only covered. 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. The sub-surface structure of DFADs shall not exceed a length of 70 meters.

2. For the purposes of this Resolution, categories of DFAD biodegradability are:

Category I: All parts (i.e., raft and tail and floating components) of the DFAD, with the exception of materials used for the instrumented buoys, are built with biodegradable materials.

Category II: All elements (i.e., raft and tail) of the DFAD, with the exception of materials used for the instrumented buoys and floating components, are built with fully biodegradable materials.

Category III:

The subsurface part of the FAD is made of 100% biodegradable materials, whereas the surface part, any flotation components and the instrumented buoy contain non-biodegradable materials.

The subsurface part of the FAD and the instrumented buoy contain non-biodegradable materials, whereas the surface part is made of 100% biodegradable materials, except for, possibly, flotation components.

Category IV: All parts of the DFAD (i.e., raft, tail and instrumented buoy) are built partly or fully with non-biodegradable materials.