
**ON MANAGEMENT OF DRIFTING FISH AGGREGATING DEVICES (FADS)
IN THE IOTC AREA OF COMPETENCE**SUBMITTED BY: EUROPEAN UNION

Explanatory Memorandum

This proposal aims to update the management framework of drifting fish aggregating devices (FADs). The text presented is in line with the EU's effort to review, under a new text, the current provisions in place under Resolution 19/02 and adapt them to reflect the increased knowledge, technological progress and revised IOTC framework. It 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.

This proposal sets new limits for the number of buoys (deployed at sea and acquired). The overall management approach remains the same as resolution 19/02 by managing the number of DFADs through the number of buoys.

New requirements will allow to reduce the negative impact of DFAD losses and introduce more accountability for the fleets using them. A general principle of mandatory retrieval of all DFADs will be thus accompanied by new specific requirements, such as a reporting obligation on the fate of all DFADs put at sea (making the distinction between lost, abandoned and discarded DFADs), and a mandatory marking of the DFAD shall be introduced to increase traceability. Lastly, to monitor the correct use of DFAD instrumented buoy, an electronic register shall be developed by the IOTC Secretariat.

This proposal is accompanied by a draft resolution on biodegradability of FADs which follows the model proposed or already adopted in other RFMOs.

**RESOLUTION 24/XX
ON MANAGEMENT OF DRIFTING FISH AGGREGATING DEVICES
(FADS) IN THE IOTC AREA OF COMPETENCE**

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

The Indian Ocean Tuna Commission (IOTC),

RECALLING that Article 5 of the Agreement for the Implementation of the Provisions of the United Nations Convention of the Law of the Sea of December 1982 relating to the Conservation

and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks (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;

RECALLING that Article 5 of 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;

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;

CONSIDERING 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 large-scale use of fish aggregating devices (FADs) 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;

RECOGNISING that FADs under the competence of IOTC should be managed to ensure the sustainability of fishing operations;

ALSO RECOGNISING that the activities of supply vessels and the use of FADs are an integral part of the fishing effort exerted by the purse seine fleet;

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;

NOTING that Resolution 12/04 *On the conservation of marine turtles* requested that CPCs consider the implementation of measures to reduce the incidences of entanglement of marine turtles and to mitigate their interactions in fisheries covered by the IOTC Agreement;

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;

CONCERNED of the impact of abandoned, lost or discarded FADs in the ocean greatly affecting marine life and the need to facilitate their identification and recovery;

RECALLING that the measures taken in accordance with Article 194 of UNCLOS 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;

NOTING that since the implementation of Resolution 19/02 only non-entangling FADs, both drifting and anchored, should be designed and deployed to prevent the entanglement of sharks, marine turtles and other species;

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;

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

PART 1 - Definitions

1) For the purposes 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, and may aggregate fish..
- b) “Drifting Fish Aggregating Device (DFAD)” means a FAD not tethered to the bottom of the ocean deployed and tracked for the purpose of aggregating fish.
- c) “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.
- d) “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 at least its position.
- e) “Buoy owner” means the owner/master/operator of a fishing vessel who is in charge of tracking an instrumented buoy and is authorised to request its activation and/or deactivation.
- f) “Active buoy” means an instrumented buoy from which the satellite communication service has been initiated and switched on, which has been deployed at sea on a drifting FAD or log and which is transmitting position.
- g) “Deactivation of a buoy” means the act of ending satellite communications service, which is done by the buoy supplier company at the request of the vessel owner or buoy owner.

- h) “Reactivation” means the act of re-enabling satellite communications services by the buoy supplier company at the request of the buoy owner.
 - i) “Abandoned DFAD” means a DFAD which was initially deployed with the intention of later retrieval but that is deliberately left at sea due to *force majeure* or other reasons.
 - j) “Lost DFAD” means a DFAD over which the buoy owner has lost control and that cannot be located by the buoy owner.
 - k) “Discarded DFAD” means a DFAD that is released at sea without any attempt for further control or recovery by the buoy owner.
- 2) This Resolution shall apply to Contracting Parties and Cooperating Non-Contracting Parties (CPCs) having vessels fishing on DFADs aggregating tuna species in the IOTC area of competence.

PART 2- DFADs Management measures

DFADs limits

- 3) Only purse seiners and associated supply¹ vessels are allowed to deploy DFADs and instrumented buoys in the IOTC Area of Competence.
- 4) CPCs shall require, in respect of its flag vessels operating in the IOTC area of competence that:
 - a) the maximum number of instrumented buoys followed at any one time by any purse seine vessel:
 - i. from the 1 January 2026, to be 260; and
 - ii. from the 1 January 2028, to be 240.
 - b) the maximum number of instrumented buoys that may be acquired annually for each purse seine vessel shall not be more than 400.

Reporting Obligations

- 5) CPCs shall:
 - a) ensure that purse seine and supply vessels using DFADs record any activity in association with a floating object (FAD or log) and/or an instrumented buoy, from the deployment to the end of use, by providing the data and information listed Annex I and following a template provided by the Secretariat;
 - b) submit these data and information to the Commission annually by 30 June, following the IOTC standards for the provision of catch and effort data; these shall be made available for analysis to the IOTC Scientific Committee at the aggregated level set by IOTC Resolution 15/02, and under the confidentiality rules set by IOTC Resolution 12/02.

¹ Supply vessel includes both the notion of supply and support vessel

- 6) In order to support the monitoring of compliance with the limitations established in this Resolution, CPCs shall:
 - a) ensure their flag vessels use instrumented buoys on all DFADs and prohibit the use of any other buoys, such as radio buoys, that do not meet the definition in paragraph 1;
 - b) ensure their flag vessels only deploy DFADs with an active buoy and systematically require their registration upon deployment in the DFAD Register
 - c) ensure that reactivation of an instrumented buoy is only done after it has been brought back to port and has been authorised by the CPC;
 - d) 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, including instrumented buoys which have been lost, or abandoned and/or discarded by 1° by 1° grid area and month strata and DFAD type; and
 - e) require, while protecting business confidential data, its flag vessels or the instrumented buoy supplier company to report, daily information on all active DFADs, including the date, instrumented buoy ID, and assigned vessel and daily position (latitude, longitude). CPCs shall compile this information at monthly intervals and submit with a time delay of at least 60 days, but no longer than 90 days to the Secretariat.

Buoy registration

- 7) Following the guidelines in Annex II, the IOTC Secretariat shall develop and maintain an electronic register for all instrumented buoys deployed in the IOTC area of competence. The proper functioning of the electronic register shall be tested with a selection of vessels during the second semester of 2025. The electronic register shall be effective as of the 1 January 2026.
- 8) The information inserted in the electronic register under Annex II shall be accessible by both the IOTC Secretariat and the flag CPC of the purse seine vessel to which the instrumented buoy is assigned.
- 9) The flag CPC shall verify the information provided by the buoy owner and validate them at least once a year.
- 10) Buoys deployed before the entry into force of the DFAD register and still active on the 1 January 2026 shall be registered at the entry into effect of the register.
- 11) 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 together with the IOTC DFAD unique identifier as referred to in paragraph 22. Once the IOTC Secretariat receives this information, the relevant instrumented buoys shall appear as active in the electronic register.
- 12) CPCs shall ensure that their flag vessels only activate instrumented buoys when physically present on board the purse seine or support vessel.
- 13) 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 active anymore in the register. If an active buoy attached to a DFAD is deactivated or lost without being retrieved, the buoy owner shall notify the IOTC 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.

- 14) Until the DFAD register is implemented, CPCs shall ensure that their vessels record in the appropriate logbook, the instrumented buoy unique reference number and the date, time and geographical coordinates (decimal degrees) of its deployment.
- 15) Data contained in the DFAD register shall be treated as confidential information and the IOTC Secretariat shall follow the procedures for the safeguard of records laid out in Resolution 12/02 on Data confidentiality policy and procedures.
- 16) Any CPC may submit a request for access to the data contained in the DFAD register, subject to the agreement of the flag CPC. All requests shall be made in writing to the Executive Secretary by the main point of contact of the CPC (Head of Delegation or Alternate). The request shall include the exact data required and a description of their intended use. The data shall only be disclosed after the written consent of the flag CPC concerned.
- 17) The Commission may decide to make the data available for purposes of scientific research following a request of the IOTC Scientific Committee and with the written consent of the flag CPC concerned. The data shall be made available to the IOTC Scientific Committee in a form that does not hinder confidential business information and shall include only data older than 6 months.

Monitoring and mitigation measures

- 18) 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 as outlined as an example in Annex III:
 - a) the use of mesh materials shall be prohibited for any part of a DFAD; and
 - b) only non-entangling material and designs shall be used.
- 19) CPCs shall ensure that their vessel do not deploy instrumented buoys on DFADs which do not comply with the requirements of this Resolution and Resolution XX on biodegradability. Purse seine vessels encountering DFADs that are not compliant with the requirement of IOTC CMMs shall immediately retrieve such DFADs from the water, unless impeded to do so for justified reasons.
- 20) CPCs shall report to the IOTC Executive Secretary any case of non-compliance with this Resolution or Resolution XX on biodegradability. Using the above mentioned register, the IOTC Executive Secretary shall contact the flag CPC with any relevant information.
- 21) CPCs shall ensure that the instrumented buoy attached to the DFAD is permanently marked with a physical tag in a non-degradable material on which the unique reference number marking (ID provided by the manufacturer of the instrumented buoy) and the IOTC unique vessel identifier number permanently and clearly visible.

- 22) As of 1st of January 2026, 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 referred to in paragraphs 1 and 21, CPCs shall ensure that each DFAD is permanently marked with a specific IOTC DFAD unique identifier. This IOTC DFAD unique identifier shall be attributed and kept confidential by the Secretariat to the CPC *[sic]* 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 2025 session. These standards shall take into account the requirements of Resolution XX on DFAD biodegradability to avoid the erasing or loss of the marking.
- 23) CPCs shall require the buoy owner 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 instrumented buoy in accordance with paragraph 13.
- 24) CPCs shall require that their vessels do not discard any DFAD or associated instrumented buoy. CPCs shall ensure that when an instrumented buoy is retrieved from the sea, no DFAD is left without an active instrumented buoy, so that the DFAD is also retrieved if no other active instrumented buoy is attached.
- 25) CPCs shall endeavour to conduct inspections, both at sea and at port, to ensure that their flag vessels comply with marking of fishing gears and FADs and other requirements. CPCs shall report DFADs found at sea without required markings to the relevant flag CPC, if possible, and the IOTC Executive Secretary. CPCs shall conduct port State inspections of fishing gears, DFADs or materials delivered onboard to build DFADs 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)
- 26) CPCs shall report any factual information showing reasonable grounds for suspicion of violations of any provision of this Resolution.

PART 3 - Scientific work and final provisions

- 27) The information provided in paragraph 6.d. shall be stratified by fleet, year, month and 1x1 degrees grid, and expressed as the average daily number of active instrumented 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 scientific analysis, and following the agreement by the flag CPC, data on DFAD trajectories shall be made available in a form that does not hinder confidential business information.
- 28) The IOTC Scientific Committee shall analyse further information, when available, and provide scientific advice on existing, additional or alternative FAD management options for sustainable fisheries to be submitted for consideration by the Commission.
- 29) 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 a comparative analysis of the contribution of all fishing gears to the juvenile mortality of targeted tunas and any other advice to recover or maintain stock size above levels which can produce the MSY and keep the risk of violating/exceeding limit reference points to a low probability; and
 - b) providing an analysis of the efficiency of current active 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.
- 30) The Working Party on Implementation of Conservation and Management Measures shall review existing Resolutions and obligations and work on a simplified and holistic framework for all fleets targeting tropical tunas. This framework shall be presented to the Compliance Committee in 2025 and subsequently submitted to the Commission for its potential adoption.
 - 31) The Secretariat shall submit a report, on an annual basis, to the IOTC Compliance Committee on the level of compliance by each CPC with this Resolution.
 - 32) This Resolution shall enter into force on 1 January 2025.
 - 33) Resolution 23/02 *On Management of Drifting Fish Aggregating Devices (DFADs) in the IOTC area of competence* is repealed by this Resolution.
 - 34) Resolution 19/02 *Procedures on a fish aggregating devices (FADs) management plan* is superseded by this Resolution.

ANNEX I
DATA COLLECTION FOR DFADs AND THEIR INSTRUMENTED BUOYS

- 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:

Category	Element	Element data type	Mandatory	Notes
Vessel	Vessel IOTC ID	Vessel identifier	Y	
	Type	Dictionary entry	Y	Can be inferred
Date	Year	Integer	Y	
	Month	Integer	Y	
	Day	Integer	Y	
Location of the floating object and/or instrumented buoy at the time of the operation	Longitude	Decimal	Y	
	Latitude	Decimal	Y	
Location of the vessel if different from the floating object or buoy	Longitude	Decimal	Y	
	Latitude	Decimal	Y	
Floating object	Identifier	Identifier	Y (when present)	In case of DFAD visit this should be provided to the extent possible, i.e. without having to lift the DFAD out of the water
	Type	Dictionary entry	Y	As defined in paragraph 3 of this annex
	Biodegradability category (if the floating object is a DFAD)	Dictionary entry	Y	As defined in Resolution XX on Biodegradability
	Activity type	Dictionary entry	Y	As defined in paragraph 4 of this annex
	Is plastic present?	Boolean		
	Is metal present?	Boolean		

Emerged part	Length	Decimal	Y (if clearly visible)	In cm
	Width	Decimal		In cm
	Height	Decimal		In cm
	Is mesh present?	Boolean		
	Mesh size	Decimal		In mm
Submerged part	Is plastic present?	Boolean	Y (if clearly visible)	
	Is metal present?	Boolean		
	Length	Decimal		In cm
	Width	Decimal		In cm
	Height	Decimal		In cm
	Is mesh present?	Boolean		
	Mesh size	Decimal		In mm
Buoy	Identifier	Identifier	Y (if buoy present)	
	Position known	Boolean		
	Activity type	Dictionary entry		As defined in paragraph 5 of this annex In the case of buoy deactivation, the cause for deactivation (DFAD is either retrieved from the sea, abandoned or lost) and position of the vessel.

- 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 shall be recorded according to the table below. CPCs shall report these data aggregated per vessel at 1*1 degree (where applicable) to the Secretariat

Category	Element	Element data type	Mandatory	Notes
Vessel	Vessel IOTC ID	Vessel identifier	Y	
	Type	Dictionary entry	Y	Can be inferred
Date	Year	Integer	Y	
	Month	Integer	Y	
Location	1x1 grid	CWP grid identifier	Y	
Floating object	Type	Dictionary entry	Y	As defined in paragraph 3 of this annex
	Activity type	Dictionary entry	Y	As defined in paragraph 4 of

				this annex
Effort	Number of activities	Integer	Y	
	Number of sets	Integer		Can be 0
	Data raised?	Boolean		
Catches #1	Species code	ASFIS Identifier	Y (activity followed by set)	Single species
	Fate	Dictionary entry		Retained / Disc.
	Catches / discards	Decimal		Amount
	Unit	Dictionary entry		weight or number
...
Catches #N	Species code	ASFIS Identifier	Y (activity followed by set)	Single species
	Fate	Dictionary entry		Retained / Disc.
	Catches / discards	Decimal		Amount
	Unit	Dictionary entry		weight number

3) Classification of Floating Objects:

Code	English description
ANLOG	Natural log or floating debris of animal origin
DFAD	Drifting FAD
AFAD	Anchored FAD
FALOG	Artificial log or floating debris resulting from human activity (and related to fishing activities)
HALOG	Artificial log or floating debris resulting from human activity (not related to fishing activities)
VNLOG	Natural log of plant origin

4) Classification of activities with floating object:

Code	Activity	Description
DE	Deployment	Deployment of a FAD at sea
CO	Consolidation	Deployment of a DFAD on a floating object (e.g. to enhance floatability)
VF	Visit with fishing	Visit of a floating object resulting in a set
VI	Visit without fishing	Visit without fishing of a floating object
LO	Loss	Unvoluntary end of use of the floating object (end of transmission of the buoy)
AB	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)
ST	Stranding	Abandonment is due to the floating object being stranded on shallow marine habitats and not drifting anymore
RE	Retrieval	Retrieval of the floating object

5) Classification of activities with instrumented buoys

Code	Activity	Description
DE	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
LO	Loss	Involuntary end of use of the buoy (lost or involuntary end of transmission of the buoy)
AB	Abandonment	Voluntary end of use of the buoy (buoy still able to transmit)
RE	Retrieval	Retrieval of the buoy on a floating object drifting at sea
TR	Transfer	Replacement of the buoy owned by another vessel by a buoy of the vessel

6) Classification of outcome of DFADs deployed:

DFAD is deployed + buoy activated						
↓						
Buoy is active						
Buoy is transmitting and can be located				Buoy is not transmitting and 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 is transmitting	DFAD is robbed	Buoy is broken/technical issue/sunken buoy
Final status of the DFAD	Retrieved FAD	Discarded DFAD	Abandoned DFAD	Lost DFAD		

ANNEX II**GUIDELINES FOR THE DEVELOPMENT OF AN ELECTRONIC REGISTER FOR INSTRUMENTED BUOYS**

- 1) The IOTC Secretariat shall develop an electronic register. The IOTC Secretariat shall explore the possibility to develop an application.
- 2) The electronic register shall allow buoy owners to automatically insert the following information concerning the deployment of instrumented buoys:
 - a. unique instrumented buoy reference number that will allow the identification of its buoy owner;
 - b. name of the buoy owner;
 - c. unique IOTC Vessel Register number of the purse seiner that is assigned to the instrumented buoy;
 - d. flag State of the purse seine vessel to which the instrumented buoy is assigned;
 - e. manufacturer of the instrumented buoy;
 - f. model name of the instrumented buoy.
 - g. IOTC DFAD unique identifier and biodegradability category of the DFAD with which the buoy was deployed
 - h. Date and time of deployment
 - i. Location of deployment
- 3) The register shall take the simplest possible form and include a “click” button to automatically inform about the activation and deactivation of an instrumented buoy, as described in paragraphs 12 and 14. In developing the electronic register tool, the IOTC Secretariat shall consider mechanisms to export data transmitted under Annex I to potentially avoid double reporting.
- 4) The IOTC Secretariat shall present the structure and functioning of the electronic register at the Commission meeting of 2025. The IOTC Secretariat shall then start the implementation of the electronic register unless decided otherwise by the Commission.

ANNEX III

NON-PRESCRIPTIVE EXAMPLES FOR THE DESIGN AND DEPLOYMENT OF DFAD

- 1) The surface structure of the 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.

