



**SCIENTIFIC COMMITTEE
THIRTEENTH REGULAR SESSION**

**Rarotonga, Cook Islands
9 – 17 August 2017**

**Resolution C-16-01: Amendment of Resolution C-15-03
on the Collection and Analyses of Data on Fish-Aggregating Devices**

WCPFC-SC13-2017/ ST-IP-13

IATTC

INTER-AMERICAN TROPICAL TUNA COMMISSION

90TH MEETING

La Jolla, California (USA)

27 June-1 July 2016

RESOLUTION C-16-01

**AMENDMENT OF RESOLUTION C-15-03 ON THE COLLECTION
AND ANALYSES OF DATA ON FISH-AGGREGATING DEVICES**

The Inter-American Tropical Tuna Commission (IATTC):

Taking into account the best available scientific information on the status of the bigeye, yellowfin and skipjack stocks;

Committed to the long-term conservation and sustainable exploitation of fisheries in the eastern Pacific Ocean (EPO);

Understanding that all fishing gears, including fish-aggregating devices (FADs), have an effect on the stocks and the pelagic ecosystem in the EPO, and that such effects should be fully understood by the Members of the Commission;

Attentive to the provisions of IATTC Resolution C-99-07 on measures related to the regulation of FADs;

Agreeing that, to accurately provide the scientific advice necessary to effectively manage tuna fisheries in the EPO, it is necessary for the scientific staff of the IATTC to have access to, and analyze, the relevant data regarding such fisheries and gears, and for Commission Members to put in place measures as needed to collect such information in their fisheries;

Acknowledging that observers currently collect data on FADs in the EPO that have been examined by the IATTC staff (Document SAC-02-13) and that the Commission has adopted measures for further research on FADs; the significant effect that FADs may have on bigeye tuna spawning biomass, according to IATTC estimates (Document SAC-03-06); that skipjack tuna is captured on FADs and in unassociated schools in the EPO (Document SAC-03-03), and according to IATTC estimates, its exploitation rate has been increasing in recent years (Document SAC-03-07);

Recognizing that these measures need to be expanded and improved upon to ensure that the effects of the use of FADs on highly migratory fish stocks along with non-target, associated and dependent species, are fully understood and that the Commission can receive the best available scientific advice concerning mitigation of any negative effects;

Committed to ensuring that such scientific advice is taken into account in the development of the Commission's conservation and management measures concerning fishing for tunas;

Noting that the Scientific Advisory Committee (SAC) has recommended that the Commission should strengthen the work on FADs by holding a meeting involving managers, scientists, and other stakeholders;

Noting that, based on recent scientific analysis, the development of improved FAD designs, in particular non-entangling FADs, both drifting and anchored, helps reduce the incidence of entanglement of sharks, sea turtles and other species;

Further noting that whale sharks are particularly vulnerable to exploitation, including from fishing, and noting the ecological and economic value these species can bring to the EPO; and

Concerned about the potential effects of purse-seine operations on the status of whale sharks when deliberately or accidentally set upon;

AGREES:

1. For the purposes of this Resolution, the term “Fish-Aggregating Device” (FAD) means anchored, drifting, floating or submerged objects deployed and/or tracked by vessels, including through the use of radio and/or satellite buoys, for the purpose of aggregating target tuna species for purse-seine fishing operations.

SECTION 1. FAD DATA COLLECTION

2. Beginning 1 January 2017, CPCs shall require the owners and operators of all purse-seine vessels flying their flag, when fishing on FADs in the IATTC Convention Area, to collect and report the information contained in Annex I. The data may be collected through a dedicated logbook, modifications to regional logsheets, or other domestic reporting procedures.
3. CPCs shall provide the data collected for the previous calendar year, pursuant to Paragraph 2, which are available at the time of submission, to the Director. CPCs shall submit the data to the Director no later than 60 days prior to each regular meeting of the SAC.
4. No later than the IATTC annual meeting in 2018, the scientific staff of the IATTC, in coordination with the SAC, shall present to the Commission the preliminary results of its analyses of the information collected pursuant to Paragraph 2, and shall identify additional elements for data collection, as well as specific reporting formats, necessary to evaluate the effects of the use of FADs on the ecosystem of the EPO fishery. The analyses shall also incorporate information from data on FADs collected by observers through the *Flotsam Information Record*.
5. In addition, no later than the IATTC annual meeting in 2018, the scientific staff of the IATTC, in coordination with the SAC and taking into account the outcomes of the *Ad Hoc* Working Group on FADs, shall present to the Commission initial recommendations based on information collected, based on this resolution and through other mechanisms, for the management of FADs, including possible effects of FADs in the tuna fishery in the EPO. The Commission shall consider adopting management measures based on those recommendations, including a region-wide FAD management plan, and which may include, *inter alia*, recommendations regarding FAD deployments and FAD sets, the use of biodegradable materials in new and improved FADs and the gradual phasing out of FAD designs that do not mitigate the entanglement of sharks, sea turtles, and other species.
6. The scientific staff of the IATTC, in coordination with the SAC, shall also formulate recommendations for regulating the management of the affected stocks for presentation to the Commission, on the basis of the results of its analyses of the collected FAD information. Such recommendations shall include methods for limiting the capture of small bigeye and yellowfin tuna associated with fishing on FADs.
7. In 2018, compliance with the FAD reporting requirements of this Resolution will be comprehensively reviewed by the *Committee for the Review of the Implementation of Measures adopted by the Commission* and presented to the Commission.
8. Data collected pursuant to this resolution shall be treated under the rules established in the IATTC Resolution on Confidentiality.

SECTION 2. FAD IDENTIFICATION

9. No later than 1 January 2017, CPCs shall require the owners and operators of their applicable flagged purse-seine fishing vessels to identify all FADs deployed or modified by such vessels in accordance with a Commission identification scheme detailed in footnote 1 of Annex 1.

SECTION 3. NON-ENTANGLING FADS

10. To reduce the entanglement of sharks, sea turtles or any other species, the design and deployment of FADs should be based on the principles set out in Annex II.
11. Annex II is consistent with the 2015 recommendations of the scientific staff of the IATTC. The scientific staff of the IATTC, in coordination with the SAC, shall continue to review research results

on the use of non-entangling material and biodegradable material on FADs, and shall provide specific recommendations no later than the 2018 IATTC annual meeting, consistent with Paragraph 5.

SECTION 4. WHALE SHARKS

12. CPCs shall prohibit their flag vessels from setting a purse-seine net on a school of tuna associated with a live whale shark, if the animal is sighted prior to the commencement of the set.
13. CPCs shall require that, in the event that a whale shark is not deliberately encircled in the purse-seine net, the master of the vessel shall:
 - a. ensure that all reasonable steps are taken to ensure its safe release; and
 - b. report the incident to the relevant authority of the flag CPC, including the number of individuals, details of how and why the encirclement happened, where it occurred, steps taken to ensure safe release, and an assessment of the life status of the whale shark on release (including whether the animal was released alive but subsequently died).

SECTION 5. AD HOC PERMANENT WORKING GROUP ON FADS

14. An *ad hoc* Permanent Working Group on FADs (Working Group) is established.
15. This Working Group shall be multi-sectorial, involving various stakeholders such as scientists, fishery managers, fishing industry representatives, administrators, representatives of non-governmental organizations, and fishers. Expressions of interest to participate in the Working Group shall be provided to the Director, who shall inform CPCs and the Chair of the FADs Working Group.
16. To the highest degree possible, the Working Group shall conduct its work electronically or, if convenient and cost-effective, in targeted face-to-face meetings that take place in conjunction with other Commission meetings.
17. The Working Group shall report on a regular basis to the Commission and present an initial report of its findings at the 2017 meeting of the SAC.
18. The Terms of Reference of the Working Group are those indicated in Annex III.
19. The Working Group shall liaise, as far as possible, with other similar working groups on FAD management established in other tuna regional fisheries management organizations (tuna RFMOs), in particular the Western and Central Pacific Fisheries Commission (WCPFC).
20. The IATTC, at its 2017 annual meeting, will review the progress and outcomes of the Working Group and will decide on the necessity for its continuation.
21. This Resolution replaces Resolution C-15-03.

Annex I

CPCs are required to ensure their vessel owners and operators record and report to the appropriate national authorities any interaction with FADs, using a standard format to be developed by the Commission staff.

For each interaction with a FAD, the following information shall be recorded:

- i. Position;
- ii. Date;
- iii. Hour;
- iv. FAD identification¹;
- v. FAD type (*e.g.*, drifting natural FAD, drifting artificial FAD);
- vi. FAD design characteristics (dimension and material of the floating part and of the underwater hanging structure);
- vii. Type of the activity (set, deployment, hauling, retrieving, loss, intervention on electronic equipment, other (specify));
- viii. If the activity is a set, the results of the set in terms of catch and bycatch; and
- ix. Characteristics of any attached buoy or positioning equipment (positioning system, whether equipped with sonar, *etc.*).

Annex II

Principles for design and deployment of FADs

1. If a flat raft is used as a FAD, the surface structure should not be covered, or only covered with material that attempts to minimize entanglements.
2. Any subsurface component of the FAD should be constructed in a manner designed to avoid entangling marine life.
3. To reduce the amount of synthetic marine debris, the use of natural or biodegradable materials (such as hessian canvas, hemp ropes, *etc.*) for drifting FADs should be promoted.

Annex III

The objectives of the Working Group are the following:

1. Collect and compile information on FADs in the EPO, including but not limited to data collected by the IATTC and reports prepared by the scientific staff of the IATTC;
2. Review the FAD data collection requirements established in this Resolution to assess the need for revision;
3. Develop data reporting formats and definitions of terms related to FAD fishing (*e.g.* biodegradable FADs, non-entangling FADs, *etc.*), to implement obligations under this Resolution, in cooperation

¹ CPCs shall obtain unique alphanumeric codes from the IATTC staff on a periodic basis and distribute those numbers to the vessels in their fleets for FADs that may be deployed or modified, or in the alternative, if there is already a unique FAD identifier associated with the FAD (*e.g.*, the manufacturer identification code for the attached buoy), the vessel owner or operator may instead use that identifier as the unique code for each FAD that may be deployed or modified.

The alphanumeric code shall be clearly painted in characters at least 5 cm in height. The characters shall be painted on the upper portion of the attached radio or satellite buoy in a location that does not cover the solar cells used to power the equipment. For FADs without attached radio or satellite buoys, the characters shall be painted on the uppermost or emergent top portion of the FAD. The vessel owner or operator shall ensure the marking is durable (for example, use epoxy-based paint or an equivalent in terms of lasting ability) and visible at all times during daylight. In circumstances where the observer is unable to view the code, the captain or crew shall assist the observer (*e.g.* by providing the FAD identification code to the observer).

with the scientific staff, to be submitted to the Commission for consideration;

4. Compile information regarding developments on FADs in other tuna RFMOs;
5. Compile information regarding developments on the latest scientific information on FADs, including information on non-entangling FADs, and identify priority areas for research;
6. Prepare annual reports for the SAC, including specific recommendations, as appropriate; and
7. Identify and review possible FAD management measures, in coordination with the scientific staff and the SAC, and make recommendations to the Commission, as appropriate.

COMISION INTERAMERICANA DEL ATUN TROPICAL – INTER-AMERICAN TROPICAL TUNA COMMISSION

Fish-aggregating device form (FADS)

GENERAL INSTRUCCIONES.

This form is designed to satisfy the requirements in Annex I of Resolution C-16-01. It is important that it be completed as thoroughly as possible.

Do not write in the shaded areas.

This form should be completed by the master or the person in charge of the fishing operations. The master can delegate this duty to another appropriate officer.

HEADING

Vessel: The name of the vessel.

Trip number: Write the calendar year of the start of the trip and the consecutive number of the trip for that calendar year in the spaces provided. For example: '2015-001', denotes the first trip in 2015.

License No.: This makes reference to the vessel's unique identification provided by the flag State.

FAD ACTIVITY

Date: The date of the event in the format DD/MM/YY (day/month/year)

Time: The local time of the event in a 24 hour format (13:00 = 1 pm).

Identification (of the locating buoy): Record the unique identification number of the locating buoy. If this is a satellite buoy, it **must** be the unique serial number. If it is another type of locating buoy, use a unique identification code that you provide to the FAD or the locating buoy and that can be use as reference for future encounters. For cases not described here, use the space under *Comments*.

Activity: From the following list, chose the numeric code that best describes the activity that you are registering.

1. Assessing: The vessel approaches the FAD to evaluate the quantity of tuna, but makes no set.	2. Deployment: A new or replacement FAD is deployed.
3. Set: The vessel makes a set on the object. If the set is made on a recently deployed FAD, make notes in <i>Comments</i> section.	4. Recovered. The FAD is recovered and placed onboard.
5. Other: Record any other activity not described above, on comments.	

Geographic location: Write the geographic location of the event (Latitude and Longitude) in degrees and minutes. Note the corresponding hemisphere (N=North, S=South, E=East, W=West).

Tuna catch: If the event is a set, write the catch in metric tons of each of the tuna species denoted. When the catch includes other tunas (OTH), record the quantities and species under *Comments*. For events that are not sets, leave blank.

Incidental catch: For the groups noted (Sharks – SHRK –, Turtles – TURT –, Billfishes – BILL –, Manta rays – MANT – and Other vertebrates – OTR –), present in the set, indicate either the number of individuals (N) or metric tonnage (t) caught. Use the line below to record the quantity of these, released alive.

Comments: Use this space as noted above or to make observations that you deem important.

COMISION INTERAMERICANA DEL ATUN TROPICAL – INTER-AMERICAN TROPICAL TUNA COMMISSION

INFORMATION ON FADS

Identification (of the locating buoy): Record the unique identification number of the locating buoy. If this is a satellite buoy, it **must** be the unique serial number. If it is another type of locating buoy, use a unique identification code that you provide to the FAD or the locating buoy and that can be use as reference for future encounters. For cases not described here, use the space under *Comments*

Description: From the following list, chose the numeric code that best describes the floating object.

1. Natural (log, ropes, pallets/racks, fronds, dead animal)	2. FAD owned by your vessel
3. FAD owned by another vessel	4. Anchored object

Components of the surface structure: Choose from the following list the predominant materials used in each section of the surface structure of the floating object.

Raft:

1. Bamboo Rack	2. Bamboo in a sausage form	3. Metallic
4. PVC or plastic	5. No raft	6. Other

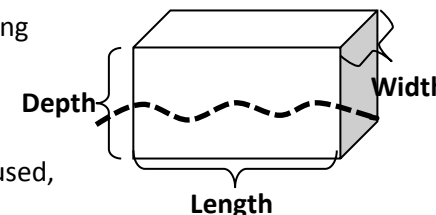
Wrapping/covering:

1. Entangling net	2. Non-entangling net	3. Cloth
4. Palm fronds	5. No wrapping	6. Other

Floating devices:

1. Net corks	2. Plastic buoys	3. Plastic containers
4. No floats	5. Other	

Dimensions (in meters); W –Width –, L –Length–, D –Depth–: Record the dimensions of the floating object in the provided spaces. Do not consider the hanging structure (tail) if one is present.



Hanging structure (tail)

Components 1 and 2: Choose the numeric code from the following list, of the two predominant materials used in the construction of the tail. If only one is used, leave the second space blank.

1. Nylon	2. Palm fronds	3. Bamboo
4. No tail	5. Other	

Config. (Configuration) : Choose the configuration that best describes the tail.

1. Sausage	2. Ropes	3. Cloth	4. Other
------------	----------	----------	----------

Mesh size: If the tail is made of net, indicate the mesh size. Otherwise, leave blank.

Type of loc. buoy (attached to the FAD): Choose from the following list the numeric code that describes the locating beacon attached to the FAD.

1. GPS, SHERPE type	2. Satellite with eco-sunder	3. Satellite with no eco-sunder	4. Other
---------------------	------------------------------	---------------------------------	----------

Comments: Use this space to provide additional information.

COMISION INTERAMERICANA DEL ATUN TROPICAL – INTER-AMERICAN TROPICAL TUNA COMMISSION

FAD ACTIVITY

VESSEL		IATTC Ves. No.		Trip Number		IATTC Trip. No.		License No.	
--------	--	----------------	--	-------------	--	-----------------	--	-------------	--

Date	Hour	Identification	Activity	Geographical position		Tuna catch (mt)				Incidental catch: Number [N] o tonnage [t].								Comments		
				Latitude N/S	Longitude E/W	YFT	BET	SKJ	OTR	SHRK	N/t	TURT	N/t	BILL	N/t	MANT	N/t		OTR	N/t
INCIDENTAL CAPTURE RELEASED ALIVE:																				
INCIDENTAL CAPTURE RELEASED ALIVE:																				
INCIDENTAL CAPTURE RELEASED ALIVE:																				
INCIDENTAL CAPTURE RELEASED ALIVE:																				
INCIDENTAL CAPTURE RELEASED ALIVE:																				
INCIDENTAL CAPTURE RELEASED ALIVE:																				
INCIDENTAL CAPTURE RELEASED ALIVE:																				
INCIDENTAL CAPTURE RELEASED ALIVE:																				

COMISION INTERAMERICANA DEL ATUN TROPICAL – INTER-AMERICAN TROPICAL TUNA COMMISSION

INFORMATION ON FADS

Identification	Description	Components of the surface structure			Dimensions (m)			Components and configuration of the hanging structure				Type of loc. buoy	Comments
		Raft	Wrapping	Floating devices	W	L	D	Mat. 1	Mat. 2	Config.	Mesh size (mm)		