

Original: English

**DRAFT RECOMMENDATION BY ICCAT TO REPLACE RECOMMENDATION 16-01 ON A MULTI-ANNUAL CONSERVATION AND MANAGEMENT PROGRAMME FOR TROPICAL TUNAS**  
*(Proposal submitted by South Africa)*

RECALLING the current multi-annual conservation and management programme for tropical tunas;  
[...]  
[...]

NOTING that the stocks of bigeye and yellowfin tuna are currently overfished, and that bigeye tuna is also subject to overfishing;

RECOGNISING that the TAC for bigeye tuna for 2017 was exceeded by more than 20% and that this level of catch is projected to reduce the probability to reach the Convention objectives by 2028 to less than 10%;  
[...]

ACKNOWLEDGING that the TAC for yellowfin tuna was also exceeded in 2016 by 37% in 2016 and by 26% in 2017;

CONSIDERING that the SCRS continues to recommend that effective measures be found to reduce FAD-related and other fishing mortality of small yellowfin and bigeye tuna;  
[...]  
[...]  
[...]

TAKING INTO ACCOUNT the recommendations made by the Panel on the Second ICCAT Performance Review regarding the carryover of underage of catches from one year to another;

FURTHER TAKING INTO ACCOUNT the recommendations made by the first meeting of the Joint Tuna RFMO FAD Working Group and the third meeting of ICCAT's *Ad Hoc* Working Group on FADs, on FAD management objectives and the availability of FAD management measures to reduce juvenile tuna mortality;

NOTING that the SCRS has advised that increased harvests on FADs could have had negative consequences for the productivity of bigeye and yellowfin tuna fisheries (e.g. reduced yield at MSY);

FURTHER NOTING that supply vessels contribute to the increase in efficiency and capacity of purse seiner vessels using FADs and that the number of supply vessels has increased significantly over the years.

THE INTERNATIONAL COMMISSION FOR THE CONSERVATION OF ATLANTIC TUNAS (ICCAT)  
RECOMMENDS THAT:

**PART I**  
**GENERAL PROVISIONS**

**Multi-annual Management, Conservation, and Rebuilding Programme**

1. The Contracting Parties and Cooperating non-Contracting Parties, Entities or Fishing Entities (hereinafter referred to as CPCs), whose vessels have been actively fishing for tropical tunas in the Atlantic shall implement a 10 year Rebuilding Programme Plan for bigeye tuna starting in 2019 and continuing through 2028, with the goal of achieving  $B_{MSY}$  with a probability of more than 50%.

**PART II  
CATCH LIMITS**

***Catch limits for bigeye tuna***

2. The Total Allowable Catch (TAC) for bigeye tuna shall be 55,000 for 2019, 2020, and 2021.
3. CPCs with bigeye tuna catches exceeding 1,575 t in any of the preceding five years or CPCs that currently flag purse seiners engaged in the tropical tuna fishery in the Atlantic Ocean will be assigned annual quotas, which, account for 90% of the TAC in 2019, noting that the overall share of the TAC may change, as follows:

[...]  
[...]  
[...]

CPC	Annual Catch Limit for period <u>2019-2021</u> (t)
Japan	
EU	
Chinese Taipei	
Ghana	
Korea Rep.	
China PR	
Brazil	
Curaçao	
Panama	
Cape Verde	
Belize	
El Salvador	
Senegal	
Guatemala	

4. CPCs listed in paragraph 3 shall ensure that the relative contribution of purse seine caught bigeye tuna to the total quota allocation shall not exceed the 2015 level. That is, CPCs shall not shift bigeye tuna catch from non-purse seine vessels to purse seine vessels.
5. Developed CPCs not listed in paragraph 3 shall not increase catches above 1,575 t in 2019, 2020, or 2021.
6. If the catch of bigeye tuna of any developing coastal State CPC not listed in paragraph 3 exceeds 1,575 t in 2019, 2020, or 2021, a catch limit shall be established for that CPC for the following years. In such a case, the annual quotas listed in paragraph 3 shall be reduced accordingly to maintain the TAC in paragraph 2.
7. The provisions of paragraph 3, 4, 5 and 6 shall not prejudice the rights and obligations under international law of those developing coastal CPCs in the Convention Area whose current fishing activity for bigeye tuna is limited, but that have a real interest in, and history of, fishing for the species, that may wish to develop their own fisheries bigeye tuna in the future.
8. The annual quotas and catch limits described in this Recommendation do not constitute long term rights and are without prejudice to any formal process of negotiation.
9. CPCs shall report quarterly the amount of bigeye caught by vessels flying their flag to the Secretariat by the end of the following quarter. When 80% of the catch limit or threshold for a CPC is exceeded, the Secretariat shall notify that to all CPCs.

10. If the total catch exceeds in any year the TAC in paragraph 2, the Commission shall review these measures.

[...]  
[...]  
[...]

***Underage or overage of catch of bigeye tuna***

11. Overage of an annual catch limit for CPCs listed in paragraph 3 for bigeye tuna shall be deducted from the annual catch limit as follows:

<i>Year of catch</i>	<i>Adjustment Year</i>
<u>2017</u>	<u>2018 or 2019</u>
<u>2018</u>	<u>2019 or 2020</u>
<u>2019</u>	<u>2020 or 2021</u>
<u>2020</u>	<u>2021 or 2022</u>

[...]

- a) Notwithstanding paragraph 11, for Ghana, the overage catch of bigeye tuna in the period 2006 to 2010 shall be repaid by reducing the catch limit of Ghana for bigeye tuna by a yearly amount of 337 t for the period 2012 to 2021.
12. Notwithstanding paragraph 9, if any CPC exceeds its catch limit:
- a) By an amount greater than 5% of its limit, then the amount deducted in the adjustment year shall be determined as 110% of the overage; and/or
- b) During any two consecutive years, the Commission will recommend appropriate measures, which shall include reduction in the catch limit equal to 125% of the excess harvest, and may include, but are not limited to, if necessary, trade restrictive measures. Any trade measures under this paragraph will be import restrictions on the subject species and consistent with each CPC's international obligations. The trade measures will be of such duration and under such conditions as the Commission may determine.
13. Any underage of previous annual catch limits shall no longer be added to the current or subsequent catch limits and future rollover of underage shall not be made until the stock is recovered.

***TAC for yellowfin tuna***

14. The annual TAC for 2019 and subsequent years of the Multi-annual Programme in 110,000 t for yellowfin tuna and shall remain in place until changed based on scientific advice.
15. As a result of the TAC for yellowfin tuna being exceeded in both 2016 and 2017, the SCRS shall complete a stock assessment for this stock in 2019.
16. If the total catch exceeds in any year the TAC in paragraph 14, the Commission shall consider additional management measures for yellowfin tuna at the 2019 annual meeting.

**PART III  
CAPACITY MANAGEMENT MEASURES**

***Capacity limitation for bigeye tuna***

17. A capacity limitation shall be applied for the duration of the Multi-annual Programme, in accordance with the following provisions:
- a) The capacity limitation shall apply to vessels 20 meters length overall (LOA) or greater fishing bigeye tuna in the Convention area.

- b) CPCs which have been allocated a catch limit in accordance with paragraph 3 shall each year:
- i) Adjust their fishing effort so as to be commensurate with their available fishing possibilities;
  - ii) Be restricted to the number of their vessels notified to ICCAT in 2017 as fishing for bigeye tuna. However, the maximum number of longline and purse seine vessels shall each year be subject to the following limits:

<i>CPC</i>	<i>Longliners</i>	<i>Purse seiners</i>	<i>Supply Vessels</i>
<u>Belize</u>			
<u>Brazil</u>			
<u>Cape Verde</u>			
<u>China (Rep.)</u>			
<u>Chinese Taipei</u>			
<u>Curacao</u>			
<u>El Salvador</u>			
<u>European Union</u>			
<u>Ghana</u>			
<u>Guatemala</u>			
<u>Japan</u>			
<u>Korea Rep.</u>			
<u>Panama</u>			
<u>Senegal</u>			

[...]

[...]

[...]

- c) For CPCs for which a capacity limitation applies, vessels fishing tropical tunas in the Convention area may be replaced only by vessels of equivalent capacity or lesser vessels.
- d) The Compliance Committee shall annually review CPCs compliance with capacity management measures.

#### PART IV MANAGEMENT OF FADs

##### ***FAD Management Objectives***

18. The general objectives for management of FADs and supply vessels in the Convention area are defined as follows:

- a) To maximize fishing efficiency of purse seine fisheries targeting tropical tunas, while avoiding adverse impacts to the fishing opportunities of fleets that use other gear or other fishing strategies while also targeting tropical tunas;
- b) To minimize the impact of FAD fishing on the productivity of bigeye and yellowfin stocks that result from the capture of high numbers of juveniles that aggregate with skipjack on FADs;

[...]

[...]

[...]

- c) To minimize the impact of FAD fishing on non-target species, where appropriate, particularly those of conservation concern.
- d) To minimize the impact of FADs and FAD fishing on pelagic and coastal ecosystems, including by preventing the beaching or grounding of FADs in sensitive habitats or the alteration of pelagic habitat.

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***FAD Closure***

19. A three months prohibition of deploying, servicing or setting on FADs shall be in place each year for all purse seine vessels, tender vessels, and any other vessels operating in support of purse seine vessels fishing in exclusive economic zones and the high seas. This should be based on advice by the SRCS taking into account monthly trends in free shoal and FAD-associated catches.

***FAD Limitations***

20. CPCs shall ensure that fleets flying their flag deploy no more than 250 FADs, per purse seine vessel flying their flag, with or without instrumental buoys, each year. In addition, CPCs with purse seine vessels shall limit the number of floating object sets to 2015 levels.
21. CPCs may authorize their purse seine vessels to set on floating objects provided that the fishing vessel has either an observer or a functioning electronic monitoring system on board which is capable of verifying set type, species composition, and providing information on fishing activities to the SCRS.
22. Further analysis shall be conducted by the SCRS on the impact of supply vessels on the catches of juvenile yellowfin and bigeye tuna to be considered in 2019.

***FAD Management Plans***

23. CPCs with purse seine and baitboat vessels fishing for bigeye, yellowfin and skipjack tunas in association with objects that could affect fish aggregation, including FADs, shall submit to the Executive Secretary Management Plans for the use of such aggregating devices by vessels flying their flag by 31 January each year.
24. The objective of the FAD Management Plans shall be to:
- i. improve the knowledge about FAD characteristics, buoy characteristics, FAD fishing, including fishing effort of purse seiners and associated support vessels, and related impacts on targeted and non-targeted species;
  - ii. effectively manage the deployment and recovery of FADs, the activation of buoys and their potential loss;
  - iii. reduce and limit the impacts of FADs and FAD fishing on the ecosystem, including, where appropriate, by acting on the different components of the fishing mortality (e.g. number of deployed FADs, including number of FAD's set by purse seiners, fishing capacity, number of support vessels).
25. The Plans shall be drawn up by following the Guidelines for Preparation for FAD Management Plans as provided in **Annex 1**.

***FAD logbook and list of deployed FADs***

26. CPCs shall ensure that all purse seine and baitboat fishing vessels and all support vessels (including supply vessels) flying their flag, and/or authorized by CPCs to fish in areas under their jurisdiction, when fishing in association with or deploying fish aggregating devices (FADs), including objects that could affect fish aggregation (e.g. carcasses, trunks) shall collect and report, for each deployment of a FAD, each visit on a FAD, whether followed or not by a set, or each loss of a FAD, the following information and data:
- a) Deployment of any FAD
    - i) Position
    - ii) Date
    - iii) FAD type (anchored FAD, drifting artificial FAD)
    - iv) FAD identifier (i.e., FAD Marking and buoy ID, type of buoy – e.g. simple buoy or associated with echo-sounder)
    - v) FAD design characteristics (material of the floating part and of the underwater hanging structure and the entangling or non-entangling feature of the underwater hanging structure)

- b) Visit on any FAD
  - i) Type of the visit (deployment of a FAD and/or buoy<sup>1</sup>, retrieving FAD and/or buoy, strengthening/consolidation of FAD, intervention on electronic equipment, random encounter (without fishing) of a log or a FAD belonging to another vessel, visit (without fishing) of a FAD belonging to the vessel, fishing set on a FAD<sup>2</sup>)
  - ii) Position
  - iii) Date
  - iv) FAD type (anchored FAD, drifting natural FAD, drifting artificial FAD)
  - v) FAD identifier (i.e., FAD Marking and buoy ID or any information allowing to identify the owner)
  - vi) If the visit is followed by a set, the results of the set in terms of catch and by-catch, whether retained or discarded dead or alive. If the visit is not followed by a set, note the reason (e.g. not enough fish, fish too small, etc.)
- c) Loss of any FAD
  - i) Last registered position
  - ii) Date of the last registered position
  - iii) FAD identifier (i.e., FAD Marking and buoy ID)

For the purpose of the collection and the report of the information referred to above and where paper or electronic logbooks already in place do not allow it, CPCs shall either update their reporting system or establish FAD-logbooks. In establishing FAD logbooks, CPCs should consider using the template laid down in **Annex 2** as reporting format. When using paper logbooks, CPCs may seek, with the support of the Executive Secretary, for harmonized formats. In both cases, CPCs shall use the minimum standards recommended by SCRS in **Annex 3**.

27. CPCs shall also ensure that all vessels referred to in paragraph 20 keep updated on a monthly basis and per 1°x1° statistical rectangles a list of deployed FADs and buoys, containing at least the information as laid down in **Annex 4**.

#### **Reporting obligations on FADs and on support vessels**

28. CPCs shall ensure that the following information is submitted every year to the Executive Secretary in a format provided by the ICCAT Secretariat. This information shall be made available to the SCRS and to the *Ad Hoc* Working Group on FADs in a database developed by the ICCAT Secretariat:
- i. the number of FADs actually deployed on a monthly basis per 1°x1° statistical rectangles, by FAD type, indicating the presence or absence of a beacon/buoy or of an echo-sounder associated to the FAD and specifying the number of FADs deployed by associated support vessels, irrespective of their flag;
  - ii. the number and type of beacons/buoys (e.g. radio, sonar only, sonar with echo-sounder) deployed on a monthly basis per 1°x1° statistical rectangles;
  - iii. the average numbers of beacons/buoys activated and deactivated on a monthly basis that have been followed by each vessel;
  - iv. average numbers of lost FADs with active buoys on a monthly basis;
  - v. for each support vessel, the number of days spent at sea, per 1° grid area, month and flag State;
  - vi. purse seine and baitboat catches, efforts and number of sets (for purse seines) by fishing mode (floating-object associated schools and free school fisheries) in line with Task II data requirements (i.e. per 1°x1° statistical rectangles and per month);
  - vii. when the activities of purse seine are carried out in association with baitboat, report catches and effort in line Task I and Task II requirements as “purse seine associated to baitboats” (PS+BB).

<sup>1</sup> Deploying a buoy on a FAD includes three aspects: deploying a buoy on a foreign FAD, transferring a buoy (which changes the FAD's owner) and changing the buoy on the same FAD (which does not change the FAD's owner).

<sup>2</sup> A fishing set on a FAD includes two aspects: fishing after a visit to a vessel's own FAD (targeted) or fishing after a random encounter of a FAD (opportunistic).

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

29. In order to minimize the ecological impact of FADs, in particular the entanglement of sharks, turtles and other non-targeted species, and the release of synthetic persistent marine debris, CPCs shall:
- i. Deploy only non-entangling FADs in line with the guidelines under **Annex 5** of this Recommendation.
  - ii. Undertake research to gradually replace existing FADs with fully biodegradable and non- entangling FADs, with a view to phase out non-biodegradable FADs by [2019].

CPCs shall report on an annual basis on the steps undertaken to comply with these provisions in their FADs Management Plans.

**PART V  
CONTROL MEASURES**

***Specific authorization to fish for tropical tunas***

30. CPCs shall issue specific authorizations to vessels 20 meters LOA or greater flying their flag allowed to fish bigeye and/or yellowfin and/or skipjack tunas in the Convention area, and to vessels flying their flag used for any kind of support of this fishing activity (hereafter referred to as "authorized vessels").

***ICCAT Record of authorized tropical tuna vessels***

31. The Commission shall establish and maintain an ICCAT record of authorized tropical tuna vessels, including support vessels. Fishing vessels 20 meters LOA or greater not entered into this record are deemed not to be authorized to fish, retain on board, tranship, transport, transfer, process or land bigeye and/or yellowfin and/or skipjack tunas from the Convention area or to carry out any kind of support to those activities, including deploying and retrieving FADs and/or buoys.
32. A CPC may allow by-catch of tropical tunas by vessels not authorized to fish for tropical tunas pursuant to paragraph 30 and 31, if this CPC establishes a maximum onboard by-catch limit for such vessels and the by-catch in question is accounted for within the CPC's quota or catch limit. Each CPC shall provide in its Annual Report the maximum bycatch limit it allows for such vessels. That information shall be compiled by the ICCAT Secretariat and made available to CPCs.
33. CPCs shall notify the list of authorized vessels to the Executive Secretary in an electronic form and in accordance with the format set in the Guidelines for Submitting Data and Information Required by ICCAT.
34. CPCs shall, without delay, notify the Executive Secretary of any addition to, deletion from and/or modifications of the initial list. Periods of authorization for modifications or additions to the list shall not include dates more than 45 days prior to the date of submission of the changes to the Secretariat. The Secretariat shall remove from the ICCAT Record of Vessels any vessel for which the periods of authorization have expired.
35. The Executive Secretary shall, without delay, post the record of authorized vessels on the ICCAT website, including any additions, deletions and/or modifications so notified by CPCs.
36. Conditions and procedures referred to in the *Recommendation by ICCAT Concerning the Establishment of an ICCAT Record of Vessels 20 meters in Length Overall or Greater Authorized to Operate in the Convention Area* [Rec. 13-13] shall apply *mutatis mutandis* to the ICCAT record of authorized tropical tuna vessels.

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***Vessels actively fishing tropical tunas in a given year***

37. Each CPC shall, by 31 July each year, notify to the Executive Secretary the list of authorized vessels flying their flag which have fished bigeye and/or yellowfin and/or skipjack tunas in the Convention area or have offered any kind of support to the fishing activity (support vessels) in the previous calendar year. For purse seines this list shall also include the support vessels that have supported the fishing activity, irrespective of their flag.

The Executive Secretary shall report each year these lists of vessels to the Compliance Committee and to the SCRS.

38. The provisions of paragraphs 30 to 37 do not apply to recreational vessels.

***Recording of catch and fishing activities***

39. Each CPC shall ensure that its vessels 20 meters LOA or greater fishing bigeye and/or yellowfin and/or skipjack tunas in the Convention area record their catch in accordance with the requirements set out in **Annex 6** and in the *Recommendation by ICCAT Concerning the Recording of Catch by Fishing Vessels in the ICCAT Convention Area* [Rec. 03-13].

***Identification IUU activity***

40. The Executive Secretary shall, without delay, verify that any vessel identified or reported in the context of this Multi-annual Programme is on the ICCAT record of authorized vessels. If a possible violation is detected, the Executive Secretary shall, without delay, notify the flag CPC. The flag CPC shall immediately investigate the situation and, if the vessel is fishing in relation to objects that could affect fish aggregation, including FADs, request the vessel to stop fishing and, if necessary, leave the area without delay. The flag CPC shall, without delay, report to the Executive Secretary the results of its investigation and the corresponding measures taken.
41. The Executive Secretary shall report to the Compliance Committee at each annual meeting of the Commission on any issue related to identification of unauthorized vessels, the implementation of the VMS, the observer provisions, and the results of the relevant investigation made as well as any relevant measures taken by the flag CPCs concerned.
42. The Executive Secretary shall propose to include any vessels identified in accordance with paragraph 35, or vessels for which the flag CPC has not carried out the required investigation and taken, if necessary, adequate measures in accordance with paragraph 34, on the provisional IUU list.

***Observers***

[...]

[...]

[...]

43. For scientific observers on board vessels targeting bigeye, yellowfin and/or skipjack tunas in the area east of meridian 20°/West longitude and north parallel 28°/ South latitude the following shall apply:

- a) Scientific observers shall automatically be recognized by all CPCs. Such recognition shall allow the scientific observer to continue the collection of information throughout the EEZ visited by the vessel observed. The coastal CPCs concerned shall receive from the flag CPC which mandated the observer the information collected by the observer and related to fishing activities on ICCAT species in their EEZ.

[...]

44. For longline vessels flying their flag 20 meters length overall (LOA) or greater targeting bigeye, yellowfin and/or skipjack in the Convention area, CPCs shall ensure a minimum of 10% observer coverage of fishing effort, through the presence of an observer on board in accordance with Annex 7. CPCs shall report the information collected by the observers from the previous year by 30 April to the ICCAT Secretariat and to SCRS.



45. For purse seine vessels flying their flag and targeting bigeye, yellowfin and/or skipjack in the Convention area, CPCs shall ensure 100% observer coverage of fishing effort, through the presence of an observer on board in accordance with Annex 7 or through an approved electronic monitoring system. CPCs shall report the information collected by the observers from the previous year by 30 April to the ICCAT Secretariat and to SCRS.
46. Each year, the ICCAT Secretariat shall compile the information collected under domestic observer programs, including on the observer coverage for each tropical tuna fishery, and make it available to the Commission before the Annual Meeting for further deliberation, taking into account CPC confidentiality requirements.
47. In 2019, the SCRS shall review its 2016 recommendations on observer coverage and advise the Commission on appropriate coverage levels for each tropical tuna fishery, taking in consideration the full suite of monitoring tools in the fishery.

#### ***Port Sampling Programme***

48. The port sampling programme developed by the SCRS in 2012 shall be continued for landing or transshipment ports. Data and information collected from this sampling programme shall be reported to ICCAT each year, describing, at a minimum, the following by country of landing and quarter: species composition, landings by species, length composition, and weights. Biological samples suitable for determining life history should be collected as practicable.

### **PART VI MANAGEMENT PROCEDURES/MANAGEMENT STRATEGY EVALUATION**

#### ***Management Strategy Evaluation and Candidate Harvest Control Rules***

49. The SCRS shall refine the MSE process in line with the SCRS roadmap and continue testing the candidate management procedures. On this basis, the Commission shall review the candidate management procedures, including pre-agreed management actions to be taken under various stock conditions. These shall take into account the differential impacts of fishing operations (e.g. purse seine, longline and bait boat) on juvenile mortality and the yield at MSY.

### **PART VII FINAL PROVISIONS**

#### ***Availability of data to SCRS and to national scientists***

50. CPCs shall ensure that:
  - a) Both paper and electronic fishing logbooks referred to in paragraph 35 and the FAD-logbooks referred to in paragraph 22, where applicable, are promptly collected and made available to national scientists;
  - b) The Task II data include the information collected from the fishing or FAD logbooks, where applicable, and is submitted every year to the ICCAT Executive Secretary, to be made available to the SCRS.
51. CPCs should encourage their national scientists to undertake collaborative work with their national industry to analyse data related to FADs (e.g. logbooks, buoy data) and to present the outcomes of that analysis to the SCRS. CPCs should take steps to facilitate making the data available for such collaborative work, subject to relevant confidentiality constraints.
52. With the objective of providing information useful to estimate the fishing effort related to FAD-fishing each CPC should provide to its national scientists full access to:

- a) VMS data of their fishing and support vessels and trajectories of FADs;
- b) Data recorded by echo-sounders;
- c) FAD logbooks and the information collected pursuant to paragraph 22;
- [...]
- [...]
- [...]

***Confidentiality***

53. All data submitted in accordance with this Recommendation shall be treated in a manner consistent with ICCAT's data confidentiality guidelines and solely for the purposes of this Recommendation and in accordance with the requirements and procedures developed by the Commission.

[...]  
[...]  
[...]

***Repeals and review***

54. This Recommendation replaces Rec. [16-01] and shall be revised as appropriate.

**Guidelines for Preparation of FAD Management Plans**

The FAD Management Plan for a CPC purse seine and bait boat fleets must include the following:

1. Description
  - a) FAD types: AFAD = anchored; DFAD = drifting
  - b) Type of beacon/buoy
  - c) Maximum number of FAD to be deployed per purse seine and per FAD type and active at any one time per vessel
  - d) Minimum distance between AFADs
  - e) Incidental by-catch reduction and utilization policy
  - f) Consideration of interaction with other gear types
  - g) Statement or policy on "FAD ownership"
  - h) Use of support vessels, including from other flag CPCs
2. Institutional arrangements
  - a) Institutional responsibilities for the FAD Management plan
  - b) Application processes for FAD deployment approval
  - c) Obligations of vessel owners and masters in respect of FAD deployment and use
  - d) FAD replacement policy
  - e) Additional reporting obligations beyond this Recommendation
  - f) Conflict resolution policy in respect of FADs
  - g) Details of any closed areas or periods e.g. territorial waters, shipping lanes, proximity to artisanal fisheries, etc.
3. FAD construction specifications and requirements
  - a) FAD design characteristics (a description)
  - b) Lighting requirements
  - c) Radar reflectors
  - d) Visible distance
  - e) FAD markings and identifier
  - f) Radio buoys markings and identifier (requirement for serial numbers)
  - g) Echo-sounder buoys markings and identifier (requirement for serial numbers)
  - h) Satellite transceivers
  - i) Research undertaken on biodegradable FADs
  - j) Prevention of loss or abandonment of FADs
  - k) Management of FADs recovery
4. Applicable period for the FAD Management Plan
5. Means for monitoring and reviewing the implementation of the FAD Management Plan

**FAD logbook**

<i>FAD marking</i>	<i>Buoys ID</i>	<i>FAD type</i>	<i>Type of visit</i>	<i>Date</i>	<i>Time</i>	<i>Position</i>		<i>Estimated catches</i>			<i>By-catch</i>			<i>Observations</i>	
						<i>Latitude</i>	<i>Longitude</i>	<i>SKJ</i>	<i>YFT</i>	<i>BET</i>	<i>Taxonomic group</i>	<i>Estimated catches</i>	<i>Unit</i>		<i>Specimen released alive</i>
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(7)	(8)	(8)	(8)	(9)	(10)	(11)	(12)	(13)
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

(1,2) If FAD marking and associated beacon/buoy ID are absent or unreadable, report it in this section. However, if FAD marking and associated beacon/buoy ID are absent or unreadable, the FAD shall not be deployed.

(3) Anchored FAD, drifting natural FAD or drifting artificial FAD.

(4) I.e., deployment, hauling, strengthening/consolidation, removing/retrieving, changing the beacon, loss and mention if the visit has been followed by a set.

(5) dd/mm/yy.

(6) hh:mm.

(7) N/S/mm/dd or °E/W/mm/dd.

(8) Estimated catches expressed in metric tons.

(9) Use a line per taxonomic group.

(10) Estimated catches expressed in weight or in number.

(11) Unit used.

(12) Expressed as number of specimen.

(13) If no FAD marking neither associated beacon ID is available, report in this section all available information which may help to describe the FAD and to identify the owner of the FAD.

**Annex 3**

**Table 1.** Codes, names and examples of different types of floating object that should be collected in the fishing logbook as a minimum data requirement. Table from 2016 SCRS report (section 18.2 Table 7).

<u>Code</u>	<u>Name</u>	<u>Example</u>
DFAD	Drifting FAD	Bamboo or metal raft
AFAD	Anchored FAD	Very large buoy
FALOG	Artificial log resulting from related to human activity (and related to fishing activities)	Nets, wreck, ropes
HALOG	Artificial log resulting from human activity (not related to fishing activities)	Washing machine, oil tank
ANLOG	Natural log of animal origin	Carcasses, whale shark
VNLOG	Natural log of plant origin	Branches, trunk, palm leaf

**Table 2.** Names and description of the activities related to floating objects and buoys that should be collected in the fishing logbook as a minimum data requirement (codes are not listed here). Table from 2016 SCRS report (section 18.2 Table 8).

	<i>Name</i>	<i>Description</i>
	Random encounter (without fishing) of a log or a FAD belonging to another vessel (unknown position)	
	Visit	Visit (without fishing) of a FOB (known position)
FOB	Deployment	FAD deployed at sea
	Strengthening	Consolidation of a FOB
	Remove FAD	FAD retrieval
	Fishing	Fishing set on a FOB <sup>1</sup>
	Tagging	Deployment of a buoy on FOB <sup>2</sup>
Buoy	Remove BUOY	Retrieval of the buoy equipping the FOB
	Loss	Loss of the buoy/End of transmission of the buoy

<sup>1</sup> A fishing set on a Fishing Object (FOB) includes two aspects: fishing after a visit to a vessel's own FOB (targeted) or fishing after a random encounter of a FOB (opportunistic).

<sup>2</sup> Deploying a buoy on a FOB includes three aspects: deploying a buoy on a foreign FOB, transferring a buoy (which changes the FOB owner) and changing the buoy on the same FOB (which does not change the FOB owner).

Annex 4

**List of deployed FADs and buoys on a monthly basis**

**Month:**

<i>FAD Identifier</i>		<i>FAD &amp; electronic equipment types</i>		<i>FAD</i>				<i>Observation</i>
<i>FAD Marking</i>	<i>Associated buoy ID</i>	<i>FAD Type</i>	<i>Type of the associated buoy and/or electronic devices</i>	<i>FAD floating part</i>	<i>FAD underwater hanging structure</i>			
<u>(1)</u>	<u>(1)</u>	<u>(2)</u>	<u>(3)</u>	<u>(4)</u>	<u>(5)</u>			<u>(6)</u>
...	...	...	...		...			...
...	...	...	...		...			...

- (1) If FAD marking and associated beacon/buoy ID are absent or unreadable, the FAD shall not be deployed.
- (2) Anchored FAD, drifting natural FAD or drifting artificial FAD.
- (3) E.g. GPS, sounder, etc. If no electronic device is associated to the FAD, note this absence of equipment.
- (4) Mention the material of the structure and of the cover and if biodegradable.
- (5) E.g. nets, ropes, palms, etc., and mention the entangling and/or biodegradable features of the material.
- (6) Lighting specifications, radar reflectors and visible distances shall be reported in this section.

**Annex 5**

**Guidelines for reducing the ecological impact of FADs in ICCAT fisheries**

1. The surface structure of the FAD should not be covered or only covered with material implying minimum risk of entangling by-catch species.
2. The sub-surface components should be exclusively composed of non-entangling material (e.g. ropes or canvas).
3. When designing FADs the use of biodegradable materials should be prioritised.

### Requirements for Catch Recording

#### Minimum specification for paper or electronic logbooks:

1. The logbook must be numbered by sheets
2. The logbook must be filled in every day (midnight) or before port arrival
3. One copy of the sheets must remain attached to the logbook
4. Logbooks must be kept on board to cover a period of one-trip operation

#### Minimum standard information for logbooks:

1. Master name and address
2. Dates and ports of departure, Dates and ports of arrival
3. Vessel name, registry number, ICCAT number and IMO number (if available)
4. Fishing gear:
  - (a) Type FAO code
  - (b) Dimension (length, mesh size, number of hooks...)
5. Operations at sea with one line (minimum) per day of trip, providing:
  - (a) Activity (fishing, steaming...)
  - (b) Position: Exact daily positions (in degree and minutes), recorded for each fishing operation or at noon when no fishing has been conducted during this day
  - (c) Record of catches
6. Species identification:
  - (a) By FAO code
  - (b) Round (RWT) weight in t per set
  - (c) Fishing mode (FAD, free school, etc.)
7. Master signature
8. Observer signature, if applicable
9. Means of weight measure: estimation, weighing on board and counting
10. The logbook is kept in equivalent live weight of fish and mentions the conversion factors used in the evaluation

#### Minimum information in case of landing, transshipments:

1. Dates and port of landing /transshipments
2. Products: number of fish and quantity in kg
3. Signature of the Master or Vessel Agent



**Observer Programme**

1. The observers referred to in paragraph 37 of this Recommendation shall have the following qualifications to accomplish their tasks:
  - Sufficient experience to identify species and fishing gear;
  - Satisfactory knowledge of the ICCAT conservation and management measures assessed by a certificate provided by the CPCs and based on ICCAT training guidelines;
  - The ability to observe and record accurately;
  - The ability to collect biological samples;
  - A satisfactory knowledge of the language of the flag of the vessel observed.
2. The observers shall not be a crew member of the fishing vessel being observer and shall:
  - (a) Be nationals of one of the CPCs;
  - (b) Be capable of performing the duties set forth in point 3 below;
  - (c) Not have current financial or beneficial interests in the tropical tuna fisheries.
3. The observer tasks shall be in particular:
  - (a) To monitor the fishing vessels' compliance with the relevant conservation and management measures adopted by the Commission.

In particular the observers shall:

- i. Record and report upon the fishing activities carried out;
- ii. Observe and estimate catches and verify entries made in the logbook;
- iii. Sight and record vessels which may be fishing in contravention to ICCAT conservation and management measures;
- iv. Verify the position of the vessel when engaged in catching activity;
- v. Verify the number of instrumental buoys active at any one time;
- vi. Carry out scientific work such as collecting Task II data when required by the Commission, based on the directives from the SCRS, observing and recording data on FAD properties in accordance with **Table 1** below.

(b) [...]

Establish general reports compiling the information collected in accordance with this paragraph and provide the master the opportunity to include therein any relevant information.

**Obligations of the observer**

4. Observers shall treat as confidential all information with respect to the fishing and transshipment operations of the fishing vessels and accept this requirement in writing as a condition of appointment as an observer.
5. Observers shall comply with requirements established in the laws and regulations of the flag State which exercises jurisdiction over the vessel to which the observer is assigned.
6. Observers shall respect the hierarchy and general rules of behaviour which apply to all vessel personnel, provided such rules do not interfere with the duties of the observer under this programme, and with the obligations of vessel personnel set forth in point 7 of this Annex.

**Obligations of the flag States of fishing vessels**

7. The responsibilities regarding observers of the flag States of the fishing vessels and their masters shall include the following, notably:
- a) Observers shall be allowed to access to the vessel personnel and to the gear and equipment;
  - b) Upon request, observers shall also be allowed access to the following equipment, if present on the vessels to which they are assigned, in order to facilitate the carrying out of their duties set forth in point 3 of this Annex:
    - i) satellite navigation equipment;
    - ii) radar display viewing screens when in use;
    - iii) electronic means of communication, including FAD/buoys signals.
  - c) Observers shall be provided accommodations, including lodging, food and adequate sanitary facilities, equal to those of officers;
  - d) Observers shall be provided with adequate space on the bridge or pilot house for clerical work, as well as space on deck adequate for carrying out observer duties; and
  - e) The flag States shall ensure that masters, crew and vessel owners do not obstruct, intimidate, interfere with, influence, bribe or attempt to bribe an observer in the performance of his/her duties.

**Table 1.** FOB/FAD information added to observer onboard form to comply with RFMOs recommendations. Table from 2016 SCRS report (section 18.2 Table 9).

<i>Properties</i>	<i>DFAD</i>	<i>AFAD</i>	<i>HALOG</i>	<i>FALOG</i>	<i>ANLOG</i>	<i>VNLOG</i>
FOB built using biodegradable materials (true/false/undefined)	X	X	X	X		
FOB is non-entangling (true/false/undefined)	X	X	X	X		
Meshed material (true/false/undefined) in FOB	X	X		X		
Size of largest mesh (in millimeters)	X	X		X		
Distance between the surface and the deepest part of the FOB (in meters)	X	X	X	X		
Approximate surface area of the FOB	X	X	X	X		
Specifies the FOB's ID whenever present	X	X	X	X		
Fleet owning the tracking device/ echo sounder buoy	X	X	X	X	X	X
Vessel owning the tracking device/ echo sounder buoy	X	X	X	X	X	X
Anchorage type used for mooring (AFAD registry)		X				
Radar reflectors (presence or not) (AFAD registry)		X				
Lighting (presence or not) (AFAD registry)		X				
Visual range (in nautical miles) (AFAD registry)		X				
Materials used for the floating part of the FOB (list to be defined)	X	X	X	X		
Materials making up the FOB underwater structure (list to be defined)	X	X	X	X		
Tracking device TYPE+ID if possible, otherwise no or undefined.	X	X	X	X	X	X

[...]  
[...]  
[...]