

**EXPLANATORY NOTE TO
DRAFT RECOMMENDATION BY ICCAT TO REPLACE
RECOMMENDATION 16-01 ON A MULTI-ANNUAL CONSERVATION
AND MANAGEMENT PROGRAMME FOR TROPICAL TUNAS**

(Submitted by Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama and Mexico)

Background

Tropical tunas (TT) are one of the most important fish resources in the Atlantic Ocean, and occur in the High Seas and the corresponding EEZs for the developing countries. While yellowfin tuna (YFT) and skipjack tuna (SKJ) appear to be in a healthier state than bigeye tuna (BET), the precautionary approach for all these and recovery for the latter are mandated by scientific advice. Hence, in 2018, catches of three of the four tropical tuna stocks in the Atlantic Ocean (yellowfin tuna, bigeye tuna and eastern skipjack tuna) were above the levels recommended by the SCRS.

The stocks assessments conducted for the Atlantic Ocean tropical tuna fisheries reveal that current management measures do not meet the effectiveness criteria required to ensure that ICCAT's conservation targets are achieved. Addressing the full complexity of the interconnected fisheries for tropical tunas and ensuring mandatory compliance with the management measures in place appear to be the most important challenges for ICCAT, noting that if the current TACs (BET and YFT) had been complied with, the stocks would have been in a healthier state. Indeed, it is easy to understand how, currently in the case of bigeye tuna where TAC as adopted is exceeded by 30% on average every year, an urgent change in the management regime is required to address matters of substance related to scope and compliance.

This proposal lends from the experience of ICCAT and other RFMOs, in particular IATTC and WCPFC, in management of multi-species multi-gear tropical tuna fisheries, to introduce streamlined, practical and implementable provisions in the measure, so as to effectively address the complexity of ICCAT tropical tuna fisheries through a robust recovery plan, which mostly relies on the commitment of CPCs to comply with conservation objectives. The proposal recalls the evident instances of TAC excesses which have led to the issue at hand, with the least impact on industry and the assurance for participants, in particular for developing States, that their access rights to the resource are not hampered or undermined by the measure, considering the ecosystem approach applied to the fishery (addressing conservation objectives for both target species and bycatch through a single measure).

Socio-economic considerations

Tropical Tunas are caught in the Atlantic Ocean by coastal and distant waters participants. In all cases, tropical tunas provide food security and high quality proteins for consumers as 'food for all' is a challenge in the 21st century. It is correct to say that under the discipline of responsible and sustainable fisheries, the environmental impact from fishing is only justified when it allows a long-term socio-economic return that is fair and positive for fishers and their families, as well as other stakeholders who are reliant on fisheries activity.

In the Atlantic Ocean, coastal and developing states are highly dependent from TT fisheries aimed at providing food and work to hundreds of thousands of people who live from the fisheries and fisheries related activities such as fishing, vessel crews, landing and handling staff, industry workers, traders, and many service providers for the fisheries industry. The importance of fisheries activity is such that a collapse in the TT populations or stocks could have an enormous impact on the coastal communities.

In the ICCAT Convention area, there are distant waters and coastal participants, developed and developing States that play an important role. This participation and human reliance redress the complexity of the issue at hand, in that building a fair and equitable measure is a crucial political challenge that CPCs must confront and overcome.

The ICCAT records of tropical tuna catches show that developing States have mostly maintained their fisheries at levels that contribute to socio-economic stability of communities and fair growth, and comply with the limits established within the overall TAC established by the RFMO. Moreover, some developing CPCs are not engaged in the fisheries, and since it is an unconditional right, the entitlements and of these countries must be acknowledged and protected. In parallel, as part of the socioeconomic considerations, it must be taken into account that long distant participants must benefit the participant developing State by providing accountable data on their fishing activities in the Atlantic Ocean to ensure long-term biomass as well as identifying fishing opportunities. In so doing, the socio economic considerations of the key elements of this proposal are:

- Ensure long-term conservation and sustainable use of the tropical tuna resources
- Not to undermine food security, work and sound economic return for fishing communities
- Acknowledge the rights of developing States
- Fair and equitable distribution of burdens and sacrifices in the rebuilding plan, taking into account both biological and socio-economic criteria
- Cost effective compliance, monitoring, control and surveillance (MCS)

Technical perspective of the proposal

This proposal calls for a change in the management system used by ICCAT, shifting from the TAC and quota system to a mixed system that includes effort controls for industrial purse seiners and catch controls for other fisheries. The main reasons for the change are:

- Measures based on TAC and quotas do not fully meet the scientific advice because some fisheries are excluded from implementation of the measure and have increased catches of the target stocks in recent years;
- Compliance with the quotas by some CPCs is not ensured because MCS coverage is poor in those countries and ICCAT has not set an independent system to validate catch reports from its CPCs.
- The new measure proposed can be summarized as follows:
- TAC: The proposal does not consider necessary to reduce CURRENT TAC (65,000 t). The SCRS does not recommend to reduce TAC; it recognizes (2019 report on BET):
 - The Committee notes that current and previous FOB time area closures and possible future changes of the allocation of catch to different gears provide some benefits to the stock (sections 19.2 and 19.4, SCRS 2018 report). The necessary reduction of fishing mortality on bigeye tuna required for stock recovery, however, cannot be achieved only with such measures. The Commission should urgently ensure that catches are appropriately reduced to end overfishing and allow the stock to recover following the Decision Framework adopted in paragraph 3 of Rec. 11-13.
 - The Commission should be aware that increased harvests on small fishes could have had negative consequences for the productivity of bigeye tuna fisheries (e.g. reduced yield at MSY and increased SSB required to produce MSY) (BET-Figure 9) and, therefore, should the Commission wish to increase long term sustainable yield, the Committee continues to recommend that effective measures be found to reduce fishing mortality of small bigeye tunas.
- Purse seine fisheries: They shall be regulated through fishery closures, with each vessel selecting one of two possible closures. The length and time of the closures shall be estimated using the Control Rule proposed by Sharma & Herrera (2019) during the 2019 SCRS. The main advantages of fishery closures are:
 - Inclusiveness: The Control Rule is directed at all purse seine vessels in operation, from all flag States, addresses the advice for the three stocks of tropical tunas, and shall also assist in reducing incidental levels. TAC and quota systems are piecemeal, directed at just one stock and may lead to perverse impacts on other stocks or changes in fishing strategy towards more sensitive components of the stock the measure is directed at;
 - Ensures full compliance: Fishery Closures are monitored through VMS and Inspection in Port (either the vessel is operating or not); quotas, on the other hand, require good MCS strategies and independent validation of catch logs, which ICCAT does not have.

- Longline and other fisheries: There is no change proposed for these fisheries at this time, other than allocation of quotas by fishery rather than CPC, and for both stocks yellowfin tuna and bigeye tuna, with all important fleets covered. Monitoring of implementation of the measure shall be required to ensure that catch reports are accurate.
- Other provisions: Provisions for previous notice of changes to the fishing and support vessels are also considered.

In general, it is considered that the measure:

- Assists ICCAT in achieving its conservation targets for the four stocks of tropical tunas, in a more effective and integral manner;
- Takes into account the socio-economic impact that a overly restrictive TAC could have on fishing activity or other reliant economic activities, which would mostly affect developing coastal countries;
- Assists ICCAT in addressing recommendations for the mitigation of incidental from purse seine fisheries, in particular endangered, threatened and protected species;
- Ensures compliance with the measure by the fishery whose contribution to total catch is highest;
- Ensures that purse seiners reduce their catches of bigeye and yellowfin juveniles while reducing skipjack catches at the same time, avoiding any detrimental effects that changes in target species or selectivity may have been experienced through the implementation of quotas;
- Fully respects the rights to resources of developing coastal states in the Atlantic Ocean, as it does not set limits on capacity while ensuring that all new entrants are subject to the measure;
- It takes into consideration the socio-economic context as it sets a more realistic plan for the implementation of the measure, establishing a phased-in three-year approach with gradual reductions in effort (purse seine) and catch (longline and other fisheries).

**DRAFT RECOMMENDATION BY ICCAT TO REPLACE
RECOMMENDATION 16-01 BY ICCAT ON A MULTI-ANNUAL CONSERVATION
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(Proposal submitted by Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama, and Mexico)

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

NOTING that according to the scientific information reviewed by Panel 1 the stocks of bigeye and yellowfin tuna are currently overfished and experiencing overfishing;

RECOGNIZING that the TAC for bigeye tuna for 2017 and 2018 was exceeded by more than 20% and that this level of catch is projected to reduce to less than 10% the probability of attaining the Convention objectives from now until 2028;

ACKNOWLEDGING that the TAC for yellowfin tuna was also exceeded in 2016 by 37%, and in 2017 and 2018 by more than 25%;

TAKING INTO ACCOUNT the results of the yellowfin stock assessment in 2019 and management recommendations issued by the SCRS that the yellowfin tuna catch in 2020 and subsequent years does not exceed 120,000 metric tons;

CONSIDERING the catches of the eastern skipjack stock have increased considerably, being in 2018 more than 20% above the levels recommended by the SCRS;

CONSIDERING that the SCRS continues to recommend that effective measures be found to reduce fishing mortality of juvenile yellowfin and bigeye tuna for all fishing gears;

TAKING INTO ACCOUNT the recommendations made by the Panel on the Second Performance Review of ICCAT 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 and other fisheries, as well as an increase in exploitation by other fishing gears could have 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 seine vessels and that the number of supply vessels has increased over the years;

RECALLING the significant Instruments of international law that promote the rights and special requirements of developing States, including but not limited to Article 119 of UNCLOS and Article 25 and Part VII of UNFSA on straddling and highly migratory fish stocks as well as the priority that should be given to small scale fisheries, as reflected in SDG 14b;

RECOGNIZING that an effective Rebuilding Plan depends on the adoption of measures to control the fishing effort effectively without exclusive subjection to a nominal TAC, and considering the rights of developing countries;

RECOGNIZING the need to adopt monitoring and control measures to ensure implementation of the conservation and management measures and to improve the scientific assessment of these stocks;

RECOGNIZING that the SCRS indicated that the current mandatory observer coverage level of 5% may not have been implemented by many fleets and that it highlighted the need to achieve these minimum levels of coverage so that the SCRS can carry out the task that has been assigned to it by the Commission:

CONSIDERING that the SCRS concluded that the current level of observer coverage (5%) seems inappropriate for providing reasonable estimates of total bycatch and recommended increasing the minimum level to 20%:

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

PART I
GENERAL PROVISIONS

Multi-annual Conservation and Management 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) a 10 year Rebuilding Programme Plan for **bigeye** tuna starting in 2020 and continuing through 2029 inclusive, with the goal of achieving B_{MSY} with a probability of more than 40%. The Total Allowable Catch (TAC) for bigeye tuna shall be [65,000 t], applicable from the third year, as specified in 1. g.
 - b) The progress of the multiannual plan shall be adjusted every 3 years, in 2022, 2025 and 2028 according to the evaluation made by the SCRS.
 - c) 5% of the bigeye TAC shall be preserved as a remainder, in order to absorb increases in catch that may be caused by increases in capacity (purse-seine fishing efficiency); or increases in catching bigeye by longline or cane fleets not subject to quota. The Commission shall assess in 2022 if the amount of the TAC to be preserved as a remainder is sufficient, reviewing the figure based on the effectiveness of the measure.
 - d) The annual TAC for 2020 and subsequent years of the multi-annual programme shall be established at [110,000 t] for **yellowfin tuna**, and shall remain in force until it is changed based on scientific advice.
 - e) ICCAT CPCs shall endeavor to maintain the catches of the stock of **eastern skipjack tuna** at levels not exceeding the average catch levels for 2012-13 [218,434 t].
 - f) ICCAT CPCs shall endeavor to maintain catches of **western skipjack tuna** at levels [32,000 t].
 - g) These management objectives shall be implemented in the form of fleet closures for the industrial purse seine fleet and TAC for other industrial fleets.
 - h) The stipulated fishing or catch activity reductions shall be implemented gradually, in order to achieve the desired reduction in a maximum period of three years, according to the plan included in the table below:

Stock	TAC	Remainder %	Recent Catch (20XX-XX)	% Necessary Reduction	% Red. 2020	% Red. 2021	% Red. 2022
Bigeye	65000						
Yellowfin	<u>110000</u>						
Eastern skipjack	218434						
Western skipjack	32000						

PART II
EFFORT MANAGEMENT MEASURES

MEASURES FOR PURSE SEINE FLEETS

2. All purse-seine vessels targeting tropical tunas¹, regardless of their size, must cease fishing in the Convention area during one of the two (2) periods indicated in the Table below:

Year	Closure Days	Expected reduction			Closure 1		Closure 2	
		BET (Mat-Imm)	YFT (Mat-Imm)	SKJ (Mat-Imm)	From	to	From	to
2020								
2021								
2022								

These closures shall be applied in one of the two periods indicated, as follows: from 00:00 hours on the first day indicated until 24:00 hours on the last day indicated for each closure.

3. For each of the closure periods, **each CPC shall notify the Executive Secretary**, before [15] of [January] of each year, the names of all purse seine vessels that shall comply with each closure period. [The Commission shall keep an accurate record of the designation of the closed period for each vessel that shall be available for public consultation on the Commission's website.]
4. Each vessel that fishes, regardless of the flag under which it operates or if it changes the flag or jurisdiction of the CPC under which it fishes during the year, must comply with the closure period to which it was committed. All new purse seiners entering the fishery shall also be obliged to respect one of the closure periods of the year in which they enter the fishery, unless the entry occurs after the second closure period. [In this case, when communicating to ICCAT the fishing authorization for the new vessel, the period of closure to which the vessel is submitted shall be informed.]
5. The activity of auxiliary vessels during closure periods shall be limited to the maintenance and collection of DCPs, to avoid their loss during this period. Auxiliary vessels shall refrain from deploying new DCPs at sea or redeploying DCPs previously collected during the closure of the purse seine vessel (s) they support. The activity of the auxiliaries during the closure periods shall be controlled by the country of the flag of the purse seiner they support, through human or electronic observers [aboard the auxiliary ship].
6. Notwithstanding the provisions of paragraphs 2 and 3, a request by a CPC, on behalf of any of its vessels, of exemption due to force majeure² that leaves said vessel unable to go to sea outside said closure period during at least a period of [45] continuous days, it shall be sent to the Secretariat, at the latest one month after it has happened.
7. In addition to the exemption request, the CPC shall send the necessary evidence to prove that the vessel did not go out to sea and that the facts on which the exemption request is based were due to force majeure.
8. The Executive Secretary shall immediately send the request and the evidence to the other CPCs electronically for consideration, duly coded to maintain the anonymity of the vessel's name, flag and owner.
9. The request shall be considered accepted, unless it is formally objected by a CPC within 15 calendar days of the receipt of said request, in which case the Secretariat shall immediately notify all CPCs of the objection.

¹ All purse seiners whose total catches of the four stocks of tropical tunas during the year 2017 or 2018 accounted for more than 1,000 t or more than 60% of their total landed catch shall be subject to the measure. Likewise, this measure shall apply to any purse seine vessel that in 2020 or subsequent years records the catch levels mentioned.

² For the purpose of paragraph 6, only cases of vessels incapacitated in the course of fishing operations due to failures in machinery and / or structure, fire or explosion, shall be considered force majeure.

10. In the event the exemption is accepted:
 - a. The vessel shall observe a reduced closure period of at least 75% of the closed period in the same year during which the force majeure event occurred, in one of the two periods prescribed in paragraph 2, which shall be notified to the Executive Secretary by the CPC, or
 - b. In the event that said vessel has already observed a period of closure prescribed in paragraph 2 during the same year in which the force majeure event occurred, it shall observe a period of reduced closure of at least 75% of the period of closure the following year, in one of the two periods prescribed in paragraph 2, which shall be notified to the Executive Secretary by the CPC no later than [January 15].
 - c. Vessels benefiting from the exemption must carry an on-board observer authorized by their flag State.
11. This exemption applies to fleet vessels that observe either of the two closed periods prescribed in paragraph 2.
12. The Parties to ICCAT shall notify the Executive Secretary of any commencement or termination of activity in the ICCAT Convention area of purse seiners under their flag. The incorporation of new purse seiners must be communicated during the year prior to which the activity is scheduled to begin.
13. In the event that one or more Parties report changes in the number or purse seiners, the Executive Secretary shall adjust the closed periods corresponding to the year in which the changes shall occur.
14. [In the event that a ship operating in the ICCAT Convention area changes its flag after January 15, it must respect the closure period previously communicated by the original flag State and the receiving flag State shall ensure the fulfillment of the closure period. If the original flag State has not communicated the closure period, the receiving State shall do so when communicating to the Commission the entry of the vessel into its fleet.]

PART III CATCH LIMITS

15. Catch limits shall apply to industrial fleets that operate with longline gear or other fishing gear. When necessary, the TAC of each tropical tuna and fishery stock shall be adjusted to accommodate the catch limit assigned to the new CPCs.

CPC to which the catch limits do not apply

16. The catch limits shall not apply to developing coastal CPCs in the ICCAT Convention area or to those whose average annual catch of tropical tunas in the Convention area during 2016-2018, as provided to the SCRS in 2019, is equal to or less than 3500 t. However, the following shall apply:
 - a. The CPCs to which the exemption applies shall endeavor to keep tropical tuna catches at an equal or lower level of [3500] annual tonnes during the period covered by the multiannual plan.
 - b. Those CPCs, excluding developing coastal countries in the ICCAT Convention area, that report catches of tropical tunas greater than [10500] tonnes during the three-year period mentioned in multiannual plan, or that report catches of tropical tunas above [3500] tonnes for a single year, shall receive catch limits for stocks covered in paragraph 17 (Table).
 - c. Developing coastal CPCs in the ICCAT Convention Area that have not submitted a Fleet Development Plan (PDF) or whose PDF has not been ratified by the Commission (as explained in paragraph 25) shall be subject to the conditions specified in paragraph 16b until the Plan is received and ratified by the Commission.

MEASURES FOR THE LONGLINE FLEET

17. The catch reduction adopted for the longline for each year and stock shall be applied according to the catches of each CPC recorded during the period [XXX], according to the ICCAT Task I data, as specified in the table below:

CPC	Bigeye Catch Limits per year			CPC	Yellowfin Catch Limits per year		
	2020	2021	2022		2020	2021	2022

18. The provisions of Part II shall not prejudice the rights and obligations under international law of those coastal CPCs under development in the Convention area whose current fishing activity targeting tropical tunas is limited or non-existent, but which have a real interest in fishing these stocks and wish to develop their own tropical tuna fisheries in the future. CPCs shall implement strong monitoring, control and surveillance measures, as appropriate in relation to their capacity and resources.
19. Fleet closures and annual catch limits described in this recommendation do not constitute long-term rights [nor limitations], [shall not count as a limit to the potential for capture outside the term of this Multi-annual Plan] and shall not be detrimental to any formal allocation process.
20. If the Commission detects repeated breaches in the application of the effort and catch limits established in this measure, the Commission shall review these measures.

MEASURES FOR OTHER FLEETS

21. Parties that have live bait fisheries and / or other surface fisheries are urged to refrain from increasing their catches above the average catch levels reported for the years 2016-18, so that the remainder adopted by the Commission is not exceeded.

Remainder or excess of capture or effort

22. The Commission shall sanction any breach of the effort limits of purse seine vessels or activity of auxiliary vessels, applying more restrictive measures to the fishing vessel responsible for such non-compliance. The activity of vessels that incur in cases of repeated or serious breach shall be suspended for a period of at least four consecutive months.
23. Any CPC that exceeds the catch limits for one or more stocks, as set out in paragraph 17:
- a) In one year, then the amount deducted in the year of adjustment shall be determined as 100% of the excess; and
 - b) For any two consecutive years, the Commission shall recommend appropriate measures, which shall include a reduction in the catch limit equal to 125% of the excess catch.
24. The maximum remainder that a CPC may transfer in a given year must not exceed 10% of its initial annual catch limit. The transfer of the remainder shall be reviewed by the Commission in 2023 and may be reduced if it is identified that such transfer jeopardizes the management of resources.

PART IV
CAPACITY MANAGEMENT MEASURES

Fleet Development Plans

25. CPCs that do not have a history of participation in the fishery during the past five years but wish to participate in the fishery, must:
- a) communicate your actual fleet development plan, which should contain:
 - i. Description of the quantity and characteristics of the ships;
 - ii. Expected date of commencement of the activity;
 - iii. Management measures such as quotas or the like that ensure compliance with the overall TAC of the resource;
 - iv. Description of the monitoring, control and surveillance measures that shall apply to that fleet.

Support vessels

26. Any CPC that has vessels that operate, partially or full-time, in support of purse seiners shall communicate the names and characteristics of all their vessels to the ICCAT Secretariat, which includes how many of these vessels were active in 2019 in the area of ICCAT competence, as well as the names of purse seiners that received support from each support vessel. This information shall be communicated no later than January 31, 2020.
27. The Secretariat shall prepare a report so that the Commission can consider what measures are necessary for auxiliary vessels, including a progressive reduction plan, where appropriate.
28. Notwithstanding this, CPCs shall not increase the number of support vessels with respect to the numbers entered at the time of adoption of this measure. This exemption applies to fleet vessels that observe either of the two closed periods prescribed in paragraph 21.
29. The SCRS shall carry out further analyzes, which shall be considered in 2020, of the impact of support vessels on catches of juvenile bigeye and yellowfin and its role in the management of FADs.

PART V
MANAGEMENT OF FADs

FAD Management objectives

30. The general objectives for management of FADs and supply vessels in the Convention area are defined as follows:
- a) To minimize potential impacts that FAD density may have on purse seine fishing efficiency, while minimizing disproportionate 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 as a 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, including entanglement of marine species, 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, stranding or grounding of FADs in sensitive habitats or the alteration of pelagic habitat.

Space closure in relation to juvenile protection

31. Fishing, or support activities for fishing for bigeye, yellowfin, and skipjack in association with objects that could affect fish concentrations, which includes the FADs, shall be prohibited during the period from January 1 to 31 in the following zone:
 - a) Southern limit: parallel 4° south latitude.
 - b) Northern limit: parallel 5° north latitude.
 - c) Western limit: meridian 20° west longitude.
 - d) Eastern limit: African coast.
32. The prohibition in paragraph 31 includes:
 - a) the planting of any floating object, with or without buoys;
 - b) fishing around, under or in association with artificial objects, which includes vessels;
 - c) fishing around, under or in association with natural objects; and
 - d) the trailer of floating objects from the inside to the outside of the area.
33. As soon as possible and at the latest in 2021, the SCRS shall assess the need to maintain the space ban on fishing with FAD, considering the results of the other effort control measures and their impact on the reduction of catches of yellowfin and bigeye juveniles.

Spatial and total closure

34. Each CPC shall ensure that:
 - a) their purse seine vessels do not deploy FADs during a period of 15 days prior to the start of the selected closure period;
 - b) all its purse seine vessels recover within a period of 15 days before the beginning of the closure period FADs equal to the number of FADs previously set upon during the same period.

FAD limitations

35. CPCs shall ensure that vessels flying their flag shall apply the following limits on the number of FADs with instrumental buoys³ are active at any one time in relation to each of their vessels through the verification of telecommunication bills. Such verifications shall be conducted by the competent authorities of the CPCs:
 - a) 2020: 400 FADs per vessel;
 - b) 2021 and successive: FADs shall be defined according to the impact that is determined as a product of the complementary measures contained in this recommendation.
36. The FADs shall be activated on the vessel at the time of deploying and shall remain active until they are recovered or lost. Deploying of objects without a satellite tracking device is prohibited.
37. 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, and providing information on fishing activities to the SCRS.

FAD Management Plans

38. CPCs with purse seine and baitboat vessels fishing for bigeye, yellowfin and skipjack tunas in association with FADs, shall submit to the Executive Secretary Management Plans for the use of such aggregating devices by vessels flying their flag by January 31 each year.
39. The objective of the FAD Management Plans shall be:
 - i. To 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. To effectively manage the deployment and recovery of FADs, the activation of buoys and their potential loss;

³ It is understood by DCP with instrumental buoy all that is provided with a device that allows its satellite tracking.

- iii. To 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).
40. The Plans shall be drawn up by following the Guidelines for Preparation for FAD Management Plans as provided in **Annex 1**.

FAD logbook- FAD and list of deployed FADs

41. 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), or deploying FAD 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 buoy⁴, 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 FAD⁵)
 - 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 (**Annex 6**). In both cases, CPCs shall use the minimum standards recommended by SCRS in **Annex 3**.

⁴ 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).

⁵ 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).

42. CPCs shall also ensure that all vessels referred to in paragraph 20 are 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

43. 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°x1° 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 or 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).

Non-entangling and biodegradable FADs

44. 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:
- a) Ensure that all deployed FADs are not entangled in line with the guidelines set out in **Annex 5** of this recommendation, in accordance with the previous recommendations of ICCAT;
 - b) Ensure that, as of January [2022], all deployed FADs are not entangled and are constructed from biodegradable materials, which includes non-plastic materials, with the exception of the materials used in the construction of FAD tracking buoys;
 - c) Report annually on the actions undertaken to comply with these provisions in their FAD management plans.

**PART VI
CONTROL MEASURES**

Specific authorization to fish for tropical tunas

45. 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

46. 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, transship, 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.

47. 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 and information about how the CPC ensures compliance with the limit. That information shall be compiled by the ICCAT Secretariat and made available to CPCs.
48. 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.
49. 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.
50. 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.
51. 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.

Vessels actively fishing tropical tunas in a given year

52. Each CPC shall, by July 31 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.

53. The provisions of paragraphs 45 to 52 do not apply to recreational vessels.

Monitoring of consumption of yellowfin and bigeye tuna catches

54. The CPCs shall communicate monthly to the Secretariat, in the days following the end of the calendar month in which they were taken, the bigeye tuna catches by the vessels flying their flag. When 50% of the catch threshold or 80% of the quota allocated to a CPC has been exceeded, as appropriate, the Secretariat shall inform all CPCs of this and each CPC shall communicate weekly its bigeye catches to the Secretariat. The CPCs shall take the internal measures necessary to ensure compliance with their obligations in accordance with this recommendation.

Identification IUU activity

55. 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.

56. 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.
57. The Executive Secretary shall propose to include any vessels identified in accordance with paragraph 56, or vessels for which the flag CPC has not carried out the required investigation and taken, if necessary, adequate measures in accordance with paragraph 55, on the provisional IUU list.

Observers

58. For observers on board vessels targeting bigeye, yellowfin and/or skipjack tunas in the Convention area the following provisions shall apply:
- a) Observers shall automatically be recognized by all CPCs. Such recognition shall allow the scientific observer to continue the collection of information throughout the EEZs 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.
59. For longline vessels flying their flag 20 meters length overall (LOA) or greater targeting bigeye and/or yellowfin in the Convention area, CPCs shall ensure a minimum of 10% observer coverage of fishing effort from now until 2021, through the presence of a human observer or an approved electronic tracking system on board in accordance with [Annex 7]. CPCs shall report the information collected by the observers from the previous year by April 30 to the ICCAT Secretariat and to SCRS, taking into account the confidentiality requirements of the CPCs.
- [59 bis. The SCRS shall provide advice on the best metrics for observer coverage to be measured by as well as how coverage should be stratified across vessels, seasons and areas to achieve maximum effectiveness.]
- [59 bis. CPCs shall use best endeavours to increase observer coverage for longliners including through trials and implementation of electronic monitoring to supplement human observers. CPCs that trial electronic monitoring shall share technical specifications and standards with the Commission towards the development of agreed ICCAT standards.]
60. 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 April 30 to the ICCAT Secretariat and to the SCRS.
61. 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, considering CPC confidentiality requirements.

Port Sampling Programme

62. 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 VII
MANAGEMENT PROCEDURES/MANAGEMENT STRATEGY EVALUATION

Management Strategy Evaluation and Candidate Harvest Control Rules

63. 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 baitboat) on juvenile mortality and the yield at MSY.

PART VIII
FINAL PROVISIONS

Availability of data to the SCRS and to national scientists

64. CPCs shall ensure that:
- a) Both paper and electronic fishing logbooks referred to in paragraph 41 and the FAD-logbooks referred to in paragraph 43, 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 are submitted every year to the ICCAT Executive Secretary, to be made available to the SCRS.
2. CPCs should encourage their national scientists to undertake collaborative work with their national industry to analyze 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.
3. 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 43.

Confidentiality

4. 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

5. This recommendation replaces Recommendation 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 FADs to be deployed per purse seine and per FAD type and number of FADs 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

FAD marking	Buoys ID	FAD type	Type of visit	Date	Time	Position		Estimated catches			By-catch			Observations	
						Latitude (N/S)	Longitude (W/E)	SKJ	YFT	BET	Taxonomic group	Estimated catches	Unit		Specimen released alive
(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 (24 hour format).
- (7) Degrees, minutes and seconds.
- (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 specimens.
- (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).

<i>Code</i>	<i>Name</i>	<i>Example</i>
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>
<i>FOB</i>	Encounter	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)
	Deployment	FAD deployed at sea
	Strengthening	Consolidation of a FOB
	Removal of FAD	FAD retrieval
	Fishing	Fishing set on a FOB ^[1]
<i>BUOY</i>	Tagging	Deployment of a buoy on FOB ^[2]
	Remove Buoy	Retrieval of the buoy equipping the FOB
	Loss	Loss of the buoy/end of transmission of the buoy

^[1] 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).

^[2] 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).

List of deployed FADs and buoys on a monthly basis

Month:

<i>FAD Identifier</i>		<i>FAD & 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>			
(1)	(1)	(2)	(3)	(4)	(5)			(6)
...
...

- (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.

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 prioritized.

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 paragraphs 58 and 59 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 behavior 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.

<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