

FADs / Senegal pole-and-line FIP : Report update

Jo Gascoigne and Youssef Jaridi, 9 June 2022

1. Introduction

This report was prepared on behalf of the Eastern Atlantic tuna pole-and-line FIP in November 2020. This version is an update from June 2022. The report considers ICCAT's management requirements in terms of the use of FADs, and how they are implemented (or not) in the Senegal-based tuna pole-and-line fleet.

Because there are only currently 4 Spanish vessels operating in the FIP, this version relates to Spanish-flagged vessels only.

The elements of the FIP workplan relating to FADs are as follows:

- 10a. Evaluate ICCAT regulations around FADs, including data submission
- 10b. Evaluate requirements for FAD management plans and review the plan for this fishery accordingly
- 10c. Evaluate the fishery data collection system for the use of FADs and evaluate whether it meets ICCAT requirements
- 10d. If required, support a pilot for an improved system for the collection of FAD data, in line with ICCAT requirements
- 10e. Evaluate the FADs in use with the fishery, and whether they meet ICCAT requirements (i.e. non-entangling FADs); if not start a discussion around the redesign of FADs
- 10f. Consider options for biodegradable FADs.

This report is intended to cover the following elements of the above workplan:

- Evaluation and summary of ICCAT requirements for FADs (10a)
- Evaluation and summary of ISSF 'best practice' for FAD design, and other information as relevant on FAD design and impacts (10e, 10f)
- Review of FAD questionnaires and other data from the fishery to evaluate the type and quantity of FADs in use in the fishery (10e)
- Evaluation of EU and Senegal FAD management plans and data collection and provision to ICCAT (10b, 10c)
- Gap analysis and recommendations for the FIP (10d, 10e, 10f)

2. ICCAT FAD requirements

The key ICCAT Recommendation relating to FADs is Rec. 21-01 (Multi-annual conservation and management plan for tropical tunas) which replaced 19-02 in January 2022. It has essentially the same provisions as 19-02, and is intended as a roll-over of the management plan to ensure that no provisions were allowed to expire. Both 19-02 and now 21-01 are intended as interim measures while the process continues to develop a formal management procedure for the tropical tuna fishery.

As in 19-02 the FAD time-limited closure in 21-01 covers the entire Convention area (i.e. the entire Atlantic) rather than just a box in the Gulf of Guinea. It therefore continues to be relevant to Senegal.

In summary, the key elements of 21-01 in relation to FADs, relevant to pole-and-line vessels, are as follows (no change from 19-02 except that the FAD closure is shorter – 1 Jan. to 13 March for 2022 instead of 31 March in 2021):

- No fishing on FADs throughout the Convention Area, 1 Jan.-13 March 2022; no deploying of FADs for 15 days prior (i.e. 17-31 Dec. 2020) (paras 27-29)
- Limits per vessel on FADs with operational buoys: 2022 – 300 (same as 2021) (para. 30)
- Flag states to submit FAD Management Plans for their vessels by 31 Jan. each year (objectives and guidelines provided) (para. 34; objectives para. 35, guidelines Annex 1)
- Information to be provided in a FAD logbook for each visit to a FAD (para. 37; optional template Annex 2, minimum requirements Annex 3)
- List of deployed FADs to be updated monthly (para. 38; minimum requirements Annex 4)
- Information on total FADs to be provided by each flag state to the Secretariat annually in an agreed format (para. 39; format provided by the ICCAT Secretariat)
- All FADs must be non-entangling (para. 40; definition of ‘non-entangling’ provided in Annex 5)
- Endeavour to ensure that FADs are non-plastic (except for the buoy) by Jan. 2021 (para. 40)
- Specific ‘tropical tuna authorisations’ to be put in place for vessels >20m, with list provided to Commission by 31 July each year (paras 41 and 48)
- FAD data to be made available to national scientists and the SCRS (paras 31 and 63)

Rec. 16-02 establishes an ad-hoc working group on FADs and sets out its terms of reference and management arrangements. In brief, the group is mandated to try and improve the understanding of the impact of FADs on target tuna species, how to quantify FAD impact and how to manage it.

Most of the ICCAT FAD requirements fall on the flag state to implement, along with the fishery. The FAD closure should be implemented by coastal states for their EEZ. Responsibilities also fall on the fishery itself in terms of implementing reporting requirements as well as using accepted FAD design. The responsibilities for implementing the FAD requirements of 21-01 remain the same as 19-02 and are summarised in Table 1.

Table 1. Summary of responsibilities for the requirements relating to FADs in ICCAT Rec. 21-01

Requirement	Flag state (Spain / EU)	Coastal state (Senegal)	Fishery (individual vessels)
72 day FAD closure 2022	Incorporate into fishing regulations, monitoring	Implement in its EEZ which is covered by the closure	Compliance
FAD vessel limits	Incorporate into fishing regulations, monitoring		Compliance
FAD management plans	Prepare and submit to ICCAT following guidelines		
FAD logbooks	Add to their fishery monitoring systems		Complete and submit as required
List of deployed FADs (monthly)	Add to their fishery monitoring systems		Complete and submit as required
Information on total FADs (annual)	Add to annual report to ICCAT		
Non-entangling FADs	Monitoring	Monitoring	Change their FAD design as required

Biodegradable (non-plastic) FADs	No actual requirement – just a suggestion		
FAD data to be provided to scientists	Unclear	Unclear	Usually under an arrangement between the fishing company and scientists

3. EU and Senegal compliance with ICCAT requirements

3.1 EU

The EU brings into force the management measures agreed at RFMOs via the annual regulation setting fishing opportunities, which is normally published in December or January (Regulation 2022/109 of 27 January 2022). The FAD closure, limits and report (of members states to the Commission) are included as Article 26. For 2021, under EU Reg. 2019/124 (Annex IV), the EU set a maximum number of vessels $\geq 20m$ authorised to fish for bigeye in the ICCAT area (34 purse seiners of which 11 are French, plus 269 Spanish and Portuguese longliners) (ICCAT 2021¹).

The EU submitted to ICCAT an annual fishing / capacity management plan for tropical tunas in 2021, including FAD management plans from Spain and France². These FAD management plans are very detailed and cover all the elements required to be included under Rec. 21-01 – but as in 2020, in both cases they cover only the purse seine fleet, although Rec. 21-01 is (like 19-02) unambiguous that pole-and-line ('baitboat' in ICCAT parlance) should also be included³. Presumably these plans are essentially the same as in 2020, since the requirements from ICCAT have barely changed.

The EU also notes that verification of the active FAD limit and the FAD closure is challenging and asks ICCAT to explore a regional observer programme to support this. They state that verification of the number of FADs per vessel will be undertaken by the 'competent authority', which in practice could be either the Ministry in Senegal (DPSP) or the flag state – depending on the means of verification (e.g. observers report to Senegal while the VMS is available to both).

The situation in relation to compliance with Rec. 21-01 FAD requirements for the EU, as far as we can establish at present, remains as last year (see Table 2).

Table 2. Summary of FAD-related requirements in Rec. 21-01 and the current situation in relation to EU-flagged pole-and-line vessels

Requirement of 21-01	Actions (France)	Actions (Spain)	Gaps in compliance at present
Applies to	Purse seiners only	Purse seiners only	Pole-and-line vessels not included
FAD closure Jan.-March	Included in FAD management plan and EU Reg. 2022/109 where all vessels using FADs are covered	Included in FAD management plan – wording taken directly from 21-01 so pole-and-line included; also Reg. 2022/109 would apply	No regulatory gaps

¹ Compilation of Part I reports from all ICCAT CPCs

² <https://www.iccat.int/com2021/index.htm#en> and see under tab Panel 1

³ See first sentence of Annex 1 of Rec. 21-01: *The FAD Management Plan for a CPC purse seine and baitboat fleets must include the following:*

No deployment of FADs 17-31 Dec.	As above	As above	No gap
FAD limits per vessel	In plan, limit for purse seiners set at 300, with an additional limit of 600 buoy purchases; but Reg. 2022/109 (Article 26) covers all vessels	Included in FAD management plan – wording taken directly from 19-02 so pole-and-line included; also Reg. 2022/109	No gap
FAD management plan	Submitted to ICCAT	Submitted to ICCAT	Only covers seiners (with some exceptions; see above)
FAD logbook and list of deployed FADs	Included in FAD management plan (Annex 3); already used by seiners in 2022	Included in FAD management plan (Annex 1); already in use	Pole-and-line vessels not included
Information on total FAD deployments to be provided to ICCAT	Included in FAD management plan	Conducted by AZTI since 2014 (methodology set out in Annex 2 of FAD plan)	Only for seiners
Non-entangling FADs	Requires any mesh to be <6.5 cm	All activity on entangling FADs forbidden since 30 June 2015	Complies with ICCAT requirements (probably) but not fully non-entangling
Non-plastic FADs	Non-biodegradable materials must be replaced ‘as soon as possible’; research underway	No mention	Not a formal requirement
Tropical tuna authorisations	On ICCAT website ⁴	On ICCAT website ⁵	None (pole-and-line vessels included)
FAD data provided to national scientists and SCRS	Done through EU research projects such as CECOFAD	FAD management plan requires that such data be recorded even if sharing it is not an obligation. In practice this is also done through EU research projects such as CECOFAD.	None (except pole-and-line not included)

3.2 Senegal

Note that Spanish-flagged vessels are covered by the above EU requirements wherever they fish, so Senegal regulations are only relevant in relation to actions that need to be taken by the coastal state

⁴ <https://www.iccat.int/en/VesselsRecord.asp>

⁵ same as French

specifically, of which there are none relating to 21-01 (see Table 1). The Senegal legal situation is summarised here briefly for completeness.

Arrête 017419 of 23 April 2021 brings Rec. 19-02 and subsequent iterations into Senegalese legislation. Some measures in the arrêté are limited to 2021 (FAD limit of 300, as well as bigeye catch limit, maximum number of licenced seiners) while others apply each year (FAD closure, FAD reporting requirements). Presumably there is, or is intended to be, an updated version for 2022 setting the same FAD limit for 2022, but we do not have a copy as yet. The main gap in this regulation, however, is that it makes no mention of non-entangling or biodegradable FADs as a requirement.

4. Review of Spanish FAD management plan

A Spanish FAD management plan was submitted to ICCAT via the EU in 2021. The plan is very similar to that submitted in 2020, as you would expect, since the ICCAT requirements have not changed. The objectives are consistent with Rec. 21-01, except that, as already noted, the plan is only stated to apply to the purse seine fleet. The main elements of the plan are as set out in the previous version of this report and not repeated here. Overall, as you might expect, the plan are consistent with ICCAT requirements, and in some areas go further (e.g. it covers all four tuna RFMOs so includes the requirements of all of them) – with the one glaring omission (from the FIP perspective) that the pole-and-line fleet is mainly excluded.

5. FAD design – current ‘best practice’

As far as I know, FAD design ‘best practice’ has not changed since the last iteration of this report – please see description there. ISSF are the acknowledged experts in this and extensive resources are available on their website: <https://www.issf-foundation.org/>. In summary, ISSF defines a non-entangling FAD as follows:

- Raft not covered in netting
- If covered at all, use canvas, tarpaulin, shade cloth or some other material with no possibility of entangling
- Sub-surface tail using no netting
- It may use rope, canvas, nylon sheet or another non-entangling material

ISSF are also working with Spanish oceanographers from CSIC on biodegradable FADs, with a biodegradable design currently being tested in various fleets around the world (Moreno et al. 2020⁶). The idea behind this design is that it uses fisher knowledge as to what makes a FAD attractive to tuna (slow rate of drift, shade and attraction of small fish) to build a FAD which is productive at the same time as being both robust and biodegradable. The design they have come up with (called a ‘Jelly FAD’ – not because it is made of jelly but because it takes inspiration from the shape of jellyfish) uses materials such as canvas, bamboo, palm leaves, manila rope, rocks and old chain, and is designed to be neutrally buoyant to minimise the need for plastic floats. Details are provided here: <https://www.issf-foundation.org/about-issf/what-we-publish/fip-resource/the-jelly-fad-a-paradigm-shift-in-bio-fad-design/>, see also Figure 1.

⁶ Gala Moreno, Joaquín Salvador, Jefferson Murua, Naiten Bradley Phillip Jr., Hilario Murua, Lauriane Escalle, Ben Ashigbui, Iker Zudaire, Graham Pilling and Victor Restrepo 2020. A multidisciplinary approach to build new designs of biodegradable Fish Aggregating Devices (FADs). WCPFC-SC16-2020/EB-IP-08.



Figure 1. A 'Jelly FAD' designed by ISSF, based on non-entangling and biodegradable materials (canvas, bamboo, manila rope, weighted with rocks, sand or old chain) (Moreno et al. 2020; photo provided by ISSF)

6. Design of FADs in this fishery

The fishery has been prepared to test jelly FADs (Gala Moreno pers. comm.). Unfortunately, due to operational difficulties with the fleet, this has not yet happened, and currently it seems that few FADs of any kind are being deployed by the fishery.

7. FAD information recorded by the fishery

Since the fleet is not currently fishing due to operational difficulties, we do not have additional information for this section at present.

As noted previously, it is possible that some of the reporting requirements are impractical for pole-and-line vessels; ICCAT has clearly designed them with purse seine vessels in mind. Purse seine vessels are much larger and have lifting equipment etc. on board, which pole-and-line vessels do not have. The main gap in data collection which could easily be rectified seems to be reporting of FAD deployments and FAD loss.

8. Gap analysis – what does the FIP need to do to comply with ICCAT and FAD best practice?

The gap analysis from the previous version of this report still applies in its essentials. To summarise:

- The EU (Spain) only applies Rec. 21-01 to the purse seine fleet, not the pole-and-line fleet.
- The issue of enforcement of both the FAD closure and the FAD limits has been raised by the EU with ICCAT. The EU has requested further work on a regional observer programme – other options are cameras on board, restricting FAD purchases and reviewing telecoms bill, but none are straightforward.
- FAD design: although there is a plan to trial Jelly FADs in the fishery, so far as far as we know this has not changed.

9. Conclusions for the FIP

Based on the gap analysis above, the following concrete activities could be considered for the FIP this year:

- Continue to engage with the EU to ask them to implement ICCAT requirements for this fleet instead of just the purse seine fleets.
- Continue the good work with ISSF on FAD design and Jelly FADs.