



**SCIENTIFIC COMMITTEE  
EIGHTEENTH REGULAR SESSION**

**ELECTRONIC MEETING**  
10-18 August 2022

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**Guidelines for Non-entangling and Biodegradable FAD Materials**

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**WCPFC-SC18-2022/EB-IP-06**

**22 July 2022**

**FAD Management Options IWG**



**THE FAD MANAGEMENT OPTIONS  
INTERSESSIONAL WORKING GROUP  
FIFTH SESSION**

**EMAIL CORRESPONDENCE**  
15 October – 15 November 2021

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**GUIDELINES FOR NON-ENTANGLING AND BIODEGRADABLE FADS**

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**FADMO-IWG-05-2021-WP-01**

15 November 2021

**I. BACKGROUND**

1. In November 2020, the FAD Management Options Intersessional Working Group (FADMO-IWG) finalized a draft *Guidelines for non-entangling and biodegradable FADs*, which was forwarded to the Commission. The WCPFC17 in December 2020 provided the following recommendation (Paragraph 349, WCPFC17 Summary Report):

*349. Noting that the SC16 and TCC16 could not complete the task in paragraph 22 of CMM 2018-01 due to the limited agenda resulting from COVID-19, the Commission tasked SC17 and TCC17 to review the draft guidelines for non-entangling and biodegradable FADs prepared by the FAD Management Options IWG (Attachment K). The FAD Management Options IWG should revisit the draft guidelines based on input from those bodies as well as any additional scientific and technical information on non-entangling and bio-degradable FADs.*

2. In the SC17 online discussion forum, there was general support on strengthening the existing provisions to reduce entanglement on FADs as proposed by the FADMO-IWG and acknowledgement that more work is needed before further requirements are put in place for the use of biodegradable materials in FADs. It was also noted that research on the use of biodegradable materials has experienced some delays due to the impacts of COVID-19. It was also acknowledged that lower entanglement risk FADs are not ideal but their use is a transitional step in moving to the desired goal of fully non-entangling FADs. There was also a suggestion on tracking weights of dFADs to estimate the trends in plastic use in dFADs overtime.
3. In the TCC17 plenary and online discussion forum, there was general support for the use of non-entangling and biodegradable FAD materials. There was also a general support for research on the development and application of suitable biodegradable materials in FAD construction including the use of locally available materials. There was a majority support to move to fully non-entangling FADs and to begin transition as soon as possible noting some challenges and difficulties faced by other CCMs such as logistical concerns about getting materials to ports and other logistical hurdles resulting from the COVID-19 pandemic.

## II. UPDATES ON THE GUIDELINES FOR NON-ENTANGLING AND BIODEGRADABLE FAD MATERIALS

4. The FADMO-IWG notes the discussions at SC17<sup>1</sup> and TCC17<sup>2</sup> including other available scientific and technical information on non-entangling and bio-degradable FADs and the status of WCPFC Project 110, which was funded by contributions from the EU, USA and ISSF. WCPFC Project 110 will conduct trials of non-entangling and biodegradable FADs in the Western and Central Pacific Ocean. These trials are expected to provide essential information to the tuna fishing industry on the designs, types of materials, performance and cost-effectiveness of non-entangling and biodegradable FADs in the WCPO context and support the industry to increase uptake of more ecologically sustainable FAD designs which has experienced some work delays due to the impacts of COVID-19 pandemic and is expected to be completed in late 2023.
5. The FADMO-IWG is supportive of the direction for banning nettings on FADs or use only non-entangling materials and designs to reduce, if not eliminate the risk of entanglement of sharks, sea turtles, cetaceans and other vulnerable species. However, the Commission needs to determine the timing of when to use only non-entangling materials on FADs noting the research on availability of materials and FAD designs in the respective area which was hampered due to the impacts of COVID-19 pandemic and the uncertainty surrounding ongoing disruptions to the global supply chain, more generally. Some members of the FADMO-IWG suggests having some transition period before strengthening the requirements for the use of non-entangling materials, taking into consideration challenges faced by some CCMs posed by the COVID-19 pandemic.
6. The FADMO-IWG recommends using biodegradable materials on the construction of FADs to reduce the number of synthetic debris in the environment but acknowledge that more research is needed on the development and application of suitable biodegradable materials and FAD designs in FAD construction including the use of locally available materials.
7. The FADMO-IWG recommends that CCMs may continue to encourage its flagged vessels to use available biodegradable materials on FAD construction.
8. The FADMO-IWG recommends that the Commission considers developing a definition of “biodegradable FAD”, ideally in consultation with other t-RFMOs.
9. The FADMO-IWG notes that processes to monitor the implementation of non-entangling and/or biodegradable FAD guidelines will need to be discussed in the near future, to assist in their ongoing improvement.
10. The purpose of this paper is to present the updated draft *Guidelines for Non-Entangling and Biodegradable FAD Materials* (**Annex A**) for consideration of WCPFC18.

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<sup>1</sup> <https://meetings.wcpfc.int/node/13212>

<sup>2</sup> <https://meetings.wcpfc.int/node/13813>


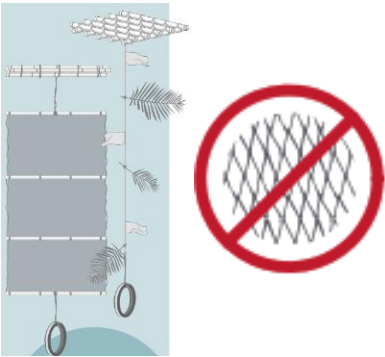
**Annex A. GUIDELINES FOR NON-ENTANGLING AND BIODEGRADABLE FADs<sup>3</sup>**

**GENERAL GUIDELINES:**

- ✓ FADs designed with non-entangling materials and constructed with biodegradable materials are the FAD designs with the least possible negative impact on the ecosystem
- ✓ New FAD designs should also focus on mitigating impact when disintegrating, beaching or sinking if lost or abandoned.
- ✓ FAD recovery activities are encouraged to reduce FAD loss and abandonment.

**I. GUIDELINES FOR NON-ENTANGLING FADs**

- ✓ FADs constructed without netting can eliminate the entanglement of turtles, sharks and finfish species. This will also reduce chances of FAD structures becoming enmeshed in coral reefs, unravelling/disintegrating and increasing risk of entanglement of marine species and impacts to other sensitive substrates, if lost or abandoned.

FAD Structure	NON-ENTANGLING	
<p><b>Raft</b></p>	<p>✓ To the extent of possible, the surface structure should <b>not</b> be covered with netting or meshed materials (to reduce entanglement of turtles).</p>	
<p><b>Tail</b></p>	<p>✓ FADs constructed without netting can eliminate the entanglement of turtles, sharks and finfish species. This will also reduce chances of FAD structures becoming enmeshed in coral reefs and other sensitive substrates, and research on the impacts of tail depth, width and size on substrates may be considered in the future.</p>	

<sup>3</sup> Will be reviewed and updated when new information becomes available

Based on the 2019 ISSF Guide there are **three (3) categories of FADs from lowest to highest entanglement risk** that are described below. *Considering the variety of designs and materials used worldwide to construct FADs, these designs are just examples, but the important elements are the net type and its configuration.*

**✓**

## NON-Entangling FADs

**RAFT**

- Do not cover with netting.
- If covered, cover with canvas, tarpaulin, shade cloth, or non-entangling materials.

**TAIL**

- Subsurface structure is made with ropes, canvas or nylon sheets, or other non-entangling materials.

More detail on the previous page.



**These FADs are expected to have no risk of causing entanglement.**

**No netting is used in any components (raft and tail)**

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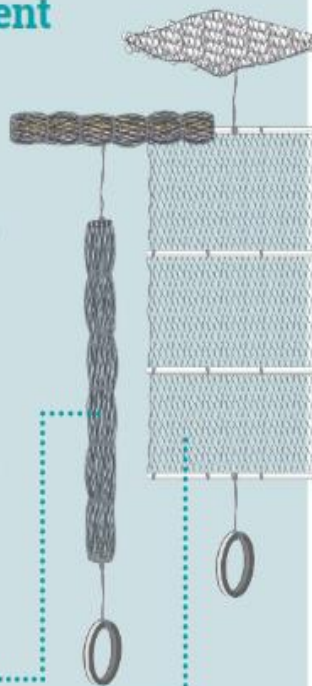
## LOWER Entanglement Risk FADs

**RAFT**

- Use only small mesh netting (< 2.5 inch / 7 cm stretched mesh) if covering with net (both upper and submerged parts).
- If small mesh netting is used as cover, it is tightly wrapped, with no loose netting hanging from the raft.

**TAIL**

- If net is used as submerged tail, could be of any mesh size if tightly tied into sausage-like bundles.
- If open panel netting is used, only small mesh size (< 2.5 inch [7 cm] stretched mesh) can be used, but weight the panel to keep it taut.



**Despite using netting, these design elements reduce the risk of entanglement events.**

**✗**

## HIGH Entanglement Risk FADs

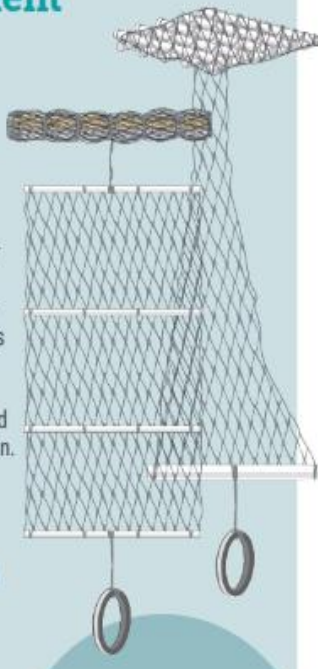
**RAFT**

- Covered with large mesh netting (e.g. > 2.5-inch mesh).\*
- If mesh size is larger than 2.5 inches (both in the upper or submerged part), it is high entanglement, whether the net is tightly tied or covered by canvas or tarpaulin.

**TAIL**

- Submerged part of the FAD constructed with open panels of large mesh netting (> 2.5-inch mesh).

\*Accounting for mesh sizes available in the market, 2.5 inch (7 cm) mesh size offers the lowest likelihood of entanglements across species and body parts.




**These FADs are known to cause entanglements with turtles and sharks.**

\* Non-Entangling FADs are highly encouraged

**II. GUIDELINES FOR BIODEGRADABLE FADs**

- ✓ Acknowledging that more research is needed on the development and application of suitable biodegradable materials in FAD construction including the use of locally available materials, CCMs should continue to encourage its flagged vessels to use available biodegradable materials to the extent possible in FAD construction.

FAD Structure	BIODEGRADABLE	
<b>Raft</b>	<ul style="list-style-type: none"> <li>✓ Encourage the use of natural and/or biodegradable materials such as bamboo, balsa wood, and other natural materials or in their absence, use of bio-based and biodegradable compounds complying with international standards that degrade without causing impact on the ecosystem.</li> <li>✓ While noting that no feasible biodegradable replacement seems to be currently available, the use of plastic buoys <del>and containers</del> for flotation should be reduced as much as possible; for instance, reduce the weight and volume of the FAD structure.</li> </ul>	
<b>Tail</b>	<ul style="list-style-type: none"> <li>✓ Encourage the use of natural and/or biodegradable materials such as cotton ropes and canvas, manila hemp, sisal, coconut fibre, other natural materials. In the absence of such materials, encourage the use of bio-based and biodegradable compounds complying with international standards.</li> </ul>	