



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

EMAIL CORRESPONDENCE

1 October – 17 November 2020

**Responses to the Recommendations in the Report of the 2nd Meeting of the Joint Tuna RFMOs
Working Group on FADs**

FADMO-IWG-04-2020/WP-01_Final

WCPFC FAD Management Options Intersessional Working Group

Introduction

The Commission requested the 4th FAD Management Options Intersessional Working Group (FADMO-IWG-04) to report back to the Commission on the merits and relevance for tropical tunas of the Recommendations of the 2nd Meeting of the Joint Tuna RFMOs Working Group on FADs¹, which was held in San Diego, USA. 8-10 May 2019. Below is the agreed text from the WCPFC16 Summary Report:

366. The Commission agreed the FAD Management Options Intersessional Working Group would meet in 2020 and that the Working Group would consider the report and recommendations of the second Joint t-RFMO FAD Management Working Group and report back to the Commission on the merits and relevance for tropical tunas of those recommendations.

¹ Report of the 2nd Meeting of the Joint Tuna RFMOs Working Group on FADs is also posted at WCPFC-SC15 website (<https://www.wcpfc.int/node/43280>)

WCPFC FADMO-IWG's Responses to the Recommendations in the Report of the 2nd Meeting of the Joint Tuna RFMOs Working Group on FADs

GENERAL:	FADMO-IWG's responses on the merits and relevance for tropical tunas
<p>1. The mandate and responsibilities of the Joint t-RFMO Working Group on FADs (JWG) be discussed within each t-RFMO, and that guidance on these matters be provided by the RFMOs (perhaps through the Kobe process steering committee) in order to clarify and define the respective roles of the JWG and the Joint Technical Working Group (JTWG).</p>	<ul style="list-style-type: none"> • The WCPFC should note that the 2nd Joint WG report can serve as a guide to help with on-going and future FAD research or trials in the WCPO. Currently, the WCPFC has instructed its FAD-IWG to focus on the task at hand and expects that any draft guidance be developed by the JWG and JTWG for review by the WCPFC. • Several CCMs viewed that this recommendation is not relevant to WCPFC noting their previous comments expressed at WCPFC 15 and WCPFC16 were they expressed their reservations about participation in the JWG with the understanding that the WCPFC does not participate in the JWG beyond the agreed attendance by the Chair of the WCPFC FADMO-IWG and a member of the WCPFC Secretariat. At WCPFC16, they supported consideration of relevant recommendations of the JWG through the FAD IWG. • One CCM expressed that this recommendation has a low relevance to tropical tuna issues.
<p>2. The agendas of future meetings of the JWG should focus on a limited number of key issues, thus allowing more progress to be made on identified priority issues. The JTWG should identify the key issues to be discussed.</p>	<ul style="list-style-type: none"> • Noted. • Several CCMs expressed that this recommendation is not relevant to WCPFC.
MANAGEMENT	FADMO-IWG's responses on the merits and relevance for tropical tunas
<p>3. t-RFMOs should prioritize scientific studies which provide advice on potential limits on FAD deployments /sets and/or the current active FAD/buoy limits, in relation to management objectives.</p>	<ul style="list-style-type: none"> • This recommendation has relevance to paragraphs 23-24 of the WCPFC Conservation and Management Measure (CMM) 2018-01. Recently, WCPFC conducted research and analyses related with this recommendation (e.g. WCPFC-SC16-MI-IP-13: Estimates of the number of FAD deployments and active FADs per vessel in the WCPO and WCPFC-SC16-MI-IP-14: Report on analyses of the 2016/2020 PNA FAD tracking programme). There is also an ongoing WCPFC project on the use of acoustic data from echo-sounder buoys used to track FADs in 2020 (WCPFC-SC-Project 88, see paper WCPFC-

SC16-MI-IP-20: Updates on Project 88: FAD acoustics analyses). Longer-term analyses would be required in order to get a wider perspective. Availability of buoy tracking data going back in time as far as possible would be very useful.

- While in general FAD closures are easily enforceable method, for reducing the number of sets on FADs, the working group (WG) considers that limiting/managing/regulating the number of active FADs/buoys could also be a matter of priority in FAD management. In this context, the WCPFC continues to conduct analyses to evaluate whether the current limit under para. 23 of CMM 2018-01 is scientifically effective.
- Restrictions on FAD sets has been used as a management option and remains so going forward.
- Analyses presented in WCPFC-SC16-2020/MI-IP-14 indicates that the majority of vessels have less than 100 active buoys per month and less than 50 per day, which is substantially below the limit of 350 active buoys per vessel in CMM 2018-01.
- One CCM recommends that WCPFC request the SC to prioritise research initiatives aiming at providing scientific advice on potential limits on FADs closures, deployment, sets and FAD buoys.
- Several CCMs viewed that this recommendation does not merit consideration by the WCPFC for the following reasons:
 - a) The recommendation does not take into account the importance of the FAD closure in the WCPO, noting that this measure is also applied by two (2) other t-RFMOs
 - b) WPFC has previously applied FAD set limits in CMM 2015-01. That application failed and was removed from the CMM. The experience showed that allocated FAD set limits are unworkable when there are large changes occurring in the sizes of fleets. There is therefore no basis for attaching priority to scientific studies on this kind of measure.
 - c) The recommendation does not take into account the situation in the WCPO where over 90% of FAD sets are made in national waters, and that coastal state CCMs have a range of other options for FAD management, including FAD charging.
- One CCM does not support the following views: i) that FAD set limits in CMM 2015-01 is a failure and ii) that WCPFC does not take into account the

	<p>situation in the WCPO where over 90% of FAD sets are made in national waters, and that coastal state CCMs have a range of other options for FAD management.</p>
<p>4. The t-RFMOs should explore opportunities for consistency and harmonization, if possible, across t-RFMOs in FAD management measures.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for the management of tropical tunas that are shared by t-RFMOs such as the WCPFC and the IATTC. • Subject to the range of a stock and fishery distribution, the WCPFC and the IATTC may need to explore consistency and harmonization of a FAD CMM (including data collection protocols), if to be developed, in addition to region-specific approaches for a FAD CMM. In addition, harmonization of definitions (e.g., FAD, FAD set, active FAD, etc.) and requirements for the use of lower-entanglement FAD, fully non-entangling FAD, and the use of biodegradable materials may be beneficial. Possibilities of harmonization with other RFMO's may be technically analyzed through the JTWG. • A common WCPFC and IATTC exploration of the potential of echo-sounder data from satellite buoys used to track FADs to provide fishery-independent data for stock assessments (e.g., indices of abundance). • Some CCMs have proposed consideration of a harmonized definition of a FAD between the two sides of the Pacific Ocean - though not all agree with reconsideration of this matter. • Several CCMs acknowledged that this recommendation has merits and relevance for tropical tunas and is noted. But also expressed that it is premature to include reference to a separate FAD CMM in these responses. This comment applies to other references to a FAD CMM in this document. They further noted that the FAD fisheries in the WCPO and EPO are substantially different from each other, and as such, they believe that harmonization of measures across multiple RFMOs is unlikely to lead to a strengthening of measures applied in the WCPFC region. In this regard, they will not support activities which are likely to undermine the standards in their region. • Some CCMs supported the view to have a separate FAD CMM noting that increased complexity on FAD regulations and the belief that having a separate CMMs may allow more focused discussions on FAD issues. This could also enhance efficiency when reviewing FAD regulations and their implementations. Further, harmonizing FAD definitions across the Pacific could reduce ambiguity in implementation, thereby allowing execution to be solid and efficient, which are critical elements in order to strengthen measures.

<p>5. Each t-RMFO should develop, as a matter of priority, systematic monitoring and reporting procedures on the number of active FADs/buoys in its Convention Area.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance to the management of tropical tunas and will be further explored. CMM 2018-01 has already introduced such a requirement in WCPFC, yet there is no clear definition on “active” FADs/buoys.
<p>6. FAD management objectives should be defined, both within each t-RFMO and jointly, to guide research, data collection, and the development of effective conservation measures.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for the management of tropical tunas. • In the FADMO-IWG-3 meeting in 2018, this has been discussed but there was no agreement: <ul style="list-style-type: none"> 9. <i>The IWG recommends that the Commission considers adopting objectives for FAD management with respect to defining an appropriate number of FADs per purse seine vessel or category [e.g. size] of vessel limiting FAD numbers; the IWG discussed potential objectives, i.e. reducing marine debris, limiting economic impact [through reduced CPUE] and reducing the impact of FAD fishing on juvenile tuna, but there was no agreement on all of them.</i> • Reviewing the FAD management objectives from other t-RFMOs (e.g. ICCAT, IATTC) will be a good starting point. • In addition, some CCMs expressed that because over 90% of FAD sets in the WCPO are made in national waters, it will be important for WCPFC objectives to be compatible with the national and sub-regional objectives of the coastal states. Whereas some other CCMs viewed that the fundamental purpose of the Commission does not include the compatibility with the national or sub-regional objectives of coastal States. • Others CCMs also expressed that it might be useful for the Commission to adopt management objectives, however, it is not essential.
<p>DEFINITIONS</p>	<p>FADMO-IWG’s responses on the merits and relevance for tropical tunas</p>
<p>7. Each t-RFMO should adopt definitions of priority terms related to the FAD fishery.</p>	<p>This recommendation has merits and relevance for tropical tunas in relation to developing a FAD-related CMM.</p> <ul style="list-style-type: none"> • WCPFC CMM 2009-02 (Paragraph 3) has a definition of a FAD as “<i>any object or group of objects, of any size, that has or has not been deployed, that is living or non-living, including but not limited to buoys, floats, netting, webbing, plastics, bamboo, logs and whale sharks floating on or near the surface of the water that fish may associate with.</i>” Several CCMs have suggested this definition be reviewed and harmonized with that of the IATTC-while others have been adamantly opposed to any review of the basic FAD definition.

	<ul style="list-style-type: none"> • SC and TCC should be asked to consider the provision/ compilation of a set of technical priority terms and definitions relating to FADs for WCPFC purposes, using Appendix 4 of the 2nd Joint t-RFMO Report as a guidance and noting that there may be differences in terms used in national legal frameworks. A list of priority terms related to the FAD fishery could be useful. All relevant terms could be defined in a FAD CMM, if to be developed. • Some CCMs supported the idea of having a FAD-specific CMM while others viewed it is premature to include a separate FAD CMM, noting their previous comments.
<p>8. The JTWG should identify definitions whose harmonization is a priority.</p>	<ul style="list-style-type: none"> • Noted while several CCMs viewed this is not relevant to WCPFC.
<p>9. Any definitions proposed by the JTWG should be reviewed by the Scientific Committee of each t- RFMO.</p>	<ul style="list-style-type: none"> • This recommendation can be noted. • Subject to the Commission’s decision, definitions identified by the JTWG (Appendix 4 of the 2nd Joint t-RFMO FAD-WG report) can be considered for reviewed by the WCPFC Scientific Committee and FAMO-IWG. Initially, focus should be on the most relevant definitions. The TCC may also want to review any modifications proposed.
<p>DATA COLLECTION</p>	<p>FADMO-IWG’s responses on the merits and relevance for tropical tunas</p>
<p>10. The minimum standards for data collection should be reviewed by the relevant technical or scientific working groups within each t-RFMO, and revised or adopted as appropriate.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for the management of tropical tunas. Together with ROP data collection, it is important to review what is already being collected from WCPFC data collection scheme in the context of streamlining the data collection as a whole. • WCPFC12 adopted the report of the 1st meeting of the FADMO-IWG and agreed on steps to be taken to improve the provision of FAD data. • Also refer to SC16-EB-IP-03 (Updated evaluation of drifting FAD construction materials in the WCPO) in terms of FAD designs and the areas that need better information to monitor the non-entangling and biodegradable FADs in paragraphs 19 – 22 of the CMM 2018-01. • The FADMO-IWG should be asked to review progress on steps to be taken to improve the voluntary provision of FAD data both in national waters and high seas at its next meeting.

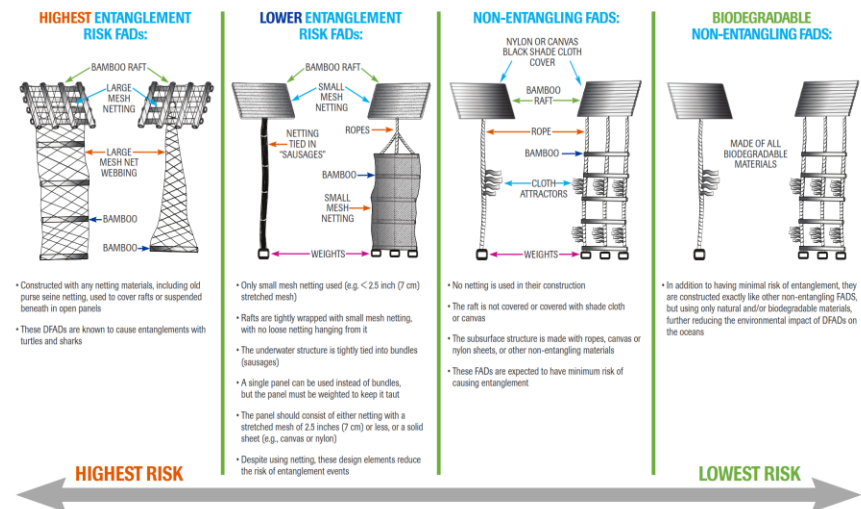
	<ul style="list-style-type: none"> • WCPFC may task the SC to develop minimum standards for data collection for FADs management.
11. Discussions on minimum data collection standards should be prioritized in the future work of the JTWG.	<ul style="list-style-type: none"> • Noted. • Several CCMs viewed this is not relevant to WCPFC.
MARKING AND TRACKING	FADMO-IWG's responses on the merits and relevance for tropical tunas
12. Given the possibility of buoys becoming separated from a FAD or being replaced, a system for marking both buoys and FADs should be explored.	<ul style="list-style-type: none"> • This recommendation has merits and relevance for the management of tropical tunas and the discussion needs to be continued in the FAD-IWG. • Consider the importance of making the ID scheme as simple and error proof as possible. • Progresses made at WCPFC related to this recommendation are shown below: • There was a WCPFC consultancy with the MRAG-Asia-Pacific on the following three issues (<i>Monitoring of FADs Deployed and Encountered in the WCPO</i>), which was presented to the FADMgmtOptionsIWG02 meeting in 28 – 30 September 2016: <ul style="list-style-type: none"> ➢ FAD marking, and identification and use of electronic signatures; ➢ FAD monitoring, tracking and control; ➢ Advise on options for FAD marking and monitoring for WCPO wide application. • The WCPFC's Scientific Committee has provided the following recommendation on FAD marking and monitoring in Paragraph 119 of the SC13 Summary Report: <p><i>119. SC13 recommended as a first step the Commission should consider introducing a buoy ID-scheme which requires the registration of all buoys attached to FADs deployed. Field tests in conjunction with industry and observers should be undertaken to determine the optimal configuration of future developments of a fully marking system that also includes the FADs themselves.</i></p> • The Technical and Compliance Committee also supported the SC13's recommendation (Paragraph 275 of the TCC13 Summary Report): <p><i>275. TCC13 supported the recommendation from SC13 (SC13 Summary Report, paragraph 119) that recommends as a first step the Commission considers introducing a buoy ID scheme, and that field tests be undertaken to determine the optimal configuration of future developments of a full marking system.</i></p>

	<ul style="list-style-type: none"> • The WCPFC should develop a FADs and buoys marking system based on previous advice from SC and TCC.
<p>13. High-resolution buoy position data should be made available for research purposes.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas. Several CCMs suggested that it needs to be broadened to cover the provision of high-resolution buoy position data for scientific research, compliance and management purposes, both in national waters and high seas to be relevant to the WCPFC. But others noted that there were no discussions to use such data for compliance and management purposes. • Currently, this is well supported by WCPFC and available data are being used by the Commission’s Scientific Services Provider (SPC-OFP) to conduct scientific analysis. (e.g. WCPFC-SC16-MI-IP-14: Report on analyses of the 2016/2020 PNA FAD tracking programme). There is also an ongoing Project on acoustic FAD analyses in 2020 (Project 88; SC16-MI-IP-20: Updates on Project 88: FAD acoustics analyses). • The Commission may consider further discussion on either [mandatory] or [voluntary] provision of long-term complete high-resolution buoy position data be made available for scientific research, and if this data will be used for compliance and management purposes. • Where appropriate, consideration may be made on the aims of other Commission projects, such as tagging or biological sampling, in relation to provision of buoy position data being made available, taking into consideration time-delay and confidentiality. • WCPFC should support this recommendation and encourages all CCMs to undertake similar research activities, in view to covering all relevant WCPFC areas.
<p>INDICATORS</p>	<p>FADMO-IWG’s responses on the merits and relevance for tropical tunas</p>
<p>14. The suite of indicators prepared by the JTWG and presented during the meeting should be reviewed, and used as appropriate, by each t-RFMO.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas. • SC and TCC should consider reviewing existing and/or further development of FAD fishery indicators. • Several CCMs noted that some of the indicators in the JTWG paper are already included in papers provided to the SC. These CCM prefer consideration of the development of set of indicators for fisheries such as the purse seine fishery and longline fishery rather than separate indicators for the FAD fishery.

<p>15. Those indicators should be extended to include research on overall biomass indicators, such as buoy- derived indices and the status of stocks/species.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas. The Commission may consider the development of the WCPFC’s FAD fishery indicators to support tuna fishery management. • Where appropriate, consideration should be made to include such indicators in the broader ecosystems indicators considered by the Commission given the potential for FAD deployments to influence the habitat and ecosystem of tropical tunas (SC16-EB-IP-07). • Expand research efforts focused on incorporating FAD buoy data (e.g., FAD density and echo-sounder information) into assessments of relative abundance; information that may complement CPUE-based abundance indices.
<p>16. Time series should be developed by each t-RFMO for all the indicators, including buoy-related indicators, using historical data to capture fishery evolution and seasonality and ENSO-cycle variability.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas. The Commission may consider the development of the WCPFC’s FAD fishery indicators to support tuna fishery management. • This could involve more research into what exactly the effect of increased FAD density is on fish distribution, fishing pressure and catchability and the relationship between FAD aggregations and local abundance. Accessing long-term complete FAD high-resolution buoy position data might be considered, where appropriate, and incorporation of this data into ongoing research using tagging and genetics may be considered along with possible ecosystem impacts.
<p>17. The development of indicators should be consistent with data collection criteria and definitions.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas. The Commission may consider the development of the WCPFC’s FAD fishery indicators to support tuna fishery management.
<p>RESEARCH</p>	<p>FADMO-IWG’s responses on the merits and relevance for tropical tunas</p>
<p>18. The JTWG should develop a five-year joint research plan on FADs, with input from the Scientific Committees of the t-RFMOs.</p>	<ul style="list-style-type: none"> • WCPFC and its constituent members and organizations are conducting research on FADs. Reviewing the past and on-going FAD research and developing a five-year joint research plan on FADs will be useful to avoid duplication of any similar research. Inputs from the Scientific Committee will be useful once the JTWG’s five-year joint research plan on FADs is available. This recommendation is noted. • Several CCMs viewed this not relevant to WCPFC.

<p>19. The joint FAD research plan should define priorities for each of the research actions, with higher priority for items that benefit all t-RFMOs or more than one t-RFMO, and organize <i>ad hoc</i> scientific meetings, as appropriate.</p>	<ul style="list-style-type: none"> • Prioritizing the list of research items will be useful. WCPFC-SC has a list of FAD research and is conducting FAD research along with its priorities based on the availability of resources. This recommendation is noted. • A “common library” of research on FADs that has been conducted in the past in all oceans would be very useful, as for example, scientists from one RMFO may not aware of FAD experiments already conducted several decades ago in another ocean. • Several CCMs viewed this not relevant to WCPFC.
<p>20. t-RFMOs should set aside and invest resources in medium- and long-term research on FADs, preferably research that is conducted jointly or transferable across t-RFMOs.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas and is noted.
<p>21. The Scientific Committees of the t-RFMOs should consider the positive experience of the workshops for vessel captains, owners and crew, and develop a mechanism for regular exchange of scientific information and stakeholder knowledge across t-RFMOs.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas subject to availability of resources and the level of priority of this recommendation. • The Commission may consider ISSF workshop experiences conducted globally by the ISSF, which conducted over 100 of these workshops as shown below for example: https://iss-foundation.org/knowledge-tools/technical-and-meeting-reports/download-info/issf-2020-01-issf-skippers-workshops-round-9/ and https://iss-foundation.org/knowledge-tools/technical-and-meeting-reports/download-info/issf-2018-19a-workshop-for-the-reduction-of-the-impact-of-fish-aggregating-devices-structure-on-the-ecosystem/ • The Commission may also encourage through long-term programs with in-person meetings to create partnerships and promote adaptive conservation measure co-construction, trust and a sense of stewardship among fishers. • WCPFC may consider facilitating the regular exchange of scientific information and stakeholder knowledge on FADs management, by fostering in particular the involvement of the industry and fishermen in future meetings of the FADMO-IWG and subsidiary bodies (e.g., SC). • A “Purse Seine Effort Creep Research Plan (SC16-MI-IP-16)” was submitted to SC16 meeting. This includes an exploratory questionnaire to increase our knowledge of the changes in the purse seine fishery, including around FADs, from the fishers’ perspectives. However, SC16 did not have the opportunity to

	discuss about this paper nor make a recommendation to the Commission on this due to the COVID-19 pandemic.
22. The results of research conducted by different groups and/or with the support of different fleets should be promptly and widely shared with all fleets and researchers involved and other interested parties.	<ul style="list-style-type: none"> • This recommendation has merits for managing tropical tunas subject to the relevance of the research results to the WCPO tuna fisheries. • It is important for the Commission not to “reinvent the wheel” but to make intelligent decisions on the use of research resources among t-RFMOs with careful planning.
23. t-RFMOs should facilitate cooperation/collaboration with t-RFMOs actively involved with acoustics, promote professional development in acoustics and, where necessary, hire scientists with expertise in acoustic data analysis, to work with the data related to acoustic buoys.	<ul style="list-style-type: none"> • This recommendation has merits for managing tropical tunas and WCPFC is currently conducting acoustic FAD Analyses by the SSP (SPC-OFP), through ongoing WCPFC Project 88 (see WCPFC-SC16-MI-IP-20: Updates on Project 88: FAD acoustics analyses).
MITIGATION	FADMO-IWG’s responses on the merits and relevance for tropical tunas
24. t-RFMOs should accelerate progress to reduce contributions of FADs to marine litter and mitigate negative impacts on coastal habitats and marine ecosystems and endangered, threatened and protected species, such as use of FADs without netting and those made with biodegradable materials, as well as mechanisms and incentives for recovering FADs.	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas and the WCPFC is currently working intensively on this mitigation of ocean pollution issues arising from FADs. • Some of the on-going work includes development of specific guidelines for the use of non-entangling material and biodegradable material on FADs. This will be discussed in Agenda 4 of the FADMO-IWG-4. • <i>The <u>FADMO-IWG-3 recommended to WCPFC15 the following minimum guidelines as described in the diagram below; and when designing FADs, the use of non-plastic and biodegradable materials should be prioritised.</u></i>



✓ Regarding the FADMO-IWG-3_recommendation, one CCM commented that some potential plastic materials for FAD construction can be made by bio-based and/or biodegradable plastics certified by international standards, which do not cause ecosystem impact (including from oxo-biodegradable plastics, which quickly biodegrade but break down into microplastics that contaminate the food chain). So there is some possibility to evaluate the use this kind of compounds as alternative to naturally occurring materials such as cotton ropes, manila hemp, sisal, coconut fiber.

- The diagram above is from the 2015 ISSF Guide. The Guide was updated in 2019 as noted in the document for Agenda item 4. The link to the 2019 Guide is:

<https://iss-foundation.org/knowledge-tools/guides-best-practices/non-entangling-fads/download-info/non-entangling-and-biodegradable-fads-guide-english/>

- Subject to the discussions of the **FADMO-IWG-4**, the recommendations and guidelines including the diagram may be updated.
- The *Pacific Islands Region Marine Turtle Management and Conservation Program* funded project “Definition of guidelines to reduce the impact of lost

	<p>and abandoned Fish Aggregating Devices (FADs) on Marine Turtles” with SPC, IATTC and other research partners and coordinated by ISSF will accelerate progress to reduce impact of FAD structure on marine turtles and the ecosystem.</p> <ul style="list-style-type: none"> • If one objective in FADs management is to reduce beaching events, then monitoring beaching patterns, “identifying hotspots” and general frequencies could be a useful to indicate whether FAD number limits (deployments) are working or not. Note the recent initiative by some members to collect in-situ data on beached FADs (WCPFC-SC16-2020/EB-IP-02 In-country initiatives to collect data on beached and lost drifting FADs, towards a regional database of in-situ data). • Some viewed that there is also a need to address how to recover FADs, where legal mechanisms, financial incentives and other mechanisms could be explored. • FAD recovery activities are encouraged to reduce FAD loss and abandonment.
<p>25. At its next meeting, the JWG should consider the impact of FADs on juvenile tunas and review mitigation measures to reduce those impacts</p>	<ul style="list-style-type: none"> • WCPFC has already been implemented FAD set management to reduce the FAD impacts on juvenile tunas (Paragraphs 16 – 18 of the CMM 2018-01 and CMM 2009-02) and WCPFC should review its effectiveness to reduce catches of juvenile tunas; based on the outcome, WCPFC may consider mitigation measures to reduce those impacts. Similarly, recent projects on mitigating FAD-related mortality of juvenile tunas have been considered by the Commission (SC15-EB-08). This recommendation is noted. • WCPFC is exploring the potential of acoustic data, in limiting sets to only those FADs that have a large estimated biomass beneath to reduce the proportion of small bigeye and yellowfin caught (WCPFC-SC-Project 88). • Several CCMs viewed that this is not relevant to WCPFC.
<p>26. Continue to involve fishers in the process of finding solutions.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas and is noted. • To date this has been done through privately funded initiatives (e.g., ISSF) but as stated above in the research section, the t-RFMOs may consider more collaborative work between scientist and fishers.
<p>27. Conduct region-specific research to test mitigation strategies, as solutions adapted to each ocean and region.</p>	<ul style="list-style-type: none"> • This recommendation has merits and relevance for managing tropical tunas. • The Commission may consider opportunistic or chartered research on vessels in collaboration with industry.

	<ul style="list-style-type: none"> The region and vessel-specific knowledge of fishers (point 26) could provide a good insight to test region-specific mitigation strategies.
28. Consider incentives to promote implementation of technological solutions.	<ul style="list-style-type: none"> This recommendation has merits and relevance for managing tropical tunas and is noted.
INITIATIVES FOR SUSTAINABILITY	FADMO-IWG's responses on the merits and relevance for tropical tunas
29. Collaboration, mutual trust, and sharing of knowledge and data among t-RFMOs, scientists, industry and NGOs should be strengthened in order to tackle unresolved issues related to the sustainability of the FAD fishery.	<ul style="list-style-type: none"> This recommendation has merits and relevance for managing tropical tunas and well noted.
COLLABORATION ACROSS RFMOs	FADMO-IWG's responses on the merits and relevance for tropical tunas
30. Hold a meeting to evaluate the information available to assess the effect of each t-RFMO's measures on FADs, with special focus on sharing information on challenges and successes.	<ul style="list-style-type: none"> This recommendation has merits and relevance for managing tropical tunas and well noted. Several CCMs viewed that this is not relevant to WCPFC noting their previous comments. While one CCM proposed that WCPFC continue engaging in the work of the Joint t-RFMO WG on FADs.