

# Comisión Interamericana del Atún Tropical Inter-American Tropical Tuna Commission



Key areas for future action for the  
Joint Tuna RFMOs Working Group on FADs

2ª Reunión del Grupo de Trabajo conjunto de las OROP atuneras sobre plantados  
2<sup>nd</sup> Meeting of the Joint Tuna RFMOs Working Group on FADs  
San Diego, California USA, 08-10 May 2019

# Key areas - General Issues

Specific actions

IATTC

## Legal aspects:

- Definition of a FAD
- Definition of ownership and responsibilities

Resolution C-18-05

Under discussion



# Key areas - General Issues

## Specific actions

IATTC

### Definitions and common indicators:

- Identify available sources for common definitions
- Harmonize definitions related to science and management of FADs: FAD set (associated vs non-associated), non-entangling, biodegradable, active buoy, type of operation at FADs etc. Prioritization should be given to those definitions with direct management implications and the science needed to guide that management
- Need to develop harmonized FAD fishery indicators (e.g. number of FADs, FAD sets, ratio of FAD-associated sets to unassociated sets, numbers of vessels deploying FADs and supply vessels etc.) to estimate the contribution of FADs to the overall effective fishing effort and capacity in tropical tuna fisheries across ocean regions

FAO Fish Tech RPT 568, IATTC FAD WG, Joint Tuna-RFMO Tech WG

Under discussion in the FAD WG. Some interim definitions have been adopted by the Commission (year 2018; ref)

Under discussion in the Joint tuna RFMO Tech WG – Task led by IATTC



# Key areas - General Issues

## Specific actions

## IATTC

Enhanced cooperation:

- Collaboration between industry and scientists for the improvement of the collection of data, scientific research and to develop effective mitigation techniques
- Coordination and collaboration on research plans on FADs across t-RFMOs
- Creation of a small technical working group of experts under the KOBE umbrella, with a focus on research and other technical aspects

Collaboration well established through several channels (Virtual meetings, BASECAMP, training workshops, research projects)

Collection of data improved at the staff level.

The staff is also requesting that industry provide higher resolution data on buoys

Two levels: at the scientists' level is well developed, but at the formal level there is room for improvement(session 12)

The IATTC is part of this technical group since late 2018



# Key areas - General Issues

## Specific actions

## IATTC

<b>Elaboration and implementation of appropriate management frameworks:</b>	Accomplished. General objectives defined, but specifics need to be discussed
– Define clear management objectives	
– Review existing FADs management plans and explore potential for harmonization across t-RFMOs	Partially accomplished; internal frequent reviews but not across t-RFMOs
– Assess the effectiveness of various management options for FADs within the framework of general tropical tuna fisheries management (e.g. overall fishing capacity)	Work in progress (e.g. project J2A)
– Address monitoring (e.g. 100% observer and VMS coverage) and compliance issues	Undertaken – 100% observer coverage in large seiners and annual Compliance committee. EM in development.
– Consider adaptive, precautionary, management with respect to emerging issues with FADs, taking into account the best available science	Some research undertaken, but not precautionary



# Key areas – Data gaps and needs

## Specific actions

## IATTC

### Data:

- |  |   |
|--|---|
| - Identify data gaps and needs   | Done as shown in Doc. FAD-03a   |
| - Optimize and harmonize the collection of data and develop common minimum standards and formats | Harmonized with national programs but under consideration by the Tech WG                          |
| - Improve data collection in FAD fisheries in general  | Done as shown in Doc. FAD-03a   |
| - Establish comprehensive systems to accurately quantify numbers of FADs and active buoys        | Work in progress (e.g. current methodologies based on the guidelines develop by the IATTC FAD WG) |
| - Need for development of robust FAD marking and tracking systems                                | Under consideration; unfunded proposal 2018   |



# Key areas – Data gaps and needs



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Specific actions	IATTC
<b>Data:</b>	
– Establish wide-scale collection of individual FAD deployment, tracking, and set-history data	FAD deployment recorded, and tracking fields included in data collection forms implemented but data insufficient for tracking Alternative: At the staff data collection level, observers, tracking is the main gap since tracking requires marking or provision of location at the same rate as vessels
– Collect new types of data on the operational and technical fleets characteristics, including on supply vessels	Partially (e.g. buoy models collected)
– Facilitate access by scientists to acoustic records of the echo-sounder buoys as a potential source of fishery independent indices	No
– Develop appropriate framework of confidentiality	Under IATTC confidentiality rules.
– Ensure/facilitate access to data for scientists and managers	Yes, following regular confidentiality rules However, high resolution buoy data has not been approved to be provided to IATTC staff

# Key areas – Data gaps and needs

## Specific actions

## IATTC

### Data:

- Mitigate the impact of FADs, consider establishing limits on the number of FADs deployed, **limits on the number of FAD set**, and consider feasibility and cost-effectiveness of FAD recovery practices

Partially. **Resolution C-17-02**

**Staff Recommendation SC-10-19**

Mitigation and recovery identification are under development at the staff level This is part of the objectives of the staff program on stranded, abandoned and lost FADs

- Evaluate economic incentives and disincentives in all FAD management measures.

**No**





# Key areas – Data gaps and needs

## Specific actions

## IATTC

### Target species:

- Identification of hotspots for juvenile BET and YFT  
Work in progress (e.g. Project J2a; maps proportion small tunas)
- Evaluate benefits of gear modifications: net changes, FADs designs, etc.  
Work in progress (e.g. sorting grids, Non-entangling), degradable FADs project)
- Encourage further research on pre-set echo-sounder discrimination of species, and size, at a FAD  
Supported ISSF project.
- Consider the regional effectiveness of time-area closures, including adaptive closures, and catch and/or FADs sets limits and allow this to inform future management  
Work in progress (Project J2A)



# Key areas – Data gaps and needs

## Specific actions

## IATTC

### Non-target species:

- Improve information on the impacts of FAD fisheries on vulnerable elasmobranch and turtle species

Work in progress (collaborating on survival of mobulid rays, habitats modeling).

- Identification of hot spots for vulnerable species

Work in progress for mobulids, sharks, etc.

- Implement best practices for handling and safe release of by-catch species as appropriate

Resolutions adopted C-15-04, C-07-03 and others.



# Key areas – Data gaps and needs

## Specific actions

## IATTC

### Non-target species:

- Introduction of non-entangling FADs designs

Work in progress, (C-18-05). The improvement on observer forms will provide more data

- Outreach and training of operators

Continued work. Bycatch workshop for skippers and crews .

- Promote full utilization of low value bonyfish by-catch, as appropriate, and reduction of discards

NA



# Key areas – Data gaps and needs

## Specific actions

IATTC

### Habitat:

- Mapping and recognition of sensitive areas using available information and identification of post-beaching impacts to inform mitigation initiatives
- Tracking positions and trajectories of FADs
- Develop innovative FAD designs to mitigate the habitat impact of FAD fisheries such as prevention of FADs sinking and beaching, recovery at sea, “smart FADs”, biodegradable designs...

Work in progress Projects M5b

Partly for some fleets with data collected under resolution C-17-02

Work in progress (Project M5a)



# Key areas – Data gaps and needs

## Specific actions

## IATTC

### Habitat:

- Assess the effect of establishing limits on numbers of FADs deployed as well as on areas or periods of deployment **No**
- Promote involvement of coastal communities in implementing actions or management measures **No**
- Consider anchored and drifting FADs in the overall analysis of impacts **FADs not used in our area**



# FAD working plans: IATTC and FAD-WG

- Workplans have been developed at both the staff level (2018-2021) and the ad hoc IATTC WG-FADs (2018-2019) for the short-medium term.

Main expected deliverables (see Section D and IATTC-93-06c for additional results of individual projects):

- 2018:** Reports summarizing current data gaps and potential improvements
- 2018-2019:** Training workshops to expand and improve data collection
- 2020:** Prototype scheme for reliable floating-object marking  
Data-driven recommendations for the implementation of electronic monitoring in the purse-seine fleet  
Quantitative evaluation of the relationship between the FAD fishery, fishing mortality and its ecological impacts
- 2021:** State-of-the-art data-collection procedures for the purse-seine fishery; improved data quality and reporting procedures  
New ecologically-friendly FAD designs, and guidelines for their implementation and use

SSP ref.	Target/Project	Timeframe & status				
		2017	2018	2019	2020	2021
<b>1. DATA</b>						
<b>Goal B:</b> Identify and prioritize opportunities to improve data quality and expand data types and coverage						
B.2.	Expand on-board data collection to small purse seiners: train observers					
<b>Goal C:</b> Facilitate the improvement of data quality, coverage, and reporting by CPC data collection programs						
C.1.	Purse-seine fleet: Improve data reporting and content (Resolutions 16-01 and 17-02; SAC-09 and WG-FADs recommendations)					
C.1.a	Develop an effective and reliable floating-object marking scheme to assist scientific advance					
<b>Goal D:</b> Investigate the use of new technologies to improve data quality						
D.2.a	Pilot study of electronic monitoring of the activities and catches of Class 1-5 purse-seine vessels					
D.2.c	Pilot study of electronic monitoring of the activities and catches of Class-6 purse-seine vessels					

SSP ref.	Target/Project	Timeframe & status				
		2017	2018	2019	2020	2021
<b>Goal Q:</b> Provide training opportunities for scientists and technicians of CPCs						
Q.3	Workshops for vessel crews, industry, and national authorities on requirements of C-16-01 and C-17-02 (WG-FADs Recommendation endorsed by SAC-09)					
<b>2. CONSERVATION AND MANAGEMENT</b>						
<b>Goal J:</b> Improve our understanding of the effects of the operational characteristics of the fishery on fishing mortality, stock assessments, and management advice						
J.2.a	Quantification of the relationship between vessel operational characteristics and fishing mortality					
<b>Goal M:</b> Mitigate the ecological impacts of tuna fisheries						
M.1.a	Evaluate the effect of the depth of non-entangling FADs on catches of tunas and bycatches of other species in the purse-seine fishery					
M.1.b	Test sorting grids (with emphasis on reducing catches of juvenile bigeye)					
M.3.a	Estimate bycatch and discard rates at FADs, by species, and identify "hot spots"					
M.5.a	Develop and test non-entangling and biodegradable FADs					
M.5.b	Reducing losses, and fostering recovery, of FADs in the purse-seine fishery in the EPO					

FAD-WG Work plan 2019\_posted\_2

**INTER-AMERICAN TROPICAL TUNA COMMISSION  
AD-HOC PERMANENT WORKING GROUP ON FADS  
WORK PLAN 2019**

The following is the work plan for the working group (WG) on FADs for 2019, as agreed with the IATTC scientific staff. Participation in the various tasks is open to the whole group, so any member of the group can participate if interested.

What	Who	When	Result
<b>1. DATA COLLECTION</b>			
<ul style="list-style-type: none"> <li>Capacity-building [Resolutions C-18-05 and C-17-02]</li> <li>Data gaps: improving data collection related to C-18-05 and C-17-02</li> </ul>			
1.1. Status of pending matters: final paper and electronic forms, data base for sharing information on Res C-18-05 and progress or necessities with respect to Res C-17-02	IATTC staff CPC	Jan Feb-May	- Report to SAC-10
1.2. Train captains and national authorities in the use of FAD data forms [Res C-18-05]	IATTC staff EV	Jan-Apr May	- Report to SAC-10
1.3. Assess implementation of FAD data forms [Res C-18-05]	IATTC staff IATTC staff/others	Jan Dec-Apr	- Report to SAC-10
1.4. Train national authorities of CPCs on FAD reports [Res C-17-02]	IATTC staff	May	Report to SAC-10
1.5. Evaluate the implementation of FAD reports [Res C-17-02]	GM IATTC staff IATTC staff GM	Dec-Apr Dec-Jul Dec-May	Report to joint FAD WG Report to joint FAD WG Proposal to SAC-10
<b>2. RESEARCH ON FADS</b>			
<ul style="list-style-type: none"> <li>Monitoring of research activities related to FAD fisheries</li> <li>Report to the WG on research activities related to FAD fisheries</li> <li>Report to the WG on data gaps related to necessary research</li> <li>Evaluate materials and designs for non-entangling and biodegradable FADs and propose recommendations for revising Annex II of Res C-18-05.</li> </ul>			

FAD-WG Work plan 2019

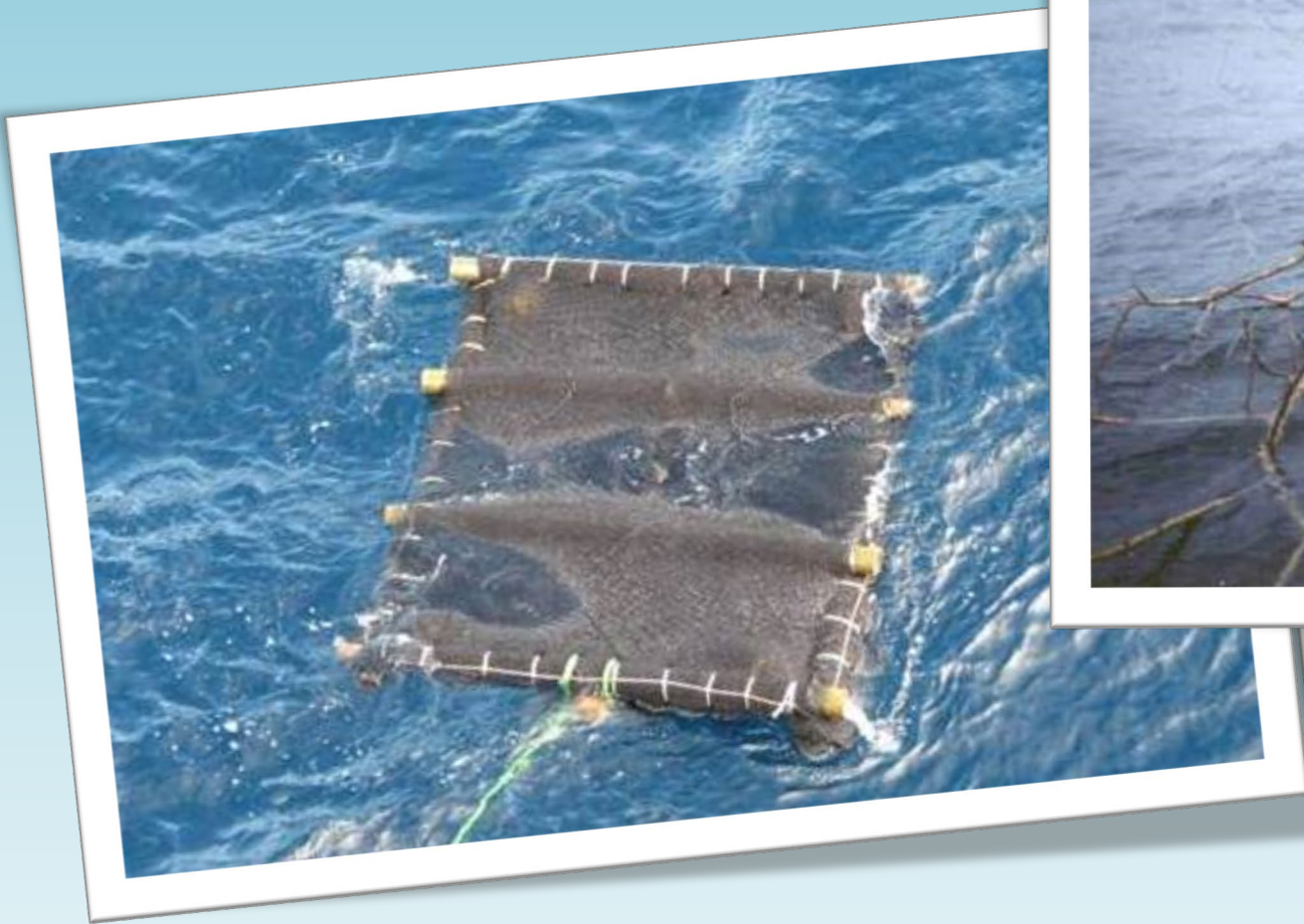
Work plan 2019\_posted\_2

	Who	When	Result
<b>MANAGEMENT</b>			
Terms of reference and review	JS GM	Jan	-
	JS	Feb-Apr	-
Proposal for adoption	JS	May	Proposal to SAC-10 Report to joint FAD WG
Workshop	IATTC staff GM	Nov-Apr	-
	IATTC staff	Mar	-
Adoption	IATTC staff	May	Proposal to SAC-10 Report to joint FAD WG
	IATTC staff	Jan	-
	JS	Apr	-
	JS	Apr-May	-
Work for	JS	May	Proposal to SAC-10
<b>OTHER TUNA RFMOS</b>			
In FADs of the tuna RFMOS			
	JS	Dec-Jul	Benchmarks in other t-RFMOS
	IATTC staff	Dec-Jul	-
	IATTC staff	May	-
<b>REPORTING</b>			
	JS	May	-
	JS	Jul	-



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Questions