

Comisión Interamericana del Atún Tropical Inter-American Tropical Tuna Commission



Developing an effective and reliable FOB marking scheme to assist scientific advance (C.1.a)

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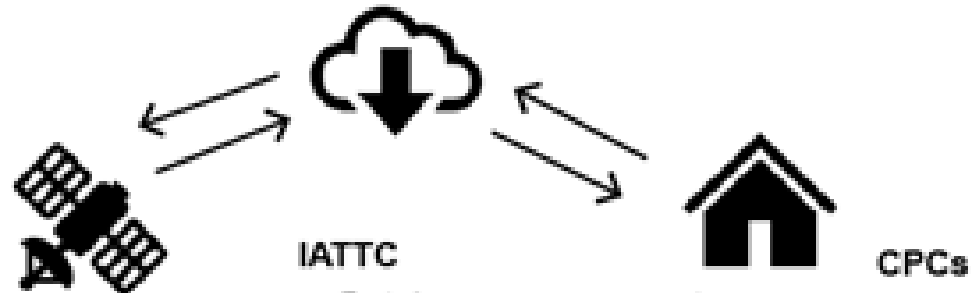
Background

- **All tuna RFMOs**, as well as other international organizations like **FAO** and **United Nations**, remark the need of developing an effective marking scheme for all fishing gears, including FOBs.
- **Current FAD data collection forms** and working scheme are **not prepared to mark and track FOBs**.

- ✓ Total FADs at sea
- ✓ FAD densities
- ✓ FAD and buoy use patterns
- ✓ Fishing mortality vs FADs
- ✓ CPUE standardization
- ✓ Impacts of FADs on the habitat exploited resources, including juveniles

Web-based FAD database – what we need?

Secure web-based FAD database



Objective:

Establish a robust, effective and reliable marking scheme to accurately mark and track floating objects throughout their entire lifetime and advance in sounded scientific questions.

- Activity
- Catch data
- 48 h max (a bunch of IDs to be used for exceptional cases)
- Position from GPS
- Checked/validated by the observer



FAD ID/register mandatory for:

- Deployments (new or re-deployment)
- Fishing set
- Start monitoring

Obtain a registration certificate:

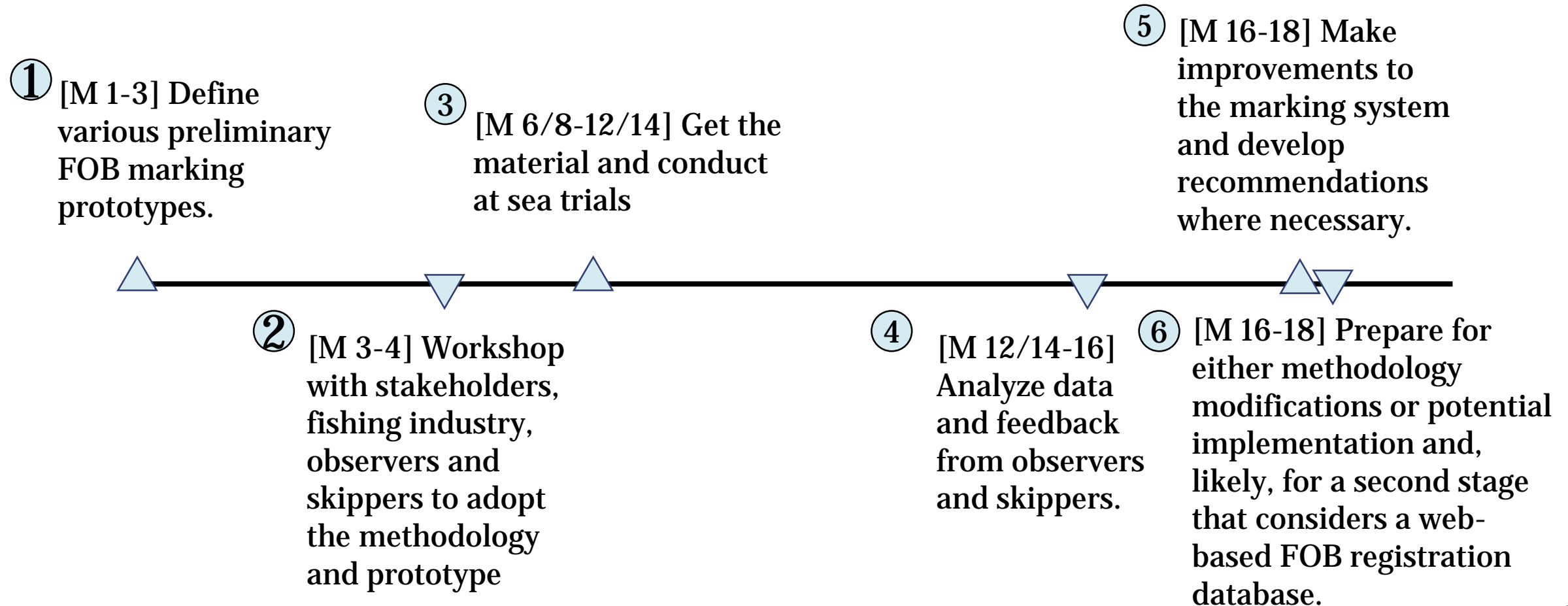
- Individual
- Multiple

Advantages and disadvantages of different FAD marking schemes

	Advantages	Disadvantages
FAD ID only	<ul style="list-style-type: none"> - Relatively easy to implement - Agreed in Res. 16-01 - Gear marking requirements (FAO, UN) met - Partial life history obtained - Patterns of FAD use (number of sets, visits, soak time, <i>etc.</i>) 	<ul style="list-style-type: none"> - Lose track information between sightings - Lose information on effective life (deactivations, lost, <i>etc.</i>) - Need to generate non-reusable ID codes - Need to specify marking rules (size, color, material, pre-printed tags, <i>etc.</i>) - Observer presence for verification
Buoy ID only	<ul style="list-style-type: none"> - Easy to implement - Automatic ID using the buoy - No additional cost (tracking data can be sent to various users) - Full life history of the FAD (if buoy changes are recorded) - Patterns of FAD use (number of sets, visits, soak time, stranding areas, <i>etc.</i>) - Patterns of Buoy use (reporting frequency, activation/deactivation areas, swapping rate, <i>etc.</i>) 	<ul style="list-style-type: none"> - Difficult to obtain lifetime track if a buoy change is missed - Assumes all FOBs are equipped with buoys - No info on FOBs equipped without a buoy - Observers not always have access to buoy ID information (<i>e.g.</i> remote activation-deactivation, buoy info inaccessible, wrong ID) - Data entry of large codes is difficult and prone to errors - Potential loss of information if geo-fencing or similar occurs - Previous initiatives noted that this data may only be a subset of all used buoys/FADs (Escalle <i>et al.</i> 2017)
Both FAD and Buoy ID	<ul style="list-style-type: none"> - Complete track of the lifetime - Gear marking requirements (FAO, UN) met - Low cost (tracking data can be sent to various users) - Will increase info on the real number of FADs (new deployments + FOBs at sea progressively) - Info on swapping rates - Better knowledge of total FOBs, including FOBs with no buoy - The more complete info to progress in several scientific topics. - Patterns of FAD use (number of sets, visits, soak time, stranding areas, <i>etc.</i>) - Patterns of Buoy use (reporting frequency, activation/deactivation areas, swapping rate, <i>etc.</i>) 	<ul style="list-style-type: none"> - Need to generate non-reusable ID codes - Need to specify marking rules (size, color, material, pre-printed tags, <i>etc.</i>) - Observer presence for verification

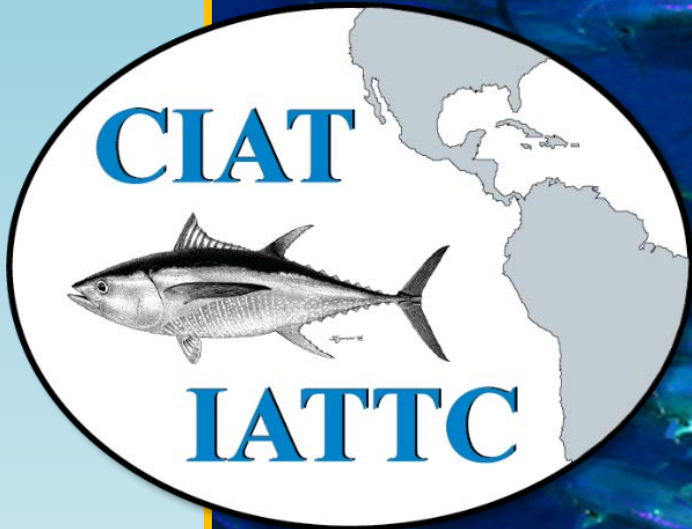
Workplan

Duration: 18 months



Collaborators, Deliverables and Budget

External collaborators	Stakeholders, managers, fishing industry, observers, skippers and likely, technology companies (buoy manufacturers, RFID companies, etc.)	
Deliverables	<ul style="list-style-type: none"> • Proposal on an efficient and reliable FOB marking scheme and a summary of pros and cons of all the methodologies considered. • Reports and documents for the WG-FADs, the SAC and the Commission, including recommendations to improve data quality and collection and best marking options. 	
Budget	15% FTE 1; 5% FTE 2; 5% FTE 3	
	Cost of regional workshop	30,000\$
	Full time technician for the field office (12 months)	25,000\$
	Cost of material for prototypes (2000 marks + other material + shipping)	40,000\$
	Cost for traveling	7,500\$
	Total cost	102,500\$



Questions

