

*Seychelles 3rd Tuna Conference
December 8th, 2012 – Mahé, Seychelles*

Working to improve traceability of fisheries and to achieve substantial bycatch reduction in the IO



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Outline

- Adopting best practices: from science to management
- Non entangling FADs
- Reducing shark, rays & turtles incidental mortality
- The next steps

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Adopting best practices: from science to management

- Principles of the sector's programs
 - Initiated by the sector
 - Starting from scientific research
 - Giving tools and objectives
 - Involving all fishermen
- A dynamics rather than single reactive finite actions
 - A proactive, progressive, practical & participating approach
- A mix between research and implementation
- Made possible because of
 - A shared concern for sustainability
 - A good cooperation with scientists
 - A follow up by ship-owners and Orthongel



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Adopting best practices: from science to management

- Issues encompassed in the Orthongel plan
 - FAD management
 - Reduction of incidental catch (including entanglements in FAD's nets)
 - Reduction of non commercialized catch (juveniles, 0-value bycatch, discards)
- Methodology
 - Identification of the possible technical solutions through a WG of scientists, captains and technicians of the ship-owners
 - Work in parallel with the MADE scientific program
 - Elaboration of guidelines
 - In real conditions testing, tuning and validating

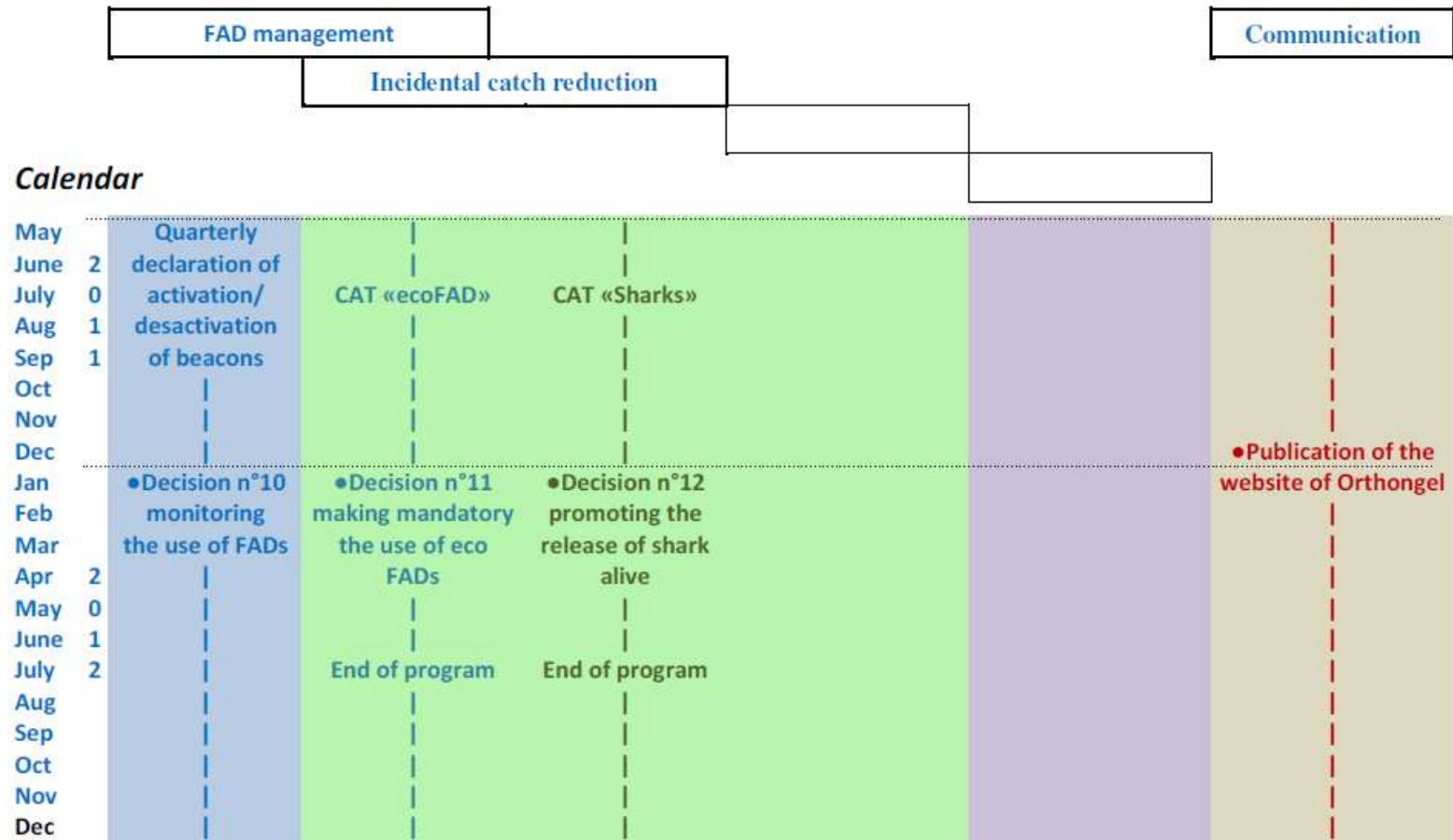
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Adopting best practices: from science to management

- Where are we today?



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Non entangling FADs



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Non entangling FADs

- Terms of reference
 - Non-entangling
 - Resistant to sea conditions
 - Similar drift than traditional FADs
 - Similar yields when fishing
 - Similar furtiveness
 - Reduced additional cost
 - Quick and easy to built



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Non entangling FADs

- Protocol
 - Each vessel's crew was explained the objectives and given instructions to build pre-designed non-entangling FADs
 - Materials (black cloths, ropes) were distributed to each vessel
 - Crew were asked to document the non-entangling FADs they designed
 - Setting of any non-entangling FAD was reported on a specific form, as well as fishing
 - After each crew, forms were revised with the captains and a report prepared



Non entangling FADs

- Raft cover:
 - 2 to 4 layers of thick black small-mesh (50 mm) netting tightly sewn together and heavily strained to prevent animals from getting between the netting.



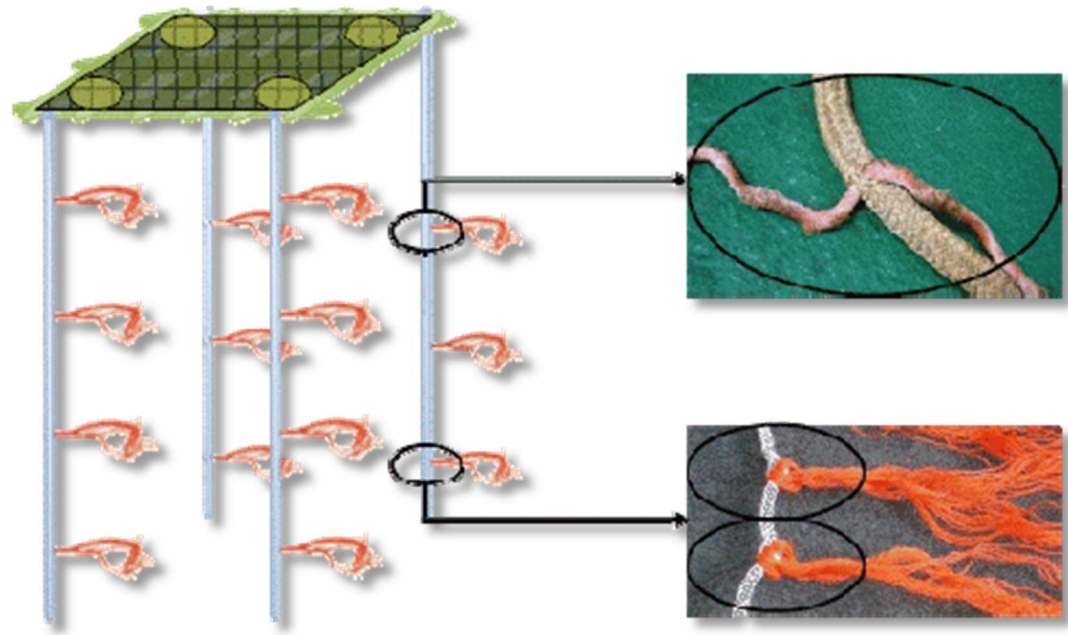
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Non entangling FADs

- Type B: the ropes design
 - The underwater hanging structure is composed of 1 to 4 recycled weighted ropes. To increase the drift, salt bags and/or small unbraided sections of recycled ropes are attached to the ropes



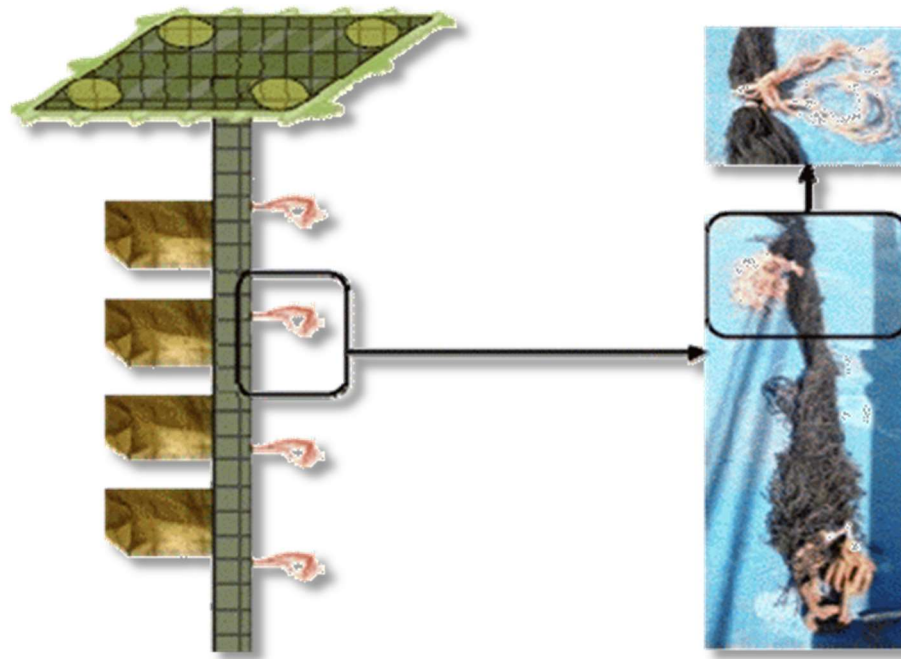
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Non entangling FADs

- Type C: the twisted net design
 - The underwater hanging structure is composed of a single twisted and weighted net hanging from under the middle of the raft



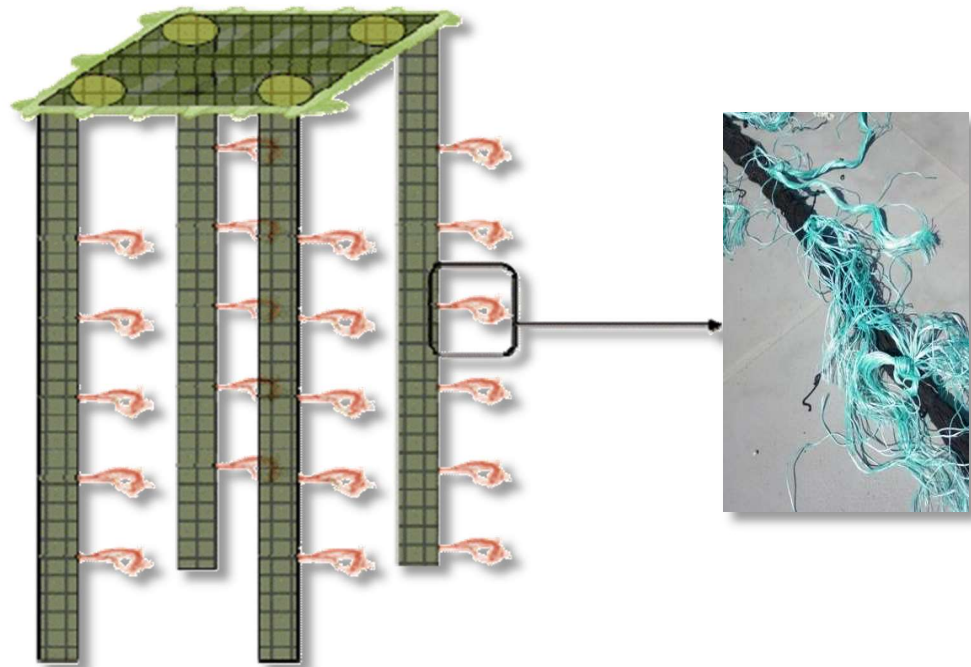
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Non entangling FADs

- Type D: the 2 to 4-net strips design
 - The underwater hanging structure is composed of 2 to 4 twisted and weighted strips of net attached to each corner of the raft



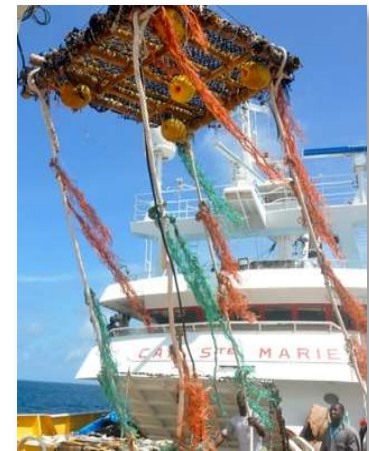
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Non entangling FADs

- Dimension of the experiment
 - More than 1200 non-entangling FADs seeded in the IO (since January 1st, 2012, vessels are not allowed to seed anything else but non-entangling FADs)
 - About 130 non-entangling FADs seeded in the AO (same resolution for the OA starting January 1st, 2013)



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Non entangling FADs

- Results in terms of yields
 - 124 sets made on non-entangling FADs
 - 92% of the sets made on non-entangling FADs made on non-entangling FADs belonging to the fishing vessel.
 - Average time between the seeding and the first set made is between 4 weeks and 10 weeks

Indicators of fishing efficiency of non-entangling and regular FADs

<i>Parameters and indicators</i>	<i>Non-entangling FADs sets</i>	<i>2010-2011 log sets</i>	<i>2005-2010 log sets*</i>
Number of observations	124	-	11 832
Average catch per set	25.5 t	-	25.0 t
Number of observations used for Shapiro-Wilk test	67	1349	-
Average catch per set	25.0 t	25.2 t	
%age of sets of <10 t	22.6%	29,8%	25.2%
%age of sets of 10-50 t	62.9%	57,6%	60.6%
%age of sets of >50 t	14.5%	12,6%	14.2%

* including null sets.



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Reducing shark, rays & turtles incidental mortality



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Reducing shark, rays & turtles incidental mortality

- Terms of reference
 - Identifying the conditions faced by sharks, rays and turtles during the different phases of the fishing operations and catch processing
 - Testing tools & procedures for the release with 2 objectives
 - 1) Improve the health conditions of the released animal
 - 2) Improve the conditions of security of the crewmen



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Reducing shark, rays & turtles incidental mortality

- Terms of reference (followed)
 - Tagging individuals during the program to measure progress and validate the effectiveness of the live release



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Reducing shark, rays & turtles incidental mortality

- Results
 - Good practices & tricks identified and documented (protocols, sketch & pictures)
 - Dedicated training of crews for each vessel



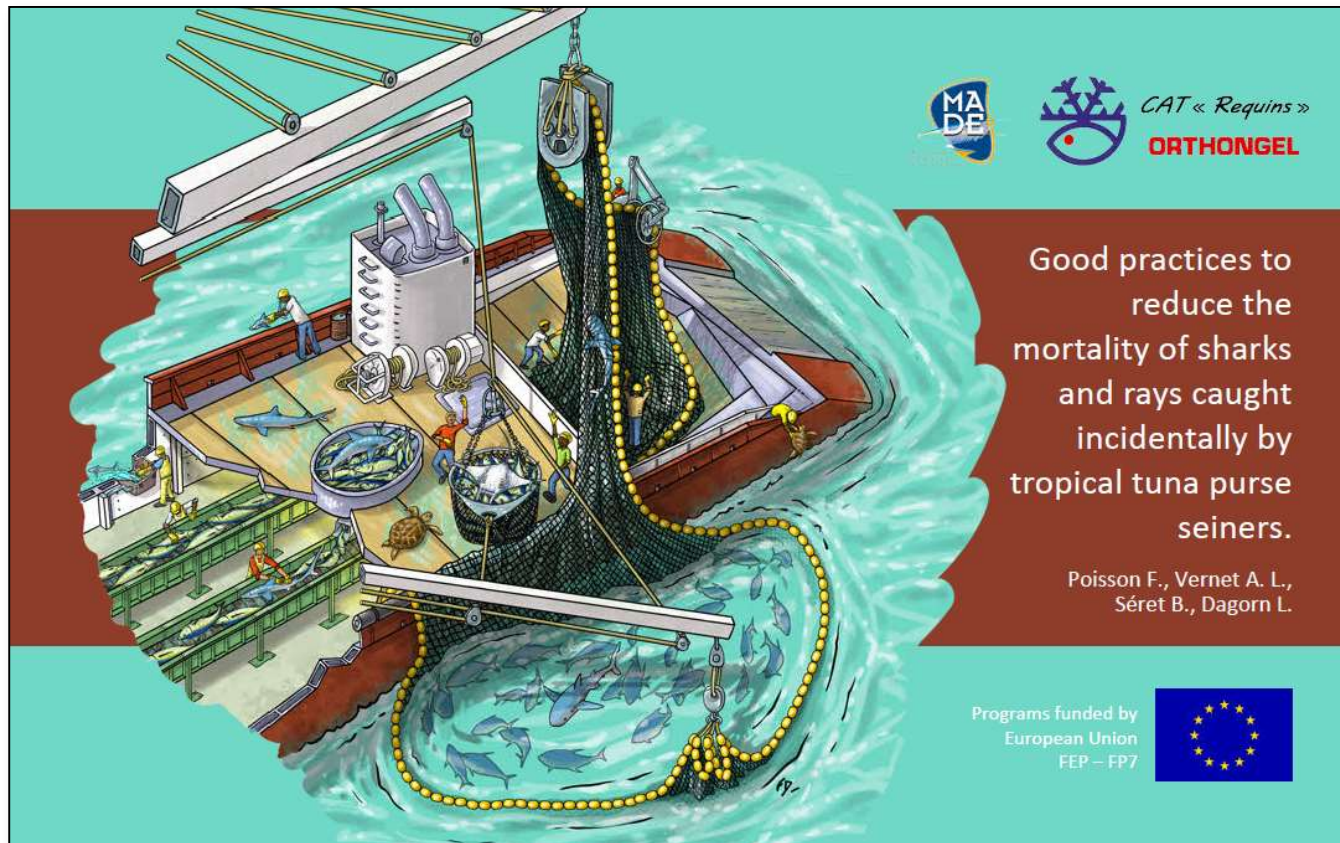
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Reducing shark, rays & turtles incidental mortality

- Results : a guide largely distributed



French, English & Spanish versions of the guide available on our website

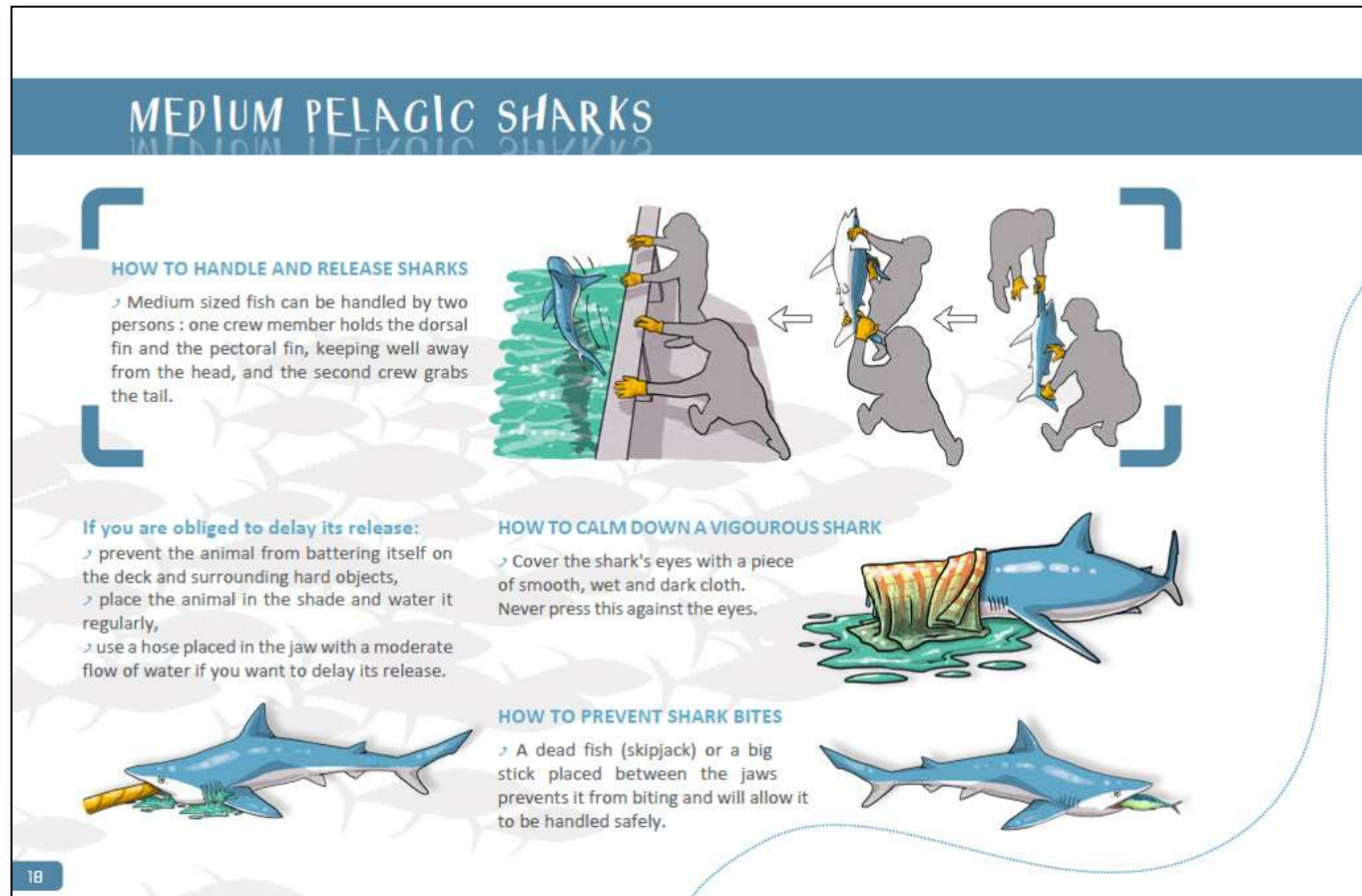
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Reducing shark, rays & turtles incidental mortality

- Results : insight of the guide



Reducing shark, rays & turtles incidental mortality

- Results : posters onboard and on land



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The next steps



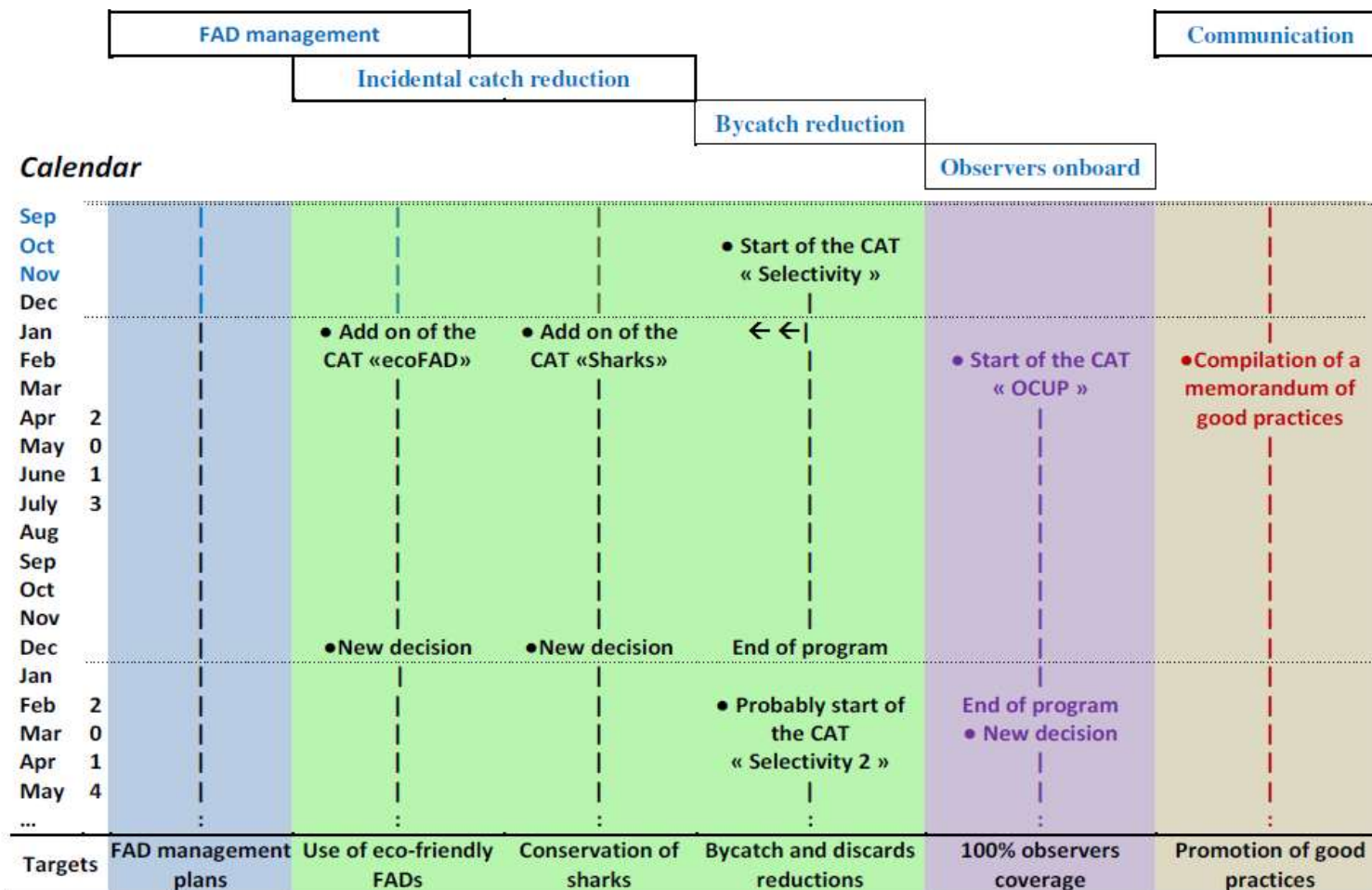
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The next steps

- Projects for 2013-2014



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The next steps

- The CAT “Selectivity”
 - Add-on of the CAT “eco FAD”: building eco FADs in land-based workshops to:
 - move towards eco-friendly FADs (without hanging nets)
 - guarantee that ecoFADs are eco-friendly all along their life-time
 - Add-on of the CAT “Sharks”: providing to all vessels selected standard tools to facilitate the release of sharks and rays alive
 - Identifying methods to be tested by the fleet to reduce bycatches



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The next steps

- The CAT “UPCO”
 - Experimenting what could be a regional observer program
 - Having on each vessel a Unique Permanent & Common Observer
 - Training such observers to all objectives
 - Using a majority of national observers from countries with FPA
 - Establishing the “rules”



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Thank you for your attention



More information on www.orthongel.fr

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