



MADE

Mitigating adverse ecological impacts of open ocean fisheries



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Europe 7th Framework Programme



Theme 2

Food, Agriculture and fisheries, and biotechnology

KBBE-2007-1-2-13: Mitigating adverse impacts of fisheries

Call:

The project will develop
measures needed to mitigate
adverse impacts of fisheries.

Known impacts comprise
habitat destruction and by-
catch of non-target species ...



Target fisheries:

Pelagic longliners
(tuna & swordfish)



Tuna purse seiners using
Fish Aggregating Devices
(FADs)



To propose methods:

- To reduce by-catch of sharks and juvenile swordfish by pelagic longliners
- To reduce by-catch of sharks by tuna purse seiners
- To assess the effects of FADs on fish ecology





General approach to reduce by-catch

<p>Before reaching the fishing zone (Spatial methods)</p>	<p>Avoid areas with high abundance of by-catch (e.g. sharks, juvenile swordfish) Avoid essential habitats of key species (e.g. sharks, juvenile swordfish) Avoid identified hotspots of biodiversity</p>
<p>When on the fishing zone (Technical methods)</p>	<p>Best fishing practices to avoid capturing by-catch (e.g. sharks, juvenile swordfish)</p>
<p>After fishing, by-catch is onboard (Technical methods)</p>	<p>Increase survival of released animals</p>

Assessing the effects of FADs on the ecology of fish

- Do FADs modify the migration behaviour of fish (tunas, sharks)?
→ Respective roles of FADs and environmental factors in the determinism of large-scale movements of fish
- Do FADs have a negative impact on the biology of fish?







Research activities on Tuna purse seiners



**Indian
Ocean**

Data & Methods

Multi-disciplinary approach based on:

- ✓ **Behavioural studies:** electronic tags (pop-up and acoustic tags) on sharks, juvenile swordfish and tuna
- ✓ **Biological studies:** growth, reproduction, trophodynamism of sharks
- ✓ **Analyses of fisheries activities:** observers data, fishers knowledge
- ✓ **Technical studies:** fishing gears (e.g. artificial bait), fishing practices (e.g. ecological FADs)
- ✓ **Socio-economical studies:** economic efficiency indicators



Partnership

8 countries – 13 partners

Coordinator: IRD (France)



EU contribution: 3 millions €
4 years (May 2008-April 2012)



◆ European country (◆ incl. European Outermost Region) ◆ ICPC country