FADIO
(Fish Aggregating Devices as Instrumented Observatories of pelagic ecosystems)

European Project

**Concept**: future biological observatories of pelagic ecosystems

Participants:
IRD (Fra)
UH (USA)
AZTI (Spain)
IFREMER (Fra)
ULPGC (Spain)
SERPE (Fra)
IMR (Nor)
UA (Gre)
ULB (Bel)
SFA (Sey)

Links with the PFRP Smart FAD project
FADIO: double objective

Development of new instruments to observe fish around FADs

Study of behavior of tuna and other species (dolphinfish, sharks, wahoos) around FADs
FADIO Objectives

Instrumented FAD
(listening station +
tuna sonar +
hydrophone + prey
sonder)

New tags:
Schooling status
Associative history
Stomach content

Presence float. objects
Schooling
Stomach content
Prey

Scientific station
Satellite
Log
WP2: new tags

Normal heart beat

After feeding

Diodon

Boats
Instrumented FADs

Sonar
SIMRAD SL-35

Vemco ARGOS-VR3
Field activities:
Characterization of aggregations
Behavior of fish around FADs

- Fish tracking (attraction distances)
- Listening stations (residence times, temporal patterns)
- Echosounder and sonars (characterization of aggregations)
- Diving (visual census of associated species)
- Passive acoustics
- Oceanography
Visual census of associated species

Passive acoustics

Oceanographic data
CTD + satellites

Fishing, tagging
Acoustic tagging

FADIO 2:
30 yellowfin tuna
2 bigeye tuna
4 skipjack tuna

22 dolphinfish
2 silky sharks
7 wahoos
Tunas, dolphinfish, sharks, wahoos tagged under a FAD
FADIO drifting FADs

Dolphinfish tagged on one FAD, observed during 8 days
Vertical movements around a drifting FAD

Time

16/10 17/10 17/10 18/10 18/10 19/10 19/10 20/10 20/10
12:00 0:00 12:00 0:00 12:00 0:00 12:00 0:00 12:00

Depth (m)

0 25 50 75 100

DOLF 90 (102 cm) WAH 94 (90 cm) WAH 102 (97 cm) YF 97 (61 cm)

YFT 98 (67 cm) YFT 99 (47 cm) YFT 100 (66 cm)