

FADIO: A PROJECT ON THE STUDY OF TUNA BEHAVIOR AROUND FADS FROM TAGGING AND ACOUSTICS

Funding: European Union, DG Research – 1.38 millions Euros (3 years)

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This project follows the objectives identified by the IOTC and its Tagging Working Group about the FAD fishery. The IOTC clearly stated that there is a need to conduct studies on the role of FADs on tuna behavior and biology, and to better understand the effects of FAD on Indian Ocean tuna stocks and fisheries, in particular via tagging. Then this project is complementary to the IOTTP presently planned by the IOTC.

PARTNERS:

IRD (France), Seychelles Fishing Authority (Seychelles), Univ. of Hawaii (USA), AZTI (Spain), IFREMER (France), Univ. de Las Palmas de Gran Canaria (Spain), SERPE (France), Institute of Marine Research (Norway), Univ. of the Aegean (Greece), Univ. Libre de Bruxelles (Belgium).

OBJECTIVES:

Development of prototypes of autonomous instrumented buoys and new electronic tags for observing the behaviour and abundance of tuna and other pelagic species.

Tagging (electronic tags) and acoustic surveys around FADs (tuna and bycatch species)

BRIEF DESCRIPTION:

- Telemetry studies on individual animals around FADs (Fish Aggregating Devices)
- Deployment of networks of first generation buoys equipped with currently available, simple vertical echosounders and listening stations and tagging of aggregated individuals.
- Acoustic surveys around buoys
- Analyses of fishery data: catch data and fishermen behaviour
- Definition of specifications for a new 360° sonar, from the previous tasks, and development of prototype
- Development of a model of aggregation processes to interpret data collected by the first generation of buoys (already existing)
- Recording and analyses of underwater sounds produced by captive tuna and wild tuna schools define the specifications of an 'association' sensor
- Tests on captive fish to determine appropriate sensors of stomach fullness
- Development of prototypes of tags, with CHAT tag philosophy
- Dissemination of the results and organisation of an international workshop to promote the concept of pelagic observatories with instruments/methods developed during the project.

SEA SURVEYS:

Total of 60 days at sea per year, during 2 years (2003,2004), mainly for: acoustic tracking of individuals, deployment of instrumented buoys and tagging, acoustic surveys (vertical sounder and long-range horizontal sonar)

For more information, a detailed document on project is available from L.Dagorn (Coordinator)

FADIO Objectives

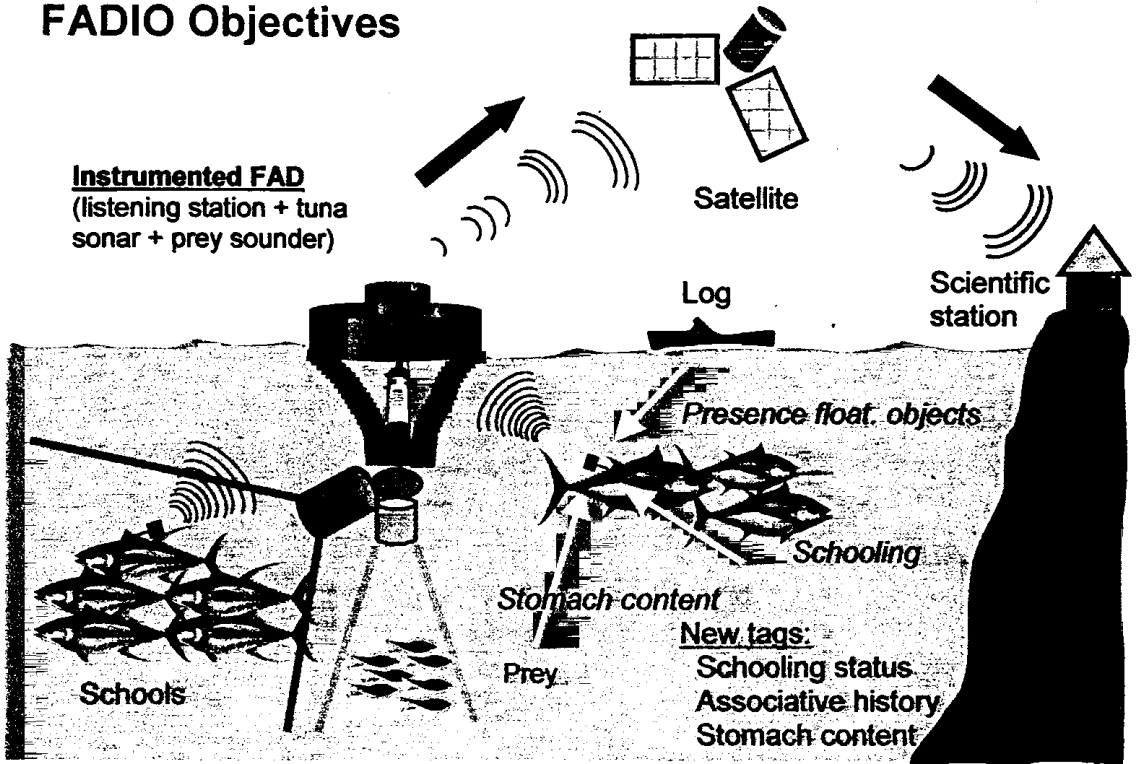


Figure 1 : FADIO objectives : Definitions of specifications for prototypes of new electronic tags and instrumented buoys

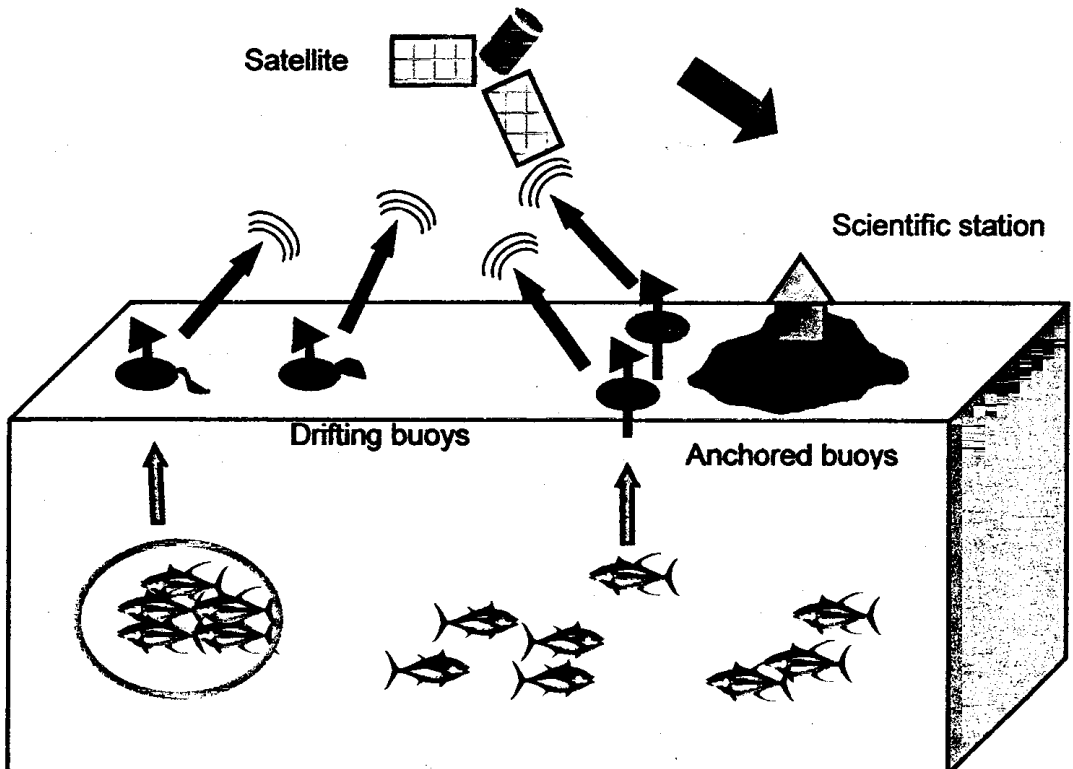


Figure 2: Concept of autonomous observatories of pelagic ecosystems (networks of instrumented buoys, large-scale tagging)