
Evolution of radio buoys technology for FAD, past, present and future.

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Abstract

In the 1990s, the tuna seiner fleet started to fish using FADs. As these FADs are drifting, it became necessary to track these devices at sea. The first radio buoys used were goniometric. The gonio receiver only detected the radio direction.

Year 1997: The GPS cost reduction allowed manufacturers to use this technology in radio buoys. These GPS buoys informed the fisher of the position and the water surface temperature.

With the GPS radio buoys, an important step has been taken. Fishers have started to understand some relations between oceanic currents and FAD catches.

Year 2000 : the first solar buoys.

Year 2004 : the first GPS satellite buoys (inmarsat D+).

Year 2007 : the first radio buoys equipped with an acoustic sounder started to appear; it was a big technological step helping to achieve large fuel savings. Fishers headed towards the FADs knowing in advance the presence of fish.

Present:

Nowadays, radio buoys with an acoustic sounder give reliable information and are widely used in the tuna fleet.

In 2012, the first buoy with a multi-frequency echo sounder begins to be marketed. They aim not only at indicating the presence or absence of fish but also at establishing the species detected by comparing different acoustic signatures in different frequencies.

Future:

Radio buoys will give reliable information on sizes and species of tuna using multitransducer acoustic sounders helping fishers to take sustainable decisions before to go.

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