
An Account of Premature FAD Loss in the Maldives

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Résumé

Fishermen have been using FADs for more than half a century (and much is now known about the behavior and biology of tunas and other pelagic fishes), however, the reason why FADs attract fish still remains largely unexplained. Regardless, the resultant fact is undeniable that a large amount of various fish species aggregate around FADs and the prospective result in terms of fish capture is highly appealing. However, the unpredictable durability and premature loss of these devices together with a large quantity of fish attracted to them is a major concern for FAD users. The premature loss of FADs have been linked with possible sources such as incompatible design and material used in the FAD systems, fish bites on the mooring line, mooring line failure due to the inability to resist the environmental forces, the submergence and collapse of the buoy due to low reserve buoyancy in the system, and FADs being dragged into deeper water due to inadequate holding capacity. The aim of this paper is to make an account of possible causes of premature FAD loss in the Maldives since the inception of the FAD program in 1981. First, the paper will look into some possible causes of earlier FAD loss in the Maldives and the consecutive improvements to the FAD design in the Maldives to overcome this problem. Then, the authors will look into numerical results investigating the possibility of premature FAD loss due to mooring rope failure, inadequate buoyancy and anchor holding capacity. The paper shows that the current mooring line sizes are adequate for the environmental forces experienced by FADs in the Maldives. The results strongly suggest that the small anchor weight might be the primary cause of premature FAD loss in the Maldives.

Mots-Clés: FADs, Mooring Analysis, Maldives

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