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Pacific dFAD Retrieval Feasibility Study

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Executive summary

This report presents results from a study, in partnership with fishing companies, to identify and evaluate options for reducing drifting Fish Aggregating Devices (dFADs) loss and abandonment and thus the ecosystem impacts linked to it. The study investigates the spatial and temporal variability of dFAD use and fate, specifically when drifting out of fishing areas, for historical buoy tracking data extending over the last 10 years. These data were made available by Cape Fisheries, the US Tuna group and Marpesca.

Areas with higher dFAD deployments, dFAD density, and four categories of dFAD fate (abandonment, loss, recovery and beaching) were identified. Based on the patterns detected, different options to limit the number of dFADs lost, abandoned, or beached were considered. Firstly, deployments could be limited in areas where deployments lead to higher rates of dFAD beaching and abandonment. This could reduce beaching by 10.4% and dFAD abandonment by 4.4%. Secondly, nine spatial boxes, close to shore, with higher rates of abandonment and beaching were identified. Recovering dFADs transiting in these spatial boxes could lead to a 60.0% reduction in beaching and 34.7% reduction in dFAD abandonment. Thirdly, recovering all dFADs transiting in large dFAD abandonment hotspots, outside main fishing areas, could lead to a 57% reduction in beaching and 57.2% reduction in dFAD abandonment. Finally, recovering dFADs in an area that overlaps the southern dFAD abandonment hotspot and the dFAD density hotspot could lead to a 57% reduction in beaching and 45.4% reduction in dFAD abandonment. It should, however, be noted that the number of dFADs entering the fishing grounds after transiting through the potential recovery areas needs to be considered, as well as the number of dFADs transiting per day or month. Follow-up work based on the results from this study could explore the economic feasibility of the dFAD recovery options identified.



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