

The interaction of cetaceans with the longline fishing industry in Samoa, South Pacific

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The longline fishery in Samoa has been subject to interactions with cetaceans since its inception around 1996. These interactions are characterised by 'dolphins' removing (depredating) bait from hooks and 'whales' depredating the catch itself.

Occurrences of cetacean by-catch through foul hooking or line entanglement appear to be rare, however most aspects of the interactions are poorly documented. Depredation impacts are mostly realised by the fishery in terms of damaged product and extra costs for fuel, bait and time; although there are unquantified reports of cetacean shooting by fishers. Exports of fish products particularly those from the longline fleet, comprise the single highest source of foreign revenue for Samoa.

A project has been established to firstly measure the scope and scale of these interactions and secondly, to trial a number of potential mitigation measures. Seed funding has been secured and partnerships developed with local, regional and international fishery organizations, conservation agencies and NGO's to tackle this issue.

The issue is characterised by a lack of information regarding the particular species involved in depredation. It is known that sharks also depredate longlines but the extent to which depredation in Samoa can be attributed to marine mammals or otherwise is uncertain. Research trips conducted by the author have shown false killer whales to be present during depredation events and rough-toothed dolphins to be actively engaged in removing baits.

Data on the amount of fish removed, and the times and areas of greatest or least depredation are unclear. An observer programme is currently under development to assist in determining the impacts of cetacean depredation in Samoan waters. A process of interviewing longline skippers combined with a review of fishermen's catch logs has also assisted in establishing broad patterns and trends surrounding the issue.

Approximately 3 – 6% of longline sets are estimated to be subject to depredation activities to a greater or lesser extent.