

Hawaii Fisheries Disaster Relief Program
Final Report

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2. Title of Project: Depth and Habitat Exploited by the American Samoa-based Longline Fishery (#657789)

3. Fishery Targeted: American Samoa-based pelagic longline fishery

4. Award received: \$US15,000

Actual amount spent: \$US15,000

5. Project Objectives:

Two research topics were proposed to improve the understanding of longline fishing in A. Samoa: 1) deployment of time-depth recorders (TDRs) and 2) the relationship between longline gear depth and associated pelagic species such as the target species (albacore), other tuna and billfish species and protected species.

6. Describe how the objectives were met.

Objective 1 was completed as twenty-five (25) TDRs were procured and distributed to the NOAA Fisheries Observer Program in Pago Pago, A. Samoa. Scientific observers commenced TDR deployment in December 2006. As of June 2008, longline depth was estimated on 187 longline sets on seven fishing trips. Data transfer was efficient as data were downloaded by the NOAA Fisheries Port Coordinator and emailed to the Principal Investigator.

Results from objective 1 indicated that the mean depth of deepest hook on 187 longlines monitored was 215 meters (standard deviation=26 m, range=57–393 m) and the maximum depth obtained was 428 m. While the A. Samoa longline fishery deploys a greater number of hooks between surface floats, gear in the A. Samoa fishery was 30 meters shallower than the Hawaii-based tuna fishery. Shallower gear in A. Samoa fishery results because the target species (albacore) are more shallowly distributed in the water column than the target species (bigeye tuna) in the Hawaii-based fishery.

7. Discuss differences between work anticipated in your proposal and work that was actually completed.

Objective 2 was only partially completed because observer data on catch by hook number and species were still undergoing quality control such as observer debriefing, edit checking and validation at the Pacific Islands Regional Office.

One aspect of Objective 2 that was accomplished was an analysis of hook depth in relation sea turtle interactions. Observers documented interactions with five protected juvenile green sea turtles from 2006 to 2008, though no interactions occurred on the seven TDR monitored trips. Sea turtles are thought to

inhabit the upper 100 meters of the water column and interactions typically occurred on hooks adjacent to the surface float. Longline monitoring estimated that 26% of the hooks were deployed in the upper 100 meters or “turtle layer”.

8. Discuss differences between expected and actual costs.

There were no differences in expected and actual costs

9. List all publications, posters, brochures, and other informational material published with project funding. Submit copies of publications to JIMAR

A presentation on gear depth in the American Samoa-based longline fishery was delivered to the Scientific and Statistical Committee and 142nd Council meeting of the Western Pacific Regional Fisheries Management Council during June 2008.