

Hawaii Fisheries Disaster Relief Program Final Report

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- 2. Title of Project:** Hawaii Longline Fishermen's Perspectives on Methods for Reducing Bycatch
- 3. Fishery Targeted:** Hawaii Longline
- 4. Award received:** \$47,994

Actual amount spent: \$47,319

5. Project Objectives:

1. Compile and develop a report on existing information on Hawaii-based longline fishermen's experiences with and perceptions about existing bycatch reduction strategies. This report would not only be of value itself, but would be used to develop the topics and sample for the case studies.
2. Develop detailed case studies of successful adoptions of bycatch reduction strategies and related information.
3. Communicate this information to fisheries managers and policy-makers and suggest how it could be incorporated into future decision frameworks.

6. Describe how the objectives were met.

The objectives were met through development of a report describing five case studies illustrating the human dimensions associated with bycatch reduction strategies. These case studies were developed using existing information supplemented by two sets of face-to-face conversations with fishermen, the first set in March/April 2007 and the second in August 2007. Having two sets of interactions allowed fishing vessel operators to share their opinions and retrospectively assess the decisions made throughout 2007. Fishing vessel owners, operators, and crew thus had the opportunity to compare their initial plans with their actions. This also provided the opportunity for individuals to share opinions at different times during the fishing season, when they were facing different biological, economic, or individual circumstances. Following is a summary of the case studies.

Fishing Vessel Operators' Experiences with Circle Hooks: Success for Fishermen and Fisheries Managers. This case study utilized open-ended interviews and focus groups to extract opinions of circle hooks regarding overall satisfaction with circle hooks and mackerel bait, perceived effects on catch rates of target species, turtle interactions, cost, efficiency and on-board safety.

Adoption of the Seabird Avoidance Method of Side Setting on Board a Hawaii Longline Tuna Fishing Vessel. This case study explores the reasons why some vessel operators converted and implemented side-setting techniques with relative ease, success, and satisfaction.

Mechanisms of Communication and Transfer of Knowledge Within the Hawaii Longline Community: Implications for Bycatch Reduction Strategies. This case study explores the transfer of knowledge among Hawaii longline fishing vessel operators to increase understanding of how dissemination of bycatch reduction information could occur both to and within the fleet.

Hawaii Longline Swordfish Fishing Vessel Operators Use of Social Sanctions to Meet Regulatory Intent. This case study assesses the human dimensions involved in the decisions of fishing vessel operators in Hawaii's swordfish fishery and how they addressed regulations limiting the number of interactions with leatherback and loggerhead sea turtles.

Re-defining Bycatch: One Hawaii Longline Vessel Operator's Ideas for Marketing Bycatch. This case study explores one particular fishing vessel operator's attempt to reduce bycatch of sharks and some other non-target species by modifying his operations and creating a market for bycatch species that otherwise would be discarded.

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

There were two types of differences; one related to the study personnel and one related to the study methods. Our initial plans for the work assumed that a JIMAR employee would be hired to conduct the field work and write the report. However, we learned that former JIMAR employee Amy Gough would be available to do the work as a contractor. Gough had worked with PI Allen on the original sociocultural study of longline fishermen and so was not only highly knowledgeable about the industry but was known and trusted by longline fishermen, enabling her to begin the project with instant rapport.

We planned to develop nine case studies, each based on one fisherman who had successfully adopted one or more bycatch reduction techniques. Initial fieldwork suggested that it would be more constructive to obtain the views of more than one fishermen regarding a certain bycatch reduction strategy such as side-setting or the use of circle hooks. We therefore decided to construct a smaller number of case studies, but to incorporate the views of more than one fisherman in each (except one case study, which remained focused on a single individual). The nature of most of the case studies dictated that the views of multiple fishermen be considered; for example, it was difficult to learn about and fully understand the potential for social sanctions as a reduction mechanism without talking to a number of fishermen.

8. Discuss differences between expected and actual costs.

We spent nearly 99% of project funds. Aside from the change in personnel strategy mentioned above, the main difference was that we had anticipated having two consultants assisting with project review, but used only one of them when the other changed jobs and was no longer able to participate. His role was transferred to JIMAR employee Arielle Levine.

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

None yet but we anticipate publications to be developed from the consultant's report in the future and will provide copies to JIMAR.