JIMAR ANNUAL REPORT FOR FY 2008

P.I./SPONSOR NAME: Dr. Minling Pan, Dr. Shichao Li, John Sibert

NOAA OFFICE (Of the primary technical contact): National Marine Fisheries Service, Pacific Islands Fisheries Science Center

PROJECT PROPOSAL TITLE: Spatial Modeling of the Tradeoff between Sea Turtle Take Reduction and Economic Returns to the Hawaii Longline Fishery

FUNDING AGENCY: NOAA

NOAA GOAL (Check those that apply):

- ☒ To protect, restore, and manage the use of coastal and ocean resources through ecosystem-based management
- ☐ To understand climate variability and change to enhance society's ability to plan and respond
- ☐ To serve society's needs for weather and water information
- ☐ To support the nation's commerce with information for safe, efficient, and environmentally sound transportation

PURPOSE OF THE PROJECT (One paragraph):

The project was designed to construct a bio-economic model to explore tradeoffs between sea turtle take reductions and economic return for the Hawaii-based longline fishery. Through simulation analysis of multiple time and area closures, the study assesses possible policy options that allow fishing opportunity to be maximized without exceeding the caps on sea turtle interactions.

PROGRESS DURING FY 2008:

The project staff:

- successfully developed a bio-economic model to explore tradeoffs between sea turtle take reductions and economic returns, and updated the model with the current available data up to 2006;
- applied the model to examine the impacts of fisheries management alternatives (time-area closure) on the sea turtle interactions and economic returns, as requested by the Council. This analysis will assist the Council to prepare the Swordfish effort EIS/Draft Amendment in response to the Hawaii Longline Association (HLA) proposal on changing the swordfish effort cap; and

- prepared multiple reports and revised the manuscripts based on the reviews from the Council staff and fellow economists.

PLANS FOR THE NEXT FISCAL YEAR (One paragraph):

The project has been completed and the associate P.I., Dr. Shichao Li, has left the position. The final effort of the project will be revisions of the reports/manuscripts, and distribution of the papers for peer reviews and publication.

LIST OF PAPERS PUBLISHED IN REFERRED JOURNALS DURING FY 2008: none

OTHER PAPERS, TECHNICAL REPORTS, ETC.:

Minling Pan and Shichao Li. 2008. "Fisheries Policy Design in Response to Sea Turtle Cap and Climate Variation - A case study of the Hawaii longline fisheries", Presentations in National Taiwan Ocean University on March 22, 2008, and National Taiwan University on March 27, 2008, respectively.

Minling Pan and Shichao Li. 2007. 'Fisheries policy designs in response to the climate variation: a case study of the Hawaii-based longline swordfish fishery', Presentation in the First Climate Impacts on Oceanic Top Predators Symposium, La Paz, Mexico, December 3-7, 2007.

Shichao Li. 2007. "Fishing Opportunities under the Sea Turtle Bycatch Caps" Presentation, in the North Pacific Loggerhead Sea Turtle Expert Workshop, December 19-20, 2007, Western Pacific Regional Fishery Management Council, Honolulu, Hawaii USA

Minling Pan and Shichao Li. 2008. 'Evaluation of Fishing Opportunities under the Sea Turtle Interaction Caps -- A Decision Support Model for the Hawaii-based Longline Swordfish Fishery Management', in *Our Living Ocean – Economics 2006*, NOAA Technical Memorandum, pending.

Shichao Lin and Minling Pan. Working paper. "Fishing Opportunities under the Sea Turtle Bycatch Caps -- A Spatial Bio-economic Model for Hawaii-based Longline Swordfish Fishery".

GRADUATES: none

AWARDS: none

PUBLICATION COUNT: none

PERSONNEL: none

IMAGES AND CAPTIONS: none