JIMAR – PFRP ANNUAL REPORT FOR FY 2007

P.I./Sponsor Name: Pierre Kleiber and Hideki Nakano, John Sibert

Project Proposal Title: Incorporating Oceanographic Data in Stock Assessments of Blue Sharks and Other Species Incidentally Caught in the Hawai’i-based 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-base 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

1. Purpose of the Project (one paragraph)
   Improve habitat based standardization of longline effort by accounting for the affects of current shear and other oceanographic features on the depth distribution of longline hooks and the degree to which that distribution overlaps the depth distribution of particular fish species.

2. Progress during FY 2007 (One-two paragraphs, including a comparison of the actual accomplishments to the objectives established for the period, and the reasons for slippage if established objectives were not met):
   - Contract with Otter Research Ltd. to add enhancements to MULTIFAN-CL (MFCL) was fulfilled.
   - A renewed blue shark stock assessment was conducted using some of the new MFCL capabilities.

3. Plans for the next fiscal year (one paragraph):
   Submit blue shark stock assessment paper to peer reviewed literature.

   none
5. Other papers, technical reports, meeting presentations, etc.

6. Graduates (Names of students graduating with MS or PhD degrees during FY 2007. Provide titles of their thesis or dissertation): none

7. Awards (List awards given to JIMAR employees or to the project itself during the period): none

8. Publication Count (Total count of publications for the reporting period and previous periods categorized by NOAA lead author and Institute (or subgrantee) lead author and whether it was peer-reviewed or non-peer-reviewed (not including presentations):

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9. Students and Post-docs (Number of students and post-docs that were associated with NOAA funded research. Please indicate if they received any NOAA funding. For institutes that award subcontracts, please include information from your subgrantees): none

10. Personnel:
   (i) Number of employees by job title and terminal degree that received more than 50% support from NOAA, including visiting scientists (this information is not required from subgrantees): none
   (ii) Number of employees/students that received 100% of their funding from an OAR laboratory and/or are located within that laboratory. none
   (iii) Number of employees/students that were hired by NOAA during the past year: none

11. Images and Captions. (JIMAR will be including images in the annual report. Please send two of your best high-resolution, color images (photo, graphic, schematic) as a JPEG of TIFF with a caption for each image. Hardcopies of images can be dropped off at the JIMAR office if no electronic versions are available.)
Caption 1: Equilibrium yield (1000 mt) as a function of fishing mortality multiplier. The shaded areas represent approximate 95% confidence intervals. Dashed line indicates $F_{msy}$, the point of maximum yield.
Caption 2: Average (1998—2002) $F/F_{MSY}$ vs. $SB/SB_{MSY}$ for a range of alternate model fits conducted under a variety of constraints and conditions. Subscripts give the fishery impact measured as ratio of exploited spawning biomass to unexploited spawning biomass averaged over years 1998 through 2001. “A” is the basecase.