

JIMAR – PFRP ANNUAL REPORT FOR FY 2007

P.I./Sponsor Name: John Sibert, Keith Bigelow, Mark Maunder, Adam Langley and Pascal Bach

Project Proposal Title: Performance of Longline Catchability Models in Assessments of Pacific Highly Migratory Species

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)

The project will provide improved models of tuna and billfish resource abundance to the regional fisheries agencies (IATTC, NOAA Fisheries, NRIFSF, SPC) or committees providing scientific advice to management bodies (ISC, Scientific Committee of the WCPFC). Standardized CPUE trends are highly influential in Pacific HMS assessments because the standardized trends represent the only indication of resource abundance in the absence of fishery independent indices. The removal of catchability and vulnerability effects will continue to be an important consideration in future Pacific HMS assessments. The project will develop improved longline catchability models for use in population assessments.

2. Progress during FY 2006 (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):

Year 1 funding was received in October 2006. A Pelagic Longline Catch Rate Standardization meeting was held at the University of Hawaii, Honolulu, from February 12–16 2007. The meeting was jointly hosted by this PFRP funded project and the Secretariat of the Pacific Community (SPC). The objectives of the meeting were to formulate a research plan to meet the objectives of the PFRP longline catchability project and provide a technical review of current and alternative longline CPUE standardization

techniques used for the yellowfin and bigeye stock assessments in the Western and Central Pacific Ocean (WCPO).

3. Plans for the next fiscal year (one paragraph):

The project will proceed with the research plan developed at the February 2007 workshop. Research will concentrate on improvements to the statistical habitat-based standardization (statHBS model). A multiple species approach to statHBS modeling will be conducted in collaboration with Japanese colleagues. Analysis of longline monitoring studies will address depth versus habitat catchability comparisons and model validations. Contacts have been established to test the robustness of various standardization methods by applying standardization models to a simulated fish population developed for ICCAT.

4. List of papers published in refereed journals during FY 2006.

Maunder, M. N., M. G. Hinton, K. A. Bigelow, and A. D. Langley (2006). Developing indices of abundance using habitat data in a statistical framework. *Bull. Mar. Sci.* 79(3):545-559.

5. Other papers, technical reports, meeting presentations, etc.

Simon D. Hoyle, Keith A. Bigelow, Adam D. Langley, and Mark N. Maunder. Proceedings of the Pelagic longline catch rate standardization meeting, February 12–16, 2007, Imin Conference Center, University of Hawaii, Honolulu

6. Graduates (Names of students graduating with MS or PhD degrees during FY 2006. 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):

	JI Lead Author			NOAA Lead Author			Other Lead Author		
	FY04	FY05	FY06	FY04	FY05	FY06	FY04	FY05	FY06
Peer-reviewed						1			
Non-peer reviewed									

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 or 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:

● Caption 2:

12. For multi-year projects, provide budget for the next year on a separate page. Contact Dodie Lau to confirm whether or not your project is to receive continuation funds (e.g., year 2, year 3), and for budget preparation assistance, lau@hawaii.edu