

JIMAR ANNUAL REPORT FOR FY 2009

P.I./SPONSOR NAME: Kevin Weng, Keith Bigelow, Adam Langley and John Hampton

NOAA OFFICE (Of the primary technical contract): Pacific Islands Fisheries Science Center

PROJECT PROPOSAL TITLE: Fishery Dynamics in the Samoan Archipelago

FUNDING AGENCY: NOAA

NOAA GOAL (Check those that apply):

- ☒ X 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 purpose of the project is to improve understanding of the dynamics of south Pacific albacore. Major objectives are: 1) analyze the spatial and temporal dynamics and fishery interaction of longline fisheries within and around the American Samoa EEZ (Exclusive Economic Zone), 2) compare albacore fishery dynamics in other Pacific Island Countries and Territories (PICTs) longline fisheries and 3) improve the regional albacore stock assessment.

PROGRESS DURING FY 2009 (One-two paragraphs, including a comparison of the actual accomplishments to the objectives established for the period, and the reasons for the slippage if established objectives were not met):

Objective 1: Little progress was accomplished in FY2009 on objective 1 as research in previous years concentrated on this objective. There was a study on longline gear depth in A. Samoa for use by the Western Pacific Regional Fisheries Management Council in formulating management measures to alter longline gear to reduce sea turtle interactions.

Objective 2: Little progress was accomplished in FY2009 on objective 2 as research in previous years concentrated on this objective. A co-PI (A. Langley) previously completed an analysis of south Pacific albacore dynamics for the Fiji and French Polynesia longline fisheries which was published as a Technical Report by the Secretary of the Pacific Community.

Objective 3: A full south Pacific albacore assessment was completed in July 2008 and reviewed at the 4th Scientific Committee of the Western and Central Pacific Fisheries Commission (August 2008). Previous assessments were based on 5°-month catch and effort data from distant-water (Japan, Korea and Taiwan) fisheries. A working paper was produced for the Scientific Committee with substantial reappraisal of the CPUE (catch per unit effort) time-series by developing an albacore targeted fleet of distant-water vessels landing in Pago Pago, American Samoa and Levuka, Fiji. Operational level data consisted of >450,000 longline sets from 1960–2007. Results indicated better coherence in CPUE amongst fleets in the albacore targeted fleet compared to aggregated (5°-month) data. The development of an albacore targeted fleet allows catchability to be constrained (i.e. no time-series variation) in the assessment, an important structural assumption that reduces uncertainty compared to previous assessments.

PLANS FOR THE NEXT FISCAL YEAR (One paragraph):

Project completion will concentrate on two manuscripts: 1) development of standardized CPUE for south Pacific albacore from operational logbook of distant-water longline fisheries and 2) gear depth and the vertical distribution of fish species captured in the A. Samoa-based longline fishery.

LIST OF PAPERS PUBLISHED IN REFERRED JOURNALS DURING FY 2009, in the following format: (Author or authors with last name and initials, publication year: Article title. *Journal name*, volume, page range.)

None

OTHER PAPERS, TECHNICAL REPORTS, ETC.:

Bigelow, K. and E. Fletcher (2009). Gear Depth in the American Samoa-based Longline Fishery and Mitigation to Minimize Turtle Interactions with Corresponding Effects on Fish Catches. PIFSC Internal Report IR-09-008, Issued 4 March 2009

Bigelow, K. and S. Hoyle (2008). Standardized CPUE for distant-water fleets targeting south Pacific albacore. WCPFC-SC4-2008/ME-WP-3.

GRADUATES (Names of students graduating with MS or PhD degrees during FY 2008; Titles of their Thesis or Dissertation): None

AWARDS (List awards given to JIMAR employees or to the project itself during the period): None

PUBLICATION COUNT (Total count of publications for the reporting period and 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
Peer Reviewed			
Non-Peer Reviewed		2	

PERSONNEL:

For projects that awarded subcontracts in the fiscal year, please provide the number of supported postdocs and students from each subgrantee. N/A

IMAGES AND CAPTIONS (We will also be including images for the annual report.

Please send two of your best high-resolution, color images (photo, graphic, schematic) as a **JPEG or TIFF (300 dpi)** with a caption for each image. If you do not have an electronic version of the image, a hardcopy version may be dropped off at the JIMAR office located in the Marine Sciences Building, Room 312):

- Caption 1:

- Caption 2: