

JIMAR ANNUAL REPORT FOR FY 2011

P.I. NAME: PingSun Leung, Shawn Arita, and Stewart Allen

NOAA OFFICE (*Of the primary technical contact*): Pelagic Fisheries Research Program

NOAA SPONSOR NAME: Sam Pooley

PROJECT PROPOSAL TITLE: The Role of Social Networks on Fishermen Economic Performance in Hawaii's Longline Fishery

FUNDING AGENCY: Pelagic Fisheries Research Program

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.
- ☐ Mission Support

PURPOSE OF THE PROJECT (*One paragraph*):

This project seeks to examine the role of Social Network Capital on vessel economic performance in the HLF. With an ethnically fragmented participation structure, the HLF offers an interesting case to examine Social Network Capital effects. Our research framework combines two methodological tools: Social Network Analysis (SNA) and stochastic production frontier/econometric analysis. We intend to collect detailed information on social linkages in the HLF and perform a SNA on the HLF. After constructing appropriate sociometric measures of Social Network Capital, we will then estimate its economic returns for longliners. The project may be outlined by the following three phases:

- 1) Data collection of social linkages in the HLF/fishermen interviews
- 2) Mapping of SNA data and analysis of individual and group level measures of Social Network Capital.
- 3) Econometric estimation of the return to Social Network Capital on vessel economic performance

PROGRESS DURING FY 2011 *(One-two paragraphs):*

Include a comparison of the actual accomplishments to the objectives established for the period, along with reasons for the slippage if established objectives were not met

It should be noted that the project officially began in October 2010. The goal of FY 2011 was then to make progress on the first stage of data collection for the social linkages in the HLF. This includes two of the following objectives 1) development of our SNA survey instrument and 2) commencement of administration of fishermen interviews.

Objective 1: Development of SNA survey instrument

We successfully developed a survey instrument that could be used to measure the social linkages for members of HLF and their individual social capital. Three separate surveys were designed for vessel owners, vessel captains, and owner-operators that were carefully tailored so that it would collect the rich data required by our social network analysis and subsequent econometric exercise. A pilot test was also conducted to make sure the questions could be well-administered to the fishermen.

Objective 2: Begin of fishermen interview administration

A field team was assembled to handle the fishermen interview administration. A graduate student at University of Hawaii (Manoa) was selected to manage the team of one native Vietnamese speaker and one native Korean speaker, who were both contracted as enumerators for the ethnically diverse HLF. The interviewing exercise is currently ongoing with initial responses looking very promising. The field team has well-immersed themselves with the HLF, and has received positive feedback from the fishermen. Up until this point we have successfully interviewed the following breakdown of HLF vessels:

- i. 30 Caucasian (non-Korean/Vietnamese) vessels
- ii. 9 Korean vessels
- iii. 12 Vietnamese vessels

We intend to complete the remaining targeted interviews by September 2011.

PLANS FOR THE NEXT FISCAL YEAR *(One paragraph):*

The plan for the next fiscal plan is to first complete the interviews of the HLF participants. Following the completion of this task we intend to move into the second and third phase of our project:

Phase 2: Perform a SNA of the HLF

- a. Describe the mechanisms which lead to the development of social networks.
- b. Calculate individual based measures of Social Network Capital and group-level measures of Ethnic-Social-Capital.
- c. Explore linkages to policy implications and operational management.

Phase 3: Estimate the return to Social Network Capital on vessel economic performance

- a. Employ efficiency analysis tools to econometrically evaluate how Social Network Capital relates to vessel economic performance
- b. Explore the structural linkages between social networks and information sharing for future research endeavors.

**LIST OF PAPERS PUBLISHED IN REFERRED JOURNALS DURING FY 2011
OTHER PAPERS, TECHNICAL REPORTS, ETC.
PUBLICATION COUNT**

**complete excel attachment (JIMAR publications request)*

GRADUATES:

Names of students graduating with MS or PhD degrees during FY 2011; Titles of their Thesis or Dissertation

None

AWARDS:

Name of JIMAR employees or project receiving award during the period, and Name of award

None

PERSONNEL (on Subcontracts):

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

Student

- 1) Michelle Barnes, Natural Resources and Environmental Management M.S.
Candidate

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:

ACRONYMS:

Please provide the complete descriptions for any acronyms used in any areas of the report. For example: UH (University of Hawaii)

SNA (Social Network Analysis)

HLF (Hawaii Longline Fishery)