The objective of this project is to enhance the multi-level multi-objective programming model for the Hawaii fisheries that was developed under PFRP Project #2066/2113. This involves making the basic model structure more tractable for regulatory analysis. It should allow more flexible time-area specification and facilitate updating the underlying data. The update model focuses on the Hawaii-based longline fishery.

The project was wrapped up during FY05. A non-linear programming model, updated in previous years and implemented by General Algebraic Modeling System (GAMS), was used for a policy simulation to analyze the recent policy for recent (2004) reopening the Hawaii swordfish fishery.

A technical report has been completed as a JIMAR publication in 2005 and titled in "Regulatory Impact Analysis for Pelagic Fisheries Management in Hawaii: A
Spatially Disaggregated Nonlinear Programming Model", by Keiichi Nemoto, SOEST 05-01, JIMAR Contribution 04-353.

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

N/A

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

Publication:

Presentation:
Evaluating cost-earnings structure of the Hawaii based longline fleet in the last decade: a step toward improved prediction. PFRP (pelagic fisheries research program) PI meeting in November 29 – December 1, in the East-West conference center, Honolulu. (by Keiichi Nemoto)

6. Graduates (Names of students graduating with MS or PhD degrees during FY 2005. Provide titles of their thesis or dissertation):
N/A

7. Awards (List awards given to JIMAR employees or to the project itself during the period): N/A

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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<tr>
<th></th>
<th>JL Lead Author</th>
<th>NOAA Lead Author</th>
<th>Other Lead Author</th>
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<td>Non-peer reviewed</td>
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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):
N/A
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): 1 (Keiichi Nemoto, PFRP economist)

   (ii) Number of employees/students that received 100% of their funding from an OAR
        laboratory and/or are located within that laboratory. 0

   (iii) Number of employees/students that were hired by NOAA during the past year:
        0

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:

    • 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