

## JIMAR ANNUAL REPORT FOR FY 2010

P.I./SPONSOR NAME: Kevin Weng, Simon Hoyle

NOAA OFFICE (Of the primary technical contract): NMFS/PIFSC

PROJECT PROPOSAL TITLE: Improved effectiveness of WCPFC through better informed fishery decision makers.

FUNDING AGENCY: NOAA

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): To develop a tool that will allow WCPFC decision makers to interact directly with stock assessments, and observe how alternative management strategies may affect both them and other interested parties. This application will a) help decision makers to become familiar and comfortable with the stock assessment's predictions, b) allow decision-makers to explore a greater range of management options than they can at present, including those they see as more relevant to them, c) allow decision makers to discuss potential outcomes, and compare alternative strategies, with their industry representatives, and d) allow each group to see how the various options they are considering may affect them and the parties they negotiate with, by providing a greater and more relevant range of outputs.

PROGRESS DURING FY 2010 (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):

Work on this project began in January 2010. Objectives for calendar year 2010 were a) to design the preliminary application; b) to liaise with fishery decision-makers, fishery stakeholders, management experts and scientists, to identify the stock assessment information that would be most useful to support negotiation and decision-making; c) to decide on software platform; d) to set up a system for managing software development; e)

to develop a simple application for bigeye tuna that allows the user to save the graphs and tables that are created; f) to modify MULTIFAN-CL to work with the management options application; g) to identify outputs to be provided by the management application; h) to demonstrate an initial prototype at stock assessment training workshops in July 2010; and i) to train and support participants (to extent possible), and obtain feedback from:

- o SPC-GEF stock assessment training workshops
- o WCPFC Commission meeting, December 2010
- o FFA management options workshops
- o Training workshop in Hawaii
- o SC7, August 2011

Some objectives for the calendar year 2010 have been met so far, and all others are on track to be met this year. a) The preliminary application has been designed; b), g), h), and i) we have liaised with stakeholders and obtained preliminary advice on outputs to be provided, by demonstrating and seeking feedback on preliminary versions of the application at the SPC pre-assessment workshop in April, and at an SPC stock assessment training workshop in June; c) the JavaFX software platform has been selected; d) software development is progressing well and being managed using the SVN versioning system and a Gforge project management interface; e) the application creates graphs and allows the user to save them, and has been applied to the bigeye tuna assessment; f) changes have been made to allow MULTIFAN-CL to work with the management options tool, and others (additional functions) are under way.

**PLANS FOR THE NEXT FISCAL YEAR (One paragraph):** Plans for the fiscal year 2011 include completion of objectives above, and progress towards the following objectives for calendar year 2011. a) Develop the installation wizard; b) Develop automatic update features – necessary to ensure that the most recent versions of the stock assessments and MULTIFAN-CL are being used; c) Develop encrypted database approach to permit analysis of fine-scale spatial and temporal closures. d) Allow the user to choose the species or species (e.g. expand from bigeye to also include skipjack, and yellowfin tuna, and enable multi-species runs) and possibly the model run (e.g. allow scenarios to be run for both the base case and key sensitivity analyses); e) Improve options for exporting graphs and tables; f) Set up web-based support, e.g. Frequently Asked Questions and email technical support; g) Produce user manual; h) Release and publicize application; i) Publish paper in primary literature on the use of scientific information in fishery decision-making. j) Train and support participants (to extent possible), and obtain feedback from: SPC-GEF stock assessment training workshops, SC7, August 2011, FFA management options workshops, Training workshop in Hawaii, and WCPFC Commission meeting, December 2011.

**LIST OF PAPERS PUBLISHED IN REFERRED JOURNALS DURING FY 2010, in the following format:** (Author or authors with last name and initials, publication year: Article title. *Journal name*, volume, page range.) For example: Charney, J.G., and A. Eliassen, 1964: On the growth of the hurricane depression. *J. Atmos. Sci.*, 21, 68-75.

None

OTHER PAPERS, TECHNICAL REPORTS, ETC.: None

GRADUATES (Names of students graduating with MS or PhD degrees during FY 2010;  
Titles of their Thesis or Dissertation): N/A

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

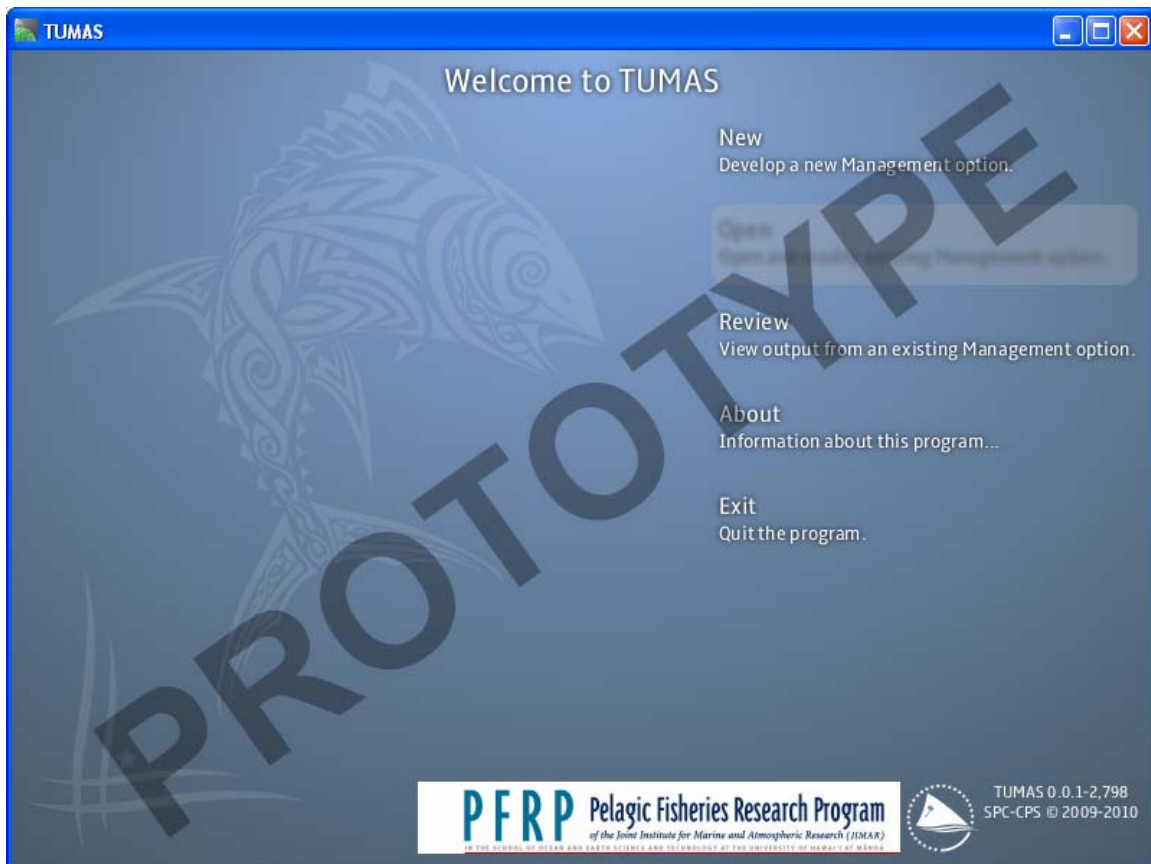
PUBLICATION COUNT (Total count of publications for the reporting period and  
categorized by NOAA lead author and Institute (or subgrantee) lead author and  
whether it was peer-reviewed or non peer-reviewed (not including presentations):

	JI Lead Author	NOAA Lead Author	Other Lead Author
Peer Reviewed	0	0	0
Non-Peer Reviewed	0	0	0

PERSONNEL (on Subcontracts):

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

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: Screen shot of the initial screen of the management options software package TUMAS (Tuna Management Simulator)



- Caption 2: A screen shot of predicted biomass plots produced by the management options software package TUMAS (Tuna Management Simulator).

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

MULTIFAN-CL – software used by the Secretariat of the Pacific Community to run stock assessments for WCPFC fish stocks

WCPFC – Western and Central Pacific Fisheries Commission.

SPC – Secretariat of the Pacific Community

SPC-GEF - Secretariat of the Pacific Community – Global Environment Facility

FFA – Forum Fisheries Agency

SC7 – Scientific Committee 7 (of the WCPFC)