

Honolulu Laboratory

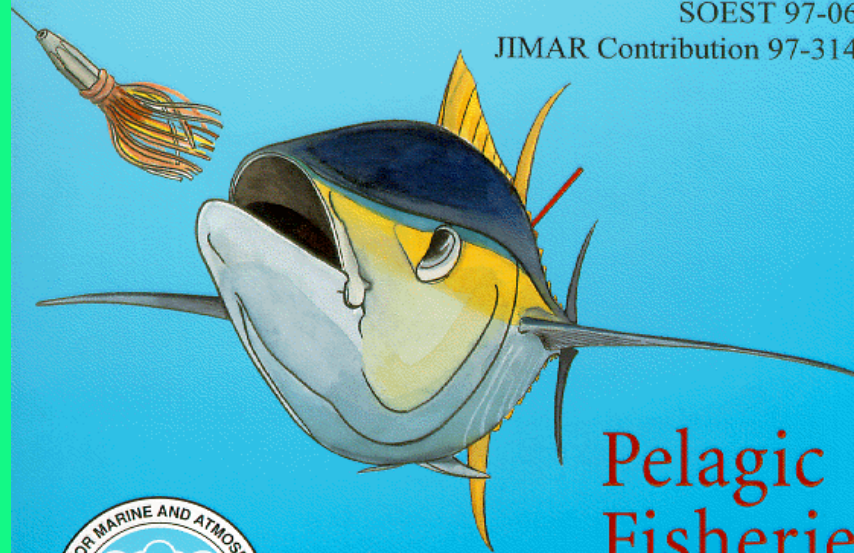
PFRP Economic Analysis, 2002

Cost-Earnings Study of Hawaii's Small Boat Fishery, 1995-1996

Marcia S. Hamilton and Stephen W. Huffman

SOEST 97-06

JIMAR Contribution 97-314



Pelagic
Fisheries
Research
Program

Pelagic Economic Projects

- **Hawaii Fishing Industry & Vessel Economics**
 - ✓ 1994 – present
 - Longline, Small-boat trolling and handline, Charter boats and Charter patrons
 - Pelagic seafood market dynamics
- **American Samoa longline fishery -- 2001**
- **Hawaii pelagic fleets programming models**
 - ✓ 2000 – present
- **International management alternatives**
(strategic “game” theory approaches)
 - ✓ 2000 - 2002

Companion NMFS projects

- Supplemental longline cost-earnings
- Cost-earnings on other Hawaii fleets
- Input-output parameters
- Turtle economic valuation experiment

Economic Fieldwork

Sector	Sample Size	Published	
Hawaii			
Longline (93)	95	1996	
Longline (01)	62	2002f	
Troll-handline			
Charter boat	62	1998	
Tournaments	7	---	
Charter patrons	> 300	2002	
American Samoa			
Longline	18	2002	

HIFIVE Activities

- **Basic data for economic modeling**
 - ✓ Collaboration with most other JIMAR economics projects
- **Development of simple Excel cost-earnings simulators**
- **Longline production modeling**
 - ✓ including effort allocation model
 - ✓ Fishing fleet capacity estimates
- **Sociology dissertation project on small-boats**

Applications

- **Regulatory Flexibility Analysis**
 - ✓ Impacts on small businesses
- **Litigation**
 - ✓ Costs, benefits, impacts of alternatives
- **Environmental Impacts**
 - ✓ Costs and benefits of alternatives
- **Economic research**
 - ✓ Production methodologies
 - ✓ Game theory applications
- **Fishing Capacity measures**

Pelagic Fleet Programming Models

Further development of PingSun Leung's
JIMAR project model:

- **A Multilevel and Multiobjective Programming Model for the Hawaii Fishery**
 - ✓ Minling Pan, PingSun Leung, Fang Ji, Stuart T. Nakamoto, and Samuel G. Pooley
 - JIMAR Contribution # 99 (1999)

Pelagic fleet model extension

- Improved spatial structure
- Updated longline and small-boat data
 - Creating more flexibility and therefore more realistic results for regulatory analysis

International Management Alternatives

- **Exploration of corporate and community - based management alternatives to international management**
 - ✓ **Development of extensive bibliographical library**
 - ✓ **Exploration of game theory applications**