Economic and Social Characteristics of the Hawaii Small Boat Pelagic Fishery

Pelagic Fisheries Research Program (PFRP)
Principal Investigators Meeting
November, 20 2009

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Skaidra Schooley
Minling Pan
• Overview of cost-earnings study
• Fisher classification
• The costs of fishing and fisher behavior
• Social importance
• Implications for future management of fishery
Hawaii Small Boat Cost-Earnings Study

- Intercept surveys across the State
- Two-waves to capture seasonality
  - April to August 2007
  - November 2007 to March 2008
- 343 completed interviews
- 74.7% response rate
FISHER CLASSIFICATION

Photos: Justin Hospital
FISHER CLASSIFICATION

• **Magnuson Stevens Act vs. Hawaii vs. Reality**

• **Classification using survey data**
  – Three question approach to classify fishers
    • Self-classify
    • Sell fish in past 12 months?
    • Percentage of personal income from fishing?
• Self classification results

<table>
<thead>
<tr>
<th>Response</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Commercial</td>
<td>41.7</td>
</tr>
<tr>
<td>Full time commercial</td>
<td>9.3</td>
</tr>
<tr>
<td>Part time commercial</td>
<td>32.4</td>
</tr>
<tr>
<td>Recreational</td>
<td>40.2</td>
</tr>
<tr>
<td>Other</td>
<td>22.1</td>
</tr>
<tr>
<td>Weekend warrior</td>
<td>14.3</td>
</tr>
<tr>
<td>Fish only for food</td>
<td>3.8</td>
</tr>
</tbody>
</table>

• Self classification vs. behavior
  – 59.5% of sample reported selling fish in past 12 months
FISHER CLASSIFICATION ISSUES

• Self Classification vs. Behavior
  
  • 30% self-classified as **recreational** sold fish
  
  • 10% self-classified as commercial **did not sell** any fish in past 12 months
  
  • 11% sold fish with **no Commercial Marine License (CML)**
  
  • 16% own CML but did not report selling fish in past 12 months
FISHING ACTIVITY: POUNDS CAUGHT

Total Pounds Caught in past 12 months

- Full Sample: 5,053 pounds
- Commercial: 7,513 pounds
- Recreational: 760 pounds
• Trip outcomes and fisher “motivations” vary across trips

- holoholo - no sell 33.4%
- non-fishing trips 0.6%
- sell fish - cover expenses 35.1%
- sell fish - profit 30.9%
**MARKET PARTICIPATION**

Percentage of pelagic fish sold in past 12 months

<table>
<thead>
<tr>
<th></th>
<th>Full sample</th>
<th>Full time</th>
<th>Part time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pelagic</td>
<td>58%</td>
<td>76%</td>
<td>53%</td>
</tr>
</tbody>
</table>

**Percent of Survey Sample**

- <10%
- 10-24%
- 25-49%
- 50-74%
- 75-90%
- >90%

**Percent Sold**
SOCIAL IMPORTANCE
### Social Importance

**What percentage of the fish you catch do you and your family consume?**

<table>
<thead>
<tr>
<th>Category</th>
<th>Percentage</th>
<th>Median</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full Sample</td>
<td>29%</td>
<td></td>
</tr>
<tr>
<td>Commercial</td>
<td>16%</td>
<td></td>
</tr>
<tr>
<td>Full-time</td>
<td>8.3%</td>
<td>5%</td>
</tr>
<tr>
<td>Part-time</td>
<td>18.9%</td>
<td>10%</td>
</tr>
<tr>
<td>Recreational</td>
<td>49.3%</td>
<td>50%</td>
</tr>
</tbody>
</table>

Photo: Justin Hospital
• Are the fish you catch an important source of food for your family?

Full Sample: 62%

Full-time Commercial: 68%

Part-time Commercial: 65%

Recreational: 58%
Are the fish you catch an important source of food for your family?

<table>
<thead>
<tr>
<th>Location</th>
<th>Yes (%)</th>
<th>No (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>74%</td>
<td>26%</td>
</tr>
<tr>
<td>Maui</td>
<td>79%</td>
<td>21%</td>
</tr>
<tr>
<td>Oahu</td>
<td>52%</td>
<td>48%</td>
</tr>
<tr>
<td>Kauai</td>
<td>64%</td>
<td>36%</td>
</tr>
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</table>
What percentage of the fish you catch do you give away?

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</tr>
<tr>
<td>Full-time</td>
<td>10.6%</td>
<td>5%</td>
</tr>
<tr>
<td>Part-time</td>
<td>24.8%</td>
<td>20%</td>
</tr>
<tr>
<td>Recreational</td>
<td>50.3%</td>
<td>50%</td>
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Photo: Justin Hospital
Fishers have, on average, 25 years of experience fishing in Hawaii.

Commercial fishers average 16 years of commercial fishing.

Only 56% would sell boat if they were to stop fishing.

Fishing tradition is strong in Hawaii.
• **Fisher classification complicates management of small boat fishery**
  – Any movement towards quotas and allocation will be problematic
    • Varying degrees of fishing effort and market participation across and within motivations

• **Trip expenditures are consistent across motivations but heavily tied to macroeconomic conditions**
  – May have important implications for trip motivations and fisher behavior

• **Small boat fishing has great social importance to the State of Hawaii**
  – The majority of small boat catch stays in Hawaii to meet demand for local consumers and tourists
  – Important source of food for local fisher families and communities
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To obtain a copy of the forthcoming report or for additional inquiries contact:

Justin.Hospital@noaa.gov
We used existing methodology to classify fishers for reporting results of our survey.

- **Full time commercial 13.0%**
  - Sell fish, fishing income > 50% of personal income

- **Part time commercial 46.5%**
  - Sell fish, fishing income < 50% of personal income

- **Recreational 40.5%**
  - No sell fish