Economic Status of Freshwater and Brackishwater Operators: 
Case study of Aquaculture Industry in Malaysia

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Background

• By 2020 Malaysia is projected to achieve high income status country

• In general, since independence in 1957 efforts have successfully addressed poverty

• Pockets of poverty exist in rural areas & the fishery sector
Outline of presentation

• Development and poverty eradication in Malaysia
• The aquaculture sector
• Methodology
• Findings and conclusions
Malaysia’s Development Efforts

3 National Policies

- National Vision Policy 2001 - 2010

3 Outline Perspective Plans (OPP)

- OPP 1 1971 - 1990
- OPP 2 1991 - 2000
- OPP 3 2001 - 2010
### BACKGROUND

<table>
<thead>
<tr>
<th>Year</th>
<th>Poverty Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>49.3%</td>
</tr>
<tr>
<td>1990</td>
<td>16.5%</td>
</tr>
<tr>
<td>2009</td>
<td>3.8%</td>
</tr>
</tbody>
</table>

### ACHIEVEMENT

- Basic infrastructure
- Human capital investment
- Rural development
- Targeted poverty (Hard core)
- Urban poverty
- Pockets of poverty
- Vulnerable group
- Relative poverty
Aquaculture - Total production (MT) 1991 – 2010 (Mysia)
Number of Freshwater and Brackishwater Culturist by Gender

- Fresh water Ponds: 16924 males, 1080 females
- Fresh water cages: 1376 males, 86 females
- Brackishwater ponds: 1352 males, 14 females
- Brackishwater cages: 2206 males, 45 females
### Poverty in the Fishing Sector (PLI= RM660)

<table>
<thead>
<tr>
<th>Poverty Among Fishermen</th>
<th>Poor household</th>
<th>Hardcore poor</th>
<th>Total Fishermen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Household Income Survey 2004</td>
<td>20,695 (29.7%)</td>
<td>5,882 (8.3%)</td>
<td>69,680</td>
</tr>
<tr>
<td>e-Kasih 2006 (poverty database)</td>
<td></td>
<td>2.036 (9.0%)</td>
<td>22,745</td>
</tr>
<tr>
<td>Traditional fishermen 2008</td>
<td>1604 (38.2%)</td>
<td>340 (8.1%)</td>
<td>4,201 (total 15,974)</td>
</tr>
<tr>
<td>Bruit Island (2010)</td>
<td>1668 (93.7%)</td>
<td>36 (2%)</td>
<td>1780</td>
</tr>
<tr>
<td>Household Income Survey 2004</td>
<td>282 (30.7%)</td>
<td>40 (4.4%)</td>
<td>980</td>
</tr>
</tbody>
</table>
Research Question

What is the economic status (as measured by asset ownership, savings, household income) of operators involved in brackishwater and freshwater aquaculture?
Research Methodology

• Study Location: Kuala Besut, Terengganu with support from Fishery Development Board Malaysia

• Self administered questionnaire with guidance

• Collected in June 2011

• Total sample: 142 aquaculturist
  - 90 brackishwater
  - 52 freshwater
PERCENTAGE RESPONDENTS WITH SELECTED ASSETS

Cash savings
Pilgrimage board
Cooperative
Unit Thrust
Insurance
Land

Fresh water Barckish water
Mean Income: Aquaculture and Gross Household Income

Aquaculture Income
- Fresh water: 3309.03
- Brackish water: 8477.01
- All: 8052.66

Gross Yearly Household Income
- Fresh water: 6639.51
- Brackish water: 8606.82
- All: 8052.66
Mean Income From Aquaculture Activity

<table>
<thead>
<tr>
<th></th>
<th>Full time</th>
<th>Part time</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh water</td>
<td>1095.1</td>
<td>1113.2</td>
<td>1103.0</td>
</tr>
<tr>
<td>Brackish water</td>
<td>3300.0</td>
<td>2184.7</td>
<td>2825.7</td>
</tr>
</tbody>
</table>
Poverty Rate Among Fresh and Brackish Water Operators

- Fresh water: 11.8%
- Brackish water: 14.8%
- All: 13.7%
Perceived Financial Situation

<table>
<thead>
<tr>
<th>Brackish water</th>
<th>Fresh water</th>
<th>Perceived Financial Situation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfied with savings and investment</td>
<td>Satisfied with savings and investment</td>
<td>Strongly disagree</td>
</tr>
<tr>
<td>Worry about loan</td>
<td>Worry about loan</td>
<td>0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%</td>
</tr>
<tr>
<td>Income sufficient for monthly expenses</td>
<td>Income sufficient for monthly expenses</td>
<td>0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%</td>
</tr>
<tr>
<td>Satisfied with current financial position</td>
<td>Satisfied with current financial position</td>
<td>0% 10% 20% 30% 40% 50% 60% 70% 80% 90% 100%</td>
</tr>
</tbody>
</table>
Conclusions

Need to further investigate the net earning of aquaculturist to assess the impact of poverty eradication programs.

<table>
<thead>
<tr>
<th></th>
<th>Freshwater</th>
<th>Brackishwater</th>
</tr>
</thead>
<tbody>
<tr>
<td>Having assets</td>
<td>Higher %</td>
<td></td>
</tr>
<tr>
<td>Income</td>
<td></td>
<td>Higher</td>
</tr>
<tr>
<td>Poverty rate</td>
<td></td>
<td>Higher</td>
</tr>
</tbody>
</table>
Thank you