Using Social Capital to Inform Participation in Sea Turtle Conservation: A Case Study from Northeast Brazil

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How can we get (more) people involved IN and WITH conservation?

Why do people participate in conservation?

Why do people participate?
Social Capital

- **Cognitive Aspects**
  - Trust
  - Norms of reciprocity, cooperation and solidarity

- **Structural Aspects**
  - Participation in associated networks

(Coleman 1988; Portes 1998; Putnam 1993, 2000)
Social Capital & Conservation

Participation can have: 

+ effect on individuals
+ effect on communities
+ effect on conservation?

(Agrawal 2001; Brosius 2005; Campbell & Vainio-Mattila 2003; Pretty & Smith 2004; Pretty & Ward 2001)
Research Questions

How can social capital (and its attributes) enhance our understanding of participation?

How can this information be used to improve participation in conservation projects?
Study Site
Methods

- Interviews (N=15)
- Questionnaires (N=341)
- Focus Groups (N=5)

Adapted from:
World Bank Social Capitol Assessment Tool
## Sample Demographics

<table>
<thead>
<tr>
<th>Category</th>
<th>Description</th>
</tr>
</thead>
</table>
| **Age**      | • Mean Age = 40 yrs.  
               • Min age = 18  Max age = 79 |
| **Sex**      | • Males 41.8% (143)  Females 57.9% (198) |
| **Education**| • Some primary education |
| **Income**   | • Monthly Respondent Income < 1 min. salary (R$540 = US$250)  
               • Monthly Household Income < R$1000 (US$500) |
| **Occupation**| • 12% Fisher (ocean), 8% Fisher (river/mangrove), 18% Housewife, 11% None, 10% Retired |
Community Level Results – Participation

Participation with Sea Turtle Conservation by Community

\[ X^2 = 13.807, \ p < 0.01 \]

Group Participation by Community

\[ X^2 = 10.877, \ p < 0.01 \]
Community Level Results – Participation

Participation Typologies (Hodgkin 2008)

- Civic Participation = 28 total score (7 items)
- Social Participation = 16 total score (4 items)
- Community Participation = 24 total score (6 items)
Individual Level Results - Participation

Civic Participation

Community Participation

Social Participation

Desire to Participate in Conservation

Gender***
Income
Age**
Education
Community

\( \beta 0.025^{**} \)

\( \beta 0.027^{**} \)

\( \beta 0.035^{**} \)

***p<0.001, **p<0.05, *p<0.10
Community Level
Results - Focus Groups

Why Participate?
- Learn
- Socialize
- Support community
- Advocate for rights / practice faith / physical activity
- Be part of a group

Responsibility?
- Government vs. individual
Community Level Results - Focus Groups

How would you like to participate in conservation?

- Obeying the law
- Not polluting
- Helping to inform others (not enforcement)
- Helping conserve
- Social/community events that involve families
Implications & Applications

How participation is defined and measured matters. Need to understand:
- How is participation perceived at the community and individual level?
- How do people want to participate in conservation?

Participation in non-conservation related activities has a positive influence on the desire to participate in conservation.

The sense of belonging to a group may provide more meaningful participation than participation in activities.
Question for Further Analysis

How do trust, cooperation and norms of reciprocity factor in?

What role does social identity play in participation?
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Measurement of Indicators – Social Capital

- Participation Typologies (Hodgkin 2008)
  - Civic Participation = 28 total score (7 items)
  - Social Participation = 16 total score (4 items)
  - Community Participation = 24 total score (6 items)

- Group Participation (Yes/No)

- Participation with TAMAR (Yes/No)

- Desire to participate in conservation (Likert)

- Trust, Cooperation & Reciprocity (Likert)
Results – Participation Scores

![Box plot showing participation scores by gender and type of participation](image)
Results

\[
\begin{align*}
\text{Gender} & \rightarrow \beta -1.583^{***} \rightarrow \text{Civic Participation} \\
& \rightarrow \beta -1.480^{**} \rightarrow \text{Community Participation} \\
& \rightarrow \beta -1.691^{***} \rightarrow \text{Social Participation} \\
\text{Participation with TAMAR} & \rightarrow \\
\text{Income}^{***} & \rightarrow \\
\text{Age} & \rightarrow \\
\text{Education}^{***} & \rightarrow
\end{align*}
\]

***p<0.001, **p<0.05, *p<0.10
### Results - Focus Groups

<table>
<thead>
<tr>
<th></th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Benefits</strong></td>
<td>Individual</td>
<td>Individual &amp; Family</td>
</tr>
<tr>
<td><strong>Motivations</strong></td>
<td>Social interaction, financial</td>
<td>Learning, social interaction, supporting family or community</td>
</tr>
<tr>
<td><strong>Barriers</strong></td>
<td>permission</td>
<td>Time, permission, money responsibilities</td>
</tr>
</tbody>
</table>

***Both men and women agreed that there are more obstacles for women than men.***