Sustainability In Community-Based Coastal Resources Management in the Philippines

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Community Based Coastal Resources Management

*Environmental*
- means to expedite the management of coastal resources
- improve effectivity & sustainability of interventions

*Socio-political*
- means to address equity issues and empower small fishers

• involves active participation of local community members
CBCRM PROJECTS
Facilitated by External Agents:
- NGOs, Academe, Government Programs

Common Components
- Coastal Resources Management
- Capability Building
- Livelihood Development
- Formation of People's Organization
- Empowerment of women/youth/Indigenous peoples
- Resource assessment/participatory research
- Social services

Majority of interventions : village-level

Types of Coastal Resources Management Interventions

**Village -level**
- marine sanctuaries
- mangrove rehabilitation
- fisheries regulation & enforcement
- coastal clean up

**Municipal/Baywide**
- integrated coastal planning
- issue-based advocacy
  - species conservation
  - anti-cement plant
- aquaculture monitoring
Activities involving local participants in various CRM interventions in 47 CBCRM projects

<table>
<thead>
<tr>
<th>ACTIVITIES</th>
<th>TOTAL</th>
</tr>
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<tbody>
<tr>
<td><strong>Issue Identification and Planning</strong></td>
<td></td>
</tr>
<tr>
<td>Resource and socio-economic assessment</td>
<td>16</td>
</tr>
<tr>
<td>Data-gathering/field surveys/PRA</td>
<td>8</td>
</tr>
<tr>
<td>MPA Site Selection and Resource Survey</td>
<td>9</td>
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<tr>
<td>Drafting of MPA/marine sanctuary management plan</td>
<td>16</td>
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<tr>
<td>Planning and site-selection for mangrove reforestation</td>
<td>8</td>
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<tr>
<td>Mangrove stewardship application</td>
<td>7</td>
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<tr>
<td><strong>Policy Formulation and Adoption</strong></td>
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<tr>
<td>Development of Municipal Coastal Development Plan</td>
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<tr>
<td>Advocacy/Support for the passage of MPA/marine sanctuary ordinance</td>
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<tr>
<td>Initiated legislation and informal dialogues with LGU and enforcers on gear regulation</td>
<td>7</td>
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<tr>
<td>Lobbying and advocacy of fishery management ordinances</td>
<td>12</td>
</tr>
<tr>
<td>Formulation and Planning of ordinances, resolutions</td>
<td>11</td>
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<tr>
<td><strong>Plan Implementation</strong></td>
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<tr>
<td>Information Dissemination on MPA/marine sanctuary ordinance</td>
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<td>Deployment of MPA marker buoys</td>
<td>12</td>
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<td>Construction of guardhouses, community center, etc.</td>
<td>8</td>
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<tr>
<td>Patrolling and enforcement of MPA</td>
<td>31</td>
</tr>
<tr>
<td>Visitor management of MPAs</td>
<td>5</td>
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<tr>
<td>Reseeding of MPAs</td>
<td>3</td>
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<tr>
<td>Fund sourcing for MPA</td>
<td>4</td>
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<tr>
<td>Enforcement of fishery regulations against illegal fishing (e.g. trawling, dynamite fishing)</td>
<td>33</td>
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<tr>
<td>Information dissemination on fishery laws, ordinances</td>
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<tr>
<td>Management of milkfish fry concession</td>
<td>1</td>
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<tr>
<td>Advocacy campaign for the protection of endangered/threatened marine species</td>
<td>10</td>
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<tr>
<td>Collection and planting of mangrove seedlings</td>
<td>13</td>
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<tr>
<td>Establishment of mangrove nurseries</td>
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<tr>
<td>Fund sourcing for mangrove reforestation expansion</td>
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<tr>
<td>Coastal clean-up</td>
<td>13</td>
</tr>
<tr>
<td><strong>Monitoring and Evaluation</strong></td>
<td></td>
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<tr>
<td>Anti-cement plant advocacy</td>
<td>2</td>
</tr>
<tr>
<td>Solid waste management</td>
<td>2</td>
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<tr>
<td>Landed fish catch monitoring</td>
<td>13</td>
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<tr>
<td>MPA monitoring (e.g. coral and fish visual census)</td>
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<tr>
<td>Maintenance and monitoring of mangrove reforestation</td>
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<tr>
<td>Water quality monitoring (effect of coastal aquaculture)</td>
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Concepts of Sustainability

Sustainable development
- development that does not compromise ability of future generations to meet their own needs

Sustainable development in fisheries/coastal resources (Charles 1994)
- simultaneous pursuit of four components:
  ecological sustainability(1)
  socio-economic sustainability(2)
  community sustainability(3)
  institutional sustainability(4)

Three level of sustainability
  macro (e.g. global)
  meso (e.g. regions within a country)
  micro (e.g. local and grassroots groups/organizations)

Reported Outcomes and Impacts of CBCRM Projects

indications of success essential for sustainability
(N = 47 sites)

1. Socio – Cultural
   - formation/strengthening of POs 66%
   - increased environmental awareness 64%
   - community empowerment/mobilization 60%

2. Governance
   - formation of local resource management bodies 70%
   - enactment of barangay and municipal policies 64%
   - increased networking and partnerships 47%
Reported Outcomes and Impacts of CBCRM Projects

(N = 47 sites)

3. Ecological
   - protection of reefs and mangroves 72%
   - reduced pressure on resources 55%
   - increased biodiversity 47%

4. Economic
   - livelihood diversification 47%
   - increased fish catch/household income 36%
   - established social services 28%
Livelihood Development Activities

• Generally limited small-scale impacts:
  - lack of business management skills
  - majority benefit only PO members
  - not reported to contribute to decrease in fishing effort or improved coastal resources management except tourism

• Significant economic and ecological impact attributed to MPAs
  - increase fish abundance, species diversity lead to increase in fish catch and household income
  - significant economic gains realized through natural resources management
  - strategic to focus on economic activities linked directly to resource management

Factors Affecting Success and Sustainability

• Context variables – existing local conditions: supra-community, community, individual/household (Pomeroy et al. 1996)

• Project Intervention variables – activities & strategies

1. Local Community Participation

Types of Coastal Resources Management Interventions

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Who Participates?

- Members of Local People/Fisher Organization
- Deputized Fish Wardens
- Elected Village Officers & FARMCs
  - Resident Volunteers
  - Fishers & Fish Traders
  - Religious & Civic Groups
  - Teachers & Students

Multi-sectoral representatives

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**Type of Participation**

1. Passive Participation
   - informed about plans & activities
2. Participation by consultation
   - views heard in workshops & meetings
3. Participation in information giving
   - answer surveys & questionnaires
4. Participation for material incentives
   - given allowance for community organizing, labor
5. Functional Participation
   - form committees for predetermined tasks
6. Interactive Participation
   - prepare plans & involved in decision making
7. Self Mobilization
   - source funds for expansion activities

*from Pretty et. al. 1995*
Factors determining the type of Participants and the Nature of Participation

- Skills required for particular activities
- Physical effort and time requirements
- Membership in program partner local organization
- Project goals
- Relative costs and benefits to individual
  - impact on individual's interest
  - degree of dependence on fishing gear / grounds being regulated
- socio-economic status of individual
  - marginalized fishers least able to participate
  - unable to forego opportunities to fish or spend time & effort to join local organizations

2. Project interventions to Enable and Enjoin Participation

- commonly through local organizations;
- special interest groups e.g. youth, women, IPs

a. Capability building
  - Skills and knowledge training
  - Opportunities for personal growth
b. Incentives for Participation

? enticement for participation/membership
? compensation for affected community members

i. Livelihood Development
   - alternative/supplemental source of income

ii. Other Economic Incentives & Entitlements
   - livelihood assistance
   - credit-extension for household scale livelihood projects
   - honoraria or allowances

3. Local Government Support

   - financial, planning, legislation and enforcement
   - often lacking and not sustainable
   - need to see benefits: short-term and long-term
4. Institutional Arrangements and Linkages
- local institution building: local management bodies
- multisectoral partnerships
- coalition building: Inter-LGU alliances, PO alliances,
  - multidisciplinary project implementors/facilitators

5. Use Rights and Incentive Systems
- if specified and secure lead to change in behavior and attitudes
  - enjoin active participation

6. Sense of Community
~ties that bind
• common use of resources
• shared beliefs, knowledge and practices
• cultural values
• formal and social control mechanisms for compliance and conflict resolution

community = project partners (e.g. POs, fisher sector)

critical challenge: heterogenous communities
  - harmonize diverse interests
Enhancing the Gains of CBCRM

- **Realizing Greater Economic and Ecological benefits is essential for sustainability**
  - socio-economic sustainability hinges on ecological sustainability
  - better understanding of inherent complexities of fishery/coastal resources
  - focus on income-generation options that contribute directly to resources management or enhancement
  - development of tenurial instruments and other incentive systems

- **Scaling-up and Integration into Broader Framework**
  - CBCRM initiatives important but not sufficient
  - Greater number of active participants
  - Harmonize at municipal-level to bay-wide scales

- **Necessity for Co-Management Arrangements**
  - Fisher communities /direct users very heterogeneous
  - Local government mandated resources manager
  - Limited resource management capabilities and financial resources
  - Multi-sectoral and inter-LGU partnerships essential
Maraming Salamat!

- Ford Foundation
- CBNRM Coastal Team