

# Sustainability In Community-Based Coastal Resources Management in the Philippines

Marie Antonette Juinio-Meñez

Marine Science Institute, University of the Philippines  
Diliman, Quezon City

## 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

	ACTIVITIES	TOTAL
<b>Issue Identification and Planning</b>	Resource and socio-economic assessment	16
	Data-gathering/field surveys/PRA	8
	MPA Site Selection and Resource Survey	9
	Drafting of MPA/marine sanctuary management plan	16
	Planning and site-selection for mangrove reforestation	8
<b>Policy Formulation and Adoption</b>	Mangrove stewardship application	7
	Development of Municipal Coastal Development Plan	8
	Advocacy/Support for the passage of MPA/marine sanctuary ordinance	20
	Initiated legislation and informal dialogues with LGU and enforcers on gear regulation	7
	Lobbying and advocacy of fishery management ordinances	12
	Formulation and Planning of ordinances, resolutions	11

	ACTIVITIES	TOTAL
<b>Plan Implementation</b>	Information Dissemination on MPA/marine sanctuary ordinance	3
	Deployment of MPA marker buoys	12
	Construction of guardhouses, community center, etc.	8
	Patrolling and enforcement of MPA	31
	Visitor management of MPAs	5
	Reseeding of MPAs	3
	Fund sourcing for MPA	4
	Enforcement of fishery regulations against illegal fishing (e.g. trawling, dynamite fishing)	33
	Information dissemination on fishery laws, ordinances	9
	Management of milkfish fry concession	1
	Advocacy campaign for the protection of endangered/threatened marine species	10
	Collection and planting of mangrove seedlings	13
	Establishment of mangrove nurseries	2
	Fund sourcing for mangrove reforestation expansion	1
	Coastal clean-up	13
	Anti-cement plant advocacy	2
	Solid waste management	2
<b>Monitoring and Evaluation</b>	Landed fish catch monitoring	13
	MPA monitoring (e.g. coral and fish visual census)	5
	Maintenance and monitoring of mangrove reforestation	2
	Water quality monitoring (effect of coastal aquaculture)	1

## 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%

Appendix 6: TYPES OF LIVELIHOOD ACTIVITIES FACILITATED BY PROJECTS

<i>Livelihood Development Activities</i>	<i>Total</i>
	N = 47
<b>1. Land-based Micro-enterprise</b>	
1.1 Cooperative/Consumer stores	17
1.2 Livestock raising/ poultry	14
1.3 Cottage industry/ handicraft	11
1.4 Saving and credit	9
1.5 Rice farming/ trading	6
1.6 Fish paste production/fish processing/ cucumber processing	6
1.7 Others	4
1.8 Fish trading	2
<b>2. Aquaculture/ Processing</b>	
2.1 Seaweed farming	12
2.2 Fish cage culture	9
2.3 Mud crab/Crab culture	4
2.4 Oyster culture	2
2.5 Sea-urchins grow-out culture	1
2.6 Giant clam farming	1
2.7 Mussel Culture	1
2.9 Coral farming	1
<b>3. Tourism/ Ecotourism</b>	<b>16</b>

## 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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enforcement  
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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



from (Pretty et. al. 1995 )

Type of Participation	Relative No. of Participants
1. Passive Participation	 <i>informed about plans &amp; activities</i>
2. Participation by consultation	 <i>views heard in workshops &amp; meetings</i>
3. Participation in information giving	 <i>answer surveys &amp; questionnaires</i>
4. Participation for material incentives	 <i>given allowance for community organizing, labor</i>
5. Functional Participation	 <i>form committees for predetermined tasks</i>
6. Interactive Participation	 <i>prepare plans &amp; involved in decision making</i>
7. Self Mobilization	 <i>source funds for expansion activities</i>

## 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

Appendix 5. Local government participation in coastal resources management

Activities	TOTAL
1. Provided Financial Support through IRA for CRM (e.g. MPA)	9
2. Passage of legislation for protection/management of specific fishery resources	9
3. Participated in community and coastal resources assessment, ICM Planning	8
4. Enforcement of legislations	7
5. Formation of MPA management body/municipal devt council	8
6. Passage MPA Ordinance establishing Marine Reserve/Sanctuary	6
7. Recognition of POs and the sectoral agenda/workshop/consultation & issue identification	4
8. Passage of local government ordinance granting territorial use on fisheries	4
9. Deployment of ARs/maintenance of buoys	4
10. Initiated establishment of sanctuary	3
11. Municipal water boundary delineation	3
12. Financial support for livelihood projects	3
13. Solid waste management planning	2
14. Infrastructure support	5

- 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