



COMMUNITY-BASED  
MANAGEMENT  
OF ENVIRONMENTAL  
CHALLENGES  
IN LATIN AMERICA



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# Trade-offs between Conservation and Development in CBNRM

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# CBNRM

- CBNRM as a means for communities to regain control over natural resources to promote livelihood security and conservation (Western and Wright 1994)
- Applied to a wide array of circumstances and models
- The significance of CBNRM approaches in recent decades has not paralleled with its success in reaching both goals.
- Many of the projects have a bias towards conservation or development outcomes, and relatively few of these strategies can convincingly demonstrate achievement in both of these dimensions

# CBNRM

- Different types of CBM strategies exist. The most analyzed are **donor- and government-driven initiatives** based on economic incentives to encourage conservation.
- Other types of **non-externally driven CBM strategies** are:
  - i) the strategies aiming to devolve or recognize existing community rights and responsibilities based on concerns of environmental and social justice
  - ii) the long-term CBM strategies based on customary practices that result in conservation
  - iii) the common pool resource management, often associated with co-management strategies

# OBJECTIVES

- The research **objective** was to identify how **settings** and **institutions** influence **conservation** and **development** outcomes in a case study representing each reality.
- The selected cases cover a diverse range of situations in which a community-based organization addresses the management of natural resources for livelihood using bottom-up governance structures.

## Case Studies

- 1) A time-tested indigenous-based conservation strategy: *Santiago Comaltepec*, a small Chinantec community with a long tradition of customary practices for natural resource protection in the Sierra of Oaxaca (Mexico);
- 2) A constitutional recognition of ancestral land rights of Afro-American communities in two Afro-Colombian community councils (CC): *Bajo Calima* (Calima-CC) and *Alto y Medio Dagua* (AMDA-CC) located in the Colombian Pacific
- 3) The artisanal management of fisheries in Bahía Blanca estuary (Argentina).

# Case Studies

## A constitutional recognition of ancestral land rights of Afro-American communities: AMDA and Calima Community Councils (Colombia)

- 2 Community Councils of Black communities
- Community property of land recognised by CO Constitution
- High level of poverty and marginalization
- Lack of formal jobs
- Tropical forest with high biodiversity and water resources
- Conflicts with illegal actors (coca trafficking and miners)



# Case Studies

## A time-tested indigenous-based conservation strategy: Comaltepec (Mexico)

- Small indigenous community
- Customary uses regime
- Community property of land recognised by Government
- Well conserved forest
- Strong social capital (leading to positive & negative effects)
- Logging, subsistence agriculture, livestock, sawmill and ecotourism
- Payment for ecosystem services (water catchment)
- High level of poverty
- Lack of employment opportunities
- Remittances



# Case Studies

## Common pool resource management, often associated with co-management strategies in Bahia Blanca (Argentina)

- Artisanal fishermen (disappearing)
- High environmental value estuary
- Unique wetland system
- Strong archaeological and paleontological value of beaches
- Dune regeneration disturbed by building and housing
- Important economic port (project to increase dredging in the estuary)
- Petrochemical and industrial site
- Incipient collective action and community-based conservation



# SETTINGS

|                                | Calima & AMDA (CO)   | Comaltepec (MX)  | Bahia Blanca (AR)   |
|--------------------------------|--|--|---|
| <b>Institutional framework</b> | Collective rights recognised by National Constitution                                      | Collective rights recognised by Mexican Constitution                       | Marine and coastal resources are public property<br>Fishing activities developed by private actors and regulated by government  |
| <b>Alignment of interests</b>  | Partial, conflicts between conservation and economic development interests (mining sector) | No current collision of interests between government and community         | Lack of alignment between artisanal fishers and government interests. Industrial sectors challenge fishers' interests           |
| <b>Power relations</b>         | Highly asymmetric  | Asymmetric. Local leaders have limited bargaining capacity                 | Asymmetric and not well-defined   |
| <b>Threats and conflicts</b>   | Paramilitaries and guerrilla<br>Richness of natural resources attracts powerful actors     | No external threats or conflicts<br>Migration as important internal threat | Different sectors (harbor, petrochemical pole, industries, large-scale fishers, tourism, etc.) compete for natural resource use |

# INSTITUTIONS

|                                     | Calima & AMDA (CO)  | Comaltepec (MX)  | Bahia Blanca (AR)  |
|-------------------------------------|---|--|--|
| <b>Endurance</b>                    | Short history   | Long history   | Long tradition of artisanal fishers' cooperative. Difficulties for collective action   |
| <b>Property rights</b>              | Collective property   | Collective property  | Public property privately exploited  |
| <b>Local decision making bodies</b> | General Assembly (includes all the community members, without gender distinction)<br>Community leaders elected by the Assembly<br>Rural neighborhood committees<br>Sector committees  | General Assembly of Commoners (a representative of every native family)<br>Common Goods Commissioner (elected by the Assembly)<br>Overseeing Council<br>Council of Eldest ( <i>Caracterizados</i> ) with strong influence on decision-making   | Fishers associations have assemblies and design representatives, but they have limited decision power to influence government agencies   |
| <b>NRM rules and regulations</b>    | Internal Management Plans<br>Access and extraction rules well defined but monitor and sanction rights not<br>Social sanctioning but not always rule compliance<br>No rule compliance by external actors<br>Young and women encouraged to get involved | NRM rules decided in the Assembly of Commoners<br>Well-defined access and use rights, monitoring rules and enforcement capacity<br>Obligatory collective activities<br>Social sanctioning fully implemented and internal and external rule compliance<br>Weak role of women and young in collective activities and decision-making | Government regulates the rights of access and has monitoring and sanctioning rights.<br>Internal rules respected by fishers but not by external actors<br>Rangers and police control resource extraction<br>Social sanctioning methods partially work among artisanal fishers but in other collectives individualistic and free-riding behavior predominates |

# INSTITUTIONS

|   | Calima & AMDA (CO)  | Comaltepec (MX)   | Bahia Blanca (AR)   |
|---|---|---|---|
| <b>Conflict resolution mechanisms</b>               | Internal conflicts face-to-face solved by leaders<br>Conflicts with external actors solved by environmental authorities'  | Conflicts solved by face-to-face confrontations   | Conflicts solved with demonstrations, strikes and road cutting, creating big economic losses  |
| <b>Leadership and management capacity</b>           | Strong and recognized leaders, legitimated by a long history of activism, but with limited external influence<br>NGOs and national agencies support in management tasks | Uncontested leadership of <i>Characterizados</i> , often surpassing Commissioners<br>NRM management capacities developed by UZACHI                                      | Several fisher associations exist, weakening leadership. Often, personal interests prevail over collective ones and the associations have limited representation    |
| <b>Social capital, values and collective action</b> | High bonding and bridging social capital, but limited linking social capital<br>Collective action is part of people's idiosyncrasy<br>Legitimacy and trust values       | High bonding, medium bridging and low linking social capital<br>Assembly's tight control on innovation and entrepreneurship<br>Reciprocity, trust and legitimacy values | Medium bonding and linking and low bridging social capital.<br>Individualistic and opportunistic behavior<br>Local community involvement discouraged by the history |

# CONSERVATION

|                                      | Calima & AMDA (CO)  | Comaltepec (MX)   | Bahia Blanca (AR)  |
|--------------------------------------|---|---|--|
| <b>Resource potential production</b> | High  | High  | It could be higher if rules and regulations were respected   |
| <b>Resource productivity</b>         | Low-medium  | Low   | Fisheries' productivity is decreasing  |
| <b>Natural resources status</b>      | <p>Water pollution</p> <p>Riverbanks destroyed (gold)</p> <p>Habitats destructed (coca)</p> <p>Glyphosate aerial spraying</p> <p>Illegal logging and hunting</p> <p>Reforestation schemes</p> | <p>Community rules protect biodiversity, natural habitats and water.</p> <p>Forests restored</p> <p>Management system certified as Smart and Sustainable Wood</p> | <p>Changes in biodiversity and dunes</p> <p>Water polluted</p> <p>Dredging</p> <p>New protection areas i</p> <p>Demand to elaborate integrated plans</p> |

# DEVELOPMENT

|                               | Calima & AMDA (CO)  | Comaltepec (MX)  | Bahia Blanca (AR)   |
|-------------------------------|---|--|---|
| <b>Resource availability</b>  | Abundant water, forest and fishing resources.<br>Subsoil rich in minerals<br>Gold decreased   | Abundant resources, but its use is restricted by communal laws   | Resource availability and quality limited by poor management and lack of control  |
| <b>Livelihood strategies</b>  | Based on natural resource exploitation<br>Legal and illegal wood extraction commercialized with low added value   | Based on forest production, livestock and subsistence agriculture.<br>Remittances<br>Forests exploited by communal enterprises   | Fishers' livelihood strategies linked to natural resources, but compete with other economic sectors<br>Unfair competition from large vessels decreases fishers' livelihood options  |
| <b>Economic opportunities</b> | Low development opportunities and high levels of marginalization<br>No formal jobs associated with natural resources<br>Armed conflicts undermine development possibilities (e.g., ecotourism)<br>No payment for ecosystem services (PES) | Lack of economic opportunities and tight community rules<br>Absence of qualified jobs<br>Communal enterprises<br>Lack of technology to add value<br>Emergent individual development initiatives (vegetables, orchids, and gourmet coffee)<br>Water catchment PES. CO2 sequestration PES being explored | Other job opportunities exist<br>Good performance of socioeconomic indicators<br>Different sector specialization in each town, but fishery sector in all of them<br>New ecologic fish processing plant creates economic opportunities to more than 200 families |

# DEVELOPMENT

|                                 | Calima & AMDA (CO)   | Comaltepec (MX)   | Bahia Blanca (AR)   |
|---------------------------------|--|---|---|
| <b>Distribution of benefits</b> | Community members individually profit from resources (fishing, gold mining and agriculture plots), but following the internal rules for extraction   | Incomes from forest exploitation and communal enterprises not distributed to inhabitants but invested in common infrastructures, facilities and services, but they concentrate in the main village                            | Benefits follow market principles: actors develop activities on a private basis and generate incomes. Conflicts of interests between artisanal fishers tourism and environmental protection                                   |
| <b>SES renewal options</b>      | High-medium for forest due to natural conditions and absence of important threats.<br>Gold extraction techniques, sewage and untreated wastes pollute rivers'<br>Population density and economic growth do not currently create resource pressures | High for forest, due to natural conditions and absence of important threats.<br>Limited logging that has little impact on renewability<br>Population density and economic growth does not currently create resource pressures | Highly dependent on environmental management.<br>Limited environmental strategies, but increasing<br>Need of integrated coastal, marine and tourism plans<br>Population density and economic growth create resource pressures |

# TRADE-OFFS

|              | MEXICO    | COLOMBIA | ARGENTINA |
|--------------|-----------|----------|-----------|
| CONSERVATION | Very High | Medium   | Weak      |
| DEVELOPMENT  | Weak      | Weak     | High      |



VULNERABILITY

# CONCLUSIONS

- Livelihood depends on sustainable management in all cases, but there is no balance between conservation and development.
- Comaltepec preserves natural resources but at the cost of development.
- Argentina fishermen have higher welfare levels, but the management in the area is unsustainable.
- CCs do not have excellent results in any aspect, and threats to conservation are derived from the absence of livelihood options outside of resource exploitation.

# CONCLUSIONS

- External pressures for conservation are the current development models and drivers, such as globalization, worldviews and the market economy that create financial needs which traditional management forms do not provide.
- Internal challenges are making people respect the rules that threaten conservation when income-generation options and enforcement capacities are limited.

# CONCLUSIONS

- Development is externally blocked by the lack of economic incentives and compensation models that enable economic opportunities and welfare linked to the sustainable management of natural resources.
- Global views demand to conserve the natural resources necessary to regulate ecosystem functioning, but they need to combine with the local views where livelihood options and incomes are a necessity.

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