Governance and Social-ecological Interactions: Advancing Top-down Approaches and Engaging Local Communities to Enhance Marine Protected Areas in Colombia

Final Report

Prepared for The Robin Rigby Trust

Archipelago of San Bernardo, Colombia.

By

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Project Summary

Fifty percent of Colombia's territory is covered by marine waters that provide important habitats for a large marine biodiversity (Diaz & Aceros, 2003; Alonso et al. 2007). Marine biodiversity, however, is in peril due to over-fishing, pollution, coastal development, climate change, among other factors (Paramo et al. 2009). Thus, Marine protected areas (MPAs) are increasingly been used as a strategy to protect marine biodiversity. In the last decade 16 new MPAs have been established in Colombia representing 50% of the total number of the MPAs in the country. Yet, the current system of MPAs in Colombia covers less than 2% of Colombian Marine territory (Murillo-Bohorquez,) which is far from the 10% target agreed by countries[1] compromised with the Convention of Biological Diversity (CBD). In consequence, it is expected that the number of MPAs in Colombia and worldwide keeps growing in the following years.

The system of national protected areas (terrestrial and marine) in Colombia follows a top-down governance approach where decisions are made by the central government with limited participation of local communities in planning and managing (Durán, 2009). Furthermore, the categories of management applied are highly restrictive limiting community access to livelihoods and in many cases overlooking the inherent and long term interactions among coastal communities and the marine environment. Although the fishing sector in Colombia represents only 0,36% of the gross domestic product (Robles, 2008; Wielgus et al. 2010), it is estimated that approximately 40,000 coastal villages rely on marine resources in Colombia (Saavedra-Diaz et al. 2015).

Thus, interactions between coastal communities and MPAs are intense. Even though the role of communities in MPA governance is not always acknowledged; empirical research has demonstrated that the performance of MPA is highly influenced by socio-ecological linkages (Christi et al., 2009), thereby recognizing rights of local communities and their role in conservation and sustainability is crucial for the successful implementation of MPAs (Pollnac & Seara, 2011).

Social factors, such as formal and informal rules, beliefs, interests, perceptions, knowledge, and power issues, which constitute elements of governance, and their interactions with ecological factors, become central for achieving effective governance and social and conservation goals in marine protected areas (Pollnac & Seara, 2011).

Giving that it is expected that the number of MPAs increase in the following years, it is important to pay attention on how to pursue effective conservation while guaranteeing communities access to livelihoods and other socio-cultural needs.

Understanding the interactions and linkages among communities within and around MPAs is a key step towards improving the effectiveness of the MPAs and addressing social and cultural community concerns. This research examines interactions within and among coastal communities, environmental authorities, and MPAs in the Caribbean of Colombia as well as their implications for governance. This research characterizes the *facto* and the *jure* governance system, identifies barriers and opportunities for improving governance, and explores territorial rights implications for MPA governance in Colombia.

Through a qualitative approach this research examines governance aspects and interactions within and around three MPAs in the Caribbean of Colombia (Figure 1).

[1] Colombia as a signatory country of the CBD follows the goals proposed in the COP VII/2004 and Aichi Target 11 to increase the representativeness and coverage of marine ecological systems by at least 10% by the year 2020.

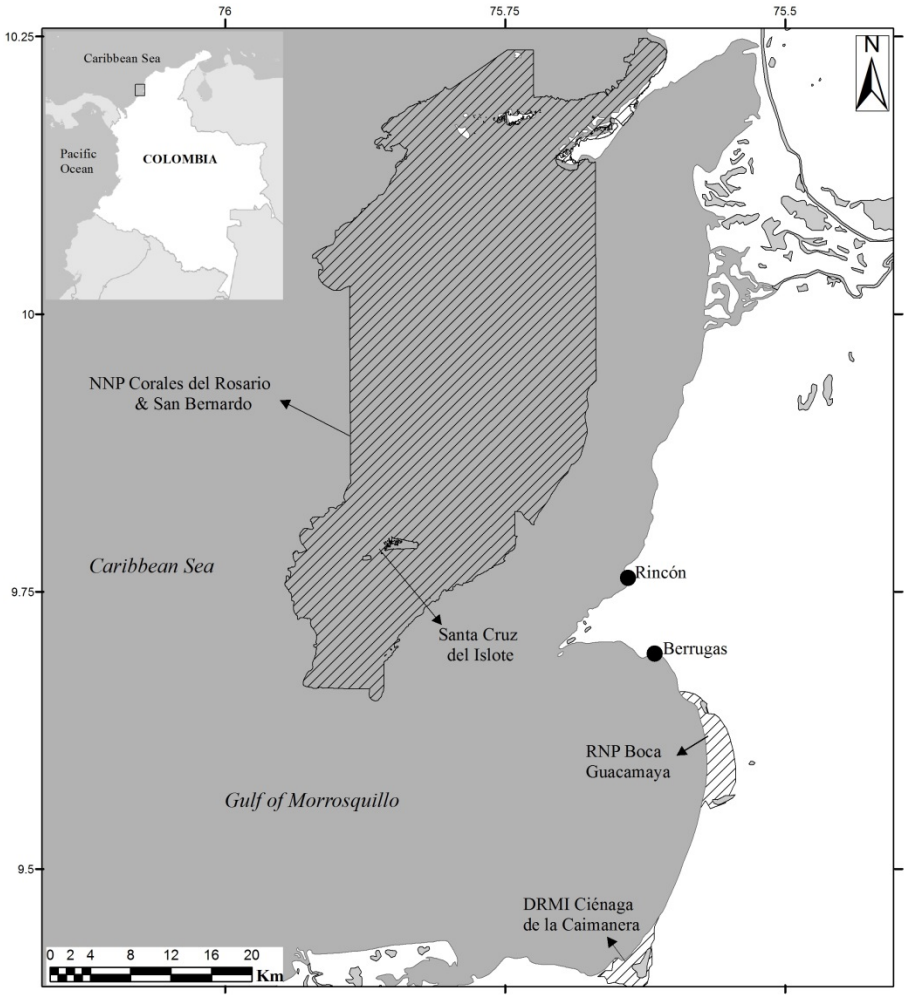

Fig 1. Map of the study area. NNP: National Natural Park, RNP: Regional Natural Park, DRMI: Regional Integrated Management District.

The three MPAs are: The National Natural Park Corales del Rosario and San Bernardo, The Regional Integrated Management District Cienaga de la Caimanera, and the Regional Natural Park Boca Guacamaya (Table 1).

Table 1. Characteristics of the Study Sites.

Study Site	Governance approach	Jurisdictional Level	Areas under jurisdiction	Uses allowed
Corales del Rosario and San Bernardo National Park	Centralized government-led	National	Marine (near shore)	No-take, restoration, recreation, subsistence fishing
Boca de Guacamayas Regional Park	Decentralized government-led	Regional	Coastal (mangroves, coastal lagoons)	No-take, restoration, recreation, subsistence fishing
Cienaga de la Caimanera Regional Management District	Decentralized government-led	Regional	Coastal (mangroves, coastal lagoons)	Conservation, restoration, sustainable use

Specifically, this research is focused on the coastal communities living close to four MPAs located in the province of Sucre, Colombian Caribbean. The communities are Cienaga de la Caimanera (associated to the Regional Management District that takes the same name), the community of Guacamaya (nearby the Regional Natural Park Boca Guacamaya), communities of Berrugas and Rincon del Mar (both of them located close to The Private Reserve Sanguare and The National Natural Park Corales del Rosario and San Bernardo (CRSB)), and the islander community of Santa Cruz del Islote (located in one of the islands of the National Natural Park CRSB) (Figure 1). While Sta Cruz del Islote is located within the National Park Corales del Rosario and San Bernardo, Berrugas and Rincon are coastal villages located outside the park. However, fishers from the three sites rely on fishing grounds within the park.

A total of sixty-nine semi-structured interviews and six focus groups were conducted. Fifty-six semi-structured interviews (Table 2) were conducted with key participant from the coastal villages of Cienaga de la Caimanera, Guacamayas, Berrugas, Rincon, and the islander village Sta Cruz del Islote between April and July 2014 (Figure 1). Through a partnership with ASOPEMABE (Asociación de Pescadores y Mangleros de Berrugas as in Spanish) it was possible to connect with community leaders and organizations in the study area. Community leaders helped to identify key informants (fishers, tourist services providers, mangrove users, members of environmental groups and other community organizations). Other participants were identified through a snow ball approach (asking participants to identified other key informants) while others were identified by the researcher when taking part in observation/participatory activities. Thirteen semi-structured interviews were conducted with representatives from environmental authorities at the regional and national level, representatives of non-governmental organizations, as well as researchers involved in marine conservation (Table 2).

Table 2. List of interviews with local community members, environmental authorities, and NGOs.

Site	Interviews with local community members
Tolu	3
Cienaga de la Caimanera	9
Boca Guacamaya	11
Santa Cruz del Islote	14
Berrugas	9
Rincon del Mar	9
Regional Environmental Authority-Carsucre	3
Fundacion Sabanas NGO	2
Institute of Marine and Coastal Research-Invemar	2
The Caribbean Regional System of Protected Areas -Sirap Caribe	1
National Parks System-PNN	3
Fundacion Maria Mulata, NGO. Rincon del Mar	1
Sanguare	1
Ecoversa NGO	1

The focus groups were conducted in Cienaga de la Caimanera (2), Boca Guacamaya (1), Berrugas (1), Rincon del Mar (1), and Santa Cruz del Islote (1). The number of participants in the focus groups was around six and ten people.

Interviews and focus groups were audio-recorded with the consent of participants. Interview and focus group guiding questions were based on the analytical frameworks for Protected Areas governance from Borrini-Fayerabend et al., (2013) and Jones et al., (2013). Interviews were transcribed and coded through an inductive-deductive approach using the free software RQDA. The mind mapping software Docear was used to organized codes and visualized salient themes and categories. This research has Ethical Clearance from the Wilfrid Laurier University Research Ethics Board.

Interview Natural Private Reserve Sanguare.

Project implementation

The Fieldwork phase.

There were three visits to the field site. The first visit to the field was in December/2013. This visit had the purpose of getting to know the study site and the logistic aspects as well as to make connections with key informants. The relationship with the research partner ASOPEMABE started in that occasion. The second visit to the field was between April-July/2014. The main purpose of the second visit was collecting data. During the 2014 fieldwork season, interviews, focus groups, and field participation/observation activities (i.e., fishing, meetings, informal conversations) took place with community participants from Cienaga de la Caimanera, Guacamaya, Tolu, Rincon, Berrugas, and Sta Cruz del Islote. Between two and three weeks were spent in each of these areas. During the second fieldtrip 69 semi-structured interviews were conducted with diverse participants from the community including elder fishermen, community leaders (male and female), independent fishers, representatives of environmental authorities at the regional and national level, representatives of non-governmental organizations, and researchers involved in marine conservation. Focus groups were conducted with members of the communities in each site.

Other complementary activities carried out during the fieldtrip included keeping notes from the field, registering observations, attending meetings with organizations, reviewing information from libraries, and meeting people working in protected areas management in Colombia. In July/2014, preliminary results from this research were presented in The Colombian National Congress of Protected Areas held in Bogota-Colombia.

The third and last visit to the field took place between October-December 2015. The purpose of this visit was disseminating research findings and getting feedback from the communities. Five meetings were held with all the communities that previously participated in interviews and focus groups. The dissemination of results with communities included two main components. (1) a brochure used as invitation to the meeting and as a means to divulgate the key aspects of the research (appendix 1) and (2) meetings with community participants where the research purpose and main findings were presented and discussed. In Cienaga de la Caimanera and Guacamayas the meetings for dissemination of results coincided with community meetings providing the opportunity to reach a large part of the community. In Berrugas, Rincon, and Sta Cruz del Islote meetings were coordinated with the help of community leaders. Participants in interviews and focus groups as well as other community members attended the meeting.

Research findings were also presented in the Latin-American Marine Science Congress (Colacmar) held in Sta Marta-Colombia between October 18-22, 2015. Presenting in the Colacmar was an opportunity to share main research findings with the academia, NGOs, and the policy sector in Colombia.

Dissemination of results, Boca Guacamaya. Nov 22/2015

Dissemination of results, Rincón. Nov 30/2015

Dissemination of results , El Islote. Nov 26/2015

Dissemination of results, Berrugas, Sucre. Nov 24/2015

Dissemination of results, Cienaga de la Caimanera. Nov 20.2015

Community engagement and collaboration

Members from the community, particularly from ASOPEMABE were fundamental to carry out all the research activities. Members from ASOPEMABE and other organizations participated as field assistants helping to identify key informants and to coordinate interviews, focus groups, and results dissemination meetings as well as other logistic aspects such as transportation among sites and participation/observation activities. The focus groups were organized with the help of community leaders in charge of inviting participants and coordinating logistic aspects of the activity (meeting venues, refreshments). The focus groups offered an interesting opportunity not only to collect information but also as a scenario for community participation and deliberation.

Field activities were an opportunity for community members to communicate their points of view about conservation strategies in the area and resource use. It was also an opportunity to reflect on ecosystems and resources changes as well as fishing technologies. Particularly, questions posed during the focus groups drove to the identification of present and historical causes of marine resource degradation. Collective thinking through focus groups helped to identify different perceptions among participants. The involvement of community members in the research helped to foster environmental awareness and self-reflection on community involvement and responsibility in marine resource management. Many participants manifested their gratefulness for being taken into account in the research and particularly for being invited to the dissemination of results.

Rincón del Mar-Nov 2015

Challenges

While accessing community members and getting interviews with participants from the coastal communities was extremely easy, getting and coordinating appointments with environmental authorities, private stakeholders, and non-governmental organizations was very challenging. Private stakeholders were reluctant to participate in interviews and requested to follow a particular protocol before accepting to be part of the research. Although after several months of providing information and following up the interview was authorized, it was not possible to set an appointment to conduct the interview. Environmental authorities, NGOs, and other stakeholders related to marine conservation were willing to be interviewed; however, it was difficult to book an appointment. At the end, several of these interviews were conducted through skype.

As mentioned above, most of the participants from the coastal communities were very open and willing to participate in the research. However, sometimes it was challenging to make arrangements for interviews times due to their job activities. Particularly, the fieldwork season coincided with the holiday seasons in Colombia which is a busy tourist time when coastal communities take advantage of the seasonal jobs. To deal with last minute cancelations or un-scheduled interviews required a lot of flexibility and adaptability. The dissemination meetings were relatively easy to coordinate given that they were scheduled just before the holiday season and also due to the previous relationship established with communities. However, it was necessary to spend additional resources and time in the field to be able to hold all the meetings for results dissemination.

Speaking Spanish as a first language greatly facilitated establishing good relationships with community participants and research partners. However, cultural differences among the researcher and the participants created some prevention in the community. Spending time in the field and participating in community daily activities helped to overcome this prevention.

Even though at the present time there are not safety issues in the study area, the region had a long history of violence. Illegal groups (guerrilla and paramilitary) had a strong influence in the area. As a researcher, safety in the field was always a concern. The research partner ASOPEMABE and the good relationships with community members were fundamental to guarantee safety in the field.

Opportunities for future research and community-partner collaboration

During the fieldwork it was possible to build a relationship of trust and collaboration with community partners. This collaboration not only benefits the current research and future projects in the area but also it contributes to empowering community members and creating spaces for community deliberation.

The dissemination of results was fundamental to reinforce the relationship among the researcher and the community. Local communities in the study area need to build social capital and organization capacity. Collaborations with researchers and academia are key to enhance and support the capability of communities to make decisions regarding marine conservation and sustainable use.

Main Findings and Forthcoming Publications

Information collected for this research is being used as a part of a doctoral research. The results will be published in academic papers and PhD dissertation.
Main findings are related to the characterization of the governance interactions within and around MPAs, barriers and opportunities for improving MPA governance, and implications of afro-descendant community rights for shifting top-down governance toward collaborative and participative modes of governance.
The identification of MPA governance barriers and opportunities helps to set priorities for improving governance and shades light on how to shift current top-down modes of governance towards collaborative approaches that facilitate community participation. Collaborative approaches facilitate that communities assume responsibility for the sustainable management of marine resources.
Barriers and opportunities were identified through the analysis of semi-structured interviews, focus groups, and document analysis. Barriers and opportunities for MPA governance are classified in three categories to facilitate the analysis (Table 3). Currently, there is a manuscript in revision submitted to the journal Ocean and Coastal Zone Management.

Fisherman fishing in San Bernardo Archipelago.

"Pescadora" Woman from Berrugas selling fish in San Onofre.

Table 3. Main Barriers and Opportunities for the Governance of MPAs in the Caribbean of Colombia

	Barriers/challenges	Opportunities
Government	-Lack of consensus and coordination among organizations -Lack of institutional capacity (financial, technical, control and surveillance, environmental authorities instability) -Lack of implementation of participatory mechanisms	-Partnerships among NGOs and government organizations -Better relationship among park authorities and communities -Recognition of collective territorial rights
Community	-Resource dependency -Erosion of self-regulation fishing practices -Lack of organization and information transference mechanisms	-Partnership among NGOs/private sector and communities -Existing social capital (organizations experience and community identity around afro-descendant collective rights)
Cross-cutting issues	-Current state of resources -Paternalistic approaches -Market system drivers -Violence and illegal actors	-Resource crisis perception/realization -International funding and technical support

The recognition of collective territorial rights as well as the community self-recognition and identity around the afro-descendant culture are particularly important for improving MPA governance. Territorial rights bring opportunities to legally recognize coastal communities within and around the MPAs as key stakeholders with rights and responsibilities for MPA planning and management. In recent years, local communities within and around the studied MPAs have made significant progress to be recognized as afro-descendants and claim territorial rights. There are different implications for MPA governance related to the afro-descendant organization and territorial rights claims. Some of these implications can be useful to foster better relationships among communities and environmental authorities and to shift top-down approaches towards community participation in MPA planning and management. However, afro-descendant rights recognition may impose challenges for governance such as exclusion of some resource users and/or coordination among them (i.e., continental coastal communities and islander communities). A detail analysis of these implications is being prepared for a forthcoming publication.

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Organizations such as Carsucre, Reserva Sanguare, Invemar, Funsabanas, Sirap-Caribe, UAESPNN, and Ecoversa were also fundamental to complete this study. Special thanks to my supervisor Dr. Scott Slocombe for his constant support and advice.

Research Expenses Summary

Item	Field trip April July 2014	Field trip October-Dec 2015
International Flight	755.68	1,437
Domestic flights	540.7	333.80
Local transportation (terrestrial and maritime transport between coastal communities within and around MPAs)	1,260.97	302.58
Room and Board	4,329.76	1230.43
Field assistants	1,028.85	306.35
Materials for interviews, focus groups, dissemination of results, and communication (internet, cell phone, mail)	267.60	107.39
Focus groups (6)	1,204	0
Total Expenses per season	9,387.50	3,717.55
Total Expenses	$13,105 CAD	

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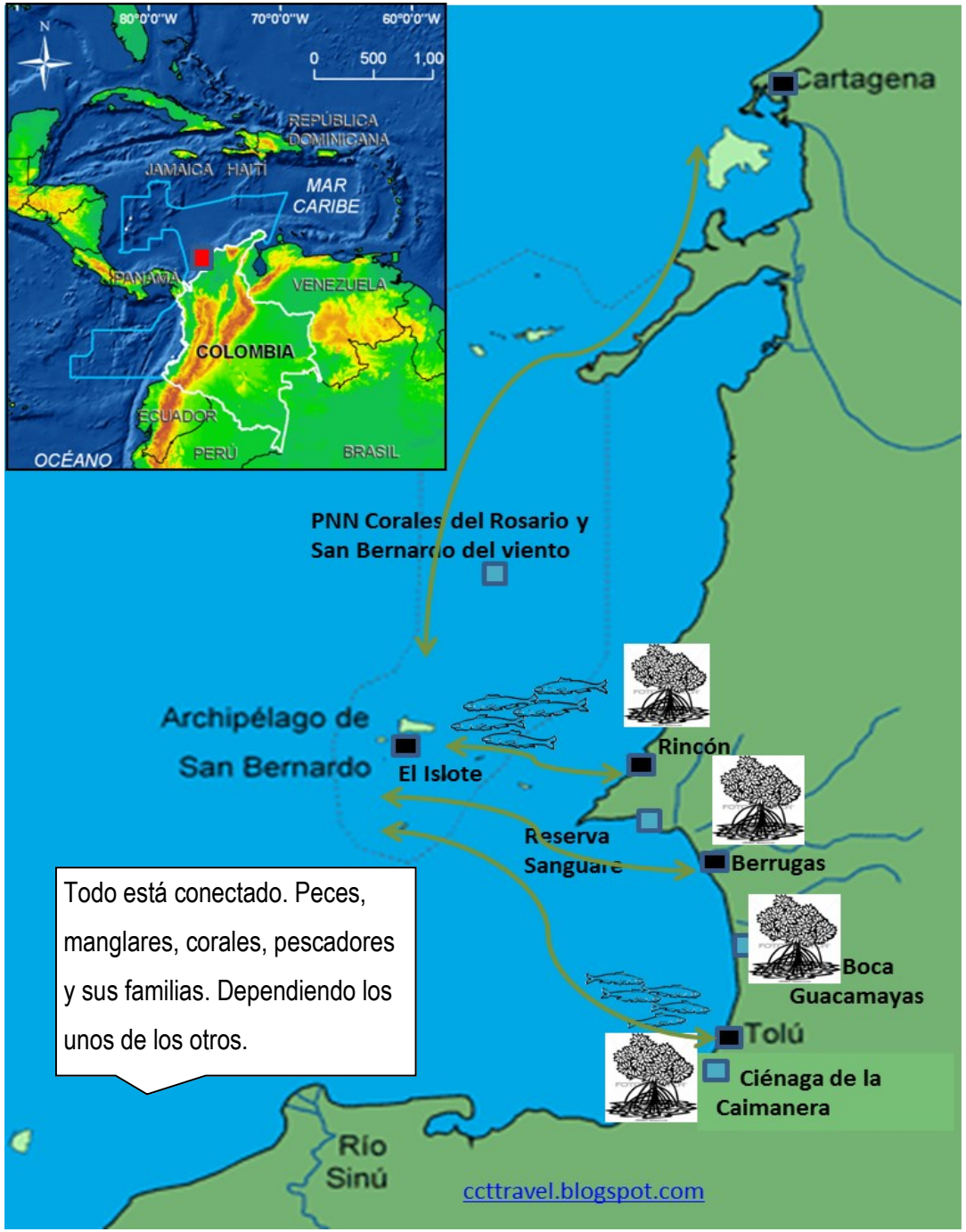
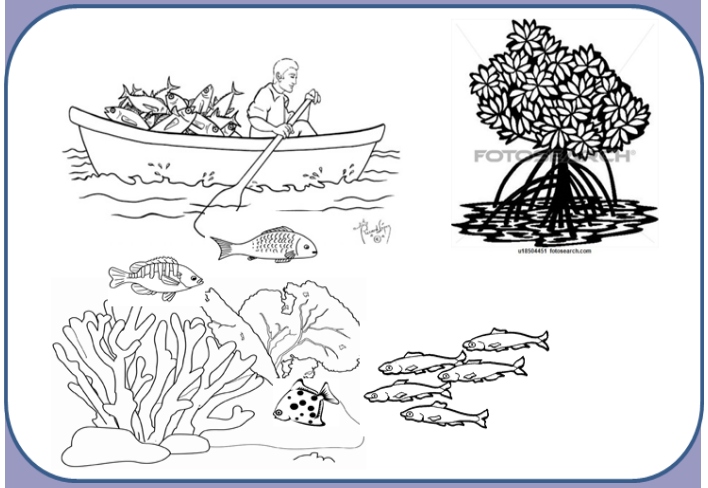
Appendix 1. Brochure used for dissemination of results



Como unir esfuerzos para manejar mejor las áreas marinas y costeras de nuestra región y asegurarnos de que haya buena pesca, manglares, corales sanos y playas?



Esta es una invitación para hablar de como mejorar los recursos marinos y escuchar su opinión.

Fecha:

Hora:

Lugar:

Las voces de la comunidad

"Entonces todas esas tradiciones que se perdieron, todas esas costumbres, como vivíamos anteriormente…, la gente era más humilde y amplia pero con el cambio que trajo el desarrollo… el desarrollo vino a cambiar nuestra comunidad…"

"Nosotros sabemos que se tiene que cuidar. Incluso yo tampoco estaría de acuerdo con que quitaran el parque porque es importante para la conservación del territorio."

Retos para mejorar las áreas marinas y sus recursos

Retos relacionados con el gobierno

-Limitada capacidad para vigilar
-Falta de coordinación entre entidades
-Muchos cambios de personal en las agencias del gobierno (ej. AUNAD)
-Mejorar mecanismos de participación social

Retos relacionados con las comunidades

-Alta dependencia de la pesca
-Pérdida de prácticas de pesca/tradiciones
-Limitada organización comunitaria

Retos comunes a todos

-Estado actual del recurso marino
-Dependencia del Estado
-Influencia de tecnología y comercialización
-Violencia y desplazamiento

…Todos tenemos algo que decir y hacer acerca del mar y sus recursos.

Oportunidades para mejorar el manejo de las áreas marinas

- Alianzas comunidades , autoridades ambientales, organizaciones y universidades
- Reconocimiento derechos territoriales
- Conocimiento ancestral
- Capital social–organización comunitaria e identidad cultural
- Deterioro recursos marinos
- Financiación y capacidad técnica