

Community-Based Organizations: Role on Coastal Resource Management in the Sarangani Bay Area

Joy C. Calva¹

¹Assistant Professor IV, Political Science Department, College of Social Science and Humanities, Mindanao State University-General Santos City, calva_joy@yahoo.com

Received: October 11, 2017; Accepted: December 28, 2017

Abstract

In areas along Sarangani Bay, there is a substantial supply of marine resources. Unfortunately, the demands, at times, exceed the supply so intervention like establishing Coastal Resource Management (CRM) is an important mechanism to sustain resources. This study documented the community-based initiatives of various organizations among municipalities and barangays along Sarangani Bay that support its role in the coastal resource management in the area. Also identified are the factors affecting the aforementioned role. The researcher employed Key Informant Interview (KII) among officers and members of organizations and officials of local government units (LGUs) in the municipalities of Sarangani Province and General Santos City (SARGEN) and also retrieved available documents for content analysis. It is evident that crucial to the success of the community-based organizations is the support and funding coming from local and international agencies in order to initiate putting of marine protected areas, implementing *bantay-dagat*, promoting clean-up drive and solid waste management, and introducing alternative livelihood projects. There are two success stories that serve as proofs of continuing initiatives of the organizations. Further, there are factors that either facilitate or hinder the success of the community-based organizations.

Keywords: community-based organizations, community initiatives, coastal resource management, Sarangani Bay Area

Community-based initiatives involve community participation. As part of the community, their role is important to Coastal Resource Management (CRM). CRM is designed to protect and conserve the natural resources to which men are dependent on for life. In these human-environment interactions, humans have long been recognized as the dominant and active agent of environmental change, albeit unfavorable changes, at times. In a way, man altered climates, polluted air, water and soil, and destroyed natural vegetation and land while stripping ores and fuels from the earth. These roles played by man in altering the planet led to an international call for natural resource management. Hence, CRM adheres to the call because according to Boelaert-Suominen and Cullinan (1994), “the urgency of addressing coastal issues is now considerably greater than it was before.”

People living along coastal areas in Sarangani Bay played significant roles in addressing these coastal issues. Community-based organizations were established but whether they succeeded or not, remains unanswered. Thus, this study attempted to investigate their activities in the southernmost Bay of the country, the Sarangani Bay - the gateway to the rich SARGEN (Sarangani Province and General Santos City) area.

The general objective of the study was to determine the role of community-based organizations on coastal resource management in the Sarangani Bay area. The specific objectives include the following: (1) To describe the different community-based initiatives designed to manage the coastal resources of the Sarangani Bay area; (2) To highlight “success stories” on local initiatives for the resource management of Sarangani Bay; and (3) To identify the facilitating and hindering factors en-

countered by community-based organizations on coastal resource management.

Materials and Methods

This is a descriptive and qualitative research designed to document local initiatives on coastal resource management in areas along Sarangani Bay and factors affecting the organizations' undertaking.

In collecting the data, this study employed a Key Informant Interview (KII). In KII, there is an interaction between the interviewer and interviewee, a meeting wherein the investigator does the questioning to the informants to gather information regarding the study (Rivera, 1996). The study also used archival research by retrieving documents from the community-based organizations and local government units along the municipalities of Alabel, Malapatan, Glan, Maasim, Kiamba and Maitum in Sarangani Province and in the barangays of Bawing, Tambler, Calumpang, Labangal, Dadiangas West, Bula and Buayan of General Santos City. Archival research is an important tool for locating and utilizing data in archives that provide details taken from several major files such as published data or computerized data bases (Bailey, 1994).

To probe the meanings and symbols of the data collected, this study used qualitative content analysis on the intent of the local communities' initiatives on coastal resource management of Sarangani Bay area. Content analysis refers to "means of summarizing, standardizing, and comparing, or otherwise systematically transforming existing data" (Smith, 1975).

Conceptual Framework

The conceptual tool used in this study is Community-Based Resource Management (CBRM) which the International Institute of Rural Reconstruction (1998) holistically defines as the "process of involving local communities in managing the coastal resources upon which they depend." It is a comprehensive strategy that seeks to address multi-faceted issues affecting the coastal environment through the active and meaningful participation of coastal communities. More importantly, it seeks to address the core issue of open access, with all its inefficient and iniquitous consequences, by strengthening the community's access and control over their resources. The community as the "primary resource owners" and therefore, the "rightful managers of their resources" (IIRR, 1998) is the basic guiding principle of the CRM. In this

study, CBRM refers to the active and meaningful involvement and participation of the local communities along the Sarangani Bay where CRM is established and widely recognized as a basic local government service to manage marine and coastal ecosystems (Balgos, 2005).

The schematic diagram (Figure 1) shows the integrated and comprehensive process of CRM of the Sarangani Bay area with established organizations through local community initiatives.

Results and Discussion

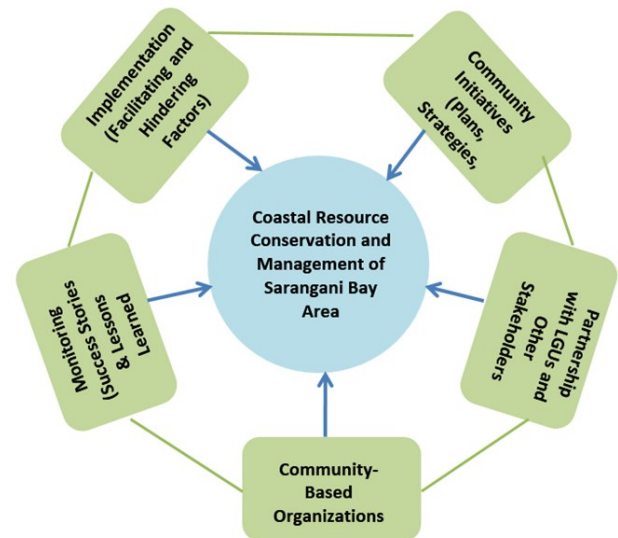


Figure 1. Schematic diagram showing the integrated and comprehensive process of coastal resource management of the Sarangani Bay area.

The Coastal Communities of the Sarangani Bay Area

The CRM in the Philippines was passed to help in improving the local implementation of coastal resource management. Several significant coastal management-related laws were established including the Fisheries Code of 1998 (Republic Act 8550), the Code that proposed limitation of access to resources by using scientifically determined procedures, integration of management consistent with inter-LGU cooperation as articulated in the Local Government Code. The Code thus enhances and institutionalizes community participation through the various levels of Fisheries and Aquatic Resource Management Councils (FARMCs). To White and Lopez (1991), the concerns of CRM are those activities that achieve sustainable use and management of economically and ecologically val-

uable resources in the coastal areas.

The coastal community in Sarangani Bay Area is composed of six (6) municipalities, all part of Sarangani Province: Glan, Malapatan, Alabel, Maasim, Kiamba, and Maitum and one (1) chartered city, the General Santos City. Sarangani Bay encloses an area of 215,950 hectares north of its entrance between Tampuan Point in Maasim and Sumbang Point in Glan. The aforementioned entities are all under the legal jurisdiction of General Santos City and Sarangani Province which used to be part of South Cotabato until November 24, 1992 (De Jesus, Dolores and Diamante-Fabunan, 2001). A brief discussion of the six (6) municipalities and the one (1) chartered city in the Sarangani Bay area follows.

Alabel

Alabel, a 1st class municipality and the capital of the Province of Sarangani has a largely agriculture-based economy and is adjacent to the highly urbanized sea port city of General Santos. Based on its municipal fisheries and coastal zone ordinances, Barangay Kawas, Barangay Maribulan and Barangay Ladol of Alabel are home to several marine life sanctuaries such as coral reefs, mangroves, and sea grass bed despite having the shortest coastline at 12.1 kilometers and the smallest coastal area at 8% of the total area.

The community initiated six (6) organizations, namely: Aquaculture Cooperative, Kawas Seaweeds Processing Association, Sarangani Seaweeds Producers Cooperative, Sarangani Farmers and Aquaculture Producers Cooperative, Ladol Deputized Fish Warden Labor Association, Sarangani Development Cooperative.

The above-mentioned organizations established linkages with the LGU-Alabel, Barangay Council of Kawas, Municipal Agriculturist Office, Bureau of Fisheries and Aquatic Resources XII, Department of Trade and Industry; Department of Science and Technology, Municipal Agriculturist Office-Coastal Resource Management, Municipal Agriculturist and Aquatic Resources Council, Department of Labor and Employment XII, Barangay Council of Ladol, SMI, Tambuyog Development, Inc., later renamed as CASCO, Maritime Police, Barangay Council of Maribulan, Philippine National Police, Philippine Coastguard and Radyo Bombo.

Glan

Glan is also a 1st class municipality in the province of Sarangani. Its coastal barangays are Baliton, Batulaki, Big Magus, Burias, Cablalan, Lago, Pangyan, Poblacion, San Jose, Small Mar-

gus, Taluya, Padidu and Tango. Aquaculture is the second important economic activity of the municipality. Glan has the longest coastline in the Sarangani Bay Area at 64.3 kilometers.

The community of Glan initiated eleven (11) organizations, namely: CabogFisherfolks and Farmers Multi-Purpose Cooperative, Muslim Christian Marginalized Fisherfolks Organization, Barangay Tango Fisherfolks Organization, Nacolil Small Fisherfolks Association, Barangay Poblacion Small Fisherfolks Organization, Barangay Tango Fisherfolks Organization, Taluya Fishermen and Farmers Multi-Purpose Cooperative, Taluya Fishermen and Farmers Multi-Purpose Cooperative, Barangay GumasaFisherfolks Organization, Barangay CablalanFisherfolks Organization, Barangay BalitonFisherfolks Organization, Barangay Batulaki and San Jose Fisherfolks Organization, Pangyan Small Fisherfolks Organization.

The organizations established linkages with the Department of Environment and Natural Resources-Southern Mindanao Integrated Coastal Zone Management Project, LGU-Glan, Barangay Council of Padidu, Department of Labor and Employment, Department of Health-Center for Health Development, Municipal Agriculturist Office-Glan, D Department of Labor and Employment Region XII, Barangay Lago Council, Barangay Poblacion Council, Bureau of Fisheries and Aquatic Resources Region XII, Stephen Pareno of the Dupalco Beach Resort, Barangay Taluya Council, Barangay Council of Gumasa, Municipal Fisheries and Aquatic Resources Council, Barangay Council of Cablalan, and Provincial Agriculturist Office, Barangay Council of Baliton, Provincial Office of Sarangani, Environmental Conservation and Protection Center, BarangayPangyan Council, Coastal Resource Management-Provincial Agriculturist Office, PAMB, DolePhil-USAID, Mahintana Foundation Inc., PACAP-AusAID, LGU-Sarangani, Barangay Kapatan Council, and MSU-GSC.

Kiamba

Established in 1947, Kiamba is a 2nd class municipality. Next to agriculture, aquaculture is its second biggest income earner, notably the culture of milkfish and shrimp. Coastal communities depend on deep-sea fishing as a primary livelihood. Of its 19 barangays, 13 are situated along the coast, namely: DatuDani, Kayupo, Lagundi, Luma, Lebe, Lomuyon, Nalus, Poblacion, Salakit, Suli, and Tambalil. One of the scenic tourist attractions of the municipality is the Tuka Marine Park, a protected area where fishing is banned. It can be reached through boat ride. The park has four protected

coves and only one (Tuka 2) is open to the public.

The community initiated five (5) organizations, namely: Maglangit Moro and Farmers Integrated Multi-Purpose Cooperative, Katubao Tri-People Community Multi-Purpose Cooperative, Lomuyon Fishermen Association, Purok Mabuhay Fisherfolks Organization, and Barangay Salakit-Fisherfolks Organization.

The organizations established linkages with LGU Kiamba, Barangay Council of Katubao, Bureau of Fisheries and Aquatic Resources XII, Department of Agriculture, CASCO, PRONET, Barangay Council of Katubao, Barangay Council of Lomuyon, Provincial Government of Sarangani, Barangay Council of Datu Dani, Department of Labor and Employment Region XII, Barangay Council of Salakit, and Tambuyog Development, Inc.

Maasim

Maasim is a 2nd class municipality composed of 16 barangays. The LGU of Maasim partnered with various sectors to protect and rehabilitate its mangrove forests. In May 2007, 1,300 mangrove seedlings were planted in Sitio Asnalang in Barangay Tinoto. This is a continuing project until now.

The community of Maasim initiated five (5) community-based organizations. These are the Tinoto Fishermen Association, Balakawan Makisahe Association, Inc., Dampilan Fishermen Association, Lumatil Fishermen Association, and Kamanga Muslim-Christian Association.

The above-mentioned organizations established linkages with the LGU-Maasim, Barangay Council of Tinoto, World Vision, Development Foundation, Inc., Conrado and Ladislawa Alcantara Foundation, Barangay Council of Kamanga, Department of Labor and Employment XII, Municipal Environment and Natural Resources Office, and Mangilen Elementary School of Maasim.

Maitum

Maitum is a 2nd class municipality with total municipal waters of 358 square kilometers. Of its 19 barangays, 7 are along the coast: Kalaong, Kiambing, Mabay, Maguling, Mindupok, Old Poblacion, and Pinol. Aquaculture is its second biggest income earner, notably milkfish, shrimp and prawn. It is also known for its dried fish or marinated fish which are sold in the malls of General Santos City.

The community initiated five (5) community-based organizations, namely: Pinol Small Multi-Purpose Association, Kapulungansa Gagmay'ng Mananagatog Mag-uuma, Mindupok Fisherfolk Cooperative, Women in Development of Sarangani,

and Maguling Fishermen's Cooperative.

The organizations established linkages with LGU Maitum, Barangay Council of Pinol, Department of Environment and Natural Resources XII, Bureau of Fisheries and Aquatic Resources XII, USAID, Barangay Council of Mabay, Provincial Agriculturist Office, PRONET, Tambuyog Development, Inc., Barangay Mindupok Council, Department of Trade and Industry, Barangay Council of Maguling, and Municipal Environment and Natural Resources Office (The full forms of the different organizations are appended).

Malapatan

Malapatan is a first class municipality where majority of the inhabitants are of Magindanaon origin. Before it became a chartered municipality in 1969, Malapatan was once part of Glan. It has 12 barangays, 5 of which are coastal, namely: LunMasla, LunPadidu, SapuMasla, SapuPadidu, and Poblacion.

The community initiated six (6) organizations. These are the SapuMasla Fisherfolks Association, Lower Lasang Small Fishermen Association, SapuPadidu Small Fishermen Cooperative, Sarangani Bangsa Moro Affiliates Management Multi-Purpose Cooperative and Tuyan Muslim Farmers and Fishers Multi-Purpose Cooperative.

The organizations established linkages with the LGU of Malapatan, Barangay Council of Poblacion, Department of Environment Natural Resources XII, Tambuyog Development, Inc., Religious sectors in the area, World Vision, Chamber of Aquaculture Industries in Sarangani, Department of Trade and Industry, Barangay Council of SapuMasla, Bureau of Fisheries and Aquatic Resources XII, Provincial Environment and Natural Resources Office, MRDP-NRMP, GYM, Alcantara Foundation, OPAG XII, DOLE XII, Umma Center for Development, SP of Sarangani, PNP, MFARMC, Media of GenSan, (PRONET), Barangay Council of Tuyan, Department of Social Welfare and Development, United Nations Development Plan, and Sen. Loren Legarda.

General Santos City

General Santos City divides the Sarangani Province municipalities into Alabel, Malapatan, and Glan on one side and Maasim, Kiamba, and Maitum on the other side. In this set-up, General Santos serves as hub of commerce and trade of the surrounding municipalities. On the other hand, the surrounding municipalities supply the products and raw materials needed for commerce and industry.

The community initiated twenty-one (21) organizations, namely: Bula Seaweeds Growers

Association, Zone 5 Bula Polyculture Livelihood Project Association, Zone 6 Small Fishermen Association, Purok 4B Association, San Vicente Ferrer Shoreline Association, San Roque Fisherfolks Association, San Juan Fishermen Association, Tinago 9A & 9B Association, Samahang Taga-Malok Association, Lower Makar A&B United Village Association, Muslim-Christian Kulasi Association, Minanga Baybay Association, Umbrella Fish Landing Association, South Cotabato Purseiners Association, Bayanihan Fishermen Association, Inc., Lower Puting Bato Coastal Association, Lower Banaulan Coastal Association, Sta. Cruz Coastal Association, Bawing Marginalized Fisherfolks Association, Cabu Coastal Association, Badjao Village A & B Coastal Association.

The organizations established linkages with the Barangay Council of Bula, LGU of General Santos City Agriculturist Office, City Environment and Natural Resources Office, Philippine National Police XII, Security and Exchange Commission, Bureau of Fisheries and Aquatic Resources XII, Department of Environment and Natural Resources, Barangay Council of Dadiangas West, Barangay Council of Calumpang, Barangay Council of Buayan, Barangay Council of Tambler, LGU General Santos, Philippine Fisheries Development Authority, Philippine Coastguard, Diver's Organizations, Barangay Council of Labangal, and Barangay Council of Bawing.

Community-Based Initiatives on CRM of the Sarangani Bay Area

Marine Protected Areas

Community-based marine protected areas employ community organizing, education and leadership development trainings/seminars as means to address societal problems in their community. The outcome of these activities was the establishment of small, community-controlled marine protected areas, usually intended to protect fringing coral reefs (and their associated fish and invertebrate communities) with the purpose of improving the socio-economic opportunities available to coastal communities largely through increased fish yields (Wells and White, 1995; Alcalá, 1998). These activities are designed to protect mangroves, seaweeds, reefs and sanctuaries thereby promoting sustainability in terms of livelihood. In addition to mangroves and seaweeds, sea grasses also help in mitigating the impact of typhoon, tidal waves, and other coastal calamities. These too help boost the tourism industry of the community.

The activities in the area cover effective planning in implementing and monitoring projects

which include planting mangroves, *nipa*, seaweeds, sea grasses, cultivating *guso*, installing artificial and coral reefs, creating fish sanctuary and fish cages, initiating mangrove rehabilitation, planting fruit trees and bamboo along the slopes to prevent erosion, and planting *gmelina* and *neem* tree seedlings for the inland and mangrove reforestation.

Bantay-Dagat (Sea Patrol)

Bantay-Dagat refers to a civilian fisheries patrol force made up of volunteers who try to keep a 24-hour watch on Sarangani coastal waters. The Bureau of Fisheries and Aquatic Resources of the Department of Agriculture is the lead agency of the *Bantay-Dagat*.

Bantay-dagat is important because it focuses on information dissemination on knowledge and practices related to coastal conservation and monitoring of illegal fishing activities, providing manpower and technology to monitor the bay, and reporting illegal fishing activities.

Clean-Up Drive and Solid Waste Management

Coastal clean-up are activities designed to reduce trash and aid in the clean-up of oceans. Solid waste management, on the other hand, is associated with the storage, collection, transport or transfer, processing and disposal of solid waste materials in a way that best addresses the range of public health, conservation, and other environmental considerations (LeBlanc, 2017).

Based on a 10-year Ecological Solid Waste Management Plan of General Santos City (2008-2018), the delicate status of balance of nature was found to have been threatened due to the improper practice of waste segregation like burning and dumping of uncollected wastes on bays, streets, canals, and just anywhere. This led to the initiatives to undertake Clean-up Drive with the LGUs paying more attention on their Solid Waste Management policies.

Regular clean-up drive helps maintain the natural habitat of the Sarangani bay and support proper management and conservation of coastal resources of Sarangani Bay. The activities include collecting solid wastes along the bay, establishment of community restrooms, information drive on the use of proper fishing net sizes and solid waste management. They promote greater participation in Sarangani Bay activities like “*Tusok Dapag*” (starfish) in 2008 in order to save coral reefs.

Alternative Livelihood Projects

Alternative livelihood projects *provide alternative means of making a living that reduces pressure on exploited resources* (Roe, 2014). The realization that fisher folks face problems with re-

gards their livelihood threatened by big commercial and illegal fishing, necessitated the local governments and these community-based organizations to include alternative livelihood programs to their activities.

To realize sustainability on initiatives established by non-governmental organizations (NGOs), income-generating project is a necessary component for the fisher folks to allot more time and commitment towards a better Sarangani Bay.

Community-Based Initiatives for the Sarangani Bay through Graphical Presentations

Marine Protected Areas

As shown in Table 1, the Municipality of Glan has the biggest share in terms of marine protected areas' initiatives with eight (8) organizations comprising 31%, followed by Malapatan with 23% and Alabel with 19%. General Santos City, Maitum and Maasim have a share of 15%, 8% and 4%, respectively.

The undertakings of Glan in marine protected areas include installing mangrove rehabilitation project within an area of 10, 239 hectares located at Glan-Padidu and planting 33,683 mangrove propagules along the coastline for mangrove rehabilitation. Activities include establishing fish sanctuary and fish cages, planting *nipa*, *gemelina* and *neem* tree seedlings, setting up artificial coral reefs with the use of rubber tires and concrete to serve as habitat of marine resources, submersing these artificial coral reefs, thereby reforesting mangroves by dropping 170 pieces of bamboo-coral reefs into Sarangani Bay which were rotted underwater and later replaced with 200 pieces of coral

reefs made of durable concrete; and declaring Kapatan Marine Reserve as a marine sanctuary.

One reason for the community-based organizations of Glan to achieve the lead role in marine sanctuary preservation is the active support of other stakeholders. The organizations established linkages with Department of Environment and Natural Resources-Southern Mindanao Integrated Coastal Zone Management Project, LGU-Glan, Barangay Council of Padidu, Department of Labor and Employment, Department of Health-Center for Health Development, Municipal Agriculturist Office-Glan, D Department of Labor and Employment Region XII, Barangay Lago Council, Barangay Poblacion Council, Bureau of Fisheries and Aquatic Resources Region XII, Stephen Pareno of the Dupalco Beach Resort, Barangay Taluya Council, Barangay Council of Gumasa, Municipal Fisheries and Aquatic Resources Council, Barangay Council of Cablalan, and Provincial Agriculturist Office, Barangay Council of Baliton, Provincial Office of Sarangani, Environmental Conservation and Protection Center, Barangay Pangyan Council, Coastal Resource Management-Provincial Agriculturist Office, PAMB, DolePhil-USAID, Mahintana Foundation Inc., PACAP-AusAID, LGU-Sarangani, Barangay Kapatan Council, and MSU-GSC.

The attention given to the establishment of marine protected area could be attributed to Glan having the biggest coastal area in Sarangani Province at 29%, a longer political development, and having the most support from various stakeholders.

Bantay-Dagat (Sea Patrol)

Table 2 shows the percentage distribution

Table 1. Facilitating Factors encountered by Community-based Organizations on CRM by Municipality/City in Sarangani Bay Area.

Facilitating Factors	Municipality/City							Total Rank
	Alabel	Glan	Kiamba	Maasim	Malapatan	Maitum	GSC	
1. Support by other Stakeholders	6	12	5	5	6	5	2	<u>41</u> - 1
2. Sound Initiatives	4	7	1	2	5	1	14	34- 2
3. Alternative Livelihood	6	6	4	2	6	5	2	31- 3
4. Longevity and Commitment	4	9	3	0	5	2	2	25- 4
5. Financial Capacity	3	2	1	0	2	1	2	11- 5
Total	23	36	14	9	24	14	22	142

on the share of community-based organizations in *Bantay-Dagat* initiatives by municipality/city. General Santos City gets the biggest chunk with eleven (11) organizations constituting 30% undertaking this initiative. It is followed by Glan with eight (8) organizations comprising 22%, Malapatan at 16% share, Alabel with 14%, Maitum with 8%, and Kiamba and Maasim having the least share at 5%.

Bantay-dagat initiatives of the City of General Santos include coral reefs protection, regular monitoring of coastal waters, and protection against illegal fishing activities, with members acting as *Bantay-Dagat* workers, doing regular monitoring and protection against illegal fishing activities, and supporting CENRO in guarding the mangroves area with some members being deputized as fish wardens (DFW).

The active intervention of the community-based organizations of General Santos City in *bantay-dagat* activities can also be attributed to the support of stakeholders. These are the Barangay Council of Bula, LGU of General Santos City Agriculturist Office, City Environment and Natural Resources Office, Philippine National Police XII, Security and Exchange Commission, Bureau of Fisheries and Aquatic Resources XII, Department of Environment and Natural Resources, Barangay Council of Dadiangas West, Barangay Council of Calumpang, Barangay Council of Buayan, Barangay Council of Tamber, LGU General Santos, Philippine Fisheries Development Authority, Philippine Coastguard, Diver’s Organizations, Barangay Council of Labangal, and Barangay Council of Bawing.

Clean-Up Drive and Solid Waste Management

The percentage share distribution by municipality/city of their community-based organizations in coastal clean-up drive and solid waste management is also shown in Table 2. Based on the data, General Santos City has the most number of community-based organizations with twenty (20) that have initiatives on coastal clean-up drive and solid waste management comprising 44%. Malapatan, Glan and Alabel with an identical 12% share, Maasim and Maitum have an 8% share, while Kiamba has the least share of 4%.

The clean-up drive and solid waste management undertakings of the community-based organizations of General Santos City are the regular cleaning-up of seawaters such as collection of floating *gapnod* (driftwood) and solid wastes particularly in their seaweeds growing areas; observing and supporting solid waste management; establishing community restrooms, observing proper fishing net sizes; joining actively and lending out equipment like light boats, nets and ropes, and trucks for free; participating in Sarangani Bay “Tusok Dap-ag” in 2008. The objective of the “*tusok-dap-ag*” activity is to pierce by a spear and collecting the dap-ag (starfish) into a sack in order to save coral reefs from this predator.

The community-based organizations of General Santos City are active in clean-up drive and solid waste management because of the support of stakeholders such as the Barangay Council of Bula, LGU of General Santos City Agriculturist Office, City Environment and Natural Resources Office, Philippine National Police XII, Security

Table 2. Percentage Distribution of Community-Based Organizations per Municipality/City with Initiatives on Marine Protected Areas, Bantay-Dagat, Clean-Up Drive and Solid Waste Management, and Alternative Livelihood Projects.

Municipality/City	Marine Protected Areas (%)	Bantay-Dagat (%)	Clean-up Drive/ Solid Waste Mgt. (%)	Alternative Livelihood Projects (%)
Alabel	19	14	12	16
Glan	31	22	12	27
Kiamba	0	5	4	11
Maasim	4	5	8	2
Maitum	8	8	8	14
Malapatan	23	16	12	16
General Santos City	15	30	44	14
Total	100	100	100	100

and Exchange Commission, Bureau of Fisheries and Aquatic Resources XII, Department of Environment and Natural Resources, Barangay Council of Dadiangas West, Barangay Council of Calumpang, Barangay Council of Buayan, Barangay Council of Tambler, LGU General Santos, Philippine Fisheries Development Authority, Philippine Coastguard, Diver's Organizations, Barangay Council of Labangal, and Barangay Council of Bawing.

Alternative Livelihood Projects (ALP)

Table 2 also shows Glan as having the highest number of community-based organizations that have alternative livelihood projects with a 27% share. Next to Glan are Alabel and Malapatan with identical percentage share of 16%. General Santos City and Maitum are not far behind with the same percentage share (14%). Kiamba's community-based organizations get an 11% share with its *payao* project, and Maasim having the least share of 2%.

Glan's community-based organizations engagement in alternative livelihood projects can be attributed to its linkages with Department of Environment and Natural Resources-Southern Mindanao Integrated Coastal Zone Management Project, LGU-Glan, Barangay Council of Padidu, Department of Labor and Employment, Department of Health-Center for Health Development, Municipal Agriculturist Office-Glan, D Department of Labor and Employment Region XII, Barangay Lago Council, Barangay Poblacion Council, Bureau of Fisheries and Aquatic Resources Region XII, Stephen Pareno of the Dupalco Beach Resort, Barangay Taluya Council, Barangay Council of Gumasa, Municipal Fisheries and Aquatic Resources Council, Barangay Council of Cablalan, and Provincial Agriculturist Office, Barangay Council of Baliton, Provincial Office of Sarangani, Environmental Conservation and Protection Center, Barangay Pangyan Council, Coastal Resource Management-Provincial Agriculturist Office, PAMB, Dole-Phil-USAID, Mahintana Foundation Inc., PACAP-AusAID, LGU-Sarangani, Barangay Kapatan Council, and MSU-GSC.

In all these initiatives, there are two (2) success stories that serve as proofs of continuing initiatives of the organizations: (1) CabogFisherfolks and Farmers Multi-Purpose Cooperative (CAFIFAMCO), and (2) Muslim-Christian Marginalized Fisherfolks Organization (MCMFO) of Glan.

Success Stories in the CRM of the Sarangani Bay Area

Two community-based organizations are

considered as "success stories" since they have met the following criteria: continuing initiatives for the protection of Sarangani Bay, longevity, improvement of their socio-economic condition, award/recognition either local or national, and strong support from the government and private agencies. These are both found in Glan, Sarangani Province, namely, CabogFisherfolks and Farmers Multi-Purpose Cooperative and Muslim Christian Marginalized Fisherfolks Organization.

Cabog Fisherfolks and Farmers Multi-Purpose Cooperative (CAFIFAMCO), GLAN

Sitio Cabog of Barangay Kapatan in Glan, Sarangani Province, a local term for bat which inhabits in *pagatpat mangrove* species, is situated along the coast of Sarangani Bay. Along SitioCabog's coastline is a mangrove area with an estimated coverage of five hectares.

In 1991, a technical study commissioned by Dole Philippines and the United States Agency for International Development (USAID) identified *SitioCabog* as one of the primary sites for an inland and marine conservation project. Cabog's rich marine resources include, besides its mangrove ecosystem, diverse species of algae, corals and fish. On September 17, 1991, after the conduct of a Human Resource Development seminar to the members, the CabogFisherfolks and Farmers Association (CFFA) was formally organized through the initiation of Dolefil with USAID as its co-founder. This paved the way for the implementation of Sarangani Bay Marine and Inland Resources Conservation Project (SBMIRCP). The project was designed to avert the gradual destruction of marine resources in 10 coastal communities in Sarangani Province. Cabog was identified as one of the project sites. CFFA was registered with the Securities and Exchange Commission (SEC) on the month of April, 1992. CAFIFAMCO is one of the ten coastal communities chosen in Sarangani Province in the implementation of the Sarangani Bay Marine and Inland Resource Conservation Project on 1991 to avert the gradual destruction of marine resources and followed by the assistance of Mahintana Foundation Inc. and PACAP-AusAID on 1995 until 2000. As of February 2001, CAFIFAMCO's membership expanded to 110. The members are a mix of IPs (B'laan) comprising 10%, Muslims (20%) and Christian settlers (70%). The expansion of the membership has not been an impediment to the convergence of ideas in a culturally diverse community. On May 21, 1998, the CAFIFAMCO received the distinction award of being the Most Outstanding Fisherfolks Organization in Region XI at

the "GawadSaka Awards". It was a fitting honor attributed to the organization a key player, together with its partners in the development of the Kapatan Marine Reserve.

Significantly, CAFIFAMCO has made impressive and valuable initiatives for the protection, conservation and management of the Sarangani Bay Protected seascape that include the following: (a) Barricaded the mangrove community when a beach resort was to be put up by a private developer in the area in 1994; (b) Women's group was organized and began their soap making project; (c) Established partnership with DolePhil-USAID for the Sarangani Bay Marine and Inland Resources Conservation Project; (d) Participated in various coastal resource management training courses, simple bookkeeping training and gill net making; (e) Engaged in other activities such as submersion of artificial coral reefs and planting of *Gemelina arborea* and neem tree seedlings for the inland reforestation and mangrove propagules for the mangrove reforestation; (f) Dropped 170 pieces of bamboo-coral reefs into Sarangani Bay which were rotted underwater and later replaced with 200 pieces of coral reefs made of durable concrete materials; (g) Installed fish sanctuary and fish cages; (h) Established the marine reserve in the community with 7 hectares declared as a reserved area; (i) Six (6) members were trained by the Bureau of Fisheries and Aquatic Resources (BFAR) as deputized fish wardens (DFWs) with a monthly honorarium of Php300 as food allowance; (j) Trained DFWs became members of Bantay Dagat team and were tasked to enforce fisheries laws (made several arrests for minor offenses like illegal entry in the marine sanctuary and gleaning (collection of seashell) and major offenses like illegal fishing; and (k) Obtained a grant of two million eight hundred thirty two thousand seven hundred fifty eight Pesos (Php 2,832,758.00) for a 3-year assistance program intended to fully conserve and rehabilitate the coastal and marine resources of Barangay Kapatan in partnership with Mahintana Foundation, Inc. on January 1, 1996 from PACAP-AusAID.

Muslim-Christian Marginalized Fisherfolks Organization (MCMFO), Glan

The first meeting of the organization was held at the coastal area of Glan-Padidu convened by a certain Ate Mel. After a short situational analysis and synthesis, the group identified degradation and depletion of the coastal resources as the major problem detrimental to the livelihood of fisherfolks. The group agreed to elect officers and unanimously approved the name Muslim-Christian Mar-

ginalized Fisherfolks Organization (MCMFO) as the name of the newly created organization. It was officially organized on November 16, 2002 with a total membership of 32 where 14 are female and 18 are male. Later, MCMFO was converted into a cooperative with the name Muslim Christian Fisherfolks Multi-Purpose Cooperative (MCFMPC).

The "success story" of the organization was built through the following accomplishments: (a) Effort on establishing and implementing a 10.239-hectare mangrove rehabilitation project for the regeneration of marine lives; (b) Through advocacy and continuous lobbying to legislative bodies, its mangrove plantation was declared a protected area; (c) Municipal Ordinance 2004-02, Section 236 (Zone II-B Zonification) was amended and declared a fishery reserve; (d) Municipal Ordinance No. 2006-04 (Article III, Section 22 - Figure of Specific Area of Dimension of Marine Protected Area) was amended establishing a fish sanctuary; (e) Barangay Council of Glan-Padidu allocated a budget for the honorarium of the organization's BantayDagat team members; (f) Contract with DENR and Memorandum of Agreement on Mangrove Rehabilitation Project with a budget of Php 100 thousand; (g) Recipient of livelihood projects from DENR; (h) Recipient of a soft loan without interest from the Municipal Government of Glan amounting to Php 100 thousand; (i) Purchased a 200-square meter residential lot along the national Highway of Glan-Padidu; (j) Recipient of Php 273,000 from DOLE intended for Talakitok Marine Cage Culture; (k) Won the bidding of bangus fry concession and fish corals concession; (l) Enhanced the level of awareness and knowledge of the members; and (m) Recipient of Botikang Barangay worth Php 25,000 of generic medicines which was handed by former President Gloria M. Arroyo during the Regional Summit of Cooperatives held at Sarangani Provincial Capitol Gym on October 26, 2007. At present, MCMFO Botikang Barangay serves the poor constituents of Glan-Padidu and other nearby barangays at affordable prices.

Facilitating Factors

For a group to achieve its full potential, whether for the interest of environment, politics, society, or economics, it surely needs support from external sources. This kind of support may be in the form of views and attitudes of the members and the community towards the group's existence. Even technology and funding assistance are also important influences.

Many of the community-based organiza-

tions like the CabogFisherfolks and Farmers Multi-Purpose Cooperative (CAFIFAMCO) and Muslim-Christian Marginalized Fisherfolks Organization (MCMFO) in Glan sustain their ideals for the betterment of Sarangani Bay through various factors circling their birth and persistence. These factors include longevity; commitment of leaders and members of the organization; sound initiatives; financial capacity which may include capacity to draw out support both from public and private sectors; support of other stakeholders in the community; and alternative livelihood for the group members (Table 2).

Support by other stakeholders ranks as the foremost facilitating factor for the continuity and success of organizations in their coastal resource initiatives. This may be in the form of grant, loan, donation, trainings, and other undertakings. The second factor is Sound Initiatives which means that activities undertaken by organizations have positive and significant impact on coastal resource management. The next factor is Alternative Livelihood that refers to projects that provide other sources of income to the members of the organization such as *bangus* culture, dried fish making, and *payao* project. Finally, longevity and commitment of leaders and members is likewise cited. This activity refers to the duration and persistence of community-based organizations by at least three (3) years. Commitment of leaders and members goes hand in hand with longevity.

Hindering Factors

The creation of an organization for the purpose of attaining something big is challenging for a number of reasons. For one, there is a need for people who have selfless commitment and dedication to extend their services any time despite lack or even absence of income. For another, there is a need for strong linkage with the external environment, both public and private stakeholders, which is crucial to the sustainability of the organization. Finally, there is the equally important need for the organization to identify initiatives that are considered significant, attainable and impact-driven.

Some community-based organizations are already defunct, weakened or in a state of hibernation because they lack one or more of the required attributes. The usual problems that stand in the way of organizations are: (a) lack of motivation/commitment of leaders and members; (b) inadequate financial and technological support; (c) internal conflict/mismanagement within the organization; (e) geographic or political set-up; (f) illegal/commercial fishing/intrusion/wastes; (f) laxity in

the implementation of Fisheries Code of the Philippines; (g) hardheadedness of the members; and (h) inadequate or lack of alternative livelihood projects.

The factors identified by the informants that have hindered the sustainability of community-based organizations in the implementation of programs and projects on coastal resource conservation and management (ranked from highest to lowest) are the following: (a) inadequate financial and technological support; (b) lack of motivation/commitment of leaders and members; (c) illegal/fishing/intrusion of commercial fishing; (d) lack of alternative livelihood; (e) geographic or political set-up; (f) hardheadedness of the members; (g) internal conflict/mismanagement; and (h) laxity in the implementation of the Fisheries Code of the Philippines.

Conclusion

The role played by community-based organizations is indispensable in the Sarangani bay area. Its primary role rests on how their initiatives help and support the community in fulfilling their mandate on coastal resource management. The need for coastal resource management in Sarangani Bay area which is the primary source of livelihood of the people in coastal communities activated the community to create organizations to push initiatives for their benefits and the localities where they live. They established linkages both with the local government and other organizations for sustainability. So far their interventions have productive results, though more efforts are still needed to make them more sustainable.

Based on the findings, the community-based organizations identified in the study played significant roles in putting up marine protected areas, implementing *bantay-dagat* activities, promoting clean-up drive and solid waste management, and introducing alternative livelihood projects. The strengths emphasized the role of these organizations in managing the Sarangani Bay.

The community-based organizations of both Sarangani Province and General Santos City have actively initiated activities and undertakings that support CRM of Sarangani Bay. The former is more developed and comprehensive in terms of marine protected areas' activities and alternative livelihood projects since many parts of the coastal waters are considered marine protected seascape. General Santos City, on the other hand, performs well on *bantay-dagat* activities, coastal clean-up

and solid waste management activities which are closely monitored by the LGUs, particularly CEN-RO.

The foremost factor that has facilitated the persistence and success of community-based organizations in Sarangani Province and General Santos is support by other stakeholders such as LGUs, national government agencies, civil society groups, and other institutions. The least facilitating factor, on the other hand, is financial capacity – the ability of organizations to survive even without or with only minimal external funding.

Inadequate financial and technological support appears to be the topmost hindering factor that impedes the growth and threatens the survival of community-based organizations. The least hindering factor, on the other hand is laxity in the implementation of the Fisheries Code of the Philippines.

The success of community-based organizations in coastal resource management can be attributed to: (1) group and individual initiatives that imbibe the spirit of being responsible community members; (2) encouragement of joint cooperation and interventions from key development players; (3) establishment of built-in mechanisms for ironing out differences and resolving disputes needs to be put in place; (4) adopting the “best practices” of successful community-based organizations since adaptive and learning organizations have better chances of improving and surviving; and (5) enhancing the capability of the organizations in awareness, knowledge, skills and attitude of the members. Finally, continuing education is important in developing a learning and knowledge organization.

Both the Cabog Fisherfolks and Farmers Multi-Purpose Cooperative and Muslim Christian Marginalized Fisherfolks Organization are identified as ‘success stories’ because of their continuing initiatives for the protection of Sarangani Bay; improvement of their socio-economic condition; award/recognition received from local and national award-giving bodies; strong support from the government and private agencies; and longevity.

Acknowledgement

Acknowledgement is due to MSU-General Santos City - Research and Development Center (MSU-RDC) for the financial support extended to the researcher in the form of travel and per diems, fees to field researchers, and research credit load.

A heartfelt gratitude is also extended to her

field researchers—Hannee Badilles, Rebino Batoto and Adnan Razul, informants of the study, family and friends, and people who significantly contributed for this research. Also, acknowledgement is due to Prof. Wilvena Pernia, who as language editor has enriched this paper.

References

- Alcala, Angel C. and Russ, G.R.(1998). Extracted from *Community-based coastal resource management in the Philippines: A case study*. *Ocean and Coastal Management* 38, 179-186. *The Online Magazine for Sustainable Seas*. Retrieved from http://oneocean.org/overseas/200212/community_based_marine_protected_areas.html
- Bailey, K. (1994). *Methods of Research (4th ed)*. New York, USA: The Free Press.
- Balgos, Miriam C. (2005). *Integrated Coastal Management and Marine Protected Areas in the Philippines: Concurrent developments*. Center for Marine Policy. Doi: 10.1016/j.ocecoaman.2005.03.003. Retrieved from www.sciencedirect.com.
- Boelaert-Suominen, S. and Cullinan, C. (1994). *Legal and Institutional Aspects of Integrated Coastal Area Management in National Legislation*. Food and Agriculture Organization of United Nations, 118. Retrieved from https://books.google.com.ph/books?id=c65_YVAIPeQC&pg=PR3&lpg=PR3&dq=Boelaert-Suominen+and+Cullinan.
- Christie, P., Deguit, E., and White, A. (2002). Starting point or solution? Community-based marine protected areas in the Philippines. *Journal of Environmental Management* (2002) 66, 441-454. Retrieved from http://oneocean.org/overseas/200212/community_based_marine_protected_areas.html
- De Jesus, Edgar A., Dolores, A., and Diamante-Fabunan, C. (2001). *Coastal Environmental Profile of the Sarangani Bay, Mindanao, Philippines*. Retrieved from oneocean.org/download/20010825/sarangani_profile/Intro.pdf.
- Leblanc, R. (2017). *An Introduction to Solid Waste Management: Integrated Approach Needed for Successful Diversion and Recycling*. Retrieved from <https://www.thebalance.com/an-introduction->

to-solid-waste-management-2878102.

Republic Act 7160, Local Government Code of 1991. Retrieved from http://www.lawphil.net/statutes/repacts/ra1991/ra_7160_1991.html. September 2, 2011.

Republic Act 8550, Fisheries Code of 1998. Retrieved from http://www.lawphil.net/statutes/repacts/ra1991/ra_7160_1991.html. September 2, 2017.

Rivera, M., Jr. and Rivera, R. (1996). *Practical Guide to Thesis and Dissertation Writing*. Quezon City, Philippines: Katha Publishing, Inc.

Roe, D. (2014). Alternative livelihood projects effective at reducing local threats to specified elements of biodiversity and/or improving or maintaining the conservation status of those elements? *Journal of the Collaboration for Environmental Evidence*. Retrieved from <https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/2047-2382-3-6>.

Smith, H.W. (1975). *Strategies of Social Research*. New Jersey, USA: Prentice-Hall, Inc.

Wells, S. and White, A. T. (1995). Involving the community in marine protected areas: Principles and techniques for management. (S. Gubbay, ed.), pp. 61-84. *The Online Magazine for Sustainable Seas*. Retrieved from http://oneocean.org/overseas/200212/community_based_marine_protected_areas.html

White, A. and Lopez, N. (1991). Coastal resources management planning and implementation for the fishery sector program of the Philippines, pp. 762-775. *Proceedings of the 7th Symposium on Coastal and Ocean Management*. Retrieved from [https://books.google.com.ph/books?id=y9HolGmvhLIC&pg=PA49&lpg=PA49&dq=White,+A.+and+Lopez,+N.+\(1991\)&source=bl&ots=yqHGL9Z0Qw&sig=w91twV6Mp0zrbBeQgtt1SD5X8bs&hl=en&sa=X&ved=0ahUKEwi7qPuiksDXAhVCIJQKHTZDCcoQ6AEIPDAJ#v=onepage&q=White%2C%20A.%20and%20Lopez%2C%20N.%20\(1991\)&f=false](https://books.google.com.ph/books?id=y9HolGmvhLIC&pg=PA49&lpg=PA49&dq=White,+A.+and+Lopez,+N.+(1991)&source=bl&ots=yqHGL9Z0Qw&sig=w91twV6Mp0zrbBeQgtt1SD5X8bs&hl=en&sa=X&ved=0ahUKEwi7qPuiksDXAhVCIJQKHTZDCcoQ6AEIPDAJ#v=onepage&q=White%2C%20A.%20and%20Lopez%2C%20N.%20(1991)&f=false)