
Community-Based Initiatives in Mangroves Ecosystem Protection

Delicia C. Inghug¹ (corresponding author), **Emma P. Sios-E**²¹Education Department, Eastern Visayas State University-Ormoc City Campus, Leyte, Philippines
(dinghug@gmail.com; ORCID 0000-0002-4190-9558)²Education Department, Eastern Visayas State University-Ormoc City Campus, Leyte, Philippines
(ammesiose@gmail.com)

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ABSTRACT

The involvement of local communities in mangrove protection is given recognition around the globe especially in tropical countries like the Philippines. The study identifies the community-based initiatives in mangrove ecosystem protection of the public organization in Ormoc City, Leyte, Philippines. With the use of qualitative type of research involving focal group discussion among the respondents, the results reveal that the public organization conducts reforestation, forest protection and control, production of mangrove seedlings, linkage with other organizations and future planning not only to strengthen the mangrove protection but also for ecotourism purpose.

Keywords: Community-based initiatives, Mangroves protection, Mangrove rehabilitation

INTRODUCTION

Mangroves are important resources of people⁽¹⁾. They cover and protect coastal areas from erosion, floods, storm surge and tsunamis. They also serve as catalyst in reclaiming land from seas, preventing the water from eating up the coast lines. Further, these mangroves ecosystem become breeding places for a number of marine organisms such as shrimps, crabs, fishes and even sanctuaries for wildlife animals such birds, reptiles other mammals alike. They also are good sources of wood for furniture and house construction. Fisher folk communities depend their livelihood to a great extent on the presence of mangroves. In addition, mangrove ecosystem is now a potential area for tourism providing additional income to people.

Various studies revealed that mangroves declined around the globe over the years at an alarming rate due to human exploitation for aquaculture, industry and settlements^{(2),(3),(4),(5)}. Efforts have been initiated and implemented at a global to a local scale to protect the dwindling mangroves ecosystem. Policies on mangrove rehabilitation were instituted however mangrove protection and conservation was still an international issue of concern. Stakeholders' participation, and unawareness of local communities directly in contact with the ecosystem on mangrove protection were reasons for its failure^{(2),(6)}.

The need for communities' involvement in mangrove preservation is imperative⁽³⁾. The concept on community-based initiatives in mangrove protection paves the way to the involvement of communities in the development and implementation of sustainable mangrove management practices. In 1995, the Philippine government promulgated the Community-based Forest Management (CBFM) program as strategy to sustain the forest and community resources of the country. It stressed the crucial role of local communities in forest protection, rehabilitation, and management and provided them equitable access to the forest and coastal resources⁽⁷⁾.

In Ormoc City, Leyte Philippines, a people's organization was created known as Naungan San Juan Mangrove Planters Association (NSAJMPA) and was registered with the Department of Labor and Employment. It was organized by the DENR constituting of 24 members to look into the dwindling mangrove forest in Ormoc City bay and assist the latter in developing, monitoring and protecting the mangroves specifically located in Naungan to San Juan Ormoc City, Leyte Philippines. The study looked into the initiatives of NASAMPJA in protecting and preserving the mangroves of Ormoc Bay.

METHODS

This study was a qualitative type of research to determine the community initiatives of the NSAJMPA in mangrove ecosystem protection in Ormoc bay. Through the use of focal group discussion, 10 Officers of NSAJMPA were used as key informants and interviewed on their programs and projects instituted to protect the mangroves stretching from Naungan to San Juan areas in Ormoc bay. These areas were covered with different

species of mangroves and was declared as mangrove protected areas. They were asked with the use of their own vernacular, open-ended questions to answer the objectives of the study. The researchers also did ocular survey of the mangrove areas to attest the validity of the information obtained.

RESULTS AND DISCUSSION

Community Identified Initiative Programs on Mangrove Protection

1. Reforestation

According to the first informant, who was the President of the NASAJMPA, as supported by the other Officers enumerated by saying;

“Natamnan namu ug mangroves ang 191 hektarya sa Ormoc Bay gikan sa Naungan ngadtu sa San Juan. Nananum mi ug Bakhaw, Pagatpat, Piyapi ug Nipa, Nanaghan na ang mangroves sa protected areas kay magsigi man mi pananum “ (We have planted mangroves in the 191 hectares of the Ormoc bay stretching from Naungan to Puertobello, Ormoc City. Four genus of mangroves were planted namely; *Rhizophora sp* (bakhaw), *Sonneratia sp.* (Pagatpat), *Avicennia sp.* (Piyapi) and *Nypa sp.* (Nipa)).

Mangrove reforestation is now one of the means of mangrove protection. The utilization of local people in mangrove reforestation is viewed as a powerful tool in reforestation success as these people are considered as stewards of the resources. This confirmed the findings of Carig (2012) that community participation increased the forest area. With the implementation of CBFM program, the people become instrumental in improved land use practices⁽⁸⁾.

2. Forest Protection and Control

Another key informant also added that to protect the forest from proliferation of illegal loggers was to protect the forest and control the presence of illegal loggers by monitoring and guarding the mangrove areas in a 24-hour basis. He said that:

“Bisan gi deklarar na ang Ormoc bay (Naungan to San Juan) nga mangroves protected areas ug dili na pwede mahilabtan sa mga tawo kung walay permiso, naa gihapon mga pasaway nga manguha ug kahoy. Para malikayan kani nga problema may gi-tubyanan nga upat ka tawo ang magbantay kada adlaw sa mga mangroves. Kani puli-puli ni sa tanan nga mga opisyal ug myembro sa asosasyon arun mabantayan kada adlaw ang mangrove protected nga lugar. Mau ni ang benepisyo nga makuha namu kay gibayran man mi sa syudad, pagbantay ani kada adlaw. (Although the Ormoc bay (Naungan to San Juan areas) is declared as a mangrove protected area, there are still illegal loggers and intruders in the areas, hence to protect the mangroves, four public organization members are hired by the government (Local Government Unit) for day to day monitoring and detection of illegal activities. This monitoring is rotated among all the officers and members of the association. This is one benefit the members got from the government. We are paid for our services).

The impact of illegal logging has been a problem for decades now resulting in the loss of ha of trees. Monitoring mangrove reforested areas on a daily basis is essential to constantly check the presence of intruders. This is what the other studies have found indicating the importance of monitoring and patrolling of the reforested areas and provide appropriate sanctions for violators⁽⁹⁾.

3. Production of mangroves seedlings for sustainable mangrove expansion

The third key informant of the organization, said that they are planning to sustain and expand the mangroves plantation by saying that:

“Nagpatubo pud mi ug mga binhi sa mangroves kay para mapu-an pa namu ang amu mga tanum. Amu ni pulihan ang kadtung mga nangamatay nga nalabnas sa balud (We also propagated mangrove seedlings to expand our mangrove plantation in the areas and to replace those mangroves destroyed by tides).

To sustain and develop further the areas, the need to have readily available mangrove seedlings is crucial. Mangrove seedlings have to be propagated continuously to replace those denuded areas and likewise for

mangrove expansion. This is not a problem because mangroves are easiest to restore due to their flexibility and higher survival and growth rate of the seedlings⁽¹⁰⁾.

4. Network Linkages

The interviewed Officers mentioned that they made linkages with various government and nongovernment organizations in mangrove protection and rehabilitation. One Officer mentioned and supported by the others that it was possible to plant the 191 hectares of land due to their linkages made with government and nongovernment organizations. They said that:

“ Napalambo namo ang 191 hektarya nga proyekto pagpadaghan sa mga mangroves tungod sa nakigtambayungay mi sa mga lain-lain nga kapunungan, pribado man o sa gobyerno sama sa Saint Peter’s College, PETRON, California Energy, HISUMCO, Visayas State University, Department of Education, EVSU, Ormoc City Campus. Naa pud mga taga gawas sa nasod nga ning tabang namo (We were able to expand our mangrove plantation in the 191 hectares land area due to the linkages we made with varied organizations, private or government organizations namely: Saint Peter’s College, PETRON, California Energy, HISUMCO, Visayas State University, Department of Education, EVSU – Ormoc City Campus. There were also coming from outside the country that assisted us in the said purpose).

The community initiative of NASAJMPA to establish linkages with various organizations was in support of previous studies where presence of diverse partners is essential to satisfy a diversity of roles and needs. According to them, successful projects are attributed to the support of variety of groups. Collaboration with other entities in mangrove rehabilitation is significant as more areas are planted with mangroves⁽¹¹⁾

Future Plans for the Mangrove Areas

The NSJMPA Officers have crafted plans for the improvement of the mangrove protected areas. According to the President, she said that;

“Amo plano para ma-protektahan namu nga dili bisan lang kinsa ang makasulod sa (mangrove protected areas), amu pangitaun asa kutob ang gitag iya sa gobyerno ug sa pribado. Kay ang uban ila man panag-iyahun nga ila pa na lugar himuan nila ug pangisdaan u di gani manputol ug kahoy. Amu pud ning ialutaga and 10 hektarya nga para himuon nga bird sanctuary. Kay sa una mangud, daghan ang mga langgam dire, bisan gani karun may nagpabilin pa. Amu ni sila pabalikun pinaagi ug pag-protektar nila. May planu pud mi paghimu mi ug latayan dire arun makaimbitar mi ug mga tawo para makita nila ang atong kakahuyan. Amu ni himuon nga “ecotourism site” and lugar. Ug usa pa nga plano namu ang paghimu ug tore para sayun namu pag-kita sa lugar ang mga illegal nga nanguha ug kahoy. (We are planning in the future to further protect the mangrove areas is to delineate them as to public or private domains because some people claimed that they own the area thus installed a private fish pond or cut the trees, even if the area claimed is within the protected area. We are also planning to convert 10 hectares of the area into a bird sanctuary. Because before there were a lot of birds here but they slowly vanished, due to people’s hunting. Another future plan that we would like to do is to provide a board walk through the mangroves so people could come and see for themselves. We will will convert this place as an ecotourism site. And another plan is to install towers in strategic place to have easy access for predatory loggers).

The claim of the NSJMPA officers to distinguish land tenure as part of their planning activities for the future is in consonance with the previous studies indicating that one of the challenges facing mangrove rehabilitation is to resolve tenure rights and ownership. Planting mangroves in inappropriate areas mostly fail, thus the need to differentiate real land ownership⁽¹²⁾. Planning for mangrove restoration and protection is essential for communities to ensure its viability. In the study on the Wetland Changes and Mangrove Restoration Planning in China, it stressed that one strategy for the mangrove protection in Shenzhen Bay is to plan to protect the mangrove resources including birds to preserve biodiversity and for the public to satisfy their view on mangrove forests Likewise, making the mangrove area possible for ecotourism purpose is a positive move for economic development. More people will come to the area to view the scenery of the mangroves as well as bird watching⁽¹³⁾.

CONCLUSION

This study emphasizes the initiatives played by the local communities in mangrove ecosystem protection. Themes identified as community-based initiatives in mangrove protection are reforestation, forest protection and control, production of mangrove seedlings to sustain mangrove expansion and establishing linkages with government and nongovernment organizations. Future planning are also drafted to delineate ownership of the mangrove protected areas and for these to be turned into an ecotourism avenue.

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