

Best Participatory Practices in Mangrove Conservation Management: The Case in the Mangrove Rehabilitation Program in the Fishing Villages in the Philippines

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Abstract

The mangrove conservation program is one of the measures to address climate change at the village or community level and is the most effective and sustainable. For it entails a community participatory approach and is anchored on the participation of the private sector, and people's organizations. Bayabas, a coastal municipality of Surigao del Sur, in the Philippines with the communities Cabugo, Magobawok, Belete, and La Paz, the sites of the study, has a robust mangrove conservation program. The study used mixed methods of survey, ethnographic, and observation/case study methods which capture the organizational culture of the sites. The findings of the study include the following: The Mangrove Conservation sites were established in response to the significant provisions of the Local Government Code of 1991 bearing on Environmental Conservation duly supported by an Ordinance of the LGU of Bayabas. The operation of the Mangrove Conservation sites was being assisted by the People's Organization (PO) which is also a quasi-cooperative for fishers. The POs were established by a joint effort of the PFAR/BFAR and the LGU of Bayabas. Sagip Wakatan, the Mangrove Conservation Program of the LGU of Bayabas was anchored on food security, sustainable development, people's empowerment, eco-tourism, and the response to climate change initiatives at the grassroots levels. Livelihood integration is one of the most important features of the Mangrove Conservation Program and was directly channeled into the four (4) People's Organizations (POs). The fishers across four (4) sites are active enough in their participation in the Mangrove Conservation.

Keywords: Sagip Wakatan, Mangrove Conservation, Participatory Approach, Coastal Conservation Management

Introduction

The surging climate change brought about by global warming made the local government units in the Philippines responsible for climate change initiatives and programs. Environmental governance program implementation is becoming part of local governments' mandate across the provinces in the country. Moreover, coastal areas such as Surigao del Sur had been doing for quite some time coastal management programs in close cooperation with the private sector and various stakeholders, foreign funding institutions, and the national government (Lowry et al., 2005). Part of the coastal management is the mangrove conservation program.

Surigao del Sur, a coastal province endowed with rich fishing grounds, seagrasses; mangroves, and coral covers is also experiencing tidal surges. It is in this view coastal resource development and climate change initiatives had been enacted by its municipalities (Celliers et al., 2013). One of which is the "Sagip Wakatan" the mangrove conservation program of the LGU of Bayabas the locale of the study. The program is not only anchored on food security, and eco-tourism but for its aesthetic and cultural value as a fishing area/village.

Bayabas, an LGU of Surigao del Sur is a typical coastal area endowed with a rich fishing ground conceptualized its mangrove program in 1999 but it was only in 2007 that the comprehensive mangrove conservation known as “Sagip Wakatan “ was crafted. It is a community-based program centered on the philosophy of partnership between and among the LGUs, POs, NGOs, NGA, and other stakeholders. The program was anchored on the empowerment of the People’s Organization, PO with the end view of developing self-sustaining communities with a passion for sustainable use of mangrove resources.

The strong point of the mangrove conservation of Bayabas was due to the adoption of a participatory approach (PA) in its aim and execution. The program is anchored on the sustainable use of resources, an anti-poverty initiative at the grassroots level. In its earliest conception, the program was anchored on building self-sustaining community/communities, and empowerment at the village level. The integration of livelihood initiatives has tremendously helped in eradicating poverty conditions in the sites of the study (Sudmeier-Rieux et al., 2006).

The study would like to discuss the implementation of “Sagip Wakatan” the mangrove conservation program of Bayabas in Surigao del Sur. The researcher believed that he is competent to conduct the study since he had been involved in community development work in his capacity as a member of the academe which has an extension program to the coastal communities of Surigao del Sur. Being also an NGO volunteer made the researcher immersed in the coastal communities (Proyrungroj, 2017). Thus, he feels he is competent to conduct the study.

Methods

The study uses both the ethnographic and survey methods. These methods were intended to be complementary. Each method could supply what the other is lacking to be able to gather much as possible the needed information for the study. Ethnographic research methodology is to be employed to have an in-depth look at the culture of the project. Ethnographic research techniques use participant observation and many of the characteristics of non-participant observation studies to obtain a holistic picture of the subject of the study (Frankel & Waleen, 1994).

The emphasis of ethnographic research is on documenting or portraying the everyday experience of individuals by observing and interviewing them. The study uses in-depth interviews and continual, ongoing fishing village immersion using the following techniques:

Field notes or field diary is the major tool to check the accuracy of the research. It is the investigator’s written report on what he has observed, learned, experienced, and seen. The researcher also used audiotapes. An ethnographic study involves procuring data by living in the place of the research area. The data are derived from direct observation. The researcher needs knowledge of the spoken language and employment of a wide range of observation techniques including face-to-face contact with the group, participation in the group activities, and intensive work with informants (David L. Sills, in Lagdamen, 1980).

The survey method will be used aided by a focus on group discussion. The data is to be subjected to the following: for the socio-demographic profile, the frequency distribution with a simple percentage will be used. The total weighted mean will be used in the problems encountered; analysis of variance was used in delivering the significant difference in the problems across sites. Other approaches will be used to cross-check the effectiveness of the method viz: Observation method, Interview method, non-participative observation, and fieldwork. This method mainly relies on the questionnaire/perception and concerns the researcher’s dual abilities to direct the inquiry to designated respondents and to secure the

cooperation of the respondents. The questionnaire uses both open-ended questions and fixed alternative questions. In open-ended questions, the respondents are free to reply to open-ended questions in their own words rather than being limited to choosing from a set of alternatives. In fixed alternative questions the respondent is asked to choose the alternatives that mostly correspond to his position on the topic/subject. The primary data of the study were taken from the self-constructed questionnaire/perception, focus group interview, and participative observation. Documentary analysis was employed in the relevant government issuances concerning mangrove conservation.

The method was supplemented by the following research approaches: Observation Method, This includes “from the outside looking in and describing the situation as he sees it “. This is one way to cross-check the data gathered from the questionnaire. Interview Method. The researcher employed an informal interview method. This tends to resemble casual conversations pursuing the interest of both the researcher and the respondent. Focus Group Interview/Discussion. A strategy is employed to check the data gathered from the main instrument. Participative Observation/Fieldwork. Employed to have a participatory involvement in mangrove conservation.

Research Sample and Respondents

All members of the People’s Organization in the four sites are the respondents of the study. The key informants are the Vice Mayor, PFAR/BFAR LGU Fishery Officer, and one from the NGO.

Research Procedure

The researcher secured a permit from the town mayor to conduct the study. After the approval from the mayor, he proceeded to the sites to administer the questionnaire which is the primary tool of the research, and conducted the interview.

Data Gathering

The interview, focus group discussion, and administration of the questionnaire was personally administered by the researcher.

Treatment of data

The following statistical techniques were used in the study; (1) To determine the profile of the respondents the frequency distribution was used; (2) Weighted Arithmetic Mean was used to determine the seriousness of the problem encountered in the four sites; (3) To determine the differences in the problems encountered across sites. The Analysis of variance was used.

Results and Discussion

Table 1. Summary of ANOVAs test of Difference in the Problems Encountered across Sites

Source of Variation	Sum of Squares	Mean Square	Degree of Freedom	F-Ratio Computed	F-Ratio Critical Value	Decision
Treatment In Between	0.45	0.15	3	0.26	2.76	Not Significance
Error Within	29.54	0.57	52			

(No difference noted across sites)

Majority of the fishers are males since fishing is a male-dominated occupation. The membership of the People’s Organization that manages the reserve is from 18-50 years old.

Most of the respondents are married. Most of the respondents have low educational status. The respondents engaged in some other occupation/sources of income besides fishing. Most of the houses of the fishers are made of light materials. All the respondents attended fishery-related training. The respondents are active members of the PO. Balete, Bakhaw padada, Nipa are the species of mangrove endemic in the area. The facilities in Mangrove conservation are rated as somewhat effective (Buitrago et al., 2005). The maintenance of the conservation sites is perceived as moderately effective. The governance of the Mangrove forest is rated as moderately effective. The components/features of the Mangrove Conservation Program are perceived as Well Implemented. The support of the different government sectors such, as LGU, BLGU, PFAR, and BFAR is rated as very much participating (City, 2014). The Implementation of the different modes of participatory approach (PA) in Mangrove Conservation is much implemented. The determinant factor in the success of the Mangrove Conservation Program is perceived as effective. The problems in the management of the Mangrove Program across sites are rated as prevailing. The attitude of the fishers in Mangrove Conservation has an overall description of positive (Roy, 2016). The implementation of the program is Satisfactory. There is no difference in the problems encountered across sites. They are more or less the same.

The Mangrove Conservation sites were established in response to the significant provisions of the Local Government Code of 1991 bearing on Environmental Conservation duly supported by the Ordinance of the LGU of Bayabas. The operation of the Mangrove Conservation sites was undertaken by the People's Organization (PO) which is also a cooperative for fishers. The benefits for the members of the PO were directly channeled to the POs. The POs were established by a joint effort of the PFAR/BFAR and the LGU of Bayabas. Sagip Wakatan, the Mangrove Conservation Program of the LGU of Bayabas was anchored on food security, sustainable development, people's empowerment, eco-tourism, and response to climate change initiatives at the grassroots levels. Despite the problems encountered the sites continuously managed the reserve. Moreover, it is safe to conclude the Mangrove Conservation work as a quasi-volunteer work. Livelihood integration is one of the most important features of the Sagip Wakatan Program. Livelihood programs were directly channeled into the four (4) People's Organizations (POs). The fishers across four (4) sites are active enough in their participation in the Mangrove Conservation. Law enforcement of the SAGIP WAKATAN and the fishery code of 1998 remains the number one challenge of the sites. The LGU of Bayabas vigorously implemented the Mangrove Conservation in tandem with other government agencies and the private sector. The operation of the Mangrove sites is dependent on LGU Bayabas. The training received by the fishers was relevant being members of the sites. Assessment/evaluation/monitoring of the sites was properly undertaken. Mangrove Conservation Program is a potent means of coastal conservation management. Success story of Bayabas Mangrove Conservation is a result of effective Bio-Physical management but also the development assistance from SOMACOR, an NGO operating in the sites, and the LGU of Bayabas' desire for an effective conservation program. Success indicators/Determinant factors in the success of Mangrove Conservation include survey, mapping, identification of species, level of salinity of water, fewer floods, less cutting of Mangroves, attendance in meeting supportive LGU, BFAR, less conflict of members and cooperation of the various stakeholders. The fishers have a positive attitude toward the Mangrove conservation program. Mangrove Conservation Program as perceived by the fishers was satisfactorily implemented. The Mangrove conservation successfully harnessed fishers' empowerment. Mangrove Conservation is an effective strategy for coastal management. Monitoring of the Mangrove Conservation was properly instituted.

Conclusion

More NGOs are needed for more collaboration in Mangrove Conservation. The NGOs also provide funds that can augment the maintenance of the mangrove rehabilitation program. Intensify Fish Warden Program. The fish warden needs more training in law enforcement. This also includes the Para-legal training of the Bantay Dagat which will be essential in the training of the fish warden. Since, after fishing, farming is the second dominant occupation of the people in the Bayabas. It is suggested that the road going to Cabugo be concreted to fast-track delivery of farm products. Linkages with foreign funding institutions are needed, to effectively harness the Mangrove Conservation Program. Linkage with NEDA for possible linkages with foreign development agencies is fertile terrain for improving the program. Since, the POs who managed the reserves were all SEC-registered it is recommended that they will venture in income-generating activities. The revenue of the said IGP is augmented in the management of the reserve..

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