

Community-Based Forest Management Program Assessment in San Francisco, Southern Leyte, Philippines

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ABSTRACT

This study attempted to make an appraisal of the Community-Based Forest Management Program in San Francisco, Southern Leyte, in terms of the benefits obtained by the farmer-beneficiaries from the project and their extent of participation in the project activities. Data from the 41 farmer-beneficiaries were gathered using an interview schedule. These were analyzed using frequency counts, percentage, means, ranges and ranking. Findings of the study showed that the mean of age of the farmer-beneficiaries was 49 years old, mostly females and predominantly married. The farmer-beneficiaries had an average of 6 years of formal schooling. A little more than half of them were tenants, with an average farming experience of 20 years. Almost all of the farmer-beneficiaries relied on coconut production as their major source of farm income. The average monthly income earned by the farmer-beneficiaries before and after joining the CBFMP was ₱2,134.15 and ₱3,258.30 respectively and had attended several seminars/trainings. Increased income and attendance to trainings/seminars were the notable benefits obtained by the farmer-beneficiaries. A great majority of the beneficiaries rated their attendance to meetings and other activities of CBFMP as very often. Almost all of the beneficiaries participated in the identification of activities to be implemented by CBFMP in the area. Lack of capital for their farming operations was the number one problem encountered by the farmer-beneficiaries of CBFMP..

Keywords:

CBFMP, Assessment, Farmer-Beneficiaries, Benefits, Participation

1. Introduction

The Philippine forest are being dangerously destroyed or modified in alarming proportions as a response to the pressures of rapidly increasing population. The increasing population pressure in the upland has contributed to the rapid forest depletion. The influx of lowland farmers to the upland can be traced to the high agricultural inputs in the lowland and the inability of the government agencies in creating livelihood programs that address the immediate needs of the lowland farmers (DENR Master Plan, 1988).

Realizing the negative effects of the forest deterioration, not only in upland communities but also on the lowlands, various development programs to improve the uplands have been undertaken. History has taught us that success in any development programs relies heavily on the people's active purposeful participation. Active and meaningful participation, however, can only be achieved through a concerted effort. Thus, in search for alternative strategies an options to carry out successful natural resources management program, the active community participation is imperative.

Recognizing that people's participation in forest management is a key in solving the country's forest problems the government has introduced programs that require the active participation of the upland communities. Thus, the Community-Based Forest Management Program (CBFMP) was launched through EO 263, guided by the premise that organized rural communities in exchange for rights to extract, sell and utilize forest products would protect and properly manage the same resources. It is the state's policy to safeguard and fortify the right of the Filipino individuals to a safe ecosystem, to develop their economical situations along the preferment of equality, equal approach and ecological growth of forest reserves, and to esteem the virtue of

ethnic people to their inherited territories by taking their customs, practices and values into consideration.

One of the main strategies for achieving these objectives would be active and open community engagement and tenure security. Consequently, The Government recognizes and supports local communities and indigenous people's capability and efforts to protect, rehabilitate, improve and maintain forestry and coastal resources and to provide legal and technical help to ensure a reasonable approach to the ecological use of natural reserves (DENR Administrative Order 96-29, s. 1996).

Community Based Forest Management (CBFM) is widely understood as an approach that makes local communities the primary players in the management of their forests. However, there is still a wide range of understandings of how and where CBFM is being implemented (Schindele and Lux, 2001). It is an influential model that has arisen from the failure of state forest governance to safeguard forest resource sustainability and fair allocation of access to and benefits from forest resources. The effectiveness of the CBFM efforts depends on how well groups, such as indigenous knowledge structures and social organizations, have exercised their right not only to engage in forest governance, but also to use their internal cultural tools to achieve resource sustainability as well as on how much room they are given to exercise this right (Guiang, et.al 2001).

CBFM's characteristics are security of tenure and social equity. In order to succeed in a conservation program within a community forest, community involvement is imperative. A must is the security of tenure on the land. Government policies in the CBFM have failed and the issue of social equity must be the concern of governments (Nagendra, 2007). As a concept of social forestry, CBFM aims to alleviate the people in the forest community from poverty and preserve natural resources (Ceballos, 2016).

Community-based forest management consists of community management of forests and agroforests managed by families or smallholders and of community management of state-owned forests (some of which, under traditional laws and practices, share customary tenure and rights). Profitable undertakings or shared businesses focused on timber and non-timber forest products and the delivery of bionetwork amenities, including ecotourism for the smallholder and community-scale are included in the Community-based forest enterprises. They also include smallholders for commercial forest products involved in agroforestry and/or outgrower schemes (Molnar, et.al, 2011).

CBFM advocates stress the urgent need for forest management to empower and involve communities (Poffenberger 1990; PWG 1999). They maintain that when local communities organize and enforce them themselves instead of having the state, which has shown poor performance so far, continue to do so on its own, implementing a participatory implementation strategy, forest protection and conservation use can be done more effectively (Guiang, et.al, 2001).

However, the CBFM programs primary aim is to provide every Filipino with a safe ecosystem, recover the socio-economic status of the communities involved, promote societal fairness, and ensure equal approach to forest resources and equitable distribution of benefits (DENR, 1996, cited by Carig, 2011). In 1990, in several provinces across the world, a logging moratorium was imposed to limit further forest cover losses. Over the last fifteen years, only about 5,000 hectares of natural forests have been harvested annually by legal timber license holders; but forest loss has remained very large, with more than 100,000 hectares reported per year (Carandang, 2005).

Indeed, most of the upland populations are considered "poorest of the poor" (Guiang, Borlagdan & Pulhin, 2001) and most are active for their survival in slash and burn cultivation/farming. The

dwindling forest resources have further exacerbated the continuous influx of migrant communities. Since of the accessible environment of many forested areas, it was challenging for the administration to choose who could be alleged responsible for such acts. This situation encouraged the government to adopt another legislation and rules to improve the conservation of biodiversity while responding to local community needs (Carig, 2011).

CBFM's characteristics are security of tenure and social equity. In order to succeed in a conservation program within a community forest, community involvement is imperative. A must is the security of tenure on the land. Government policies in the CBFM have failed and social equity must be the concern of governments (Nagendra, 2007; Ceballos, 2016). It is the major forestry program and is considerably helped by a participating tactic to sustainable forest management involving local communities. Greater portions of the forest are managed by individuals and the civic, so that administration and transnational organizations can teach local people to protect and preserve the forests (Manandhar and Shin, 2013).

Partnerships between governments and communities have been established to restrict the ongoing deforestation, where control and management are shared between them both. The surrounding villages manage and control the forest on their own with community-based forest management (CBFM). They will utilize their natural resources in a more sustainable way by giving power and control to local residents. A widening international interest in this community-based management system arose in the 1970s and 1980s. This system was built on local knowledge structures as well as local management structures (Folkesson, 2008).

The findings of this study may provide important information on the strengths and weaknesses of the CBFMP. The program implementors will greatly profit from the valuable information generated from the study. They will be informed as to what projects in the community need to be strengthened and sustained. The extension service can become a source of self-fulfillment for the implementors as they come into awareness of the needs of others. Likewise, this study may provide relevant information which could be useful in promoting environmental consciousness among the constituents to protect the natural resources from over exploitation. They would be encouraged to become effective and active participants in all community-based activities. The CBFMP participants would realize that providing the needed data about their characteristics, the benefits they derived from and the problems encountered in the implementation of the program can yield relevant and essential information that may be used in formulating plans of action geared towards improvement of their socio-economic conditions in the community.

The CBFMP has been implemented in Sam Francisco, Southern Leyte since 1998. At present, the residents of that municipality still harbor doubts on the real success of the project. Barring unforeseen circumstances aside, the program leaders hope for its successful implementation. Thus, the objectives of this study was to identify the respondents' benefits derived from the project with emphasis on identifying their extent of participation in the project activities and the problems they encounter in the project.

2. Methods

The study was conducted in San Francisco, Southern Leyte, Philippines. The respondents of the study were contained 41 beneficiaries of CBFMP who were asked to answer the research instrument. The study made use of the descriptive method. This was used to provide information about the beneficiaries' extent of participation and the benefits derived from the project as well as the problems encountered by the CBFMP participants. Using simple random sampling, the collection of respondents was used. An interview schedule was used to gather the desired

information from the respondents. First part gathered information on the demographic and socio-economic characteristics of the respondents, second part was designed to draw information on the benefits derived and extent of participation of the CBFMP beneficiaries and last part obtained information on the problems encountered by the beneficiaries in relation to the implementation of CBFMP. Secondary data was gathered from the study. The researcher herself conducted the data collection. Data was analyzed using SPSS with the assistance of a numerical analyst.

3. Findings Analysis

3.1 Socio-Demographic Features

The mean age of the project beneficiaries was 49 years old. Almost two-thirds (63%) of the farmers' beneficiaries were female, and a little more than three-fourth (76%) were married. Of the 41 farmer beneficiaries, less than half (42%) had reached 5 to 8 years of formal education. A little more than one third (34%) had 1 to 4 years of formal education, 9 (22%) had 9 to 12 years while only one (2%) finished college. Regarding tenurial status of the beneficiaries, a little more than half (51%) of the beneficiaries were tenants and a little less than half (49%) were owners. However, the lands cultivated by the beneficiaries were identified and classified as forestlands. Since the lands were classified as forestlands and these lands were tilled by some people for past many years, the cultivators had been awarded by the Department of Environment and Natural Resources the Certificate of Stewardship Contract (CSC). In order to improve the socio-economic conditions of forest occupants/beneficiaries and communities, this contract serves as their tenure instrument which grants rights to manage, establish, use as well as protect forest resources on a sustainable basis. More than one third of the farmer beneficiaries (39%) had farming experience from 11 to 20 years while a little more than one-fourth (27%) had been farming from 2 to 10 years. As to their farm size, almost two-thirds of the farmer beneficiaries (63%) owned one to three hectares of farmland. On the average, the farmer beneficiaries of CBFMP had cultivated three hectares of farmland (Table 1).

Table 1. Respondents Demographic Features

Variable	Frequency (f)	Percentage (%)
Age of Farmer-beneficiaries (years)		
39 and below	9	22
40 – 49	13	32
50 – 59	11	27
60 – 69	7	17
70 and above	1	2
Gender		
Female	26	63
Male	15	37
Marital Status		
Single	1	2
Married	31	76
Widow/widower	7	17
Separated	2	5
Education		
No. of formal schooling (years)		

1 – 4	14	34
5 – 8	17	42
9 – 12	9	22
13 -16	1	2
Tenurial Status		
Tenant	21	51
Owner	20	49
Farming Experience		
10 and below	11	27
11 – 20	16	39
21 – 30	7	17
31 – 40	6	15
41 and above	1	2
Farm Size (Has.)		
3 and below	26	63
3.1 – 6.0	10	25
6.1 – 9.0	2	5
9.1 and above	3	7

3.2 Benefits Obtained from CBFMP

The benefits obtained by the beneficiaries from CBFMP are shown in Table 2. All of them claimed increased income as one benefit derived from the project. Also, 100% of them reported that their attendance to seminar/trainings had benefited them in their farming operations. Almost all (98%) said that the tree planting activity of the project had improved the environment, while 37 (90%) had seen the reduction of risk involved in soil erosion as a benefit derived from the CBFMP. In addition, (29%) had access to credit through membership in the association which the project had organized. The CBFMP beneficiaries in San Francisco had monthly dues in the amount of ₱10.00. Collected dues would serve as source of funds to be loaned to the beneficiaries of the CBFMP.

The findings of the study are in agreement with various studies. Rebugio, et.al., reported that socio-economic improvements were achieved under the CBFM program through the stipulation of provisional service and extra revenue to a controlled quantity of members. Therefore, one of the disputes for CBFM is to maintain and disseminate the advantages to more poor people in the forest communities. Feasible and tough businesses and additional financial chances, predominantly for forest contingent communities, need to be further developed (Guiang et al. 2001, Pulhin 2005 in Pulhin et al. 2007; Rebugio, et.al.).

(Matabaran, 2005) have reported that the farmer-beneficiaries derived income from the project was used for the purchase of food and to pay for the expenses related to the education of the beneficiaries' children. Caday (2000) also found out that majority of the farmer respondents in her study had increased income after serving as cooperators of the different pilot provincial agricultural extension programs. However, similar study disclosed that majority of the farmer-beneficiaries were able to plant rice twice a year which consequently increased their production. Farmers had a chance to attend seminars and workshops on rice production and other income generating projects (Salvoro, 2001).

Labor (2000) reported beneficiaries of swine production project had improved their personal and social qualities. Moreover, a study conducted by Cubrado (2001) reported on her study that some of the benefits derived from the project included increased income, increased production and updated knowledge in rice technology. Farmers perceived several advantages in their attendance in the Farmers Field School. Foremost among the advantages were knowledge and skills they obtained from the training. The education received through the field school helped them become better managers. It also helped them reduce the risks in farming as they were able to correct faulty practices, thus gained better control of farm conditions (Caday, 2000).

According to Carig, (2011) after the distribution of the tenancy tool, which is manifest in the delivery of respondents into various revenue groups, the income of the farmers increased. While revenue increased, the respondents disclosed that this was not due to the allocation of tenancy, but was carried about by revenue from other incomes, such as employment from government, and non-government divisions of jobs.

However, Manandhar and Shin (2013) results of the study illustrates that revenue is used for operations in forest management, such as forest harvesting, logging, planting, and protection. In addition to forest management revenue, ecological enhancement programs such as community buildings, school support, and revenue producing activities for the disadvantaged are used. The results of the household survey showed that in order to have access to the basic necessities for these nearly 15 percent households of the revenue require to consumed on income generating activities for poor families.

On the contrary, Ajayi (2017) reported that the farmer's increased earnings guaranteed an increase in crop yield. In his study, respondents claimed that agroforestry involvement had given them the advantage of possessing intensified profit and crop type. Developments and management in soil fertility through the use of animal manure and the preservation of soil nutrients through nitrogen-fixing trees and vegetation have certainly added to an upsurge crop yield of the farmers.

In the Philippines, it is well recognized the advantages of soil conservation and tree farms in agroforestry (Cruz, 1982). In general, the environmental influence of agroforestry practices (the principal manufacture methods at CBFM places) are certain, including conservation of soil, control of erosion and conservation of water (Palmer, 1996; Cruz, 1982; Lasco and Pulhin, 2006). However, it has been demonstrated that the use of *Leucaena leucocephala* hedgerows in several portions of the Philippines reduces soil erosion. Likewise, in Leyte, shrubberies lessen soil erosion to 8 t/ha likened to the restraint with no soil conservation measure (Dano and Siapno, 1988; Lasco and Pulhin, 2006).

Study of Ajayi (2017) results revealed that the perceived advantages derived from agroforestry practices increase the farmer's income. This is aligned with Adelabu (2010), who uncovered that good production of agroforestry makes likely additional per capita income of the farmers. Not only were the harvest yielded by the farmers expended by the household, but they were also sold for cash by means of satisfying certain family needs.

Table 2. Benefits Obtained from CBFMP

Variable	Frequency (f)*	Percentage (%)
Increased Income	41	100
Attendance to trainings/seminars was useful in farming activities	41	100
Improved environment due to tree	40	99

farming		
Reduction of risk involved in soil erosion because of tree planting	37	90
Increased farm production	13	32
Credit access from the organization	12	29

**multiple response*

3.3 Extent of Beneficiaries' Participation in the CBFMP Activities

Table 3 presents the activities performed by the beneficiaries of CBFMP. Almost all (98%) got involved in the identification of activities implemented in the area, while 95% participated in the production of forest tree seedlings. A great majority (90%) joined the tree planting activities of the project. On the other hand, two-thirds (66%) performed strip brushing in the area, while another two-thirds (66%) helped in the maintenance of the plantation by doing replanting and weeding activities. Almost two-thirds (63%) of the beneficiaries got involved in the preparation of the CBFMP training design. In addition, the Board of Directors of the beneficiaries' organization assisted in the preparation of the Memorandum of Agreement with DENR. The aforesaid findings revealed that the farmer-beneficiaries had actively participated in the activities related to the implementation of the CBFMP.

As reflected in (Table 3), a great majority of the CBFMP beneficiaries (88%) rated their attendance to meetings/and other activities conducted by the project as very often. Four (9.76%) of the respondents considered their attendance to meetings and other activities of the project as often while only one (2%) of the respondents seldom attended the CBFMP activities.

Foremost among the problems encountered by the beneficiaries of the CBFMP was the lack of capital for farming operations. A great majority (95%) encountered problem on some members who insisted on how activities are to be undertaken, without regard for the technical advice provided during trainings/seminars conducted by the CBFMP for them. Hiring of non-members of the organization to work in some phases of CBFMP was a problem reported by 93% of the respondents, while six (15%) disagreed on how funds were allocated.

As regards the beneficiaries suggested possible solutions to solve their problems, the most prevalent problem on the lack of capital for farming activities, almost all members of the association (98%) suggested to look for other sources of funds. The beneficiaries also pointed out that there must be transparency in the disbursement of the association's funds. Majority (93%) suggested that the prepared plan of activities of the project should be strictly followed to answer the problem of the insistence of some members on how activities are to be carried out. On the other hand, giving priority to the hiring of members of the organization to work in the project activities of CBFMP was suggested by (85%) of the beneficiaries.

The present results are inline to those similar studies. Carig (2011) results of the study reported that participation was measured for participation in group meetings, election of officers and events related to forest development. In the two CBFMA programs, the rate of participation in community meetings was relatively high, with 100% participation. According to Manandhar and Shin (2013), active participation of users in the Community Forestry Programme has highlighted the fact that these forests not only protect biodiversity, but also have many other less evident advantages. The daily workshops, general assemblies, and meetings of the executive committee often show that not only does the CF program generate forest resources, but also establishes an important local institution.

Folkensson (2008) reported that due to its participatory nature, the involvement of the project facilitates connections between stakeholders, providing the opportunity to create social networks that are an important source of technical knowledge in rural areas (Jara-Rojas, et.al. 2020). Manandhar and Shin (2013) also reported that community forests promote the rural livelihood of worker involvement, society growth, and use by user groups of forest products. Rural citizens have convenient entry to forestry products due to the CF program strengthens the states of the forest.

However, study of Folkensson (2008) also showed that within the group, there are problems that impact a CBFM project. They spoke about inequalities being a contributing factor in the world, and that this imbalance in society is the reason why certain people do not obey the law. Similarly, Husseini et al. (2016) most households reported not engaging in the forest reserves management. The primary explanation for local group non-participation was the absence of an offer to engage in the processes of any decision-making (Tadesse, et.al., 2017).

A comparable report by Adhikari, et al. (2014) found that rewards underneath the community forestry program in Nepal for resource governance and management were inadequate to achieve successful participation by citizens. There is slight encouragement for populace to engage in ecological forest administration, according to Salam et al. (2005), unless better rewards are taken into account in a forest management plan (Tadesse, et.al., 2017).

There is related condition amongst indigenous Ikalahan folks in Northern Luzon, among other activities, indigenous societies have mobilized to conserve the biological forest and its opulent biodiversity reserves (Rice, 2004). There is therefore some evidence at the landscape level that CBFM projects help preserve established ecosystems of biodiversity (Lasco and Pulhin, 2006).

Furthermore, Jamilu, et.al (2015) also reported in their study that improve greater participation and increase crop production in the project. Extension staff should assist farmers in forming viable cooperative organizations, and where they exist, efforts should be made to improve their ability to easily access credit, farm inputs and the markets for their agricultural products. An undetermined amount of other external assistance was provided, such as grants and technical support. Adequate incentives are not yet available to enable CBFM areas invest private sector (Rebugio, et.al.).

Table 3. Extent of Beneficiaries' Participation in the CBFMP Activities

Variable	Frequency (f)*	Percentage (%)
Activities		
Identification of activities implemented in the area	40	98
Seedling production	39	95
Tree Planting	37	90
Strip Brushing	27	66
Plantation maintenance (replanting, weeding)		
Preparation of training design	26	63
Forest Protection (patrol works, establishment of firelines)	23	56
Preparation of the memorandum of agreement with DENR	3	7
Frequency of Attendance		
Very Often	36	88
Often	4	10

Seldom	1	2
Problems Encountered		
Lack of capital for farming operation	41	100
Insisted by some beneficiaries on how projects/activities are to be done	39	95
Hiring of non-members of the organization	38	93
Disagreement on allocation of funds	6	15
Suggested Solutions		
Look for other sources of funds	40	98
Transparency in funds disbursement	40	98
Follow exactly the prepared plan of activities of the project	38	93
Prioritize hiring of members of the organization	35	85

**multiple response*

4. Conclusions

The findings of the study revealed that the farmer-beneficiaries of CBFMP are middle-aged, married, mostly females and have reached the elementary level of formal education. They have long years of farming experience as either cultivators or tenants and cultivating a fairly large size of forest lands. The CBFMP has increased the income of the beneficiaries and has given them opportunities to improve their socio-economic conditions. The beneficiaries are very interested to participate in development activities if they can foresee benefits thereafter and lack of capital to finance farming operations is the primary problem encountered by the farmer-beneficiaries. Hence, the following recommendation were suggested: There is a need for DENR to assign a full-time barangay-based community development worker in CBFMP in order to promote access to the beneficiaries of the project and address their concerns from time to time. DENR should encourage the CBFMP beneficiaries to form a credit cooperative, in this way they can avail of a better credit assistance. Training on food processing/preservation should be conducted among the beneficiaries since most of them are women. Housewives can help augment their family income out of these trainings on livelihood. Expanding its CBFMP coverage may results in much improved rural communities and rainforest/watershed management in those communities.

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