LOCAL MONITORING: A POTENTIAL TOOL FOR COLLECTIVE ACTION AND LEARNING IN COMMON RESOURCE MANAGEMENT

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I. INTRODUCTION

The last few decades witnessed the growing interests among many national governments in the world to devolve the rights and responsibilities for common resource management to local communities. In Asia, Philippines is one of the few countries that has paid a lot of attention on the people-oriented approach in the management of their forests. Community forestry has already begun as government programs in the 1970s. Considering that 49% of the country is forestland (14.7 million hectares out of a total 30 million hectares), naturally its management can be not done by the state alone. The commitment of the government to engage local communities as partners in forest management was evident from the long-history of the government's attempts to improve the framework of engagement. The different community forestry programs were later evolved into Community Based Forest Management (CBFM) program. It was recognized as a national strategy in 1996, through the Presidential Executive Order No. 263, to ensure the sustainable development of Philippine's forestlands.

The CBFM program aims for a balance between sustainable forest management and human well-being. Local communities can obtain the legal rights from the state to manage a piece of forestland by organising themselves into People's Organisations (POs). These are legally recognised organisations that are registered with the Securities and Exchange Commission or Cooperative Development Authority. In exchange for the rights to use the forest and its resources, the POs are responsible for managing, protecting, rehabilitating, conserving, preparing management plans, developing their organisations, etc. (DENR, 1998).

The implementation of CBFM is overseen by the Department of Environment and Natural Resources (DENR). It is the national agency in charge of the implementation of conservation, management, development and proper use of the country's forest resources. The Executive Order

No. 192, Section 5, gave the DENR the legal mandate to exercise supervision and control over all forestlands. DENR is also expected to formulate, plan, coordinate, implement and monitor policies through local field units. The DENR Strategic Action Plan for CBFM targeted a total area of 9 million hectares to be covered by CBFM by year 2020. Out of this target, around 5.7 million hectares have been covered by various tenure systems granted to local communities by 2002 (Diaz & Bacalla, 2002). This is larger than the total area of about 4.6 million hectares of forests and forest lands that have been set aside for "public good" such as protected areas, national parks, sanctuaries, wilderness, watershed reservations (DENR, 2000 *in* Guiang, 2001).

Despite its achievement so far, CBFM implementation also faces many problems and challenges. One of the biggest challenges is the partial transfer of power to local communities and local government units. The responsibilities of overseeing the CBFM implementation, in theory, should be shared by the DENR with local government units. The Local Government Code (Republic Act No. 7610)[1] authorises provincial and municipal governments to implement social forestry and reforestation programs, manage communal forests under 5000 hectares, protect watersheds, and enforce forest laws. Although Local Government Code provided for the highest form of decentralisation and is considered a significant turning point in the decentralisation and devolution of government powers (Magno, 1993:14), and is probably one of the most innovative and impressive in the region (Lynch, 1993; Colchester, 1994), reality on the ground shows that the DENR still maintains its strong control.

This partial devolution and the lack of willingness from the government to give power and authorities to local communities are also apparent from the complicated and excessive regulatory requirements. Furthermore, there are uncertainties, ambivalence, and contradictions among various laws and policies related to community forestry. Policy development processes often do not consider the realities at the community level (O'Hara, 2002). This further complicated by frequent policy changes and the insufficient information sharing between central DENR and its local offices that have often led to misinterpretations and unintended enforcement.

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[1] It should be pointed here that the LGC was implemented way before CBFM became a national programme.

As the result of the above situations, partnerships among the DENR, local government units, and the POs in the implementation of CBFM are rarely found on the ground. The roles and responsibilities of local government vis-à-vis DENR remained ambigious and were not clearly spelled out (Geollegue, 2000; Tiongson, 2000; Magno, 2001). Furthermore, lack of skills and capacities, personnels, and financial resources have further prevented local government to fully handle the devolved functions (Geollegue, 2000). In addition, there is insufficient communication and information flow, and lack of institutional capacities and mechanisms to engage in partnerships (Castro and Garcia, 2002; Ignacio and Woell, 2002; Tandug, 2002). In summary, the lower-level government structure, non-government organisations, and community associations had not been able to participate fully due to lack of resources, capacities, and power (Revilla, 1986; Vitug, 1993; Broad, 1995).

Another problem in CBFM implementation was little benefits generated from CBFM that would improve people's livelihood and encourage them to sustain their efforts. In several CBFM areas, the PO members were given reforestation contracts that provided economic incentives for their participation in rehabilitating their CBFM areas. Nevertheless, after rehabilitation contracts ended, there was no sufficient resource for tending the seedlings. This took the PO away from the long-term benefits that they might get from these established plantations. In CBFM areas located outside protected national park or watershed, the POs can also obtain permits to extract limited volume of non-timber forest products, such as rattan, bamboo, resins, honey, etc. Apart than these forest-based livelihood options, there were few non-forest livelihood options that can meet the immediate needs of the people.

It is clear that local people is still struggling in coping with the many challenges of CBFM management. The challenges are tremendous considering that many People's Organisations usually do not have sufficient skills and knowledge to allow them to manage CBFM as per DENR requirements. Furthermore, they lack the skills and proper tool to collect reliable and relevant information that would allow them to communicate their problems and challenges in a way and form that are acceptable by other stakeholders. They lack the tool and mechanism to monitor the consequences of their actions, the progress they have made in dealing with the challenges, or in reaching their management objectives. While monitoring itself is not a new

concept[2], the adoption, implementation, and maintenance of monitoring programs have presented serious challenges to decision makers and forest managers. Monitoring initiatives at the community level also face similar problems. The development of monitoring system was almost always initiated by outsiders to meet their objectives, i.e. to review the progress of their development projects and sometimes the performance of the local communities according to initiators' criteria. The initiators often failed to design monitoring systems that matched the need and capacities of the communities concerned. Furthermore, the process excluded them and other local stakeholders. Unsurprisingly, it is very difficult to find a monitoring scheme that can be sustained beyond the lifetime of a specific project.

This paper argues that monitoring is a potential tool to facilitate collective action and learning between the communities and other stakeholder. It also argues that for monitoring initiatives to be sustained, the process of developing monitoring system should be initiated at the grass-root level by the communities and other concerned local stakeholders in a participatory way, based on their shared common concerns, and for their own purpose. This paper will first outline CIFOR's adaptive collaborative management project, its concept, and the importance of monitoring in this kind of management. This will be followed by a brief description of the site in Palawan, Philippines, where local monitoring system was developed by the community and local stakeholders. The following sections describe the processes that the community groups and other local stakeholders went through in their joint efforts to develop local monitoring system, how the bottom-up development processes provide a platform for collective action and learning among the participants, and present several observations made during the implementation of this monitoring system. The last section of this paper puts forward the lessons learnt from this initiative and the challenges that the PO faced in sustaining their efforts.

II. MONITORING AND ADAPTIVE COLLABORATIVE MANAGEMENT

In managing complex ecosystems, such as forests, where not enough knowledge exists, we have to learn to live with surprises and uncertainties (Holling, 1978; Walters, 1986; Lee, 1993).

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[2] According to Alexander *et al.* (1996), people monitor their environment as naturally as they look, feel, smell and listen.

Adaptive collaborative management (ACM) program of the Center for International Forestry Research (CIFOR) facilitates social learning, communication, and collective action among communities and other stakeholders with the aims to improve their ability to collaboratively manage a complex and dynamic system through continuous adjustments to their management systems. At the heart of the strategy are the conscious efforts by local people and other stakeholders to observe and learn about the impacts of their management on forests and subsequently improve it.

ACM work in the Philippines was started in 1999. It is a part of the global ACM research program in Asia (Indonesia, Nepal, China), Africa (Zimbabwe, Malawi, Cameroon, Ghana), and Latin America (Brazil, Bolivia). ACM research focuses on developing and testing the concepts, management principles, tools, and policy options needed to strengthen the ability of the people and other stakeholders in managing forest resources in collaborative and adaptive ways. ACM also aims to understand the conditions in which adaptive and collaborative management can lead to real improvements in both forest and people's conditions especially the poor and marginalised people.

In facilitating ACM in community forestry, we foresee that to enable local communities and local stakeholders to engage in on-going observations on the impacts of their management practices, continually reflect and learn from the observations, and subsequently adapt their management strategies, there will be a need to have an effective monitoring system. Monitoring is a key element of adaptive collaborative management (Bosch *et al.,* 1996; Taylor *et al.,* 1997, Salafsky *et al.,* 2001). One of our interventions in facilitating ACM at the local level, therefore, is to introduce the concept of monitoring and, if there are interests, to assist local forest managers in developing collaborative monitoring arrangements that are simple, doable, effective, and will encourage participation from government institutions and various community groups.

Monitoring can be defined as periodic and repeated observations of appropriate parameters to determine the effects of certain management strategies or policies, and the response of systems to change (Bosch *et al.,* 1996). The initiatives to design monitoring program at the community level faced many challenges. In many cases, the monitoring systems usually were designed by the

initiators or projects to assess the performance of the communities in achieving certain project goals, and the participation of the communities was often limited to data collection only (Ricafort, 1996 in Abbott & Guijt, 1998). The initiators failed to design monitoring systems which are practical, cheap, easy to do, and useful for the communities. Even if these obstacles were overcome, the monitoring system had low rate of adoption by local people because they were not involved in the development processes and the systems were not developed in collaboration with other local stakeholders, based on their shared common concerns and goals, which would leave local communities all alone in sustaining the effort beyond the lifetime of the project.

Bosch *et al.* (1996), Guijt & Sidersky (1996), Abbot & Guijt (1998), among others, emphasised that for monitoring to be a part of sustainable learning processes, it has to be of local relevance and feasible in the long run. Furthermore, it will only contributes to local understanding and empowerment if the processes motivate all stakeholders and that the results are feedback into local information system so that monitoring is not merely extractive.

III. SITE DESCRIPTION

The site is located in Palawan island, one of the biodiversity hotpots in the world. The site is a CBFM area of 5,006 hectares and it is located around 67 kilometres from Puerto Princesa City, the capital of the province. The management of this area has been in the hands of a People's Organisation called San Rafael Tanabag and Concepcion Multi-Purpose Cooperative, Inc. (STCMPC) since 1996. The area covered series of watersheds of the three adjoining villages or *barangays*, i.e. San Rafael, Tanabag and Concepcion.

The CBFM area consisted of a strip of disturbed forestlands in need of rehabilitation. Prior to 1970, forest conditions in the area were good and rich with *almaciga* (*Agathis damarra*), *ipil* (*Instia bijuga*) and *narra* (*Pterocarpus indicus*). In 1970, forest conditions started to decline with the increase of logging operation and flow of migrants who practiced slash-and-burn to open area for farms. To halt forest degradation, logging ban was imposed in the Philippines, including Palawan, in 1986 and slash-and-burn practice was strongly prohibited (Hartanto *et al.*, 2000)

The latest census of 1999, carried out by the *barangay* government, showed that the total population in the three villages were 3,597. The population in San Rafael and Concepcion was 1,575 and 1,565, respectively. Tanabag had the lowest population of 457 people. The majority of the population are migrants and the rest are the Indigenous people of Tagbanua and Batak (Lorenzo, 2000).

Stakeholder analysis, using the "Who Counts Most" method (Colfer *et al.*, 1999) showed that the stakeholders in the site are numerous, with complex and dynamic interactions, that had made forest management in the area far from simple. The main stakeholders in forest management are listed in Table 1. Several community organizations exist at the community level. In fact, the members of the People's Organisation were only 433 people or around 12% of the whole village community. The different community groups were usually not involved in CBFM management and the level of collaboration among them was low. Furthermore, there was a history of conflict between the PO and the neighbouring *almaciga* resin concessionaire who was supported by the *barangay* captains.

Table 1. The main stakeholders in Palawan site.

COMMUNITY GROUPS
1. San Rafael, Tanabag, Concepcion Multi-Purpose Cooperative, Inc. (STCMPC)   2. Fishermen's Association   3. Women's Group
GOVERNMENT INSTITUTIONS
1. DENR and its Provincial office and Community-level office   2. Local Government Units at the *barangay*, city and provincial levels   3. Palawan Council for Sustainable Development
NON-GOVERNMENT INSTITUTIONS
1. Budyong Rural development Foundation, Inc.   2. Enterprise Works Worldwide   3. Environmental Legal Assistance Centre   4. Haribon Foundation

The institutional complexity in the Philippines, as the result of devolution and decentralisation, can also be found in Palawan. Policy-makers issued the Strategic Environmental Plan Law (Republic Act 7611, 1992) to ensure that the environment and natural resources of Palawan, the Philippine's last frontier, are properly managed and protected. This law transferred to Palawan Council for Sustainable Development the authority to protect and manage natural resources in Palawan. With the establishment of the Council, the current institutional arrangements became more complex. Eight out of ten respondents, in our interviews, identified the major source of conflicts between the two institutions to be related to the unclear authority to issue permits and licenses (e.g. extraction of timber and non-timber products, environmental clearances). The lack of clarity with regards to their authorities, rights and responsibilities, was further exacerbated by weak coordination and complementation, lack of capabilities of certain agencies, vested interests, etc. (Esguerra and Hartanto, 2002).

IV. DEVELOPMENT OF LOCAL MONITORING SYSTEM

The PO in Palawan, as a part of their responsibilities as CBFM manager, was requested by the local DENR to conduct monitoring. The request was put forward in 1996 and was repeated in early 2000. Despite their commitment to do so, the PO had little experience and knowledge on how to develop and conduct monitoring. They therefore requested ACM researchers to assist them in developing a local monitoring system. The processes and steps of developing local monitoring system in ACM site in Palawan were described in Hartanto *et al.* (2002). A small team of ACM researchers were involved as facilitators in the whole process.

The development processes took place in three workshops and several discussion sessions outside the workshops. The first workshop was held in February 2001 and was attended by key personnels and members of the PO, a representative from the *barangay* council, a representative from City Environment and Natural Resource Office, and two representatives from Department of Environment and Natural Resources. The second workshop in September 2001 brought together wider stakeholders and community groups. Besides those participated in the first workshop, other participants included representatives from Women's Group and Fishermen's Association, representatives from Palawan Council for Sustainable Development, a Council's

special project called Palawan Tropical Forest Protection Programme, and local NGOs (such as Enterprise Works Worldwide, Budyong Rural Development Foundation, Inc, and Haribon Palawan). The third workshop in January 2002 was attended by similar stakeholders as in the second workshop, except for DENR and local NGOs who only attended the pre-workshop session.

The local monitoring system used the Criteria and Indicators (C&I) framework for Sustainable Forest Management as the framework to describe, conceptualise, organise, and interpret information with regards to CBFM management. The C&I Framework is usually composed of a hierarchy of *Principles, Criteria, Indicators,* and *Verifiers*. The four level of hierarchy have clear vertical linkages in a comprehensive and coherent manner that can be verified (Prabhu *et al.,* 1996; Lammerts van Bueren and Bloom, 1997; Prabhu *et al.,* 1998). C&I has been proven to be a useful communication tool among different stakeholders, including between local communities and other local stakeholders. Ritchie *et al.* (2000) emphasised the need for the development of C&I for Community Managed Forest to be based on a fully participatory processes. Thus these processes of information sharing, learning, and awareness building, local communities and local stakeholders could come to a better understanding and agreement on the visions of sustainable forest management and how to go about it. Furthermore, to facilitate and encourage local communities to implement monitoring framework and use it as decision-making tool, they have to be engaged as key players and develop strong ownership over the development process.

The processes and steps of developing the Criteria and Indicator framework for local monitoring were described in Figure 1. The key steps of the monitoring development process were as follows:

1. Developing a Shared Vision of the Future

As the first step in framework development process, we facilitated the participants to come up with a shared vision of the future. Vision-type scenario building technique was used for this purpose. Scenarios are tools that can be used to anticipate the future by stimulating people to

Figure 1. The processes of developing local monitoring system in Palawan.

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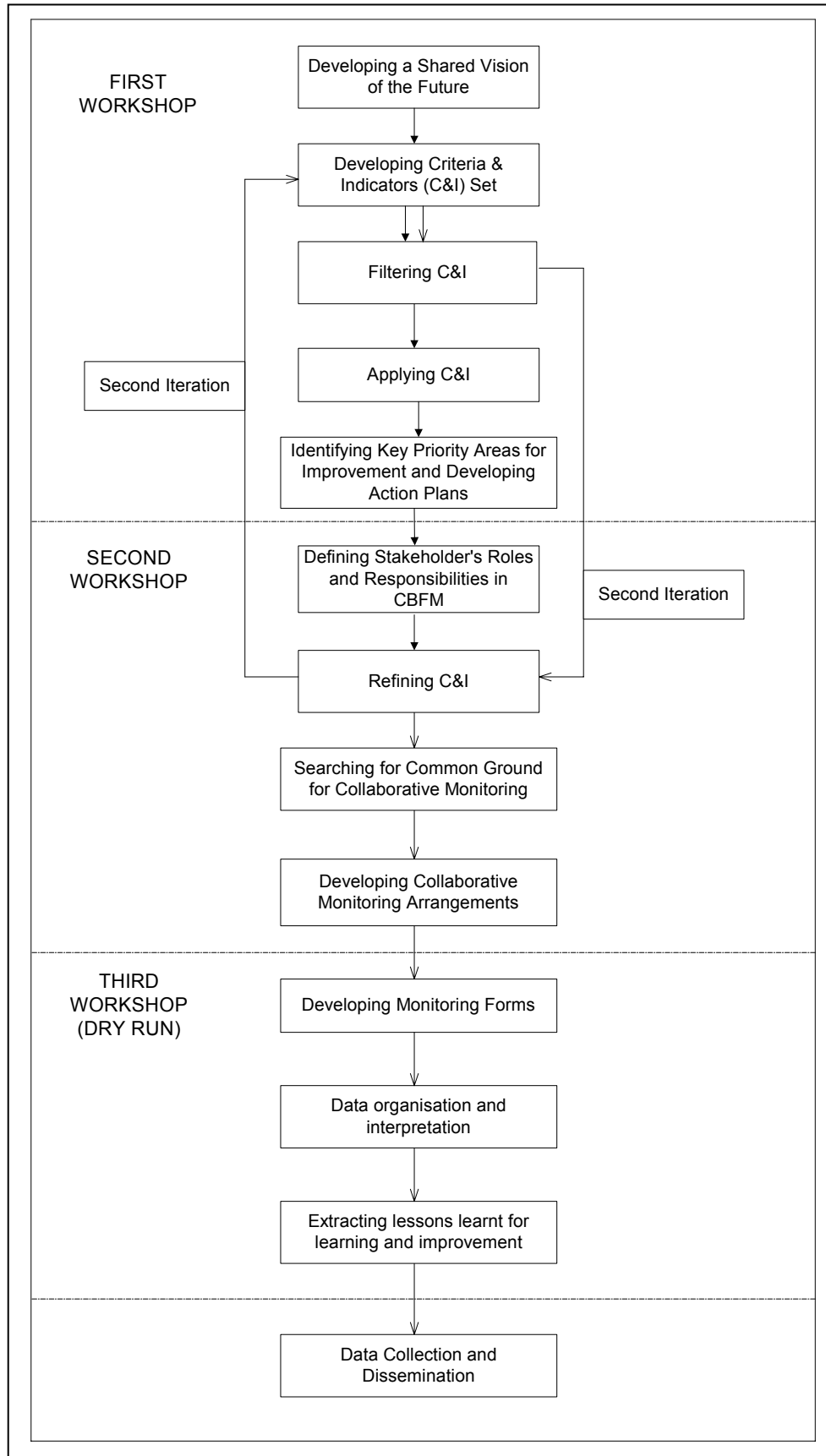
think creatively and breaking away from their usual ways of thinking, or their mental model of how things work, so that they can deal better with complexity and uncertainties (Wollenberg, 2000). Firstly, participants were asked to visualise and subsequently draw an ideal desired future. Their visions of the ideal future could be regarded as the goal or the direction in which they would like to move towards. Secondly, the agreed and shared components of future conditions were pulled out from their drawings. These components were grouped together and general heading ("theme") was assigned for each group. The general themes emerged were Education, Organization, Livelihood, Forest Management, Coastal Resource Management, Infrastructure (included irrigation and electricity), Health, and Policy.

2. Developing Criteria and Indicator-based monitoring framework

We explained to the participants what C&I framework is. An analogy with tree structure was used to explain the structure of C&I framework and to help the participants in understanding how the high levels of the C&I (for example "Criteria") relates to lower levels (for example: "Indicators"). The trunk was used to describe criteria, branches described indicators, and leaves described verifiers. An exercise was also conducted to explain what "criteria" and "indicators" mean and how they relate to one another. In this exercise the participants were divided into several groups. Each group was asked to build a house, using plastic straws, that is 'big', 'strong', and 'beautiful'. Once the houses were built, the participants were requested to select a house that met the three criteria. This prompted the participants to have a lively discussion on the indicators of those three criteria and allowed them to understand the meaning of the two terms better.

To develop the C&I framework for monitoring, the participants were divided into small groups; each group worked on a different theme. In each group, participants specified the specific conditions that would describe the ideal conditions of the corresponding theme. These specific conditions were further broken down into smaller units that are measurable or observable and can provide indications how far local people and local stakeholders are in achieving their goal of sustainable forest management. These processes produced three levels of Criteria and Indicator framework, with theme as the Criteria.

Despite the simplification of the C&I structure, the participants still found it difficult to distinguish different levels of this simplified structure. The participants misunderstood the highest level ("Vision") as dream so that their ideal conditions were unrealistic and unattainable. Most of the participants confused the indicator as action plan, things that needed to be done rather than ideal conditions to achieve. The monitoring framework produced therefore should be refined to ensure that the C&I are applicable, realistic or attainable, doable (easy to do and not costly), and encourage collaboration across different community groups or stakeholders.

3. Refining the monitoring framework

The concept of filters was introduced and the participants were asked to filter out indicators and verifiers that were not applicable, realistic, doable, and did not encourage collaborative efforts. To allow the participants to learn what other groups developed for different themes, the participants reviewed the C&I produced by other groups, applied these filters, and provided inputs to improve the set.

The monitoring framework underwent another major iteration in the second workshop. The framework was expanded in the second workshop from 8 Criteria to 10 Criteria (see Table 2 for summary of changes). However, the participants later decided to focus their initial monitoring efforts on five Criteria only, i.e. Education, Livelihood, Organisation, Forest Management, and Coastal Management (see Appendix 1 for the complete monitoring framework).

4. Prioritising Areas for Improvement and Collective Actions

At this stage, the participants assessed their current conditions against the ideal conditions described in the C&I framework, with the purpose to identify areas that need improvements. As this exercise produced a long list of "weak" areas, the participants further prioritized those "weak" areas. They later developed strategies to address them in several discussion sessions outside the workshop. The integrated planning for action in the monitoring development process allowed the participants to see clear and direct linkages on how by undertaking certain actions they would reach their ultimate goal of sustainable forest management.

Table 2. Iterations in the Criteria and Indicator structure of the local monitoring framework

CRITERIA	FEB 2001 WORKSHOP	SEPT 2001 WORKSHOP	JAN 2002 WORKSHOP
Policy	3 I , 9 V	2 I , 8 V	-
Education	3 I , 10 V	4 I , 8 V	4 I , 8 V
Livelihood	3 I , 6 V	2 I , 7 V	2 I , 7 V
Organisation	6 I , 10 V	4 I , 8 V	4 I , 8 V
Health	3 I , 14 V	3 I , 6 V	-
Forest management	2 I , 8 V	2 I , 6 V	2 I , 6 V
Coastal management	1 I , 6 V	2 I , 9 V	2 I , 9 V
Infrastructure	3 I , 10 V	1 I , 1 I	-
Social		3 I , 6V	-
Ecology		4 I , 6V	-

5. Clarifying Stakeholders' Roles and Responsibilities in CBFM

This step is quite important due to the numerous numbers of institutions in Palawan. This step was conducted in the second workshop to ensure that monitoring would be a collaborative effort and that the participants were clear about the roles and responsibilities of different groups and institutions. Venn diagram was used as a tool to identify local, both formal and informal, institutions and to highlight different and contrasting local perceptions regarding the roles, relative importance and influence of local institutions as compared to other institutions. Pretty *et al.* (1995) pointed out that Venn diagram exercise can be an illuminating one since it showed how others perceived certain aspects of one's institution and work that may not be revealed before.

The participants worked in three small groups and produced three different diagrams showing the group's perceptions on the roles, responsibilities, and interactions among local groups and institutions. Despite the differences in their perceptions, the participants agreed that the diagram showing close coordination and partnerships among all concerned institutions, that assisted and

supported the PO in implementing CBFM, described the ideal situation which they would like to achieve in the future.

6. Searching for Common Ground for Collaborative Monitoring

This step was conducted to identify the common ground for collaboration. The participants were divided into four homogenous groups, i.e. members of Fishermen's Association, members of the People's Organisation, representatives from NGOs, and representatives from local government institutions. They reviewed the eight criteria of the monitoring framework produced, identified areas of their interests and concerns based on their roles, responsibilities, and mandates. This exercise pinpointed areas of common interests and possible collaboration among different stakeholders as shown in Table 3.

Table 3. Areas of interests and concerns of different community groups and local stakeholders

CRITERIA	People's Organisation	Fishermen's Association	PCSD	DENR	NGOs
Organisation	✔	✔			✔
Livelihood	✔	✔			✔
Forest and Forest Management	✔	✔	✔	✔	✔
Coastal Management	✔	✔	✔	✔	✔
Health	✔	✔			
Infrastructure	✔	✔			
Policy	✔	✔	✔	✔	✔
Social	✔	✔	✔	✔	✔
Ecology	✔	✔	✔	✔	✔
Production	✔	✔	✔	✔	✔

It was clear from the exercise that the concerns of communities as expressed in the monitoring framework were very comprehensive and broad. Some of the concerns were beyond the mandates and responsibilities of the local stakeholders present in the workshop. These included Health and Infrastructure (which are the concerns of local government), Organisation, and

Livelihood. It would be a challenge for the PO to monitor these issues and to try to solve related problems without the support from relevant institutions.

7. Developing Collaborative Monitoring Arrangements

The participants further discussed on how to go about collecting the information by defining, for each verifier, who will collect the information, the methods of collection, source of the information (for secondary information), the time needed to collect the information, how often the information should be collected, and how long monitoring should be done to make the information meaningful.

8. Developing Monitoring Forms

As mentioned earlier, the participants decided to focus their monitoring efforts on five criteria only based on their existing skills and capacities. After the second workshop, several PO members came together and developed monitoring forms for those criteria with the assistance from ACM researchers. In the third workshop, the participants were facilitated to improve those monitoring forms. Lorenzo & Estanol (2002) described what the participants went through in the third workshop. The participants divided themselves into several small groups based on their interests and the management activities they have been involved in. During the exercise, the participants had to re-visit the C&I framework and select verifiers that can be combined in one form for monitoring purposes. The results of each group were presented for feedbacks and inputs from the other groups. To ensure that the forms can be filled up easily, the participants tried to complete the revised monitoring forms themselves. They were given the time to collect the data by visiting local school, interviewing key PO personnels who had the information needed, etc. By doing so, the participants improved the forms and collected needed data at the same time. Several examples of the completed forms produced during this workshop were shown in Table 4 and Table 5.

Table 4. Completed forms for the extraction and sales of lumber from CBFM area in January'02.

Type of lumber	Volume (board feet)	Price per board feet	Total price	Expenses				Total income
				Forest charges	Labor cost	Transportation cost	Other cost	
Narra	1,000	45	45,000	11,000	12,000	2,000	400	19,600
Ipil	1,000	28	28,000	11,000	11,000	2,000	200	3,800
Others	1,000	18	18,000	3, 800	10,500	2,000	200	1,500

Table 5. Completed forms for the illegal fishing activities in the *barangay* coastal areas.

Activities	Persons carried out the activities	Frequency of monitoring	Monitoring team	Volume	Place where activities conducted	Cost
Fishing using dynamite	Roy	Daily	Maliliit na Mangingisda Multi-Purpose Cooperative (MMMPC)	500 kilos	Fish Sanctuary	4,000
Fishing using cyanide	Pedro	3 times a week	MMPC	200 kilos	Fish Sanctuary	10,000

V. IMPLEMENTATION OF LOCAL MONITORING

The PO members started collecting relevant information right after the third workshop. Data collection was done based on their personal interests. For example, most women were interested in monitoring livelihood parameters, e.g. handicraft making and goat raising, while key PO officers were interested in monitoring the volume of forest resources extracted such as lumber and *almaciga* resin. Monitoring of these parameters, using the devised forms, was carried out without too much difficulty. Unfortunately, the efforts lasted for a couple of months only. Monitoring stopped after several key PO officers, including the Chairman of the PO, got better economic opportunities elsewhere. CBFM activities were run by a skeleton of PO officers and members who were mostly discouraged by the absence of their leader. Harvesting of forest

products reduced tremendously and the PO was not able to meet the targeted volume set for that year. Without these activities there was nothing much for the PO to monitor.

With regards to monitoring of illegal activities in the forest, the City Environment and Natural Resource Office, through its forest guards, have been patrolling the area. Community and PO members, other government institutions such as *barangay* councils, Palawan Council for Sustainable Development, etc. collaboratively supported this effort by reporting any illegal activities taken place in the area. Two cases of illegal logging and illegal transport of lumber were recorded, and the cases were filed by PO against the illegal loggers. In the coastal areas, Fishermen's Association has been active in monitoring illegal fishing activities. Their monitoring efforts continue until now. Monitoring records were maintained by the association's secretary. This is probably due to the support provided by several institutions, including Haribon Palawan and the Bureau of Fisheries and Aquatic Resources. They warned the persons who conducted illegal activities and turned over the case to authorities for legal actions.

VI. LESSONS LEARNT AND CHALLENGES

We observed that the development processes of local monitoring system were effective in providing a platform for collective action between the PO and other stakeholders. The processes engaged PO members and representatives of other community groups, such as fishermen's association, women's groups, teachers, health workers, and youth, who were excluded in many CBFM-related activities before. The PO found low participation of PO members and other community members (non-PO members) in the past very problematic. Their low participation was contributed by inadequate information dissemination about CBFM, low benefits enjoyed by the people, lack of support from the *barangay* leaders to CBFM, and hesitation from certain key PO personnels to include other non-PO members in their activities. After the second workshop, a gradual change in the way the PO strategised their management interventions was noted. In the past, the majority of their CBFM activities were designed to involve their members only. In their more recent activities, they designed their activities to include the participation of other community groups and non-members. Handicraft weaving was initiated by several PO women, and their efforts were later expanded to include other non-PO women. The PO also designed a

mechanism in which they actively sought and incorporated feedbacks and inputs from different community groups and stakeholders to their management plan. This mechanism has never been applied before. It is likely that other factors contributed to this new mechanism as well, in particular reflections and learnings from implementing their action plans which re-emphasised the importance of engaging other stakeholders in their CBFM activities. The processes also integrated planning for collective action in which the PO could directly make an action plan to address those areas that need improvements.

The processes of developing local monitoring provided a platform not only for collective action but also for learning among different stakeholders. By recording illegal activities in their area, they realized that they did not know the appropriate mechanisms for reporting such activities to concerned agencies, and what information they have to submit to facilitate an immediate response from investigating teams from those agencies. This awareness prompted them to learn more about reporting mechanisms from concerned agencies. The women monitored the time needed to complete handicraft items and got a reasonable estimate on how much time they spent for each product. This information allowed them to determine a reasonable price for the product that not only included the costs of the raw materials but also labour costs. By recording which products were sold, the women learned which products were in demand and could be sold easily and so could determine the kind of products that they should produce in the future. They later monitored the price of similar products and the variety of designs available in the market.

The development of monitoring system also allowed the participants to learn about the concerns, interests, limitation and constraints of other groups and institutions that lead to increased awareness, mutual respect and understanding. Identification of areas for collaborative monitoring and prioritisation of parameters showed that the interests of government institutions, such as DENR and Palawan Council for Sustainable Development, are natural resource management, environment and forest protection. The interests of the PO and communities are far beyond these and include their needs for food, alternative incomes, education, etc. which may not of high priority for those government agencies. Consequently, for information collection purposes, the PO and community groups would have to collect related data themselves or get some support from the local NGOs. In fact, most of the costs and responsibilities in collecting the data so far

were actually shouldered by the PO and community members. Monitoring illegal activities was the only effort that was highly supported by the different government institutions. This may not be a problem for the issues that concern them and as long as they have sufficient skills and capacities to do so.

Our observations during the implementation of local monitoring showed that the PO members still need capacity building to help them to organise the information in the tabular format. Furthermore, they also need assistance in analyzing the information to generate sound and sensible conclusions that will help them to understand the consequences of their management interventions. Nevertheless, low capacities were not the biggest challenges that they faced. The fact that the PO only monitored the agreed parameters for a couple of months only indicated that there was a serious problem with regards to the CBFM management that had discouraged them to maintain their efforts. As mentioned at the beginning of this paper, the management of CBFM in the country is still dominated by the Department of Environment and Natural Resources. What devolved to the local communities are mostly responsibilities while the rights are bounded with so many regulations and requirements. The POs do not have sufficient autonomy to come up with their own rules, to decide the level of their access to forests and harvesting of forest products, etc. as these issues are highly controlled by the DENR.

The situation in Palawan was even more difficult as the management of the island has been heavily oriented towards conservation and protection. It has serious implication on the benefits that the PO can generate from CBFM. One example is the restrictions on the transport of lumber out of the island. The PO was allowed to transport finished or semi-finished wood products but they had to go through a long process to get the permit. Although the PO had the permit to harvest dead trees from their CBFM area, the limited demand from the Palawan-based buyers, their limited access to outside markets, and high forest charges (taxes) have prevented them to generate sufficient income from CBFM. Another example was the zoning system recently introduced by the Palawan Council. The system puts 70% of the CBFM area of the PO in ACM site into core zone. If this zoning system is enforced in the future, the majority of the CBFM area can not be harvested and utilized by the PO. With all those challenges, it is not surprising that several key PO officers abandoned CBFM as the benefits of CBFM management were not

sufficient to sustain their interests. The PO is at the stage of re-organising themselves at the moment, exploring non-forest livelihood sources, while lobbying the Palawan Council to reconsider the implementation of the zoning system. Nevertheless, without serious commitment from relevant government agencies to improve the situations for the POs, CBFM will not achieve its intended goals.

VII. CONCLUSION

The People's Organisation, community members, and other local stakeholders in Palawan have successfully developed a framework for local monitoring system in a participatory way. The development processes of that monitoring system have fostered collective action and learning across these different stakeholders. Several spin-off effects of this initiative were also observed in which the People's Organisation became more active in reaching out and working together with different community members and local stakeholders.

Despite the participatory nature of the monitoring development processes, several challenges remained with regards to the implementation of monitoring system itself. The results of this study showed that the participatory and bottom-up processes in developing monitoring system, based on stakeholders' common concerns and for their own purposes, were not enough for the PO to sustain their monitoring efforts. To maintain and/or increase the commitment and interests of the PO to manage the devolved CBFM areas, there is a need for policy-makers to create a more conducive policy framework and put in place more appropriate supporting mechanisms that would allow the PO to be more in control over the management and to generate benefits that would set off the costs they invest in CBFM management. Without these, PO will not be encouraged to manage forests and forest resources in a sustainable manner.

VIII. ACKNOWLEDGEMENTS

and Elsa P. Santos for their contribution and participation in designing the processes for this local monitoring development effort.

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APPENDIX 1. THE FRAMEWORK OF LOCAL MONITORING SYSTEM

Local monitoring framework on Education.

Criteria: Improved education quality and system in the three barangays.				
Indicators	Verifiers	Data Needed Baseline/Actual	Method of Collection	Source of Information
1. There is a scholarship programme for high school and college	Majority of the poor can study	Number of pupils/students - day care - elementary - high school - college	Teachers' reports	Officials of Parents Teachers Community Association (PTCA)
2. Presence of non-formal education activities	a. Presence of trainers coming from the villages.	Number of trainers from the villages.	Surveys, Interviews	Department of Social Welfare and Development (DSWD), Department of Education, Culture, and Sport (DECS), Barangay Officials
	b. Out-of-school youths attend vocational training	Number of out-of-school youths studying or participating in education activities Number participating in non–formal education	Report School records	Concerned agencies
	c. Training in the villages	Number of training courses conducted in the villages	Village records	Concerned agencies
3. Presence of scholarship program for vocational course/tech-nical school for CBFM beneficiaries	CBFM beneficiaries are able to study	Number of persons studying vocational courses Number of persons who finished college	Interviews Surveys Records of People's Organisation	Concerned agencies
4. Many people understand CBFM	a. Presence of Information and Education Campaign materials	Number of Information and Education Campaign materials Signboard Pamphlets Radio program Film showing	Ocular inspection Interviews Radio station	
	b. Regular meetings, dialogues are held	Number of meetings	Records of People's Organisation	People's Organisation
	c. Presence of a newsletter	Number of issues	Records	People's Organisation

Local monitoring framework on Forest Management.

Criteria: Sustainable management of forest and forest resources.				
Indicators	Verifiers	Data Needed Baseline/Actual	Method of Collection	Source of Information
1. Sustained forest protection and rehabilitation	Activities to protect the forest and watershed like reforestation, tree planting, nursery establishment and agroforestry timber stand improvement	Number of trees Number of nurseries Number of hectares	Secondary data, reports	People's Organisation, Department of Environment and Natural Resources (DENR), Palawan Tropical Forest Protection Program (PTFPP), Local Government Units (LGUs)
2. Management plan and framework exist and are implemented	a. Proper and efficient use of forest resources	Activities in processing forest resources		
	b. Proper technology for processing forest resources	Proper technologies employed		
	c. Timely harvesting of minor forest products	Month of harvest		
	d. Policies for proper use of forest resources are followed	Policies		
	e. Active forest guards	Number of forest guards (*bantay gubat*)		

Local monitoring framework on Livelihood.

Criteria: Existence of sources of income for the community.				
Indicators	Verifiers	Data Needed Baseline/Actual	Method of Collection	Source of Information
1. Increased incomes	a. Crop production for better incomes	Identify capabilities of members	Survey Coordination activities	Department of Agriculture (DA), Department of Social Welfare and Development (DSWD), National Statistic Office (NSO), members of People's Organisation
	b. Savings of Pesos 2,500 a month from increased incomes	Monthly income	Survey Interviews	DA, DSWD, NSO, members of People's Organisation
	c. Enough money for common needs	List of household appliances and other important household items	Survey Simple questionnaires	DA, DSWD, NSO, members of People's Organisation
	d. Almost all residents are gainfully employed	Number of household members who are employed	Survey Simple questionnaires	DA, DSWD, NSO, members of People's Organisation
	e. Parents can send their children to school	Type of school (private, public) Type of course taken	Survey Simple questionnaires	DA, DSWD, NSO, members of People's Organisation
2. Stable and sufficient source of income	a. Presence of livelihood projects	Type of livelihood activities Source of livelihood project funds Identity of project implementers		
	b. There are members who own land	Status of land ownership Assessment value of land	Survey Simple questionnaires	Assessor, Bureau of Land

Local monitoring framework on Organisation.

Criteria: A strengthened, empowered and responsible organisation exists.				
Indicators	Verifiers	Data Needed Baseline/Actual	Method of Collection	Source of Information
1. Members are strengthened	a. Actions are guided by principles	Principles of cooperative Sustainable development principle (not all)	Observation of operation Observation of meetings Number of output (volume) Output of main product Income expenses	Board of Directors/ members of People's Organisation Board of Directors/ members of People's Organisation Operation manager Operation manager Operation manager or budget officer
	b. Members are able to stand up to principles	Committee or management group installed Cooperative operations followed	Collect data or appointment of staff Check manual procedure/ observation operation	Board of Directors/committee Operation manager
	c. Act as one toward a desired goal	Policy installed and followed Forms/books installed	Check policy manual/observation Check existence of used forms	Board of Directors Chairman/ Book-keeper record
2. Members and officers are dedicated	Complete attendance in meetings, seminars and workshops	Meeting agenda	Collection/copy agenda	Secretary
3. Members and officers follow principles and guidelines	a. Render voluntary services in monitoring illegal activities in CBFM area	Operation record	Collect grading schedule/person involved	Secretary
	b. 100% payment of membership fee and share capital	List of members who pay membership fee & share capital	Check record of secretary or book-keeper	Book-keeper and Secretary
4. There is a sound financial management system	a. Financial statements are submitted 100%	Quarterly financial report submitted Book of accounts	Check with bookkeeper	
	b. Book of account is maintained 100%	Book of accounts	Check with book-keeper or records of account	

Local monitoring framework on Coastal Management.

		Data Needed Baseline/Actual	Method of Collection	Source of Information
Indicators	Verifiers			
1. Sustained implementation of Community Resource Management Plan (CRMP)	a. Existence of fish sanctuary	Number of fish sanctuaries	Secondary data reports	Department of Environment and Natural Resources (DENR), Environmental Legal Assistance Center (ELAC), coast guards (*bantay dagat*), Local Government Unit (LGU)
	b. Existence of buoys to mark fishing boundaries	Number of fishing buoys established	Secondary data reports	DENR ELAC, *bantay dagat*, LGU
	c. Reduced illegal activities	Number of violators, number of illegal activities	Secondary data reports	DENR ELAC, *bantay dagat*, LGU
	d. Protection and conservation of coral reefs that serve as breeding grounds for fish	Laws, ordinances that are enforced	Secondary data reports	DENR ELAC, *bantay dagat*, LGU
	e. Sufficient knowledge of laws on use of fishery resources	Training, seminars attended and information extended to others		DENR ELAC, *bantay dagat*, LGU
	f. Active, disciplined and dedicated coastal guards	Number of coastal guards and extent of dedication in performing job Number of violators		DENR ELAC, *bantay dagat*, LGU
	g. Coordination with Local Government Units and other sectors	Frequency of meetings		
	h. Prevention of garbage disposal into sea	Posters, signs installed		
2. Balanced and proper utilization of coastal resources	Alternative livelihood activities for added household income	Various coastal livelihood activities	Listing	

Criteria: Sustainable management and protection of coastal areas.