

Challenges and Opportunities in DENR-LGU Co-Management of Forests and Forestlands in Seven Sites in the Philippines

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INTRODUCTION

The concept of collaborative management or co-management is defined as “the sharing of power and responsibility between the government and local resource users (Berkes *et al.* 1991).” Co-management is described as “a partnership in which government agencies, local communities, and other stakeholders negotiate, as appropriate to each context, the authority and responsibility for the management of a specific area or set of resources (IUCN 1996).” The World Bank (1999) further elaborates co-management as “the sharing of responsibilities, rights, and duties between the primary stakeholders, in particular, local communities and the nation state; a decentralized approach to decision-making that involves the local users in the decision-making process as equals with the nation-state.” Figure 1 illustrates this, noting that the State is only one among a set of stakeholders (Carlson and Berkes 2005).

Co-management in the Philippines has been implemented since early 1990s. The province of Nueva Vizcaya pioneered at least four models of co-management arrangements mostly led by the local government unit (LGU) with the Department of Environment and Natural Resources (DENR) as the government agency mandated to manage and oversee development of public forestlands. The first co-management agreement in the country was forged among the DENR, the Provincial LGU (PLGU), the forest reserve occupants, and civil society through a memorandum of agreement (MOA) that mandated all parties to become joint forest managers. Another arrangement is the co-management model between PLGU and private landowner

ABSTRACT

The study assessed the DENR-LGU model of collaborative management of forests and forestlands in seven sites in the Philippines. A critical review was made of relevant laws and policy issuances that enable co-management; the challenges and opportunities in implementing this co-management model to promote forest conservation, protection and development; and how these bear on tenure security, livelihood of forest communities, and institutional arrangements in forest management. In turn, factors contributing to the success or failure of co-management were assessed. This paper presents problems and prospects, issues and concerns, and puts forward corresponding policy recommendations to improve co-management of forests and forestlands in the Philippines.

Keywords: co-management, forestlands, forest communities, tenure security

in which usufruct rights are issued to private land owners through a 25-year MOA. A third model involves the PLGU and devolved watershed settlers under a 25-year MOA that allows limited agricultural cultivation and bestows harvesting rights to the settlers.

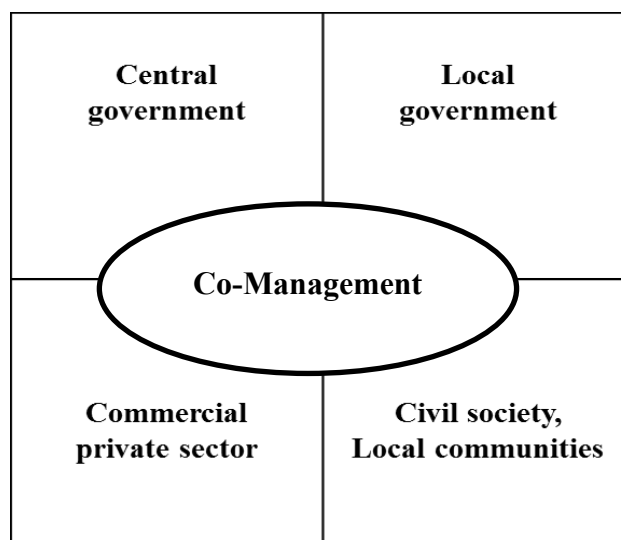


Figure 1. Categories of stakeholders involved in co-management (Source: World Bank 1999 as cited in Carlson and Berkes 2005)

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The joint management by PLGU and the Provincial Environment and Natural Resources Office (PENRO), which entails the issuance of ownership title to tree planters within the province, is another model of co-management. These arrangements show that co-management is a strategic alternative to devolution that combines DENR's expertise in resource management and the LGU's capability in delivering basic services and skills in people management (Agbayani 2005).

The most widely implemented co-management arrangement nationwide involves the central government agency (through DENR) and LGU, and derives its legitimacy from the Local Government Code enacted in 1991 as Republic Act (RA) No. 7160 that devolved certain functions to LGUs. The Code emphasizes the LGUs' role in natural resources management by stating that "the local government shares with the national government the responsibility in the management and maintenance of ecological balance within their territorial jurisdiction." The Code initially devolved certain environmental functions of DENR to LGUs including the implementation of the Integrated Social Forestry Projects (ISFP).

DENR crafted several policy issuances to strengthen collaboration and partnership with LGUs. The Department Administrative Order (DAO) No. 30 issued in 1992 provided "guidelines for the transfer and implementation of DENR functions devolved to the LGUs." DENR-DILG (Department of Interior and Local Government) Joint Memorandum Circular (JMC) No. 2003-01 stipulates the "strengthening and institutionalizing the DENR-DILG-LGU partnership on devolved and other forest management functions."

A recent issuance by DENR on this is DAO 2010-07 which provides for the continuing devolution of environment and natural resources functions to LGUs.

Other co-management models have since been reported in other areas in the Philippines but only a few studies documented and assessed how these models fared in addressing socio-economic, institutional, and environmental issues relating to forests and natural resources management.

This paper focuses on the LGU-DENR co-management model implemented in seven sites in the Philippines. The study aims to evaluate this co-management model in terms of challenges and opportunities in promoting forest conservation, protection, and development; in improving tenure security and livelihood of forest communities; and in improving institutional arrangements in forest resource management. Further, factors contributing to the success or failure of co-management were determined and on the basis of the study's findings, policy recommendations were developed to improve co-management of forests and forestlands.

METHODOLOGY

The study used both secondary data (*e.g.*, relevant documents, related policies, and literature on co-management and CBFM) and primary data for assessment. Primary data were collected through the use of combined social policy research tools such as individual and key informant interviews (KIIs), focus group discussions (FGDs), intensive consultations, and direct field observations.

Table 1. Number of key informants and percentage by sector in the seven co-management sites

Study Site	No. of Key Informants Interviewed					%
	DENR	LGU	POs	Other Sectors	Total	
Quezon, Nueva Vizcaya (Buliwao-Maasin Subwatershed), Luzon	2	3	3	1	9	10.11
Lower Magat Forest Reserve, Diadi and Bagabag, Nueva Vizcaya, Luzon	3	6	5	1	15	16.85
Bayawan City, Negros Oriental, Visayas	3	2	9	2	16	17.98
Santa Catalina, Negros Oriental, Visayas	3	3	5	2	13	14.61
Wao, Lanao Del Sur, Mindanao	1	2	10	1	14	15.73
Isulan, Sultan Kudarat, Mindanao	2	3	5	1	11	12.36
Surallah, South Cotabato, Mindanao	2	2	5	2	11	12.36
TOTAL	16	21	42	10	89	
%	17.98	23.59	47.19	11.24	100.00	100.00

Note: Other sectors include NGOs and local water district

Semi-structured interview schedules using open-ended questions for the KII as well as guide questions for the FGDs were prepared. Since this was an exploratory study, snowball sampling (a non-probability sampling technique) was used where key informants (KI) were initially identified by the heads of the DENR, LGUs, people's organizations (POs), and other agencies (*i.e.*, local water district, non-government organizations or NGOs). These respondents then recommend key leaders and elders knowledgeable on co-management of forests and locally known to have expressed differing perspectives as possible respondents. A total of 89 informants were interviewed (Table 1) and four FGDs were held (Table 2) with representatives from three sectors (LGUs, DENR, and POs) in the seven sites from May to November 2010. Availability of the informants during site visit was one of the reasons for the limited sample size.

Sites were purposively selected to represent the Philippines' three major island groups (two sites each from Luzon, Visayas, and Mindanao). The sites were limited to those that received development assistance from the United States Agency for International Development or USAID's EcoGov Program and the Philippine Tropical Forest Conservation Foundation, Inc. (PTFCF). The projects, comprised mainly of LGU-DENR co-management arrangements, were implemented at the municipal or city level in six sites while one was at the provincial level. Among the sites, five are located in a municipality: Quezon (Nueva Vizcaya), Santa Catalina (Negros Oriental), Wao (Lanao Del Sur), Isulan (Sultan Kudarat), and Surallah (South Cotabato). One site was based in a city (Bayawan City, Negros Oriental) and the remaining project site was based in a province (Lower Magat Forest Reserve in Nueva Vizcaya). Table 3 summarizes the information on the study sites while Figure 2 shows the site locations.

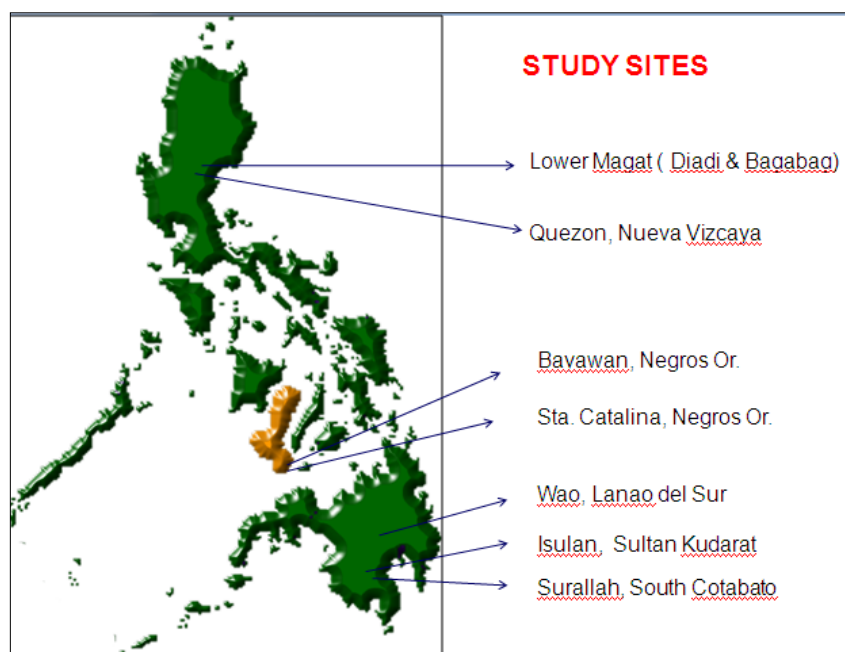


Figure 2. Location of the co-managed study sites

At the time of the study, three of the sites (Lower Magat, Bayawan, and Santa Catalina) were covered by co-management agreements (CMAs) or MOA signed in 2004, two sites (Quezon and Wao) have four-year-old agreements, while Isulan and Surallah were into co-management for one year.

The study focused on determining mechanisms for entering into co-management. While identifying the challenges and opportunities in implementing co-management in forest conservation, protection, and development, the study also looked at how co-management affected tenure security and livelihood of forest communities, the existing institutional arrangements, and determined gaps, problems encountered, and lessons drawn by co-managers. Narrative assessments, both qualitative and quantitative (frequencies and percentages), were made along selected indicators, problems, issues, and concerns raised by the respondents.

Table 2. Number of participants and percentage by sector in four FGDs done covering the seven sites

Study Site	DENR	LGUs	POs	Total
Quezon and Lower Magat Forest Reserve, Diadi and Bagabag, Nueva Vizcaya (2 sites)	3	4	8	15
Sta. Catalina and Bayawan City, Negros Oriental (2 sites)	3	4	10	17
Surallah, South Cotabato and Isulan, Sultan Kudarat (2 sites)	2	3	6	11
Wao, Lanao del Sur	1	2	8	11
Total	9	13	32	54
%	16.67	24.07	59.26	100.00

RESULTS AND DISCUSSION

Co-Management Policies and Initiatives in the Philippines

From the colonial period until the early 1990s, management of Philippine forests have been entrusted to national government agencies, which are highly regulatory, centrally controlled, and industry-centered. In 1991, the central government, including DENR, steered forest policies to devolving forest management to LGUs and local communities through RA 7160.

Relevant laws and policy issuances that enable co-management of forests and forestlands in the country are listed in Table 4. These serve as the legal basis for implementing co-management in the seven sites studied. Executive Order (EO) 192 of 1987 gives DENR the primary responsibility for the conservation, management, development, and proper use of the country's environment and natural resources such as forests and forestlands. RA 7160, on the other hand, bestows rights and obligations to LGUs to share in the responsibility to manage and maintain the ecological balance within their territorial jurisdictions. It enjoins LGUs to work closely with DENR in the management of natural resources. Further, the code provides that, subject to the supervision, control, and review of DENR: a) provinces shall be involved in enforcement of forestry laws limited to community-based forestry projects; b) municipalities shall be involved in implementation of community-based forestry projects, which include Integrated Social Forestry (ISF) programs and similar projects, the management and control of communal forest with an area not exceeding 50 sq km, and establishment of tree parks, greenbelts, and similar forest

development projects; and c) for cities to carry out the same functions or roles as those devolved to the municipalities and provinces.

To carry out the devolution, the following guidelines were issued: 1) DAO 92-30 detailing the guidelines for transfer and implementation of DENR functions devolved to LGU; 2) DENR-DILG JMC No. 98-01, which prescribes the Manual of Procedures for DENR-DILG-LGU partnership on devolved and other forest management functions; and 3) DENR-DILG JMC No. 2003-01 on strengthening the DENR-DILG-LGU partnership on devolved and other forest management functions. JMC 98-01 mandates the setting up of mechanisms for the DENR-DILG stakeholders' partnership and as oversight for the implementation and monitoring of devolution and partnerships. It also provides for the general procedures for establishing partnership, and putting in operation the devolution. JMC 2003-01 calls for preparation of forest land use plan (FLUP) as basis for comprehensive development of forestlands in a particular area and as a prerequisite for entering into co-management agreement. EO 606 of 2007 reiterates FLUP as basis for forestland development. EO 318 of 2004 promotes sustainable forest management in the country.

Other laws supporting devolution by recognizing the role of upland farmers, local communities, and indigenous peoples (IPs) in sustainably managing their resources are RA 7586, otherwise known as the National Integrated Protected Area System

Table 3. Brief profile of the seven co-management sites

Study Site	Assistance Provider	LGU Level	Date CMA Signed	Area Covered (ha)	CMA Partners
Quezon, Nueva Vizcaya (Buliwao-Maasin Subwatershed), Luzon	EcoGov for FLUP formulation	Municipal	May 4, 2006	4,995	MOU: BLGU Buliwao & Maasin, MLGU-Quezon, DENR-PENRO, NCIP-RD2, NVSU, Dept. of Land Reform, DAI-EcoGov, FRIENDS
Lower Magat Forest Reserve, Diadi and Bagabag, Nueva Vizcaya, Luzon	Natural Resources Management Program and GOLD Project of USAID	Provincial	Feb. 25, 1998 amended Jan. 24, 2004	24,000	MOA: DENR, PLGU Nueva Vizcaya
Bayawan City, Negros Oriental, Visayas	EcoGov for FLUP formulation	City	June 8, 2004	14,434	CMA: DENR-R7, CLGU Bayawan City, Negros Oriental
Santa Catalina, Negros Oriental, Visayas	EcoGov for FLUP formulation	Municipal	Sept. 8, 2004	15,000	Memorandum of CMA: DENR-R7, MLGU Santa Catalina, Negros Oriental
Wao, Lanao Del Sur, Mindanao	EcoGov for FLUP formulation	Municipal	April 11, 2006	2,184	MOA: DENR-ARMM, MLGU Wao, Lanao Del Sur
Isulan, Sultan Kudarat, Mindanao	EcoGov for CMA implementation	Municipal	April 16, 2009	14,443	CMA: DENR-R12, MLGU Isulan, Lanao Del Sur
Surallah, South Cotabato, Mindanao	EcoGov for FLUP implementation	Municipal	Feb. 23, 2009	11,618	CMA: DENR-R12, MLGU Surallah, Lanao Del Sur

(NIPAS) Act of 1992, and RA 8371 or the Indigenous Peoples Rights Act (IPRA) in 1997. NIPAS Act provides for the creation of a site-based Protected Area Management Board (PAMB), composed of representatives from DENR, LGUs, NGOs, and organized communities to serve as local policy making body to deliberate over land use plans, zoning measures, as well as resource management and protection activities in priority protected areas. IPRA provides for the recognition, protection, and promotion of rights of indigenous cultural communities/indigenous peoples (ICC/IPs) to their ancestral lands through the issuance of Certificate of Ancestral Land Title (CALT). The IPs are entrusted with the responsibility to maintain, develop, protect, and conserve these areas with support and assistance from government agencies.

In spite of these laws and policy issuances on devolving environmental functions to LGUs, there are no clear policies that provide guidance on how co-management should be implemented on the ground. At present, local DENR offices and LGUs rely on general devolution while each site crafted provisions of CMAs and MOA based on needs and situation.

In 2011, the DENR's CBFM office reported 158 co-management sites in the country with a total area of 486,853 ha (Table 5). These sites are co-managed by DENR and LGUs either at the provincial or municipal levels and cover communal forests, community watersheds, greenbelts, tree parks, and reforestation areas. The Cordillera Administrative Region (CAR) has the most number of CMAs (57) but only cover 50,069 ha while Region XII has 10 CMAs covering 124,598 ha.

Reasons of DENR and LGU for Entering into Co-Management

Table 6 presents the reasons of DENR and LGU respondents for entering into co-management, grouped into five: 1) protecting the existing forests (91.89%), 2) rehabilitating bare forestlands (86.49%), 3) securing water sources (64.86%), 4) reducing flooding and soil erosion (48.65%), and 5) biodiversity conservation (48.64%).

The results show that respondents put high premium on the value of forests in their respective areas, not only for their productive (source of timber and water) and protective (reducing floods and soil erosion) services, but also for floral and faunal biodiversity therein. The LGUs want to protect the existing forests in the watershed and rehabilitate bare forestlands to improve water supply and quality as well as reduce the risk of flooding downstream.

The respondents said that their communities will be highly vulnerable to the negative effects of uncontrolled forest degradation (*i.e.*, timber poaching, conversion to upland farms) common in their areas unless they protect the remaining forest cover and rehabilitate bare forestlands.

They realized that DENR alone could not protect the forests by itself so the agency needs to co-manage these with LGUs who have direct jurisdiction over the communities within and around forestlands.

Table 4. Relevant policy issuances on co-management of forestlands

Year	Policy	Subject
1987	Executive Order No. 192	Providing for the reorganization of the Department of Environment, Energy and Natural Resources, renaming it as the Department of Environment and Natural Resources, and for other purposes
1991	Republic Act 7160	The Local Government Code of 1991
1992	DENR Administrative Order No. 30	Guidelines for the transfer and implementation of certain DENR functions devolved to the LGUs
1998	DENR-DILG Joint Memorandum Circular No. 98-01	Manual of procedures for DENR-DILG-LGU partnership on devolved and other forest management functions
2003	DENR-DILG Joint Memorandum Circular No. 2003-01	Strengthening the DENR-DILG-LGU partnerships on devolved and other forest management functions
2007	Executive Order No. 606	Pursuing sustainable upland development anchoring on food, wood and non-wood security and economic productivity and providing the mechanisms for its implementation and for other purposes
2008	Executive Order No. 318	Promoting sustainable forest management in the Philippines
2010	DENR Administrative No. 2010-07	Guidelines on the continuing/phased devolution of ENR functions to LGUs

Table 5. Number of co-management agreements for communal forests and watersheds by region, 2011 (Source: FMB-DENR)

Region	No. of Co-Management Areas	Total Area (ha)
CAR ¹	57	50,068.98
I	12	28,207.05
II	5	30,050.00
III	12	4,513.80
IV-A	1	500.00
IV-B	3	125.00
V	4	10,398.00
VI ²	15	30,770.46
VII	11	65,216.00
VIII ³	6	1,548.99
IX	5	25,303.00
X	3	5,703.00
XI	11	42,323.06
XII	10	124,598.49
XIII	3	67,526.81
TOTAL	158	486,852.64

¹There are no co-management agreements but their data are devolved communal forest or watersheds to LGUs

²There is also an on-going project on CBFMMP Panay and Negros which includes FLUP and co-management among the components

³There are no co-management agreements but their data are devolved communal forests

Mechanisms for Entering into Co-Management

Co-management agreements provided the enabling policy instrument for LGUs to directly participate and take the lead in managing their forest resources. DENR-DILG JMCs 98-01 and 2003-01 provide mechanisms for DENR and LGUs to come up with Joint Orders or MOA for co-management of certain forest areas as part of the devolution under the Local Government Code. The MOA specifies the “roles and functions of the parties, their internal rules of business, the composition, roles and functions of the Technical Working Group, and their commitments to the partnership (Section 2, JMC 2003-01).” Among the priority concerns of the partnership, as shown in Section 3.1, are: “a) identification, delineation, and establishment of co-management areas; b) transparent, accountable, and participatory forest land use planning for each LGU in which the roles and responsibilities of national and local agencies and other sectors are clearly specified; and c) devolution of management of forest land areas based on approved LGU forest land use plans.”

A review of the CMAs in the study sites revealed common items or provisions agreed upon by the partners. It was the role of LGUs to initiate the formulation of FLUPs or IRMPs (Integrated Resource Management Plans) and integration of these into the LGU comprehensive land use plans (CLUP). To implement these plans, LGUs have committed to: a) allocate human and financial resources through the Environment and Natural Resources Council (ENRC); b) enact supporting and facilitating ordinances; and c) strengthen the M/C/PG-ENRO’s (municipal/city/provincial Environment and Natural Resources Office) and ENRC’s capabilities to manage the CMA areas. On the other hand, DENR provided technical assistance; deputized LGU staff and personnel to enforce ENR laws and regulations; issued tenurial instruments that were properly endorsed by the ENRC; assigned permanent support staff to the project management unit (PMU); and allowed the LGU and other steward occupants to harvest, utilize, and transport through permits, planted trees and other non-timber forest products (NTFPs). Each of the seven LGUs formed a multi-stakeholder steering committee or ENRC to serve as oversight body of the co-managed area. The ENRCs hold regular meetings to discuss operational concerns.

Institutional Arrangements in the Co-Management Agreement

Through the co-management agreement, forest management agenda was institutionalized in the seven LGUs through the ENRCs and ENROs. The need to secure water sources and reduce impacts of environmental hazards such as flooding and heavy soil erosion provided the forestry agenda for LGUs to enter into CMA with DENR. With clear goals linked to local needs, the seven LGUs’ legislative bodies (the *Sangguniang Bayan* in the municipalities or *Sangguniang Panglungsod* in the city) adopted the resource management plans of co-managed areas and annually allocated corresponding budget for implementation and operational expenses of ENRO and ENRC. The EcoGov Program indicated in its 2011 reports that during the last six years, EcoGov-assisted LGUs allocated PHP 317.4 million (USD 7.5 million) for these programs. Thus, forest management agenda is slowly being institutionalized in the LGUs, gradually strengthening its capability to provide institutional support to forest dwellers. With the signed CMA, interviewees reported that some LGUs are now recognized by upland farmers and other stakeholders as key service providers on forest management concerns, bringing the institutional support closer to communities.

The creation of steering committees (SCs) or technical working groups (TWGs) composed of DENR representatives, LGUs, and multi-sectoral groups and entities (*i.e.*, POs, NGOs, and local water district) enhanced participation of various stakeholders in decision making, particularly in conflict resolution.

Forest Conservation, Protection, and Development under CMA

The approved resource management plans for the co-management areas of PG-Nueva Vizcaya, the MLGUs of Quezon, Wao, and Surallah have a common purpose, which is to protect and conserve water resources supporting irrigation dams and reservoirs.

Table 6. Frequency of DENR and LGU respondents' reasons for entering into co-management

Reason	Quezon (n=5)	Lower Magat (n=9)	Bayawan (n=5)	Sta. Catalina (n=6)	Wao (n=3)	Isulan (n=5)	Sultan Kudarat (n=4)	Total (n=37)	%
Protect existing forest	4	9	4	6	3	4	4	34	91.89
Rehabilitate bare forestlands	5	9	3	4	3	4	4	32	86.49
Securing the water sources	2	7	4	3	3	4	1	24	64.86
Reduce flooding & soil erosion	2	3	3	3	2	3	2	18	48.65
Biodiversity conservation	2	7	2	2	2	2	1	18	48.65

The LGU respondents of Quezon and Bayawan identified micro catchments at the barangays as sources of potable water and irrigation of small farms. These LGUs prioritized community watersheds for rehabilitation and conducted information campaigns so that communities living within and adjacent to the catchments would understand the need to protect this resource through appropriate soil and water conservation measures.

All respondents in the seven sites said that each of their LGUs organized and fielded forest protection teams to complement the DENR's personnel. Participants in the FGDs agreed that this led to improved protection of existing natural forests in their localities. Table 7 shows the status of forest protection teams as well as records confiscations or apprehensions in each site. Forest protection teams have been deputized as follows: 20 teams for MLGU Quezon, 78 teams for the CLGU Bayawan, and all *tanods* in two barangays in PLGU Nueva Vizcaya. On the other hand, MLGUs of Santa Catalina and Wao hired 20 and 8 forest guards, respectively. Forest protection in Wao has reportedly been effective, evident in the decreasing number and volume of confiscated illegally cut wood from 2008 (5.27 cu m) to 2010 (zero confiscations) as shown in Table 8.

Unfortunately, some informants surmised that illegal tree cutting may have shifted to other municipalities where volume of confiscations increased from 2.22 cu m in 2008 to 47.9 cu m in 2010 (Table 9). Other respondents pointed out that the lack of knowledge on guidelines and poor capability to enforce forestry regulations are common in many LGUs particularly among the DENR-deputized and volunteer forest protection teams.

Tenure Security and Livelihood of Forest Communities in CMA areas

The CMA authorizes the steering committee, chaired by the local chief executive (LCE), to sign sub-agreements for individual property rights (IPR) for CMA site occupants allowing them to develop occupied areas based on an approved farm plan. This new authority enables LGUs to address land tenure concerns of constituent upland farmers, which DENR

could hardly respond to in the past. The LGUs, with technical support from DENR, assisted upland farmers in developing farm plans and delineating individual claims, and subsequently signed IPR agreements with them. Table 9 shows the number of IPRs recognized in the study sites, with Bayawan having the most IPRs (389) and Santa Catalina with the least (30) number.

With secure land tenure, KIs claimed that IPR holders have started to develop their areas into agroforestry farms by integrating long-term perennials such as rubber and fruit trees with annual crops such as corn. To encourage agroforestry farm development, some LGUs established nurseries where forest and fruit trees were raised for distribution to upland farmers. Indigenous forest trees were also provided free and planted along farm boundaries. With funds from the provincial government, some LGUs improved existing roads leading to production areas. Respondents reported that at present, IPR holders within the co-managed sites have shifted from annuals- or cash crops-based farming system to multiple cropping with perennial and woody trees of endemic species, fruit trees, and rubber trees to help ensure soil and water conservation, while providing livelihood. Agroforestry farms developed by IPR holders were as follows: 103 ha in LGU Quezon, 482 ha in Bayawan, 45 ha in Santa Catalina, and 240 ha in Wao.

In addition, respondents said that co-management implementation activities generated local employment for forestland smallholders (Table 10). Employment opportunities included laborers in LGU-established nurseries (86%), forest guards (71%), plantation laborers (52%), workers in LGU infrastructure projects (42%), laborers in harvesting of agriculture and forest products (38%), contractual workers in MENRO (38%), and as ecotourism tour guides (16%).

CMA also has the potential for sustaining forest management initiatives through payment for ecosystem services (PES). The Wao experience provided a clear example of how an LGU can facilitate PES to sustainably finance forest development activities. Wao officials realized that municipal fund alone is not sufficient to sustain forest protection and rehabilitation activities in a co-managed area.

Table 7. Status of forest protection teams in the study sites, 2010

Study Site	Status of Forest Protection Team	Confiscations/Apprehensions
Quezon	20 volunteers (10 per barangay)	No record
Lower Magat	Barangay tanods in 2 barangays deputized	No record
Bayawan City	78 Barangay tanods and auxiliary police deputized	2,500 bd ft lumber; 100 sacks charcoal; 3 vehicles impounded
Santa Catalina	20 hired forest guards	No record
Wao	8 hired forest guards	18,000 bd ft lumber/flitches; 10-wheeler truck and Isuzu Elf impounded
Isulan	IRMP still to be implemented	No record yet
Surallah	IRMP still to be implemented	No record yet

Sources: key informants interviewed

Table 8. Documented apprehensions/confiscations of illegally cut wood (in cu m) in Wao and other municipalities of Lanao Del Sur, 2008-2010

2008		2009		2010	
Months	Volume	Months	Volume	Months	Volume
From Wao					
June	1.26	January	0.22		
October	0.38	March	0.28		
November	1.41	April	2.89		
December	2.22				
Sub-Total	5.27		3.39		
From other municipalities					
May	2.22	January	2.52	March	42.90
		February	1.48	July	5.00
Sub-Total	2.22		4.00		47.90
TOTAL	9.71		7.39		47.90

Table 9. Number of individual property rights (IPRs) recognized in the study sites, 2010

Co-Management Sites	Total Area of CMA (in ha)	Number of IPRs Recognized
Quezon, Nueva Vizcaya	4,995	234
Lower Magat Forest Reserve, Diadi and Bagabag, Nueva Vizcaya	24,000	174
Bayawan City, Negros Oriental	14,434	389
Santa Catalina, Negros Oriental	15,000	30
Wao, Lanao Del Sur	2,184	153
Isulan, Sultan Kudarat	14,443	Still in planning stage, IRMP still to be implemented
Surallah, South Cotabato	11,618	Still in planning stage, IRMP still to be implemented

Other competing demands for available LGU budget could potentially jeopardize implementation of the resource management plan. Thus, Wao explored other sustainable financing sources. On December 15, 2009, after a series of consultations initiated by the Wao LGU, a MOA with the Wao Water District (WWD) was signed for the implementation of a PES scheme. Under the agreement, a co-management special account was created by the LGU where PES funds can be deposited. WWD initially committed PhP 75,000 (USD 1,744) as annual payment into the special account, which the LGU can use to finance rehabilitation and conservation activities of watershed communities within the co-managed area (Balicao *et al.* 2011).

A similar agreement was signed by the MLGU with Wao Truck Owners' Association where the latter committed to collect PhP 10.00 (USD 0.23) per trip from its members, which would be remitted to the PES fund. The expected annual collection from truck owners was estimated at PhP 120,000 (USD 2,790), which can support agroforestry development activities of 16 upland settlers every year accordingly. A PES agreement was also signed by the MLGU with Unifruitti Corporation, a private company getting water from the co-managed area, for washing pineapple fruits before exporting to other countries. Unifruitti agreed to contribute at least PhP 100,000 annually to the PES fund.

Lessons from Implementing Co-Management Activities

The study revealed lessons to help understand the factors contributing to the success or failure in co-managing forestlands. These include the following:

- FLUP facilitates the signing of co-management agreements;
- Clear purpose, such as conservation of water sources and reducing impacts of environmental hazards (*e.g.*, floods, soil erosion, and landslides), is crucial in sustaining LGUs' interest in managing forests and forestlands;
- Multi-sectoral bodies, such as steering committees and technical working groups that allow stakeholders to jointly

- and collaboratively analyze problems and generate consensus, facilitate conflict resolutions and create commitments that increase sustainability of actions;
- Recognition of IPR, complemented with planting material support from LGUs, encourage forestland occupants to develop agroforestry farms;
- Use of existing partnership instruments such as CMA and MOAs, and legitimization of the resource management plans by the SB/SP can continuously engage LGUs to support management of forests and forestlands within its jurisdiction and annually allocate funds;
- DENR can augment achievements in forest protection and rehabilitation by complementing the resources of LGUs and other partners; and
- LGUs can facilitate fund leveraging and generation of sustainable fund sources such as PES and PPP (public-private partnership).

Issues and Concerns in Implementing Co-Management

Co-management has created institutional arrangements promoting partnership among different stakeholders of forests and forestlands. This partnership has brought forestland smallholders closer to institutions such as the LGUs, which can respond to their needs and interests. However, some challenges, as discussed below, will have to be addressed to sustain this partnership.

a. Lack of policy on co-management mechanisms

The review of existing policies (*i.e.*, devolution under the Local Government Code, DENR DAO 92-30, JMCs 98-01 and 2003-01, as well as EO 606 and 318) revealed that there is no concrete policy that details the implementation mechanisms for co-management;

b. Establishing protocols to promote transparency, accountability, and participation in the development and implementation of co-management in general and specifically for PES as a scheme is needed.

Table 10. Frequency in the types of employment provided to the communities by the CMA in the seven sites

Employment*	Quezon (n=9)	Lower Magat (n=15)	Bayawan (n=16)	Santa Catalina (n=13)	Wao (n=14)	Isulan (n=11)	Sultan Kudarat (n=11)	Total (n=89)	%
Nursery laborer	8	12	13	7	23	5	9	77	86.52
Forest guard	8	13	16	13	13	-	-	63	70.79
Plantation laborer	8	12	9	6	11	-	-	46	51.69
LGU infrastructure project laborer	3	5	8	9	12	-	-	37	41.57
Agriculture & forest products harvesting laborer	8	5	7	7	8	-	-	35	39.33
MENRO contractual staff/ laborer	1	3	9	3	5	5	9	35	38.33
Tour guide in ecotourism area	-	9	-	5	-	-	-	14	15.73

Note: * multiple responses

A major concern of WWD in the PES scheme being implemented in Wao was how to track the use of its PES contribution. Faced with this issue, the MENRO was required to maintain a ledger for each IPR holder, indicating the kind and amount of assistance received by IPR holders from the WWD PES contribution. The MENRO was also required to report the status of the PES fund to the steering committee on a quarterly basis. The WWD was included as member of the steering committee so that it can participate in the deliberation and be updated on how the PES fund is being managed. Similar protocols will have to be developed for other LGUs planning to implement PES in their areas so that stakeholders contributing to the PES fund for watersheds will become confident that their contributions are properly spent for the conservation and rehabilitation of watersheds;

c. Insufficient information, education, and communication (IEC) on co-management

Many of the KIs interviewed were not aware of the co-management policies and implementation. Some respondents learned about co-management through the EcoGov project where they were chosen as beneficiaries. But for other stakeholders from DENR and LGUs not covered by the EcoGov project, respondents revealed that they were not familiar with the co-management mechanism and if ever, heard about it from a forum or meeting;

d. Decentralizing authority to issue harvesting permits

Under existing regulations in the Philippines, only the Regional Executive Directors (REDs) of DENR can issue permits to harvest planted trees. While IPR holders are mostly planting fruit trees, rubber, and coffee in between cash crops, which do not need harvesting permits from DENR, some farmers who planted forest trees have expressed concern about this regulation since the regional offices are far from their areas. This situation is common in most co-managed areas. For example, if the IPR holder needs to cut 4 or 5 trees for family use, it becomes impractical for them to secure a permit from the DENR regional office considering the costs involved. It is then suggested that the Municipal Mayor be authorized to issue harvesting permits for small volume of planted trees harvested in co-managed forestlands;

e. Developing clearer guidelines in forest law enforcement.

CMA allows the DENR to deputize LGU personnel to enforce forest laws and regulations. In the process of enforcement, illegally cut forest products and conveyances used to transport these products are confiscated by the LGU-led multi-sectoral forest protection team. However, there were instances when the DENR would unilaterally order the LGU to release the confiscated forest products and conveyances for certain reasons. This has created animosity that endangers the DENR-LGU partnership as it tends to diminish the credibility of the LGU to enforce forest laws and regulations. Clearer guidelines will have to be developed that would require endorsement from the MENRC before any forest products and conveyances

confiscated by the LGU by virtue of the CMA can be released by DENR directives;

f. Enhancing skills of DENR staff in providing technical assistance to LGUs

According to the respondents, DENR needs to enhance the skills of its staff to ensure effective provision of technical assistance in relation to co-management activities such as resource management planning, IPR issuance, and farm planning, among other functions; and

g. Developing sustainable sources of financing

DENR and LGU funds are limited to adequately support co-management implementation so they need to explore ways on how they could acquire funds to sustain the activities stipulated in the co-management plan.

RECOMMENDATIONS

Results of this study were validated during the National Forum on Co-Management held on July 13-14, 2011, at the Training Center for Tropical Resources and Ecosystems Sustainability (TREES) at the University of the Philippines Los Baños (UPLB), College of Forestry and Natural Resources (CFNR). Key recommendations to strengthen the implementation of the DENR-LGU co-management model in the country were as follows:

1. Assess existing policies and develop comprehensive guidelines on co-management;
2. Conduct orientation on co-management among DENR, DILG, and LGU personnel, including site visits to expand coverage;
3. Organize or designate focal units within DENR responsible for facilitating co-management planning, implementation, and monitoring;
4. Train DENR staff members on various aspects of co-management planning, implementation, and monitoring;
5. Establish partnership structure between DENR and DILG at various levels; and
6. Organize regular assessments and sharing sessions among LGUs and DENR. The PLGU can be engaged to facilitate this process.

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Figure 3. PO president in Buliwao, Quezon, Nueva Vizcaya shows his IPR.



Figure 4. Co-managed agroforestry study site in Bayawan, Negros Oriental