# People, Power and Timber: Politics of Resource use in Community-Based Forest Management\*

#### Juan M. Pulhin Wolfram H. Dressler

\*A paper to be presented in the 12<sup>th</sup> Biennial Conference of the International Association for the Study of the Commons (IASC) to be held in Cheltenham, England on July 14 - July 18, 2008. The paper is a revised version of the lead author's Professorial Lecture first presented at the College of Forestry and Natural Resources Faculty Lounge, UP Los Baños (UPLB), College, Laguna, Philippines on 26 June 2007. The paper has been submitted and is currently under review in the Environmental Management journal. We wish to thank the Vicente Lu Professorial Chair in Forestry of UPLB and the Environmental Justice Project for funding the field work and initial writing of this paper. We wish also to thank the International Forestry Resources and Institutions (IFRI) and IASC for funding the participation of the lead author in the IASC 12<sup>th</sup> Biennial Conference.

#### **Abstract**

Political powers emanating from the state continue to drive the management of forest stands in the Philippines. This paper examines how centralized state political power is exercised through devolved or 'de-centered' powers at the policy, program and project level in forest management in the southern Philippines. We investigate how centralized political power emanates through networks to affect the success of local timber utilization through community-based forest management (CBFM) in Mindanao Island. By examining the shift from centralized to devolved forest management, results suggest that centralized power continues to be exercised as a form of local control through CBFM. The conclusion asserts that, in certain conditions, local communities can use their political capacities to effectively negotiate, or even resist centralized state control over 'their own' timber resources.

**Key words:** political power, Community-Based Forest Management, timber utilization, devolved forest management, common property forest resources, Philippines.

#### INTRODUCTION

Political powers emanating from the state continue to drive the management of forest stands in the Philippines. Recent studies describe how the politics of forest management continues to be grounded in the Philippine state's 'networked agenda' of socio-political and economic control – an agenda extending from centers of rule to rural peripheries (Porter and Ganapin, 1988; Kummer, 1992; Broad and Cavanagh, 1993; Vitug, 1993; Broad 1995; Vitug 2000). These contributions examine how in the Philippines a history of centralized political power over forest resources has recently given way to devolved initiatives that support local access to and use of timber (Utting, 2000). Despite these studies, however, few consider how, when and why centralized political power works to govern local users and resources through devolved structures such as Community-Based Forest Management (CBFM). In particular, recent scholarly assessments of CBFM deal inadequately with the layers of political power that govern timber utilization from near and afar (see Bacalla, 2006; Dahal and Capistrano, 2006; Pulhin et al., 2007). Failure to address how centralized political power affects the conception and implementation of CBFM, neglects how projects are steered politically and how outcomes affect the ability of the rural poor to access and use timber.

Even though branches of the Philippine government now turn to devolved forest governance to transfer authority and rights over decision-making to local timber users, its agencies continue to control, deploy and harness power through 'community-based conservation'. They do so with the aim of regulating access and use of timber resources. It is now evident that the devolution of forest governance through CBFM is anything but the scaling back of state control. In many cases, agencies now use CBFM as a regulatory strategy to influence how rural Filipinos themselves govern access to and use of timber resources (Gauld, 2000). As a result, local resource users come to perceive, organize and reflect on their thinking according to the conceptual categories of CBFM in line with the interests of the state (Agrawal, 2005). Yet, at the same time, as certain state agencies and their representatives exercise power unilaterally, local users by-pass political constraints by continuing to negotiate local realities by deftly anticipating local context, often independent of state agencies (cf Dressler, 2006).

This paper offers critical insights into the political dimensions of devolved forest management and utilization on Mindanao Island in the southern Philippines. We seek to unravel the complexity and contradictions of central state control over timber utilization in community-based forest management (CBFM) by analyzing three important levels where power structures are contested, negotiated and/or employed: the policy, program and project/ site level. We draw on theory from political ecology and common property studies to better understand how the political power governing access to and use of timber reserves unfolds at each level as a dialectic; that is, how political power unfolds between state agencies and community members, and how local outcomes affect forest resources, and vice versa. We argue that enhancing the tenurial security of uplanders and granting them greater independence in decision-making, will partly ensure improved access to and use of timber resources, independently and/or through CBFM.

We structure our paper in 4 sections. Following this introduction, section 2 provides the conceptual frame of the study involving how central state power can enmesh itself with decentered powers to direct and control local circumstance. Section 3 explores how each form of political power can be exercised more or less concurrently at the policy, program and project/site levels between local and state actors. We note that, while state agencies claim they govern from, or with the 'grass roots', authority remains centralized with the bureaucratic elite. We show how the ambiguities of such governance can affect management outcomes, local community livelihoods, and the condition of timber resources in the Philippines. Section 4 concludes by examining the theoretical and practical implications of the politics of timber utilization in Community-Based Forest Management on Mindanao Island. The methods used for this paper correspond with the policy, program and project levels of community-based forest management. At the policy level, we analyze policy documents and forestry statistics; at the program level, we consider the content of Community-Based Forest Management Agreements (CBFMA) and related documents; and at the project level, we draw on the results from focus group discussions and interviews with government forestry officials and local members of the CBFM arrangement. The research ran from 2005 to 2007 involving interviews with officials from the Department of Environment and Natural Resources (DENR) at the regional, provincial and field office level; officials at the municipal government and Barangay (smallest political unit in the Philippines) level; and officers and members of the Ngan, Panansalan, Pagsabangan, Forest Resources Development Cooperative (hereafter "the Cooperative") of Compostela, Compostela Valley in Mindanao.

# CONCEPTUALIZING POLITICS AND POWER IN THE MANAGEMENT OF COMMON PROPERTY FOREST RESOURCES

The extent to which state agencies can exercise different types of political power informs the implementation of, and local responses to, community-based forestry management programs (CBFM) in the Philippine uplands. We draw on earlier conceptualizations of 'political ecology', notably Watts (1985), Blaikie and Brookfield (1987) and Bassett (1988), to consider how political power moves through scales of society via motives and networks to influence the social and political conditions under which local users can exploit timber resources through CBFM. In the Philippines, the state continues to articulate its political power through CBFM as a 'networked agenda' – a network of socio-political relations informed by political and economic motives – effectively built on highly asymmetrical distributions of resources that incur significant risks and vulnerabilities at the local level (Hornborg, 2001:1). The asymmetry of such power relations arises when those who hold considerable power in government exercise degrees of control over the behaviour of local people as if they were 'political subjects', where the latter's resistance to control is overcome through *both* consensual and coercive means (Wong, 1968: 673).

While certain scholars, such as Nelson and Wright (1995), suggest that the bureaucratic elite, or others in position of power, can exercise unilateral control over forests and those who live in them, centralized power is exercised through the rhetoric and structure of devolution. In this sense, then, the state's capacity to exercise political power through devolved governance structures reflects its ability to

discipline its constituents to conform to social and political expectations or moral obligations based on predefined goals (see Dressler et al. 2006). Nelson and Wright (1995) call this 'decentered models of power', where power is seen as subjectless: it is not a "substance possessed and exercised by any person or institution conceived of as a 'powerful' subject"... but "an apparatus consisting of discourse, institutions, actors and a flow of events" (Nelson and Wright, 1995: 9-10). Following Foucault's (1979) notion of Governmentality, this conceptualization supports the view that exercising political power can arise through myriad political rationalities and intellectual technologies that allow for self-regulation to attain political objectives. That is, the state uses political power to convey and instill a way of thinking. believing and acting – as embodied in state beliefs – among its local constituents such that they manage the environment in a particular way (Agrawal, 2005). As constituents internalize state beliefs they can self regulate their own actions according to state objectives (Bryant, 2002:270). Analyzing this notion of political power centres on how, when and why centralized political power is adopted by and translated into certain knowledge and expertise and, in turn, how it is used in devolved governance and management (Miller and Rose 1990, 1992). Such 'expert knowledge' informs everyday actions and objectives often associated with planning tools such as Community Resource Management Frameworks (CRMF) and tenure instruments like Community-Based Forest Management Agreements (CBFMAs). Each of these plans facilitates the alignment of community interests with those of the government through a form of regulated freedom. Central to this conceptualization of power is how indirect political power is wielded and negotiated through CBFM at the policy, program and project level (Paulson et al., 2003).

At each level, the social, political and economic terms of timber utilization are further rooted in competing notions of property rights, where the state sees timber in CBFM areas as government property, while local users involved in CBFM see timber as common-property. The state, its parastatal and local users draw on these competing perspectives of the forest "commons" to define *their own* institutional dynamics and socio-political responses that partly regulate access to and use of forest resources through CBFM. In doing so, state interests, local responses and circumstances define property rights institutions as the basis of relationships and actions regarding the use of timber from forests. As such, *political powers* that define different forms of governance become highly differentiated overtime depending on how different levels of society articulate their rights to use timber in the forest 'commons' (see Gibbs and Bromley 1989).

The expressions of differentiated political power in association with property rights of relevance to forest environments include the *right to use* forest resources, the *right to control decision-making*, and the *right to alienate* others from using and engaging in decisions (Meinzen-Dick, 2006). In the context of the Philippine state exercising central control over timber, enacting each right to forest resources is an expression of political power that can concurrently include and alienate users at the policy, program and project level. For example, *use rights* refer to the political powers of the right to access and withdraw from timber resources at the project or site level, whereas *alienation and decision-making rights* refer to the power to manage and exclude others from timber stands, such as through policy and program delivery (see Schlager and Ostrom, 1992). The way in which the central state exercises centralized political power through the devolved CBFM structures effectively defines

who can capture, retain and hold rights to timber resources – both directly and indirectly.

# THE POLITICAL POWER OF TIMBER UTILIZATION AT THE POLICY, PROGRAM AND PROJECT LEVEL

As the section shows above, to a large extent, the ability to access and use timber resources is articulated through positions of political power at different scales of society in the Philippines. In the context of CBFM, this unfolds at the policy, program, project or site level. At each level, actors express their interest in exercising their right to access, use and manage timber resources through implementing CBFM and the way it dispenses centralized and decentered forms of power. Rather than just consider CBFM policy, programs and projects as instruments of and for forest management, we consider each arena as contested political spheres, or "battlefields of knowledge" laced with political power (Long and Long 1992). It is in these political spheres where mundane mechanisms and related technologies of control are fashioned and exercised through politics and management expertise. We show next how powerful actors in government access and use timber resources through CBFM networks to dispense of social and political pressures, and how this, in turn, affects community livelihoods.

At the policy level, we provide the historical context of CBFM by examining the evolution of different policies relevant to property rights through the colonial and post-colonial era. We then examine how unstable policy, conflicting perspectives, and centralized state decision-making affect the "political rights" of stakeholders over CBFM and timber resources. This analysis extends to the program level, where we consider how mundane or indirect mechanisms (e.g., land tenure instruments) translate policy objectives into practice. At the project or field level, we assess the impacts of centralized political power over timber use as it is delivered through the CBFM project of the local Cooperative, *Ngan, Panansalan, Pagsabangan, Forest Resources Development Cooperative* (NPPFRDC) in the municipality of Compostela in Mindanao.

#### **Historical Context of Property Rights in Forest Lands**

In the Philippines, upland property rights developed alongside the evolution of forest policies. This took place during three major time periods: the pre-colonial, colonial (1500s to 1946), and post-colonial (1946 to 1970s), including the shift toward community-based forest management (1980s to present). The latter stage reflects a period when colonial land use classifications and contemporary policies merged through the policy and practice of CBFM.

# Pre-colonial period

Prior to Spanish colonization, land ownership in the Philippines was structured under different regimes of customary tenure, from usufruct holdings to common property. Forests were accessible to all and ownership was vested in whoever first cleared and cultivated land (Fernandez, 1976). However, land was never owned in the same way as present day concepts of land ownership imply. People possessed access rights

to occupy the land and harvest the fruits of their labour (withdrawal rights) while respecting their territorial boundary (Lynch, 1984). Although customary tenure and institutions did govern access to and use of land and forest resources (see McDermott, 2000), there appears to be no clear, overarching articulation of the right to manage, exclude and alienate others.

## Colonial period (1500s to 1946)

During the Spanish colonial era, Royal Decrees were promulgated which placed Philippine land and natural resources under state control and regulation. The introduction of the *Regalian Doctrine*—holding that all lands not retained as private title were vested under the Crown as public domain— undermined traditional rights to land and forest resources (Dressler, 2006). The Spanish colonizers built on the doctrine to institutionalize state ownership of forestlands and resources within a bureaucracy that soon institutionalized proprietary rights for forest use. In 1863, the *Inspecion General de Montes* (IGM) was created to govern the use of the country's forest resources, vesting the *use*, *control* and *alienation rights* over forest lands and resources with the colonial government (Lynch, 1984).

American occupation from 1898 until the Commonwealth Period of 1935 consolidated state control over forests and forest land in the Philippines. The 1902 Organic Act and the 1935 Constitution reinforced the Doctrine by assuming all forest lands remained with the state, including the right to access, use, and manage timber reserves. As a result, logging companies easily secured the use rights to valuable timber conferred to them through the colonial government, effectively *excluding and alienating* indigenous uplanders from their ancestral lands. While transfers of use rights were successful, the transfer of accountability in harvesting practices was less successful. Extensive forest clearings continued apace until 1945, the end of foreign occupation (Lynch, 1984).

From Post-colonial exploitation (1946-1970s) toward Community-Based Forest Management (1980s to present)

During the post-colonial period in the Philippines there was no major change in property rights policies regarding forest lands and timber resources. Even with Philippine independence, the constitution of 1973 stipulated that the state retains rights to all lands and forest resources of the "public domain". This meant that the Philippine state continued to allocate timber concessions to large-scale logging companies as a means of generating domestic revenue for development. Unfortunately, politicians and well-connected individuals receiving use rights by government also amassed wealth from the exploitation of forest resources (Kummer, 1992; Vitug, 1993).

Poorly regulated commercial timber harvesting continued unabated as the Marcos administration formulated tenurial provisions to sedentarize swidden cultivators through smallholder agroforestry schemes. These included the Forest Occupancy Management (FOM) in 1975, the Family Approach to Reforestation (1976), and the Communal Tree Farming (CTF) in 1978. Despite being the forerunners of current community-based forest management programs, the programs largely failed to provide tenurial security to forest occupants. Most government program recipients

were treated as squatters and cheap labor for rehabilitating degraded upland forests (Pulhin, 1996).

The more comprehensive strategy of Integrated Social Forestry Program (ISFP) was adopted in 1982 to manage forest "destruction" by swidden, reduce poverty among forest occupants, and help rehabilitate degraded forests. Unlike the earlier programs, the ISFP granted stewardship agreements to qualified individuals and communities allowing them to occupy and cultivate upland areas that, in return, they had to protect and reforest. Uplanders received de facto tenure for a period of 25 years (renewable) through Certificates of Stewardship (CS), with corresponding use rights and management responsibilities as stipulated in the program's policy instruments. While the launching of ISFP signaled the official adoption of social forestry as a forest management and development strategy in the uplands (Pulhin, 1996), regional enthusiasm for people-oriented forestry was tempered due to limited success and covert motives. In particular, social forestry arose as a state strategy to control and stabilize political unrest in rural areas in the 1970s and the 1980s -Marcos' counterinsurgency strategy – and offered few incentives for farmers to invest in sedentary agriculture (Porter and Ganapin, 1988; Pulhin, 1996). The government's first generation of social forestry projects did not depart from conventional practice.

In 1986, with the demise of Marcos and surge in democracy, the state and civil society put issues of social equity at the center of the country's forest policy agenda (DENR Policy Advisory Group, 1987). To guard against the inequities of past monopolistic allocations often rooted in centralized power structures, the new Constitution contained provisions mandating equitable access to and distribution of benefits from forest resources. Policy reforms soon devolved state power by implementing community-based forest management (CBFM) nationwide.

From 1987 to 1989, the Aquino administration promulgated the National Forestation Program (NFP) offering market incentives and involving communities, families, NGOs, and corporations in forest management initiatives (e.g., rehabilitate denuded watersheds) (de Guzman, 1993). The program yielded Forest Lease Management Agreements (FLMAs) and eventually the Community Forestry Program (CFP), with the aim of providing upland farmers access to tenure and forest resources (i.e., Community Forest Management Agreement (CFMA)) (de Guzman, 1993). The rights of indigenous peoples were also recognized by the Aquino administration through the Departmental Administrative Order no. 2 (DAO, 2 Series of 1993) and the National Integrated Protected Areas System (NIPAS) Act of 1992. For example, the DAO, 2 Series of 1993 was the first policy document to enable indigenous peoples to secure ancestral rights to land through "Certificates of Ancestral Land Claims (CALC), while the NIPAS Act allowed for CALCs to sit within protected area boundaries.

Thereafter, President Fidel Ramos' administration institutionalized the Community-Based Forest Management (CBFM) Program, integrating all programs for local forest management (Pulhin et al., 2007). All new projects were issued CBFMAs (Community-Based Forest Management Agreement) as tenurial instruments for smallholders (25 year renewable leases). Moreover, under the more recent Indigenous Peoples Rights Act (1997), indigenous peoples can apply for a Certificate

of Ancestral Domain Title (CADT) or Certificate of Ancestral Land Title (CALT) to certify *de jure* ownership of land. Despite these policy initiatives, the question remains whether the national government's use of CBFM can enhance uplanders' rights to access and use timber resources equitably and sustainably.

# Policy Level Issues Relevant to Property Rights in CBFM

Three major interrelated issues at the policy level — unstable policy, conflicting perspectives of interest groups, and centralized state decision-making— drive how and why national level political powers can secure full rights over timber in CBFM areas. Despite the tenurial provisions of CBFM, the property rights of the recipient communities often remain unstable. Indeed, although land tenure instruments like the CBFMAs entitle People's Organizations (POs) to use and conserve forests pursuant to a management plan for 25 years, this seldom unfolds in practice. In many cases, while the government will delegate and devolve access, use, management, and exclusion rights over CBFM to a People's Organization, in reality, it maintains centralized control over property rights. Since 1998, for example, there were three national suspensions of resource use permits (RUPs) by three previous DENR Secretaries without following due process. Of the three cases, the worst situation was the cancellation of all existing CBFMAs in 8 Regions by then DENR Secretary Defensor on January 5, 2006 (except for those with on-going foreign assistance, allegedly due to non-compliance or violations by POs). Ironically, subsequent assessments by the DENR Central Office itself show that very few of these POs committed any grave violations as far as the provisions of the CBFMA are concerned. Indeed, as Miyakawa et al. (2006:2) note "there are many observations indicating that CBFM Program is very effective to control forest fires, illegal logging and other violations committed inside CBFM areas". In all three nationwide suspensions of RUPs/CBFMAs, the DENR did not observe its own provision of due process (consultation, prior notification, etc.) before issuing penalties and sanctions; in effect, the DENR violated its own policy. The policies and practice of CBFM clearly remains susceptible to the whims of whoever occupies upper level positions in the DENR.

At present, the processing of all RUPs by the lowest DENR field office (i.e., the Community Environment and Natural Resources Office or CENRO) is centralized at the Office of the DENR Secretary in Manila. As a result, POs from as far as Mindanao must travel to Manila to follow-up on their RUP application, which can cost them considerable time and money. As such, the DENR Secretary has effectively centralized all major decision-making, despite CBFM policy seeking to do the opposite. In response, one DENR official mentioned in a 2006 scientific forum at the University of the Philippines Los Baños that "Whatever the DENR Secretary says is the forest policy" (Pulhin and Dizon, 2006).

Various powerful interest groups hold conflicting perspectives on the DENR Secretaries' authority over whether to allow any timber harvesting in CBFM areas. On the one hand, powerful environmental NGOs with strong media linkages support a long-term logging ban and hence oppose the idea of timber harvesting in CBFM areas. On the other, DENR staff who benefit from their dealings with timber license operators are not convinced of the merits of a CBFM strategy that allows for timber harvesting by local communities. At an even higher level, politicians in Congress are divided on the issue of the logging ban. Some suggest that a total ban on timber

harvesting for a long period of time (e.g. 20-30 years) is needed to allow forests to recover, while others contend that sustainable forest management that allows timber utilization in select areas, including through CBFM, is a much more viable strategy (see Guiang, 2001). Similarly, while previous DENR Secretaries largely favored "sustainable" forest exploitation in zones, there appears to be confusion whether CBFM is the appropriate vehicle to bring this about. As the former DENR Secretary stated at a press conference: "CBFMAs have become 'fronts' for illegal loggers who financed cutting of trees even outside the areas" (The Manila Times, December 7, 2005). Over the course of such political dialogue, the policy agenda on timber harvesting in CBFM areas continues to vacillate as powerful interest groups and elite politicians further shape the decision-making of local government and resource users.

### Program Level Politics and "Technologies of Control"

The CBFM Program –the intermediary between the policy and project level– operationalizes the CBFM strategy as the national approach to sustainable forestry and social justice. Those government officials who implement program mechanisms have the capacity to exercise power for their own benefit and, in turn, indirectly govern how local communities engage with CBFM objectives.

Recent Philippine Forestry Statistics (FMB, 2004) place the current coverage of the CBFM program at 5,969,522 ha, involving 2,877 POs and 690,691 households. Of these, 4,904,116 ha are under various forms of land tenure instruments. This onslaught of CBFM tenure replaces the century-old TLA approach to forest utilization where benefits went to an elite minority. CBFM supposedly democratizes forest access by transferring management rights and responsibilities to forest communities. From 10.29 million ha under the control of 422 TLA holders in 1974, timber concession areas remained in decline reaching only 825,000 ha at present, with barely 18 license holders remaining (FMB, 2005). In contrast, from virtually nothing in early 1980s, total CBFM coverage nationwide is now about 10 times the size of all the existing TLAs combined (see Figure 1). While these statistics suggest success, closer inspection suggests that the millions of hectares of forest lands under community management are fraught with political imbrications that adversely affect local user rights to timber resources. We describe next how extending from the program level, mechanisms of social control, such as technical expertise and land tenure instruments, still exercise political influence over local timber exploitation.

#### Dominance of technical expertise and property rights

CBFM strategies now retain a degree of sophistication in accommodating multiple interests at the national and local level, from protecting the rights of Filipinos to a healthy environment to supporting indigenous rights to ancestral lands. It is the genealogy of CBFM discourse, its multi-pronged objectives and extensive networks, that reveal how the program extends from the local to the national political arena, where expert knowledges are privileged, incorporated, and institutionalized. As a result, the program has come to rely heavily on the ideological position of government and/ or the knowledge of technical experts, otherwise known as "consultants", to operationalize its many policy objectives. The technocratization of

community forest policy and practice complicates the program to the point that it is beyond the comprehension of most communities, further marginalizing local knowledge and practice. An example of this is the requirement to produce sophisticated forest management plans wherein the annual allowable cut (AAC) is based on prescribed inventory procedures and formulas necessary for the issuing of RUPs (Dugan and Pulhin, 2006). Because of the method's complexity, most People's Organizations hire professional foresters to do the job, adding transaction costs and further delays to the processing of their permits. Complex administration further bureaucratizes the application process, since the approving DENR offices must scrutinize the "scientific soundness" of the proposal. This requires ever more time to evaluate and process local applications. However, the situation now leads to graft and corruption as some DENR staff demand "grease money" from the applicants to compensate for the lack of any key documents. The heavy reliance of expertise both at the program and project level relates to the costs involved and the sustainability of the CBFM interventions. For instance, in their nationwide assessment of CBFM, Borlagdan et al. (2001:75) noted:

The dominant cost of community forestry projects are technical assistance, organizing and mobilization of staff and forest and forest rehabilitation such as contract reforestation. Technical assistance, in particular is a major cost in almost all national program sites.

The high dependence on external expertise and costs associated with the program causes many CBFM initiatives to end prematurely, especially after consultants finish their contracts and funds dry up. In such instances, local communities require new external support in order to revive their interests in participating in the CBFM activities (Pulhin, 2005). Such management outcomes show how the state increasingly recentralizes funds, knowledge and power through "decentralizing" CBFM initiatives.

### Land tenure instruments as "technologies of control"

As the primary agency responsible for managing all forest land, the DENR has the legal mandate to use land tenure instruments, such as the Community-based Forestry Management Agreement (CBMFA), to ensure its "mandate" of resource democratization, while also monitoring and controlling the use of timber resources. As such the government has few difficulties using the instrumentalist character of CBFMA to centralize control over resources by *selectively allocating* specific "rights" to individuals or groups. Hence, to affect particular parties the DENR can suspend or withdraw the issuing of Resource Use Permits (RUPs), while CBFMAs can be cancelled if they fail to promote state interests. In essence, the Department of Environment and Natural Resources' tenurial instruments, such as CBFMAs, represent the state's "technologies of control" (Miller and Rose, 1990) for governing local access to timber reserves. Others include Community Resource Management Frameworks (CRMFs) and 5-year work plans.

Because the issuance of CBFMA grants *de facto* rights to access and use forest resources, it serves as an effective tool by which to govern local resource users. It recruits, mobilizes and organizes communities to participate in the government's CBFM Program, including, in state language, *"kaingineros"* or *"illegalistas"* who often

"poach" timber. Through CBFMA, even the forest violators may be won over to the government fold; not by force but by their "own volition" in joining the CBFM Program. CBFMA recipients fulfill state objectives by preparing a government defined Community Resource Management Framework, including the 5-year work plan of the participating People's Organization. The Community's Resource Management Framework must be prepared with the participation of stakeholders and consistent with the overall management strategy of the specific forest and watershed area, providing legitimacy to "process" and the management framework. In accordance to DENR objectives, then, both the CBFMA's management framework and implementing rules and regulations define the actions of local users. According to the DENR (1998:26), in following government objectives, local communities must:

"Immediately assume responsibility for the protection of the entire forest lands within CBFMA area against illegal logging and the other unauthorized extraction of forest products, slash and burn agriculture (*kaingin*), forest and grass land fires, and other forms of forest destruction; and assist [the] DENR in the prosecution of violators of forest and environmental laws."

A completed CRMF and 5-year work plan clearly embodies the government's own CBFM objectives. Since local communities help prepare work plans, they often regard them as their own, further shaping their decisions pertaining to the CBFM area they must manage; in this process, of course, local community interests and aspirations are aligned with and potentially trumped by the government's own CBFM policy and political interests. As a result, such centralized control can translate PO mobilization into resistance.

As the DENR assigns communities with greater responsibilities to manage afforestation efforts, members are still denied *de jure* rights to access and use timber. Community members who are unable to act on their own needs and concerns in such arrangements are further marginalized by the state and have few incentives to conserve the timber upon which they depend. The impacts of the national DENR exercising centralized power through the devolved structures of CBFM can be explored further in the context of the Cooperative case study.

# Project Level Realities: The Case of the Forest Resources Development Cooperative (the Ngan, Panansalan, Pagsabangan, Forest Resources Development Cooperative)

The case of the Cooperative in Compostela Valley, Mindanao (see Fig 2), describes how centralized political power can move through networks to affect the ability of local organizations and users to manage timber in a socially and environmentally responsible manner. The Cooperative's history demonstrates how local organizations —even those assisted by local government offices—can have positive forestry management outcomes derailed by state power brokers. Despite being one of the first CBFMs to include indigenous peoples (the *Mandaya-Mansaka*), former logging managers/staff, workers, and illegal loggers, the state's unscrupulous exercise of political power over timber utilization continues to affect the initiative negatively.

### The Cooperative's history, people and forest resources

The Cooperative manages an area that was once part of a Timber License Agreement area of Valderrama Lumber Manufacturers Company, Incorporated (VALMA), comprising 26,000 ha of forest. The local DENR introduced the idea of forming a Cooperative, for fear that without organizing the community, the area would be completely denuded of forests following the TLA's closure in 1994. The chair of the Cooperative's board of directors, who is a former VALMA employee, recalls during an interview conducted at the Coop Office in Barangay Ngan, Compostela Valley, Philippines on June 24, 2005,

No one from our ranks expected that the TLA of VALMA would not be renewed. That was why when its timber license expired on 31 December 1994 after twenty-five years of operation, we were left with no means of livelihood. Some of us resorted to kaingin making [swidden], and unauthorized gathering of timber and other non-timber forest products just to survive.

The DENR sought to deter deforestation by proposing a corporate-cooperative venture as a replacement for the TLA, through the USAID-funded Natural Resources Management Program (NRMP) implemented by Development Alternatives Incorporated (DAI). A cooperative structure was suggested for managing the forests and, in 1995, this idea was presented by DAI to the local governments covering the ex-VALMA concession area. At that time, however, the initiative was only supported by the Community Forestry Agreement, which later became the CBFMA. Initially, members of the Mandaya-Mansaka indigenous peoples inhabiting the area did not agree to the idea for fear of losing access to land and forest. They eventually conceded, but only after the DENR-NRMP and its information, education, communication (IEC) campaign.

The Cooperative was formed and registered with the Cooperative Development Authority (CDA) on 15 September 1996 with members being awarded CBFMA No. 11 thereafter. The CBFMA gives them the rights and responsibilities to manage and protect 14,800 ha of forest land located in Compostela Valley Province. In 2004, the CBFM area of the Cooperative had a total population of 8,259 (approximately 2 persons per ha). Of these, only 324 individuals (or 4% of the total population) were actually members of the Cooperative, and dependent on its management activities. Cooperative members currently include individuals from the indigenous Mansakaya-Mandaya (40%) and migrants who recently settled the area (constituting 60%). Moreover, the PO currently functions as a business entity while satisfying the requirements of being a cooperative with various staff charged with enforcement and monitoring. At present, the CBFM site of Cooperative still retains 80 percent forest cover. This includes the residual (or production) and mossy (protection area) forests. The area also hosts mature growth and mossy forest where one can find a high diversity of flora and fauna (see Pulhin and Ramirez, 2006).

Decentered management and cooperative control over local bundles of rights

Closer analysis of the Cooperative's dealings with local and state politics affecting timber harvests suggests that its ability to use the tenurial instruments to cope with uncertainty is greater in the absence of centralized state interventions – arguably. centralized political power defining local governance. Left to their own devises, Coop members demonstrate the ability to negotiate with the multiple political interests of several groups seeking to stake claims over land and resources in the area. Among these groups is the military and the New People's Army (NPA), a rebel group that considers the CBFM area as their base. From time to time, the Cooperative has had to negotiate with these groups to avoid delays in transporting their logs along the main transport route to and from the timber-processing site. The "illegalista" also poses danger to the Cooperative. Because of the Coop's monitoring activities, the "illegalista" harasses Coop staff in order to continue their activities. During fieldwork in 2005, for instance, the lead author witnessed a verbal conflict as PO forest protection staff caught illegalista's trying to haul out illegally cut logs through the check point managed by the Coop members. At about the same time, the head of the forest protection committee received an anonymously sent death threat (via text message). Despite such hindrances, forest protection efforts continued.

There are other groups that the Coop members also managed to forge direct alliances with. One is the Local Government Unit (LGU) of Compostela Valley whose Mayor supported the Cooperative. For the past seven years, the LGU helped deliberate their work plans, and even provided livelihood assistance through the provisions of *tilapia* fingerlings for the cooperative's fishpond, and seedlings for agroforestry projects.

Another stakeholder that the Cooperative had established good working relationships with is the Community Environment and Natural Resources Office (CENRO).. Many Coop members had developed a mutually beneficial relationship with the CENRO in terms of protecting the area against log smugglers, illegal loggers, and timber poachers. Moreovoer, when the CENRO was caught short it had requested the assistance of the members by borrowing the Coop's truck and haulers to transport confiscated logs. The two currently protect the forests hand-in-hand in a flexible manner partly *independent* of central state structures.

The Coop appears to have handled local politics and conflict well enough through existing political networks to ensure that timber utilization continues. They continued do so in a manner that worked for their interests and the protection of forest resources. In many ways, the organization's potential to negotiate stems from its ability to broker the anticipated context of these circumstances themselves. While clearly not routine, members knew of the context that gave rise to "conflict" and "partnership", and hence obtained greater local knowledge of how to deal with each. In other cases, the Cooperative has established alliances and forged partnerships with local stakeholders that enabled them to fulfill their responsibilities as stewards of the CBFMA area. Despite such local "success", however, the Cooperative continues to struggle with the state's political power over timber utilization.

(Re)centralized management and limiting cooperative control over local bundles of rights

As noted, the Community Resource Management Framework (CRMF) governs the overall management of the CBFM, which grants the national DENR more *de jure* rights to timber than local users. Although produced by the PO itself, the CRMF is still designed and implemented under the DENR's (political and legal) oversight, and controls forest management activities on a lease basis for 25 years. Under this document, 535 ha (5%) of the total 11,113 ha of production forest (at a volume of 21,400 m3) and 12,465 m3 of the 277-ha of plantation forest was to be harvested over five years (Pulhin and Ramirez, 2005). Ideally, the harvest was expected to generate revenue for forest development, protection projects and livelihood initiatives for the Cooperative.

Although a local initiative, the CRMF's Five-year Work Plan (FWP) produced an annual allowable cut (AAC) needing approval by the DENR. For this reason, the AAC was often lower than the proposed volume by the Cooperative, which is subject to the whims and wishes of the approving DENR authority. Ultimately, the DENR specifies the Resource Use Permit's approved volume, which the Cooperative has no legal control over. Without the RUP, the Cooperative cannot proceed with its timber harvesting operations, granting the DENR centralized control.

The DENR's bureaucratic control also made applying for RUPs a difficult task. It involved a lot of time, effort, negotiation skills, and high transaction costs. The entire process of RUP processing and approval often takes more than six months and a total transaction cost of PhP 210,000 (~ US 5,000) (based on the Cooperative's 2006 to 2007 application). Even after enduring this process, the PO could only use its RUP for a year reckoned from the end of its last RUP operation. This meant that for 2007, the Cooperative was left with less than six months to operate as more than six months were used up in just processing the RUP application.

The lack of the Cooperative's control over the use rights in the CBFM area was not only demonstrated in the uncertainty of RUP issuance. Even though the RUP was already issued, the DENR Secretary could still cancel the permit unilaterally, as experienced by the Cooperative on three occasions over its ten years of operation. After less than a year of timber utilization by the Cooperative, then DENR Secretary Cerilles imposed the first national suspension in September 1998 due to alleged violations by different Peoples' Organizations. This was followed by the second national suspension by Secretary Guzon in early 2003 due to some erring CBFMA holders. In December 2004, Secretary Defensor imposed the third national suspension due to the clamor of civil society to stop all logging activities because of the devastation brought about by the typhoons in Aurora and Quezon provinces. All of these suspensions or cancellations were the result of political pressures at the higher DENR level – in no case was the Cooperative consulted or at fault.

The Resource Use Permit cancellation has taken its toll on the environment and the socio-economic conditions of the people in the area. During its eight-year logging operation (from 1997 to 2004), the Cooperative harvested 8,609 m3 of naturally grown species. These were sold as lumber to different local buyers in Rizal, Cebu, and Mindanao. If not for the suspension of the RUP, the total volume would have been higher. Each suspension was followed by a downgrade of AAC against the approved volume by the DENR. Because the funds for forest management depended on logging revenue, the capacity of the Cooperative to generate livelihood

projects was significantly limited. From the net profits in logging, 60 percent were ploughed back to forest development (approximately PhP148,000 per year), 10 percent allocated as reserved funds, and the remaining 30 percent (around PhP74,000 per year during the eight-year period) went to livelihood activities. These amounts were small compared to the expenses incurred by the Cooperative in keeping with its responsibilities and obligations of forest management. In 2003 alone, the organization had incurred a net loss of around PhP2.4 Million, a huge sum that the cooperative badly needed for its various operations. Just after the Cooperative had barely recovered from the second national suspension of 2003, the third national suspension was imposed in late 2004 resulting to a net loss of more than PhP 400,000.

In the early part of its inception, the Cooperative had several livelihood initiatives. Its consumer store started operating in 1997 with an initial capital of P200,000. The PO was also venturing into swine production, which started operating in 2000, as well as duck rearing. Other projects included tailoring, meat processing, and poultry production. The Cooperative, however, had to stop these livelihood activities because it could not generate sufficient income to pay for the high cost of animal feeds and the salary of the caretakers during the RUP suspension periods.

Forest protection had also suffered. In 2004, there were eight forest guards who have been deployed by the Cooperative in the three barangays. They were being paid by the cooperative at PhP0.28 per board foot produced in the sawmill. Since the RUP suspension, the number of guards was reduced to four (one guard per 3,700 hectares) due to the volatile logging operations in the site. As mentioned, these four voluntary guards faced a lot of challenges, including death threats.

The socio-economic impacts of the RUP suspensions are currently felt by local users, members or non-members alike. During regular logging operation, the Cooperative can employ as many as 300 workers for a wide variety of jobs (i.e., haulers, chainsaw operators, helpers, supervisors, among others). In a survey conducted by the DENR Region XI in 2002, there was an increase in the number of *sari-sari* (general) stores in the barangay that the respondents attributed to the income they gained by working with the Cooperative (DENR, 2002). From 25 stores in 1996, the number of business establishments increased to 60 in 2002. Some of the workers used their money to buy motorcycles-for-hire, an alternative livelihood in the area during slack seasons. This translated to a 40 percent increase in motorcycle-for-hire plying the roads in the area (24 in 1996; 59 in 2002). The number of working animals, particularly the *carabao* (water buffalo) also increased during the same period. Carabao were employed in the hauling of logs and operators were being paid for PhP1.00 per-board foot of logs hauled. The DENR survey also showed that some members used their income to support their children's education.

With the suspension of the Resource Use Permit's, however, local residents suggest that a domino effect arose in the community where a boom period eventually went bust. Without jobs, some have opted to sell their properties just to cope with the on-and-off logging operations of the Cooperative. Worse, children stopped going to school because of lack of transportation fare and allowance. To prevent this from cotinuing, sawmill workers agreed to work on a meager PhP30 per day wage rate just to support their family for at most two meals per day.

Despite these DENR interventions, the Cooperative remains remarkably resilient in its ability to absorb the economic shocks associated with the national RUP suspensions. Even during RUP suspension, the Cooperative went on with their forest protection responsibility in compliance with the CBFMA provisions and their CRMF and FWP. From eight forest guards in 2004 which was subsequently reduced to only four in the same year, the Cooperative has recently increased the number to 12 (4 in Pagsabangan, 2 in Panansalan and 6 in Ngan). Since the slack period gave an opportunity for the illegal loggers to proceed with their activities, the Cooperative saw the need to increase its forest protection efforts and presence in the field even during the suspension period. Each forest guard received PhP 150 per week (~ US \$3) allowance from the Cooperative during the RUP suspension, while during the timber harvesting, they went back to the original salary scheme based on per-board foot of logs cut. The Chair of the Forest Protection Committee laments in an interview conducted on June 24, 2005 at the Coop Sawmill in Barangay Ngan, Compostela Valley, the Philippines:

We are doing our best to secure the CBFM area from illegal loggers and poachers even without compensation. We only have one shotgun as against the sophisticated firearms of illegal smugglers, but still, we do our job regardless of the danger because we know that once resources are depleted, there is no other recourse but to stop the operation permanently. What is sad to note however, is that adjacent communities which are not issued with CBFMA are the ones doing illegal activities since they have not appreciated the value of forest protection and have no contractual agreement with the government.

Despite not having an RUP for seven months, the Cooperative still exceeded its forest development targets for 2006. From a target of 30 hectares for reforestation, the cooperative rehabilitated a total of 30.09 hectares. It also surpassed its target of 20 hectares for agroforestry with the development of around 26.066 hectares planted with durian (Duryan) and lanzones (Lansones, *Lansium domesticum Corr.*) intercropped with abaca (Abaka, *Musa textilis Nee*), banana (Saging, *Musa paradisiaca Linn*), coconut (Niyog, *Cocos nucifera Linn*) and corn (*Mais*) – a replanting activity aligned with the CBFMA and therefore national DENR's mandate. Mr. Antonio Sunquit, former Chair and presently Vice Chair of the Coop elaborated in an interview conducted on October 27, 2007 at ComVal Hotel, Compostela Valley, the Philippines:

Before the suspension of all CBFM areas, the Coop support all the expenses for reforestation and agroforestry activities including the costs for clearing, staking, planting and other activities. During the suspension, we have no money to support these activities because the Coop had no income. Doing reforestation and agroforestry is very costly: PhP 12,000/ha and PhP 26,000/ha, respectively. Since each Coop member has around 3 hectares of land within the CBFMA site, we encouraged them to develop their own areas with very minimal support from the Coop. The Coop just provided them planting materials and they have to do all the activities on their own without external financial support. We also want to demonstrate to the government that we are sincere in performing

our obligations as stipulated in CRMF and Five-Year Work Plan and hope that it will honor its obligations in return by lifting the suspension of RUP.

Indeed, the CBFMA and its associated mechanisms (e.g., RUPs) have become powerful means of local governance. These instruments enabled the government to regulate the activities of the Cooperative members not by force, but by shaping their actions by controlling CBFM policy.

#### CONCLUSION

This paper explored how and why the complexity and dynamics of "extending" national political power over timber utilization in rural areas produced undesirable outcomes amongst small holders engaged in community-based forest management. We examined how exercising centralized political power through decentered models of power at the policy, program and project level through CBFM led to mixed management outcomes. We demonstrated that when members of community-based timber operations are sufficiently organized and resource endowed, then they have greater potential to deal with local risks and vulnerability through incremental learning (often via trial and error) and de-centered state support (through community level offices and management structures) than under central state control.

The adverse impacts of state agencies exercising political powers through the policies and programs of community-based forest management appeared to be less manageable for users than the changing political circumstances at the local level. For instance, the series of national-level suspensions of RUP by the DENR Secretaries as a result of political pressures proved to be more damaging to the Cooperative when compared with the impact of local politics. The Cooperative effectively dealt with interventions from the New People's army and *illegalista* activities through local ways and means, largely independent of the state government.

The Cooperative had to wield countervailing powers to negotiate the dominating structures and ideologies of the central government. To continue to do so, the Cooperative members will need to strengthen their political capacity and developed their human and economic resource base. In the future, this will put them in a stronger position for negotiation with more powerful political actors, enabling them to advance their interests and welfare as well as promote the sustainability of the timber resources. A major requirement of this community-strengthening process is the ability of communities to establish alliances and partnerships with those who broker political power, such as in Congress and Malacañang. Moreover, the involvement of sympathetic and conscientious members of the government, nongovernment, and private institutions is needed to ensure that the benefits of resource use in CBFM will accrue to those who justly deserve it (Pulhin and Dizon 2006).

We have also shown that securing land tenure by asserting property rights (even if de facto) is a fundamental precondition for successful CBFM implementation. Legislated policy on secure CBFM tenure would offer smallholders greater stability and direction in implementing their forestry management agreements. At the

moment, only unlegislated "soft rights" structure land tenure instruments like CBFMA, most of which cannot be defended and are often withdrawn by prominent political leaders. For this reason, there is little incentive for communities to invest in forest management, particularly in line with DENR objectives (Gilmour *et al.*, 2005). These soft-rights are vulnerable to political pressures and can lead to considerable socioeconomic and environmental impacts upon being suspended and withdrawn. Overall, legislated community forestry policy should be "enabling" rather than "enforcing", and be flexible, facilitative, and simple enough to accommodate varying local conditions and understandings.

Given our account of the Philippine state's approach to managing timber resources, it is clear that beyond policy and practice there is the need for enabling the state's bureaucracy, that is for the DENR to adopt a socio-political repertoire of forest management -- the adoption of CBFM strategy requires a whole new set of knowledge, skills, values, and attitude within the forestry bureaucracy. This means a major departure from the traditional regulatory or policing function, which the DENR has been playing for a century, towards a more supportive and facilitative role to support local livelihoods and the condition of the forests. Secure tenure and active local participation in community-based forest management are central to such future success.

#### REFERENCES

- Agrawal, A. and C.C. Gibson. 1999\. 'Enchantment and disenchantment: The role of community in natural resource conservation' World Development 27 (4): 629-649.
- Agrawal, A. and E. Ostrom. (2001 'Collective Action, Property Rights, and Devolution of Forest and Protected Area Management', in Meinzen-Dick, R., A. Knox and M. Di Gregorio (eds) *Collective Action, Property Rights and Devolution of Natural Resource Management: Exchange of Knowledge and Implications for Policy.* DSE/ZEL, Feldafing, Germany, pp. 75-110.
- Agrawal, A. 2005. Environmentality. Community, Intimate Government, and the Making of Environmental Subjects in Kumoan, India. Vol. 46(2):161-190.
- Bacalla, D. T. 2006. Promoting Equity: A Challenge in the Implementation of Community-Based Forest Management Strategy in the Philippines. In Mahanti et al (eds.) Hanging in the Balance: Equity in Communitybased Natural Resource Management in Asia. Bangkok: RECOFTC and East-West Center, pp. 162-181.
- Basset, T. J. 1988. The Political Ecology of Peasant-herder Conflicts in the Northern Ivory Coast. Annals of the Association of American Geographers. vol. 78(3): 453-472.
- Blaikie, P. and H. Brookfield. 1987. Land Degradation and Society. London: Methuen.
- Borlagdan S. B., E. S. Guiang, and J. M. Pulhin. 2001. Preliminary Assessment of Community-Based Forest Management in the Philippines. Unpublished project report submitted to the Ford Foundation, Inc., Philippines, Institute of Philippine Culture, Ateneo de Manila University in collaboration with the Department of Social Forestry and Forest Governance, College of Forestry and Natural Resources, University of the Philippines Los Banos.
- Broad, R. 1995. 'The Political Economy of Natural Resources: Case Studies of the Indonesian and Philippine Forest Sectors', *Journal of Developing Areas* 29 (3): 317-339.
- Broad, R. and J. Cavanagh. 1993. *Plundering Paradise: The Struggle for the Environment in the Philippines*. Manila: Anvil Publishing, Inc.
- Bryant, R. 2002. 'Non-governmental Organizations and Governmentality: 'Consuming' Biodiversity and Indigenous People in the Philippines, *Political Affairs*, 50:268-292.
- Dahal, G. and Capistrano, D. 2006. Forest Governance and Institutional Structure: An Ignored Dimension of Community Based Forest Management in the Philippines. International Forestry Review .8 (4): 333-394

- De Guzman, M. V. P. .1993. 'A Review of the Applicability of Current DENR Tenurial Instruments to Issues Related to Ancestral Domains'. Unpublished Natural Resources Management Program Report 93-05, Louis Berger International, Inc.
- Department of Environment and Natural Resources. 1998. *A Compilation of Policies on Community-Based Forest Management (CBFM)*. Manila: Community-Based Forest Management Office, Department of Environment and Natural Resources.
- DENR Policy Advisory Group. 1987. 'DENR Policy and Program Agenda for the Environment and Natural Resources Sector'. Unpublished report of the DENR Policy Advisory Group, Forestry Development Center, College of Forestry, UP Los Banos, Philippines.
- Dressler, W. 2006. Co-opting Conservation: Migrant Resource Control and Access to National Park Management in the Philippine Uplands. Development and Change. 37(2): 401-426
- Dressler, W., Kull, C., and Meredith, T. 2006. The Politics of Decentralizing National Parks Management. *Journal of Political Geography*. 25: 1-28.
- Dugan, P. and J. Pulhin. 2006. 'Forest Harvesting in Community-Based Forest Management (CBFM) in the Philippines Simple Tools Versus Complex Procedures', in R. Oberndorf, P. Durst, S. Mahanty, K. Burslem, R. Suzuki (eds) *A cut for the Poor*. Proceedings of International Conference on Managing Forests for Poverty Reduction: Capturing Opportunities in Forest Harvesting and Wood Processing for the Benefit of the Poor, Ho Chi Minh City, Vietnam (3 6 October).
- Fernandez, P. V. 1976. *Custom Law in Pre-Conquest Philippines*. Quezon City: University of the Philippines Law Center.
- Forest Management Bureau (FMB). 1990-2005. *Forestry Statistics*. Forest Management Bureau, Department of Environment and Natural Resources, Quezon City, Philippines.
- Forest Management Bureau (FMB). 2006. 'A Decade of Implementation of the Community-Based Forest Management Program: Present Situation'. A prepared by the Forest Management Bureau and presented by Dir. Marcial C. Amaro, Jr. during the CBFM Strategic Planning Workshop at Traders Hotel, Manila, Philippines (20-22 September).
- Foucault, M. 1979. 'On Governmentality', I & C 6:5-21.
- Gauld, R. 2000. 'Maintaining Centralized Control in Community-based Forestry: Policy Construction in the Philippines', *Development and Change* 31(1): 229-254
- Gibbs, C. J. N. and D. W. Bromley. 1989. 'Institutional Arrangement of Rural Resources: Common-Property Regimes', in F. Berkes (ed.) *Common*

- Property Resources: Ecology and Community-based Sustainable Development. Belhaven Press: London, pp. 23-32.
- Gilmour, D., N. O'Brien, and M. Nurse. 2005. 'Overview of Regulatory Frameworks for Community Forestry in Asia', in N. O'Brien, S. Matthews and M. Nurse (eds) First Regional Community Forestry Forum: Regulatory Frameworks for Community Forestry in Asia. Proceedings of a Regional Forum held in Bangkok, Thailand (24-25 August), RECOFTC, Bangkok, pp. 3-33.
- Guiang, E. 2001. 'Impacts and Effectiveness of Logging Bans in Natural Forests: Philippines', in P. Durst, T. Enters (eds) Forests Out of Bounds: Impacts and Effectiveness of Logging Bans in Natural Forests. Food and Agriculture Organization-Regional Office for Asia and the Pacific Publication 2001/08, pp. 103-135.
- Hornborg, A. 2001. *The Power of the Machine. Global Inequalities of Economy, Technology and Environment.* Altamira: Walnut Creek, Calif.
- Kummer, D. 1992. *Deforestation in the Post War Philippines*. Ateneo de Manila University Press: Quezon City.
- Long, N and A. Long (eds). 1992. *Battlefields of Knowledge: theInterlocking of Theory and Practice in Social Research and Development*. London and New York: Routledge.
- Lynch, O. J. 1984. 'Withered Roots and Landgrabbers: A Survey of Research on Upland Tenure and Displacement', in *Uplands and Uplanders* (ed) C. Castro. Quezon City: BFD Upland Development Program, pp. 167-230.
- McDermott, M. H. 2000. Boundaries and pathways: Indigenous identity, ancestral domain and forest use in Palawan, the Philippines. Unpublished Ph.D. Dissertation. University of California, Berkeley.
- Meinzen-Dick, R. 2006. 'Shifting Boundaries of Tenure Systems and Security of Access to Common Property'. Paper presented at 11th Biennial Conference International Association for the Study of Common Property, Ubud, Bali, Indonesia (19 June 23).
- Miller, P. and N. Rose. 1990. 'Governing Economic Life', *Economy and Society* 19(1): 1-31.
- Miyakawa, H., Evangelista, R., Cirilo, F., Gulinao, M.E., Patiga, N., Racelis, A., Sibuga, L., Collado, A., Santos, D.L., and Sarmiento, M. 2006.. 'Towards the brighter future of CBFM (A field review on 23 CBFM sites). Unpublished report of the DENR-JICA Project Enhancement of Community-Based Forest Management Program, Quezon City, Philippines.
- Nelson, N. and S. Wright. 1995. "Introduction: Participation and Power', in N. Nelson and S. Wright (eds) *Power and Participatory Development*. Intermediate Technology Publications: London, pp. 1-18.

- Paulson, P., L. L. Gezon, and M. Watts. 2003. 'Locating the Political in Political Ecology: An Introduction', *Human Organization* 62 (3):205-217.
- Peluso, N. 1990. Rich forests, poor people. University of California Press, Berkeley.
- Peluso, N. 1993. Coercing conservation? The politics of State resource control. *Global Environmental Change* 3(1): 199-218.
- Porter, G. and D. J. Ganapin. 1988. 'Resources, Population and the Philippines' Future: A Case Study'. World Resource Paper No. 4. Washington, D. C.: World Resources Institute.
- Pulhin, J. M. 1996. 'Community Forestry: Paradoxes and Perspectives in Development Practice'. Ph.D. Dissertation, The Australian National University, Canberra, Australia.
- Pulhin, J. M. 2005. 'Enhancing the Philippines' Community-Based Forest Management Implementation Strategy: Synthesis of Six Case Studies. Report submitted to the Forest Management Bureau of the Department of Environment and Natural Resources in relation to the support from the National Forestry Program Facility managed by the Food and Agriculture Organization (FAO) to serve as basis for CBFM strategic planning to enhance the implementation of CBFM in the Philippines.
- Pulhin, J. M. and J. T. Dizon. 2006. 'Politics of Tenure Reform in the Philippine Forest Land', in L. Lebel, X. Jianchu, and A. P. Contreras (eds) *Institutional Dynamics and Stasis: How Crisis Alter the Way Common Pool Resources are Perceived, Used and Governed*. Chiang Mai, Thailand: Regional Center for Social Science and Sustainable Development (RCSD), Faculty of Social Sciences, Chiang Mai University, pp. 161-176.
- Pulhin, J. M., M. Inoue and T. Enters. 2007. Three decades of community-based forest management in the Philippines: emerging lessons for sustainable and equitable forest management. *International Forestry Review* **9** (4): 865-883.
- Pulhin, J.M. and M.A. Ramirez. 2005. 'Behind the Fragile Enterprise: Community-Based Timber Utilization in Southern Philippines'. Unpublished report of the case study submitted to Regional Community Forestry Training Center for Asia and the Pacific (RECOFTC) with the financial assistance of International Tropical Timber Organization (ITTO) and the Forest Trends.
- Rose, N. and P. Miller. 1992. 'Political Power Beyond the State: Problematics of Government', *British Journal of Sociology* 43(2): 173-205.
- Schlager, E. and E. Ostrom. 1992. 'Property-rights Regimes and Natural Resources: A Conceptual Analysis', *Land Economics* 68 (3): 249-62.
- The Manila Times. December 7, 2005.

- Utting, P. (ed) 2000. Forest Policy and Politics in the Philippines: Dynamics of Participatory Conservation. Quezon City: Ateneo de Manila University Press.
- Vitug, M. D. 1993. *The Politics of Logging: Power from the Forest*. Manila: Philippine Center for Investigative Journalism.
- Vitug, M. D. 2000. 'Forest Policy and National Politics', in P. Utting (ed) Forest Policy and Politics in the Philippines: The Dynamics of Participatory Conservation.

  Quezon City: Ateneo de Manila University Press, pp. 11-39.
- Watts, M. J. 1985. Social Theory and Environmental Degradation. In Desert Development. Ed. Y Gradus. Dordrecht: D. Reidl Publishing. Company. pp. 14-30.
- Wong, D. 1968. 'Some Problems in Defining Social Power', *The American Journal of Sociology* 73(6): 673-681.

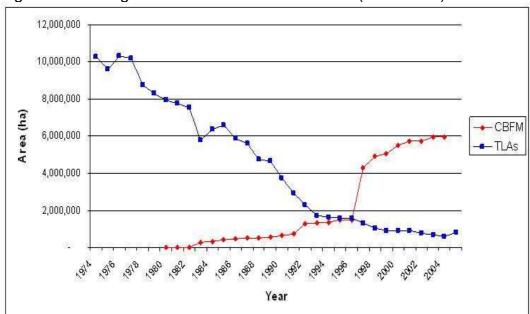


Figure 1. Coverage of TLA areas vs. CBFM areas (1974-2005)

Sources: Updated based on Pulhin et al. (2007). Data derived from the Forest Management Bureau Forestry Statistics (1990-2005)

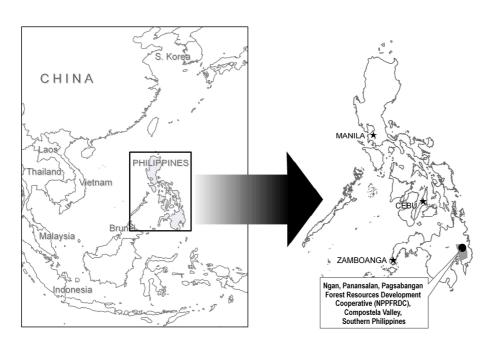


Figure 2: Location of Cooperative Site