

**Trends in forest ownership, forest resources
tenure and institutional arrangements in the
Philippines:
are they contributing to better forest
management and poverty reduction?**

By

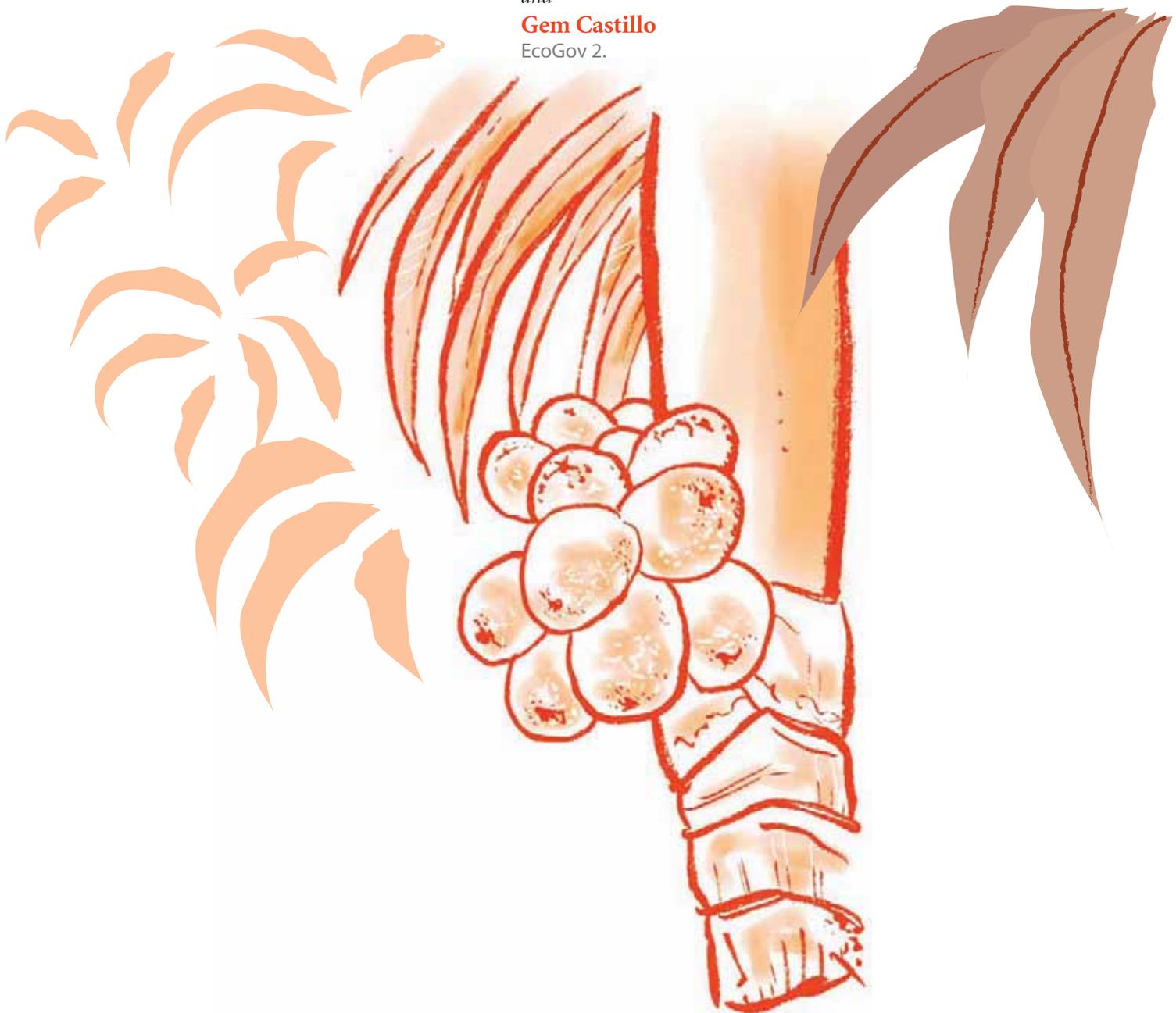
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The ideas and suggestions in this paper do not necessarily reflect those of USAID, DENR or DAI.

Introduction

In the early twentieth century, at least 70 percent of the Philippines total land area of 30 million ha was covered by moist tropical rain forests, consisting of and supported by several forest biota. Dipterocarp forest of the *Dipterocarpaceae* family dominated the vegetation and may have covered more than 20 million ha (ESSC, 1999a; USAID/Manila, 1989; World Bank, 1989).⁶² Other significant forest types that were not as extensive as dipterocarps include pine, beach, molave, mangrove and mossy forests. Philippine forests were also the source of key minor forest products such as rattans, bamboos, vines, resins, wildlife and medicinal plants. The country's forests, coral and marine resources once possessed some of the richest biological diversity in the world, with a net biodiversity index of 0.786, the third greatest among the countries of South and Southeast Asia (Guiang, 2004a; DENR and UNEP, 1997; USAID/Manila, 1989). This made the Philippines one of the 18 mega-diversity countries that together contained 60 to 80 percent of global biodiversity (DENR and UNEP, 1997; World Bank, 2004).

However, the dominant dipterocarps were heavily exploited both before and immediately after the Second World War; the harvestable volume of timber (including both dipterocarps and non-dipterocarps) in old growth forest ranged from 100 to 170 m³ per hectare (Revilla, 1984), depending on the location. Later, the Philippines continued to exploit its forests to support rural economies through the export and/or processing of raw logs, timber, semi-processed lumber, veneer and plywood in the 1960s, 1970s and early 1980s (Bautista, 1990; Guiang and Manila, 1994). Since the Second World War, forest exploitation has opened up large areas for agricultural production and expansion.

The abundant and highly valued timber from natural forests did not last long. By the end of the twentieth century, the Philippines had only 18.3 percent forest cover (ESSC, 1999a), with less than 1 million ha of old growth forests and 4 million ha of naturally occurring residual forests. Most of these forests are in fragmented stands. The country has undergone a catastrophic degradation of its natural resource base, resulting in one of the lowest rates of per capita forest cover in the tropics (about 0.085 ha), the collapse of much of its mangrove forests, the continuing loss of and threat to biodiversity, the pollution and siltation of coastal and marine resources, the loss of topsoil, and increasing damage to lives and property from flash floods and drought (DENR and UNEP, 1997; Guiang, 2001; Revilla, 1998; World Bank, 1989; 2000; De Leon and White, 1997). The loss of forest cover over a period of a century has had impacts on the lives of more than 100 diverse Philippine cultures and more than 2 million plant species (Poffenberger, 2000). The country's loss of its original forest has resulted in at least 418 species appearing in the World Conservation Union's (IUCN) red list of threatened species for 2000, bringing the Philippines into the top 25 global biodiversity hotspots (Tesoro, 2005). Worse, despite its comparative advantage in developing forest plantations and the initial stock of natural forests, the Philippines has been a net importer of logs, lumber, veneer and plywood to meet domestic demand since 1989. The shares of imports in total supply increased from 13 to 40 percent for logs, 70 percent for lumber, and 20 percent in plywood and veneer (Dy, 2002).

The main direct cause of forest degradation in the Philippines is overexploitation, fuelled by weak governance, the capture of resources by elite groups, failure to collect rents from licensees, short-sighted and unpredictable policies, rapid population growth, and increased conversion of forest land to agricultural, residential and commercial uses. Over the last 20 years, the government and the donor community have made serious efforts to address the continuing forest degradation (Vitug, 1993; de los Angeles, 2000), but much remains to be done to improve the overall condition of the

⁶² Revilla (1984) estimates that dipterocarps covered about 91 percent of all public forests in the Philippines, 95 percent of commercial forests and 45 percent of the total land area.

country's forests. Illegal cutting, slash-and-burn farming, upland migration and the conversion of forest land to other uses continue to plague Philippine forests.

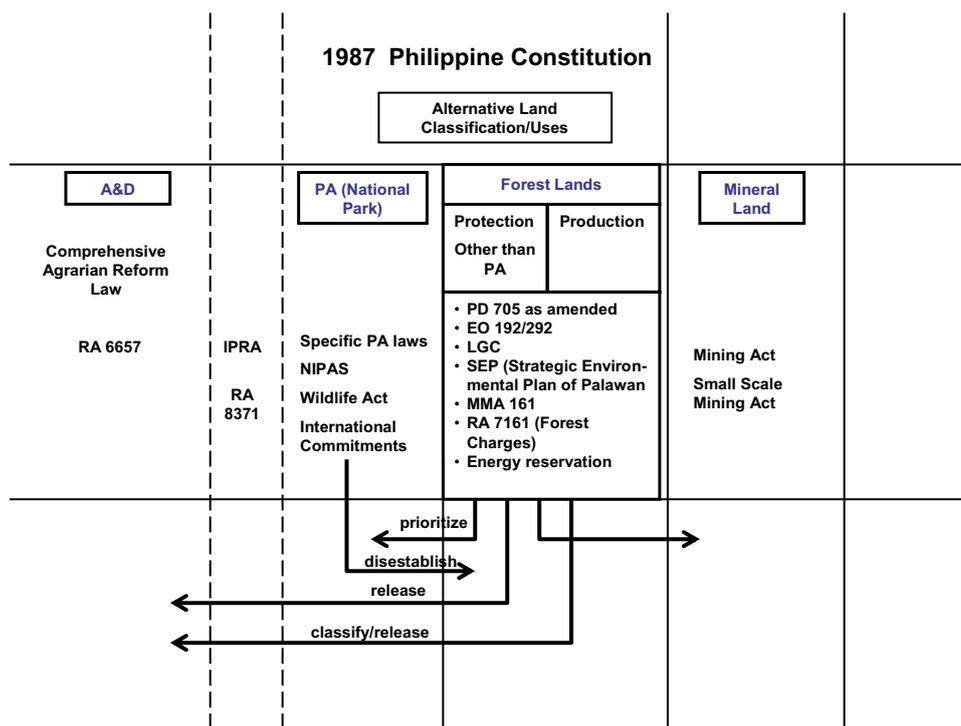
Based on analysis of secondary information, legislative and administrative policies, and relevant documents from government agencies and foreign-assisted projects, this case study sets out to determine the relationships among and effects of various tenure and ownership systems for forests and forest land in the Philippines. The study provides a context in which to understand how forests and forest land are protected, developed and managed under different types or categories of ownership or tenure instrument. It provides observations and analysis of how various tenure and forest resource managers have effectively managed the remaining forests, rehabilitated bare forest land and helped alleviate poverty and social injustice. The recommendations it makes are aimed at guiding policy-makers and implementers in adopting or enacting better policies, institutional arrangements and practices that could help reverse the trends in forest degradation in the Philippines.

Tenure systems and forest ownership

POLICIES ON TENURE AND FOREST LANDOWNERSHIP

In its colonial past, the Philippines adopted the Regalian doctrine of tenure and forest ownership in planning, allocating, protecting and managing its natural resources, including forests and forest land. All forest lands are in the public domain and are classified into agricultural, forest or timber and mineral land and national parks (1987 Constitution, Art. XII, Sec. 3) (Figure 1). The 1987 Constitution (Art. XII, Sec. 2) states that “All lands of the public domain, waters, minerals, coal, petroleum, and other mineral oils, all forces of potential energy, fisheries, forests or timber, wildlife, flora and fauna, and other natural resources are owned by the State. With the exception of agricultural land, all other natural resources shall not be alienated.” This policy has rendered the State the largest “absentee landlord” by giving it legal control of at least 15.85 million ha of public domain (FMB/DENR, 2003; Hyde et al., 1997). In reality, however, most forests and forest land are under de facto open access to every citizen of the State, occupied or claimed by forest residents and communities, covered by some kind of tenure arrangement, or proclaimed by the State as set-aside to protect biodiversity and ensure the sustainability of environmental services from watersheds.

FIGURE 1
Allocation of forest land under various laws and policies



As early as 1975, the Revised Forestry Code (PD 705), adopted a comprehensive approach to protecting and managing forests and forest land. Since the end of martial law in 1987, the State has continued to enact other legal and institutional frameworks for sustainable natural resource management. These laws and policies have guided and directed various government bodies in planning, allocating, regulating, managing, monitoring and governing forests and forest land. The laws enacted and the administrative policies issued over the last 15 years have promoted decentralized environmental management by local governments, indigenous groups and resource-dependent communities. Relevant laws and national executive orders include:

- National Integrated Protected Areas Act of 1991;
- Executive Order 263 of 1995, which provides the legal basis for community-based forest management;
- Indigenous People's Rights Act of 1997;
- Clean Water Act of 2004;
- Executive Order 318 of 2004, which promotes sustainable forest management (SFM);
- various executive orders and presidential decrees or proclamations setting aside certain forests and forest land for the protection of watersheds, the conservation of biodiversity, research and ecotourism purposes, the protection of geothermal areas and facilities, or the establishment of industrial and economic zones;
- Local Government Code of 1991.

As a result of the laws and administrative policies that were enacted under martial law and immediately afterwards, responsibility, accountability and authority in the protection, development and management of forests and forest land have been subject to complex institutional, ownership and tenure systems (DENR and USAID/Manila, 2004). With assistance from the Philippine Environmental Governance Project (EcoGov), these have been divided into five categories, which are shown in Table 1. This categorization was not planned but is largely a result of the emerging pattern of how the State allocates forests and forest land in the Philippines.

The framework of laws is complemented by various department administrative orders and specific implementing rules and regulations that clarify (or sometimes complicate) national policies and establish detailed implementation procedures. Annex 1 provides examples of department administrative orders and implementing rules and regulations that were issued to trigger implementation of the laws. One key element in this framework is the variety of new tenure instruments that grant property rights of various kinds over public forest land to local and indigenous communities. Another important feature is the establishment of a national system of protected areas, which is based on IUCN specifications for including the participation of indigenous peoples, tenured migrants and other local stakeholders, including local government units (LGUs). These laws and orders have opened up opportunities for collaboration, partnership and joint ventures among national government organizations, local governments, civil society groups and the private sector.

TABLE 1
General categories and objectives of forest land allocations in the Philippines

Category of allocation/ accountability	Relevant forest policies governing the allocation*	Primary objectives	Secondary objectives
A. Classified forest lands			
1. Allocations to address public goods (forest reserves, national parks, GRBS/WA) – DENR, PNOC, NIA, NPC	National Integrated Protected Areas Act, republic acts, presidential decrees or proclamations, executive orders, administrative orders	Conservation of biodiversity Protection of watersheds	Social justice and poverty alleviation Ecotourism and livelihoods
2. Allocations to civil and military reservations – military, academic institutions	Presidential decrees or proclamations, republic acts, executive orders	Academic and research activities and other special uses	Poverty alleviation Protection of biodiversity
3. Allocations to LGUs under communal forests or co-management agreements	DENR administrative orders, co-management agreements, DENR regional administrative orders, executive orders	Recreation, production, ecotourism, education, watershed protection Social justice and poverty alleviation	Production

4 Allocations to communities, community organizations and indigenous peoples a CBFMAs and related tenure b CADCs/CADTs#	DENR administrative orders, Indigenous People's Rights Act	Social justice and poverty alleviation Upland production system	Protection of biodiversity Ecotourism
5. Allocations to the private sector – holders of TLAs, IFMAs, fishpond leases, grazing lands	DENR administrative orders	Forest production Conservation and management of natural forests for processing	Protection of biodiversity Poverty alleviation
6. Unallocated forest lands (not covered by any of the allocation instruments above) – open access	DENR administrative orders, presidential proclamations or decrees	Based on actual occupancy, claim or best use	
B. Unclassified forest lands (to be allocated to <i>de facto</i> claimants or occupants)	Acts of Congress to classify these areas as either alienable and disposable or forest land	Based on actual occupancy, claim or best use	

* Annex 1 provides more details of selected tenure and allocation instruments under the different categories of forest land allocation in the Philippines.

Certificates of ancestral domain claim (CADCs) are issued by DENR and can be converted to certificates of ancestral domain title (CADTs) under the Indigenous People's Rights Act. There is some overlap among these and community-based forest management agreements (CBFMAs); of the 4.9 million ha of land allocated to communities, at least 2.5 million ha is under CADCs, some of which already have CADTs (World Bank, 2004). The rest is covered by CBFMAs or related tenure instruments.

DENR = Department of Environment and Natural Resources.

IFMA = industrial forest management agreement.

NIA = National Irrigation Administration.

NPC = National Power Cooperation.

PNOC = Philippine National Oil Company.

TLA = timber licence agreement.

Source: DENR and USAID/Manila, 2004.

The present systems for allocating forest land in the Philippines are the result of a series of decentralization policies in recent years. At the operational level, the impacts of these devolution policies on the forestry sector need further evaluation. So far, they have not resulted in significant investments in forest plantations by the private sector or LGUs, they have not minimized illegal logging and the conversion of forest land to agricultural or other uses, and they have not adequately addressed poverty in the uplands. Accountability, responsibility and authority in the protection and management of forest land remain vague and unclear. Incentives and rights for the holders of different tenure or allocation instruments have yet to be clearly defined and implemented.

The general categories for allocating forest land include different stakeholders in the protection, development and management of forest land. DENR and other government agencies (PNOC, NIA, NPC) remain the State managers of protected areas and watersheds. These set-asides are for the benefit of present and future generations and are designed to serve inter-generational public goods, but greater State commitment is needed to provide adequate funds to ensure their protection and management for biodiversity conservation and watershed protection. In these areas, the State must regulate, control and enforce forestry laws while responding to demands for social justice and poverty alleviation, and public interest remains the driving force in managing them. It is possible to adopt "protect, participate and profit" strategies in protected and watershed reserves, rather than following a strictly "protect, prohibit and punish" approach (Larsen, 2000).

The communities – upland migrants and indigenous peoples – are another set of key stakeholders in the protection and management of forest land. These groups are at the centre of local, national and international attention as they emerge to become major players in managing the Philippines' forest land. Many qualified communities have obtained a degree of tenure and some rights over their lands, but it remains to be seen whether or not these land and natural resources assets will be productive and help the communities to emerge from poverty and social injustice (Borlagdan, Guiang and Pulhin, 2001; Contreras, 2003). Community-based forest management (CBFM) is a strategy for achieving sustainable forestry and social justice, as spelled out in Presidential Executive Order No. 263 of 1995. Thus, the CBFM approach and strategy should be adopted in all kinds of tenure and allocation instruments for the protection and management of forest land.

Allocations of forest land to the private sector remain the dominant tenure instrument for increasing the production of timber and other wood requirements in the Philippines. Forest policies affecting the allocation of forest land to the private sector have changed since the constitution was adopted in 1987. The private sector's past abuse and exploitation of forests under martial law have tainted its image in advocating for a more deregulated policy environment in production forestry (Wallace, 1993).

The different methods of allocating forest land in the Philippines highlight the need to design and implement category-specific planning and monitoring systems that apply to selected tenure or allocation instruments. Current forest management planning, regulation, monitoring and policy-making are still very heavily based on the timber-oriented rules and regulations of the Philippine Selective Logging System (Revilla, 1998; Guiang and Manila, 1994). The requirements for obtaining approval for annual allowable cuts and for transporting forest products are the same for community organizations and private sector tenure holders, which has led to relatively high transaction costs for community organizations obtaining resource use rights (EWW, 2003), and collusion among community leaders, DENR field officials, the military and LGUs in income-generating forest management activities. DENR has suspended the rights of CBFMA holders at least three times since implementation of the policies allowing community organizations to harvest and benefit from productive natural and planted forests. This high level of regulation is similar to that applied to the holders of TLAs and IFMAs, and has had negative effects on communities that have been strictly enforcing forest management regulations in their tenured areas. It should be noted that community organizations have greater need of regular income sources to protect and manage their forest land than private sector actors have. Communities require public subsidies for training, initial investments in livelihoods and enterprises, and the carrying out of obligations to protect and manage forest land (Guiang, 2004d).

Overall, there is a need to determine key performance indicators for effective forest management and to design a system for using these indicators to monitor the performance of various tenure and allocation holders over time. Efforts are being made to assist DENR, LGUs and tenure/allocation holders to design, install and operationalize a governance-oriented monitoring and evaluation (M&E) system at the local level to promote effective forest management.⁶³ It should be noted that the lack of trust among DENR, community organizations, LGUs and civil society regarding the harvesting of natural and planted forests in CBFMA, TLA and IFMA areas stems from the lack of an effective monitoring system for evaluating performance in forest management.

CHANGES AND TRENDS

As Table 2 shows, most classified forest land in the Philippines is under the management of the State (28 percent) or communities (33 percent). Only 12 percent of forest land is in the private sector under various tenure instruments. The challenge is how to address tenure in the 25 percent of forest land that is still open access or under *de facto* claims and management. The present allocation of

⁶³ The United States Agency for International Development (USAID)-funded Philippine Environmental Governance Project Phase 2 (EcoGov 2) is currently using 12 performance indicators for effective forest management with DENR, LGUs and tenure/allocation holders in Southern and Western Mindanao, Central Visayas and Northern Luzon. Six of the 12 indicators are compulsory for all types of tenure/allocation, and the remaining six indicate added performance. The 12 indicators are consistent with the principles and requirements of SFM.

forest land implies higher public expenditures to protect and manage set-aside (protected areas and watershed reserves), subsidize the capacity building needs of communities – including social infrastructure and livelihood assistance – and capture open-access forest land through appropriate tenure/allocation instruments. This issue poses a particular challenge as the Philippines is forecast to undergo another ten years of budget deficit, political instability and competing needs for increased social services, improved infrastructure, education and agricultural development (World Bank, 2003; 2005).

TABLE 2
Allocation of forest land in the Philippines

Category of allocation	Estimated area (ha)	% of total forest land and unclassified areas
A. Classified forest lands	14 765 000	
1. Allocations to address public goods (forest reserves, national parks, GRBS/WA)	4 165 000	28%
2. Allocations for civil and military reservations	296 000	0.02%
3. Allocations to LGUs under communal forests or co-management agreements	Minimal area	
4 Allocations to communities a CBFMAs and related tenure b CADCs/CADTs	4 900 000	33%
5. Allocations to the private sector (mostly existing TLAs, IFMAs, fishponds, grazing lands)	1 760 000	12%
6. Unallocated forest land (not covered by any of the allocation instruments)	3 644 000	25%
B. Unclassified forest land (to be allocated to <i>de facto</i> claimants or occupants)	1 089 000	
Total	15 854 000	

* There is some overlap among CADCs, CADTs and CBFMAs; of the 4.9 million ha of land allocated to communities, at least 2.5 million ha is under CADCs, some of which already have CADTs (World Bank, 2004). The rest is covered by CBFMAs or related tenure instruments.

Sources: FMB/DENR, 2003; Angeles, 2004; World Bank, 2004; DENR and USAID/Manila, 2004.

Between 1980 and 2003, the allocations for set-aside – biodiversity conservation and forest reserves – increased by 25 percent, from 3.4 to 4.2 million ha. Forest exploitation in the 1970s and early 1980s resulted in alarming rates of deforestation and biodiversity loss, which became a major issue after martial law (i.e., from 1986). Increasing awareness of the value of biodiversity and the environmental services of forests, together with the shift from timber-oriented management systems to a more ecologically oriented perspective in forest management, led to advocacy for increasing the land allocations of protected areas. This trend was strengthened by the National Integrated Protected Areas Act in 1991 and various proclamations to protect critical watersheds serving multi-purpose hydroelectric power dams and national irrigation systems. Donor funds for biodiversity conservation in the 1990s also influenced the allocation of protected areas. These funds included grants from the Global Environment Facility (GEF) of the World Bank, the USAID Debt-for-Nature swap that endowed the Foundation for the Philippine Environment (FPE), and the European Union (Guiang, 2004a). Also during the 1990s, many environmental non-governmental organizations (NGOs) advocated for biodiversity conservation, rehabilitation and social justice in the uplands.

After the martial law years, there was growing nationwide desire to address social justice and poverty by allocating more forests and forest land to marginalized communities, especially indigenous people. This was partly a reaction to decades of corruption, dominance by elite groups and displacement of marginalized upland communities to make way for large-scale timber extraction, especially during the 1960s and 1970s. However, the seed for this new trend was planted during the later years of martial law with President Marcos's Letter of Instruction of 1982, which recognized upland communities' claims to and occupancy of forest land. The area of forest land

allocated to upland migrants and/or indigenous people has expanded from a tiny area in the 1980s to almost 5 million ha, or more than one-third of total forest land (Guiang, 2004b; World Bank, 2004). The allocation of forest land to communities is seen as the State's response to demands for increased devolution and the creation of more administrative and legislative mechanisms for local forest management (Borlagdan, Guiang and Pulhin, 2001; Contreras, 2003). The shift to CBFM is a natural response to the increased migration into the uplands, where an estimated 20 million people out of a total population of 84 million live. CBFM is also a way of addressing social inequity, the stagnant economy and the skewed distribution of arable land in the lowlands under the National Land Reform Programme.

The strengthening of policies in favour of allocating forest land to communities peaked in 1995 with Presidential Executive Order No. 263, which officially adopted CBFM as the country's strategy for SFM. This move was conceived to correct the State's reputation for being the nation's greatest "absentee landlord", and responded to the urgent need to empower communities so that they could establish "social fences" in open-access forests and forest land, thereby recognizing local communities' *de facto* resource management activities, including those of indigenous people (Hyde *et al.*, 1997). The rights of indigenous people were further strengthened by the Indigenous Peoples' Rights Act (Republic Act 8371) of 1997, which paved the way for the titling and private ownership (individual or communal) of ancestral forest lands. Both CBFM and the Indigenous Peoples' Rights Act are based on participatory planning and bottom-up approaches to identifying and articulating communities' resource development, management and protection strategies.

Over the last five years, forest land allocated to the private sector under different tenure instruments has stabilized at about 12 percent of the total, compared with a high of 72 percent in 1970/1971, as shown in Table 3. The area under TLAs decreased from more than 10 million ha in 1970/1971 to less than 1 million ha in 2000, generally coinciding with the decreased area of natural forests. The private sector's allowable cut for timber extraction decreased from more than 10 million m³ per annum in the late 1960s and early 1970s to 89 000 m³ in 2000 (Wallace, 1993; Angeles, 2004) – only 10 percent of its allowable cut in 1986. The sudden decrease in the late 1980s was largely precipitated by the 1987 Constitution, which put a stop to the "privilege-driven" TLA system and proposed co-production, co-management or joint venture agreements for the development and management of natural resources, including forest land (Wallace, 1993; Guiang, 1993). It is projected that only three TLAs will exist after 2010, and most TLAs have already been converted into IFMAs, which can cover a maximum area of 40 000 ha.

Policy provisions for the allocation of forest land to the private sector have changed every time the DENR leadership changes (Olizon, 1991; Acosta, 2003; Angeles, 2004), as have the incentives and restrictions regarding access rights to standing natural timber in tenured areas, financing, tax incentives and technical requirements. This uncertainty and unpredictability in forest policies affecting the private sector have discouraged investment in forest plantations, despite adoption of the Master Plan for Forestry Development in the Philippines (Acosta, 2003; Angeles, 2004; Tesoro, 2005).

Between 1980 and 2001, most plantations were established by the government and the private sector. The development of forest plantations was driven mostly by donor funds (e.g., contract reforestation projects funded by the Asian Development Bank [ADB], the Japan Bank for International Cooperation [JBIC] and World Bank loans), compliance with TLA regulations, and environmental objectives. Planting to ensure a supply of wood and other timber products did not expand as expected, and ranged from about 1 100 ha per year for 1999 to 2001, to 4 800 ha per year for 1986 to 1992 (Acosta, 2003). Investment in forest plantations for domestic needs has not been adequate to meet the projected local demand for timber and wood (DENR/FMB, FAO and UNDP, 2003; Dy, 2002; Angeles, 1999). The establishment of forest plantations has also been complicated by various tenure and claim conflicts, insurgency, the high cost of loans, and unpredictable policies. With an average yield of 200 m³ per hectare, about 25 000 ha of harvestable forest plantations are needed to meet the average annual domestic demand for 5 million m³ (Guiang, 2001; Angeles, 1999).

TABLE 3
Areas of forest land under the private sector from 1970 to 2000 (thousand ha)

Type of agreement	1970/1971		1980		1990		1995		2000	
	No.	Area	No.	Area	No.	Area	No.	Area	No.	Area
TLA	461	10 598	261	7 939	97	3 620	41	1 600	19	910
IFMA/ITPLA			12	88	81	30	248	538	184	548
Tree farm			101	9	101	1	128	18	155	19
Agroforestry			2	1	94	11	84	97	80	91
Total				8 037		4 189		2 253		1 568

Sources: FMB/DENR, 1980; 1990; 2000.

The present allocation of forest land in the Philippines reflects the decisions and actions of DENR, LGUs, civil society groups, donor agencies, communities, tenure holders and other resource managers in their efforts to manage forest land effectively and efficiently. Allocations also reflect the increasing awareness of and adherence to the principles of participatory decision-making and subsidiarity. However, they fall short of transparency and accountability, especially regarding national and local allocations of resources for the implementation of effective forest management in protected areas and regarding the active participation of LGUs and local stakeholders in the issuing of various resource use rights in forest land.

Although the present allocations to LGUs are minimal, they are expected to increase over the coming years as a result of increasing pressure to devolve forest management functions, assist communities, respond to support from donor agencies and civil society groups, support Protected Area Management Boards (PAMBs), and protect and manage communal forests, co-managed forests and communal watersheds. The current issue of DENR controlling and supervising the forest management functions of LGUs will continue until the Local Government Code of 1991 is amended. This provision renders the devolution and decentralization of forest functions partial in nature, which explains why many LGUs have a lukewarm attitude towards the development, protection and management of forest lands in their political jurisdictions, although some forward-looking local leaders disregard the inadequacy of the current forest devolution policy (Agbayani, 2005).

Unfortunately, the current situation has discouraged LGUs from helping communities to put pressure on DENR to reduce regulatory measures and transaction costs (Agbayani, 2004; EWW, 2002; Vitug, 1993) and from providing extension and social infrastructure support to improve production systems. In principle, the active involvement of LGUs and communities will help control illegal logging and forest conversion through locally organized enforcement systems. However, DENR maintains that most LGUs and communities need capability enhancement, are overwhelmed by the added responsibility of forest management and have limited funds to implement devolved functions. As a compromise, Agbayani (2005) and Guiang (2004c) propose co-management agreements for the development, protection and management of forest land by DENR, tenure holders and LGUs. Under the co-management principle, LGUs and DENR share accountability and responsibility for sub-allocating forest land to qualified claimants and stakeholders in their respective localities, based on locally accepted and technically sound LGU forest management plans (DENR and DILG, 2003).

In the future, the role of LGUs in the allocation and development of forest land is expected to increase (DAI, 2004; World Bank, 2005), but will vary from one forest land allocation to another. In protected areas, watershed reserves and CBFMA areas, LGUs are encouraged to participate in determining the direction, strategy and policies for managing various forest management units. As most forest land is allocated to communities and protected areas/watershed reserves, LGUs – together with local DENRs – are in a better position to promote investments in forest plantations and high-value crops through contracts, joint ventures or other business arrangements. Although these business arrangements may not be ideal, LGUs can broker business agreements among investors, tenure and allocation holders and DENR. They can also support extension and information dissemination, the maintenance or improvement of access roads and the provision of social services, as well as following up on applications for environmental compliance certificates from DENR. However, LGUs have a smaller role in areas that are allocated to reservations under the responsibility of other government agencies such as PNOC/the Department of Energy (DOE), NIA,

military establishments and NPC. In these areas, LGUs could work with DENR and tenure holders to assess forest management activities and monitor forest management over time.

In time, LGUs' short- and long-term roles in forest management will be to serve their local constituents, ensure the stability and quality of domestic water and communal irrigation systems, ensure the protection of lives and investments in the lower portions of watersheds, minimize flash floods and natural hazards, and sustain the production of food and fibre. LGUs will interpret and apply local environmental governance for forest land management. LGUs represent the lowest level of decision-makers and holders of responsibility for implementing effective forest management. They can open up opportunities for local stakeholders in participatory planning, decision-making and the implementation of actions that have an impact on the allocation and use of forest land. Elected officials are accountable to their constituents and the national government for governance and budgetary subsidies.

Local DENR offices and other relevant offices of national line agencies will increasingly provide technical services to LGUs, communities and other tenure and allocation holders. Together with LGUs and local stakeholders, they will set the technical standards and key performance indicators for improved forest management by tenure and allocation holders. Local civil society organizations could apply pressure to LGUs and DENR to ensure that they are accountable and transparent in their choices, decisions and actions with respect to allocating forest land and financial and human resources for sound forest management (Guiang, 2000c).

The shift in the configuration of forest land allocations in the Philippines over the last 20 to 25 years has had positive and negative effects. Increased allocations for conserving biodiversity and protecting critical watersheds have limited allocations for the private sector and upland communities, except for the ancestral domain claims of indigenous people who can be issued with CADCs or CADTs even in protected areas and watershed reserves. The overlaps and bias in the allocation of forest land that favoured public goods purposes, social justice and poverty alleviation did not sit well with the private sector, and forest management-related conflicts have increased, especially with respect to tenure rights, utilization, institutional mandates and traditional knowledge and practices (Malayang, 2004; Guiang, 2004d). The following are some common causes of conflict that have emerged recently:

- *Differences between customary and statutory laws in the use of forest resources in protected and ancestral domain areas:* the compromise has been to align the protected area management zones and plans with those of the ancestral domain areas. Examples of this kind of conflict are found in Mount Kitanglad Protected Area, where indigenous people's use rights are not consistent with protected area management policies, and ancestral domain claims cover the entire protected area. In Mount Apo, geothermal energy development conflicts with ancestral domain claims and protected area management objectives.
- *Confusing and vague institutional mandates among public agencies,* such as DENR, the National Commission on Indigenous Peoples (NCIP), NPC, LGUs and NIA, because of overlaps in the areas of their mandates and jurisdiction. Discussions are being held to harmonize these mandates, responsibilities and limits in protecting, managing and utilizing forest land. DENR maintains that it has the mandate to issue resource use rights to indigenous people, even in ancestral domain claims, while NCIP maintains that it must give its "free and prior informed consent" before any development or other activity is carried out in ancestral domains. In some areas, such as Samar, the benefits expected from mining in protected areas conflict with the aims of biodiversity conservation (REECS, 2001).
- *Disagreement regarding fair compensation, fees or penalties between off- and on-site stakeholders in the protection and management of forest land:* for instance, the province of Nueva Vizcaya taxed the private sector operators of the multi-purpose Casecnan Dam under DOE. The firm paid more than 250 million pesos (p) to LGUs (at the provincial, municipal and barangay levels) as part of its property tax obligation because water for the dam flows out of a watershed in Nueva Vizcaya (Velasco, 2005).

Analysis of components of the forest tenure and ownership system

FOREST COVER AND FOREST LAND MANAGEMENT

Table 4 shows recent estimates of the country's forest cover, which accounts for only 18.1 percent of the total land area (ESSC, 1999a).⁶⁴ Of the total forest cover, an estimated 19 to 20 percent is forest plantation and permanent perennial high-value crops (Kummer, 2003). However, there is no reliable information on how the forest cover is distributed among the different categories of forest land allocation, as shown in Tables 2 and 5 which makes it difficult to generalize about how forest management is carried out under each allocation category. Enforcement and monitoring become complicated, including linking the results from decisions and actions to improved forest management. Accountability and responsibility cannot be pinpointed easily, and the impacts of inputs, investments and interventions cannot be adequately measured. There is need for a reliable breakdown of forest types according to tenure and allocation holder as a benchmark for managing natural resource assets and monitoring improvements in forest management over time.

Fragments of information such as the recent updated forest cover survey of Mindanao (DENR and USAID/Manila, 2004) show that most remaining natural forests (open and closed canopy) are located in protected areas and watershed reserves or in zones that are highly inaccessible or the hideouts of insurgents. According to their allocation categories, these areas are the direct responsibility of DENR, PNOC or indigenous people (holders of CADCs). The areas have been partially validated and determined at the LGU level through the use of satellite images, simple community mapping exercises, focus group discussions and reconnaissance activities. Satellite images confirm that forest cover in Mindanao has increased over the last 14 years, but most of the increase can be attributed to the conversion of forest lands to plantations of high-value crops, at the expense of natural forest. In the late 1980s, large-scale suspension and non-renewal of TLAs without the establishment of effective forest protection systems and strong property rights led to forest lands in Mindanao becoming open-access areas. This accelerated their conversion into various upland production systems and triggered illegal logging. Over the last 14 years, at least 40 000 ha of natural forests per year have been lost in Mindanao, while the average annual increase in plantations has been 70 000 ha.

TABLE 4
Estimated areas of different types of forest in the Philippines

Tropical forest type	Area ('000 ha)	% of total land area
1. Old growth dipterocarp forest	805	2.7
2. Residual dipterocarp forest	2 731	9.1
3. Closed canopy pine forests	124	0.4
4. Open canopy pine forest	104	0.4
5. Submarginal forest	475	1.6
6. Mossy forest	1 040	3.5
7. Mangrove forest	112	0.4
Total natural forests	5 391	18.1
8. Forest plantations	774	
Total forest area	6 165	

⁶⁴ Official Forest Management Bureau (FMB)/DENR estimates claim that the forest cover of the Philippines has increased to 24 percent of the total land area, based on analysis of 2002 satellite images (FMB/DENR, cited in World Bank, 2004).

Sources: Data on the area of natural forest types were taken from Acosta, 2003 and ESSC, 1999a; information on the estimated area of forest plantations came from Cadiz, 1999 and Alonzo, Natividad and Tordilla, 1998. Figures were rounded to the nearest thousand hectares.

Table 5 provides a more detailed analysis of the contribution made by each category of forest land allocated to different forest management objectives. It highlights the need to generate sound information in order to design and implement effective governance policies and practices, especially regarding the planning and allocation of forest land and the management and monitoring of forest management activities under different allocation categories.

Where the dominant objectives are biodiversity conservation and protection of watersheds, existing policies and regulations restrict the use of allocated forest land. However, enforcement suffers from a lack of resources and weak property rights and benefits for occupants and local stakeholders. For allocated forest lands where the main objectives are forest production, upland production systems, poverty alleviation and social justice, the State has yet to adopt a highly deregulated and strong incentive-based system of policies and practices to promote investments, reduce transaction costs and maximize the participation of all key stakeholders at the local level. Except for forest lands that are allocated to other government agencies, the State – through DENR – uses a “one size fits all” approach to forest regulations and enforcement; as a result, private sector and community allocation holders struggle with overregulation and high transaction costs. Government managers of protected areas and watershed reserves are often inflexible in dealing with communities in buffer and multiple-use zones.

The extent and nature of the remaining natural forests under each category of forest land allocation have to be ascertained, including areas for development, rehabilitation, settlement and upland cultivation. Information will help identify the benchmarks for monitoring forest management under each allocation. This is urgent and important, as more and more forest land is being allocated to migrant communities and indigenous people (through CADCs, CADTs and CBFMAs) and IFMA and/or TLA holders are increasingly applying for forest harvesting rights.⁶⁵ Existing information on areas of forest per tenure or allocation holder is fragmented and not aggregated at the municipal, provincial, regional and national levels or even at the shared ecosystem level. Thus, improved forest cover as an indicator of effective forest management is not currently monitored by LGU (provincial or municipal) or tenure/allocation holders. For instance, the claimed increase in forest cover to about 24 percent (World Bank, 2004) cannot easily be attributed to types or categories of forest land allocation. Knowing the forest cover per tenure/allocation category or LGU would strengthen accountability and facilitate enforcement, especially against illegal logging and forest conversion. Such information would also be useful in monitoring resource managers’ (DENR, NIA, PNOC and holders of various tenure instruments) improved forest management resulting from strategic interventions or investments.

The information in Table 5 helps to gauge the effectiveness of forest management activities according to category of forest land allocation, at the national level. The holders or recipients of tenure or allocation – as resource managers – are expected to be responsible and accountable and to have the authority and rights to protect and manage the natural and planted forests in their areas according to the principles and practices of SFM and biodiversity conservation. Tenure or allocation holders thereby become “accountability centres”, and are expected to plan, raise funding support for and carry out activities to protect and manage existing forests or to expand forest cover within their areas. Each holder is also expected to enforce individual property rights or respect prior rights while achieving defined objectives such as biodiversity conservation, enhancement of environmental services, including water and energy, and production of forest products. This perspective supports decentralization and the devolution of forest protection and management, and ensures that the limited human and financial resources of the State are invested in protecting and managing forests and biodiversity conservation in areas that are of great benefit to present and future generations.

⁶⁵ It should be noted that there are overlaps between CADC/CADT areas and protected areas and watershed reserves. Areas covered by protected area community-based resource management in the multiple-use and buffer zones of protected areas may also be included in the community forest land category. These overlaps may result in the double counting of areas in certain categories.

At present, the only forest lands covered by established institutional systems for tracking improvements or compliance to forest regulations are those under the private sector and CBFMAs. Planning and monitoring systems also exist for forests under protected areas or watershed reserves. Guiang (2001) argues that most forest lands under the private sector, those in protected areas and watersheds that have adequate funding and generate user fees, and a few CBFMAs or CADCs/CADTs that are supported by donor funds or generate revenue have some kind of on-site management, which is evidenced by active forest protection activities, approved management plans and functioning organizations. In theory, DENR, through FMB and regional offices, has a system to monitor the forest development, protection and management activities of all tenure and allocation holders. However, this function is currently carried out only randomly, and tends still to focus on tenure holders with timber or other resource use rights.

TABLE 5
Condition and potential of allocated forest land to address SFM and poverty alleviation objectives

	Allocation of forest land and unclassified areas					
	Watershed reserves and protected areas	Civil and military reserves	LGUs	Communities under CADCs/CADTs and CBFMAs	Private sector under FLAs, IFMAs, SIFMAs, TLAs, PLAs, etc.	Unclassified
1. Total area (ha)	4 165 000	295 000	Minimal	5 332 000	1 766 000	1 089 000
2. Percent of total forest land and unclassified areas	26.2%	1.8%		33.5%	11.1%	6.8%
3. Total forest cover (natural and planted) (ha)	Relatively high, as commercial logging in most of these areas was suspended or stopped	Very few areas have forest cover; largely brush and grassland	Some areas have natural forest cover, but fragmented	Most areas were under cancelled, abandoned or expired TLAs. Some have old growth forests, but mostly secondary natural forests and reforestation areas	Only TLA and some IFMA areas have natural forest cover	Most areas are already under some kind of upland cultivation
4. Population	Mostly upland migrants in highly inaccessible areas; some indigenous people, especially in Mindanao and Northern Luzon	Some occupants or claimants within the reserves, e.g., Mount Makiling	Occupants and claimants in proposed communal forests and watersheds, or in those with co-management agreements	Upland migrants, indigenous people and communities of forest workers who remained in the area	Claimants and upland farmers, some indigenous people	Claimants and occupants
5. Forest resources manager	Mostly DENR, NPC, NIA, PNOC	Military and academic institutions	LGUs – provincial, city, municipality, barangay	CBFMA, CADC and CADT holders	Holders of TLAs, IFMAs, FLAs, MPSAs, etc.	State through DENR
6. Main objective of allocation	Protection of biodiversity, watersheds, etc.	Research and training; other uses	Protection, production, recreation, training and research	Production, protection	Production of goods and services	?
7. Approved RMP	Some have; most do not	Some have; most do not	A few have	Those assisted with external funds have	Most have (required)	

8. Funding source for RMP implementation	Mainly DENR; some from LGUs, NGOs, donors Environmental users' fees or charges	Budget of recipient of reservation Environmental users' fees	LGUs' IRA, donors, private sector (contracts) Bonds Fees for environmental uses or resource use rights Share of national government's income from natural resources	POs (value of labour) Revenues from resource use rights Rental, entrance fees Private sector via business contracts Donors DENR?	Private sector capital Revenues from resource use rights	?
9. Mechanism for multisectoral monitoring and enforcement	Established PAMBs; none or internal to DENR	Not clearly defined; mostly internal to recipient	Multisectoral with DENR, POs, LGUs, civil society	Emerging; involves DENR, LGUs, POs, civil society	Holder, DENR	Via checkpoints and issuance of use rights
10. Legal instruments for allocating forest land	Proclamations, presidential decrees, and republic acts; with CADCs and CBFMAs in multiple-use and buffer zones	Proclamations or presidential decrees	Co-management agreements DENR proclamation orders No IRR for allocating the 5 000 ha under the LGU	CBFMAs, CADCs, CADTs, CSCs, CALCs/CALTs	TLAs, IFMAs, PLAs, FLAs, SLUP, MPSAs, etc.	To be classified
11. Bundle of rights to communities	Limited and only in multiple-use and buffer zones	Not defined, restrictions defined in the proclamation and recipient	Partly defined in Joint Memorandum Circular 2003-01 and other policies	Defined under CBFM policies; depend on DENR's regulatory powers	Limited; defined by the holder and DENR	<i>De facto</i>
12. Bundle of rights to private sector	Almost none, only possibility of joint ventures in recreation, multiple-use and buffer zones	Not defined, restrictions defined in the proclamation and recipient	LGU contracts with the private sector	Restricted by DENR regulations	Defined by policies, but generally unpredictable and unstable, especially for tenure	<i>De facto</i>
13. Responsibility, accountability and authority for designated protection forests and forest land	DENR, whole area considered protection forest land (in partnership and collaboration)	Allocation holder. Protection areas may be delineated and managed as protected areas as part of RMP	Allocation holder. Protection areas may be delineated and managed as protected areas as part of RMP	CBFMA/CADC/CADT holder delineates protection areas and may partner with public and private organizations for protection, development and enterprises	Allocation holder delineates and manages protection forests as part of RMP	?
14. Responsibility, accountability and authority for rehabilitation and development	DENR and other partners for delineated areas	Allocation holder, based on approved RMP	LGUs, based on approved RMP	CBFMA holders, based on approved community resources management or ancestral domain sustainable development plans	Allocation holder, based on approved RMP	?

15. Potential to produce timber	Low	Low	Moderate	Moderate (smallholder scale from managed natural forests)	High (from plantations and managed natural forests)	Depends on site and risks taken by occupant
16. Potential to produce non-timber	Moderate	Low	Low to moderate	Low to moderate	Moderate to high, depending on incentives	
17. Potential to produce high-value crops	Low	Low	Moderate to high	Low to moderate, depending on government support	High because of private sector efficiency	
18. Potential to provide environmental services – biodiversity, watershed, aesthetics	High	Low to moderate	Moderate	Low to moderate	Low to moderate	?
19. Potential to address poverty and equity	Low for poverty, high for equity because of intergenerational perspective	Low to moderate	Moderate to high	High for equity, low to moderate for poverty, depending on rights and distribution of benefits within community	Low for equity, depending on efficiency of taxation Moderate for poverty, depending on local employment generated	?

Note: Areas under CBFMAs, CADCs and CADTs are greater than the estimated 4.9 million ha (World Bank, 2004) because of possible overlaps.

CALC = certificate of ancestral land claim.

CSC = certificate of stewardship contract.

FLA = fishpond lease agreement.

IRA = internal revenue allotment.

IRRs = implementing rules and regulations.

MPSA = mineral production sharing agreement.

PO = people's organization.

RMP = resource management plan.

SIFMA = socialized industrial forest management agreement.

SLUP = sustainable land-use planning.

Sources: FMB/DENR, 2000 ; Guiang, 2001.

Forest management in set-asides for public goods

Set-asides for protected areas and watershed reserves cover at least 28 percent of the total classified forest land, but suffer from low levels of public support and financing. Thus, the objectives of

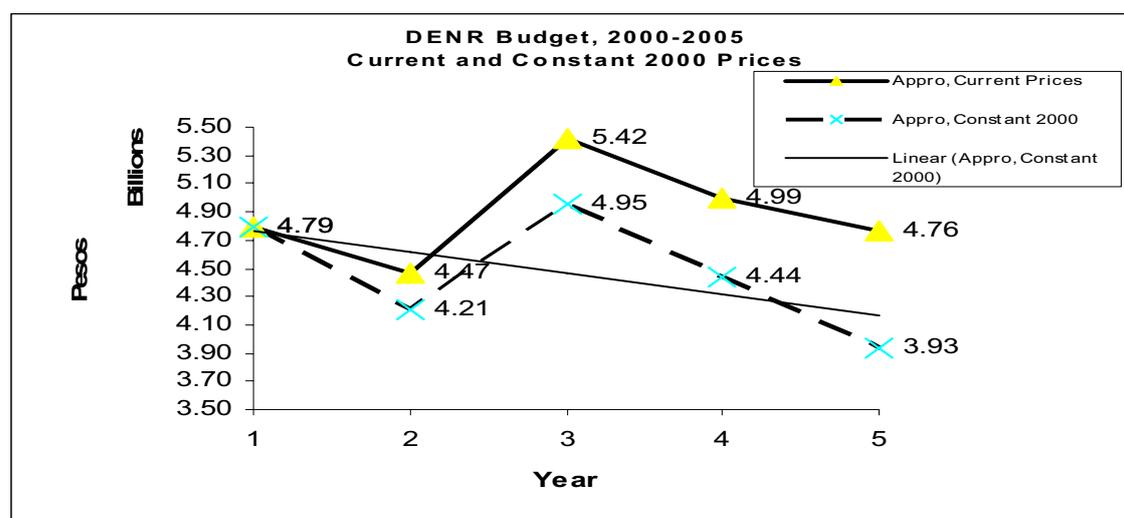
biodiversity conservation and watershed management have only partially been achieved. Most protected and watershed management areas are only “on paper”, with minimal protection activities on the ground. The laws, proclamations and administrative orders that allocated these areas as set-asides have not ensured sustainable funding to support biodiversity conservation, protection, development and rehabilitation activities. In fact only one of the eight protected areas covered by specific legislation has an annual budget allocation (Agaloos, 2005). The legislation establishing forest lands as protected areas or watershed reserves forms the basis for restricted use of forest in these areas. With limited funding and staff, some protected areas and reserves have become open access and are highly susceptible to illegal logging, poaching and conversion via slash-and-burn farming.

Existing policies give top priority to biodiversity conservation and watershed management, but these commitments are not backed up with accompanying budgetary allocations. Over the years, there has been strong political will to issue orders and instructions to ban all kinds of logging and extraction in set-asides and to declare more protected areas and watershed reserves. There are now 430 such areas, including more than 140 watershed reserves. Protected areas are the responsibility of only 1 100 DENR staff members out of a total of more than 20 000. Many protected area supervisor (PASU) and watershed management offices are understaffed and have minimal operational budgets for carrying out their basic tasks, functions and responsibilities.

Only half of the Philippines’ 430 protected areas have PAMBs that are mandated by law to provide oversight, direction and advice in the protection and management of these areas (World Bank, 2004). Most PAMBs and their corresponding PASUs need capacity building in order to carry out their functions effectively, and most are perceived as “extensions of DENR” rather than local bodies that represent the different stakeholders in the protected area or watershed reserve.

In 2004, only 131 protected areas had established integrated protected area funds. These generated a total of at least p86 million, but only 12 protected areas had access to funds from the national treasury (Agaloos, 2005). Limited budgetary support for set-asides has restricted forest protection, the activities of PASU offices, livelihood support for communities, tenure processing in buffer and multiple-use zones, capacity building of PASU staff and local stakeholders, and social marketing (NIPAP, 2001; World Bank, 2003; Agaloos, 2005). Protected areas and watershed reserves require huge investments from DENR, LGUs, civil society and community organizations in order to carry out increasing activities, address property right issues in buffer and multiple-use zones and resolve indigenous people’s claims. The Philippines, which is one of 25 hotspots in terms of threats to biodiversity, will continue to be plagued with the issue of funding (Figure 2) as DENR’s annual budget is expected to stagnate in coming years. Despite higher costs, DENR has to perform with a smaller real budget than it had in the past (World Bank, 2005).

FIGURE 2
DENR budget for 2000 to 2005



Source: World Bank, 2005.

Large-scale donor funding for selected protected areas and watershed reserves in the 1990s helped establish specific management systems in these areas. Since donor support ended, many areas are threatened by illegal logging, forest conversion, bioprospecting and the entry of upland migrants.⁶⁶ Less has been invested in watershed management than in protected areas, and most budget support for watershed management has been linked to the construction and operation of multi-purpose hydroelectric dams, national irrigation systems and other national initiatives. It is now well-known that fewer than 10 percent of the more than 140 watershed reserves are under effective and functional management. Except for the energy generated by hydroelectric dams, LGUs and communities obtain few clear benefits from protecting and managing upper watersheds. Efforts to set up and operationalize user fee systems that link watershed management with local water districts and/or communal irrigation systems have met with mixed success (Borlagdan, Guiang and Pulhin, 2001; DAI, 2004). User fees from watersheds and protected area systems have potential as a major source of financing (Bautista, 2003) for environmental protection, livelihood assistance and other activities.

Forest management in private sector forest land

The strict regulation of timber extraction from natural forests has made it more difficult for the private sector to manage forest land. Only those private sector bodies with access to ADB and Land Bank of the Philippines financing for industrial tree plantations, or to long-term funds, are able to protect and manage their forest land effectively. Although forest land allocated to the private sector accounts for only 12 percent of total classified forest land, it is expected to produce, process and supply most domestic demand for timber and other products. After the martial law years, civil society and the government became more vigilant in monitoring allocations to the private sector, including extraction activities and compliance with regulations. Corruption and abuse in the private sector became a major issue in the late 1980s and early 1990s, and many private sector forest management agreements were suspended, not renewed or cancelled. The private sector's future participation in forest management and development has been the subject of much discussion and policy debate. Many suspended TLA holders abandoned their forest areas in order to reduce operational costs, sell their equipment and processing facilities and phase out gradually from the industry. Those that remained have sustained their operations by diversifying into high-value crops and forest plantations, processing imported logs and buying logs on the open market. Except for TLA and IFMA holders, private sector bodies are less concerned to manage natural forests sustainably, especially old growth forests, as the long-term benefits from investing in these types of forests are uncertain.

Compared with the government's grants and loans to rehabilitate watersheds and protected areas or to subsidize communities' tree farm and agroforestry initiatives, the private sector has invested less in developing forest plantations. As a result, the Philippines has become increasingly dependent on remaining natural forests and mature planted forests as sources of raw materials. Over the last 15 years, there has also been increasing dependence on imports of timber and wood products to meet domestic demand. The minimal investments in forest plantations even in highly suitable plantation areas such as Eastern Mindanao have been a major concern among industry players, policy-makers and academic, who have advocated strongly for improved policies and the addressing of constraints (Sanvictores, 1997; Acosta, 2003; Tesoro, 2005).

The most commonly mentioned constraints are inadequate policy incentives, the high cost of financing activities, insurgency and the presence of occupants and claimants in forest lands that are suitable for forest plantations. There are also urgent issues regarding overregulation of the industry, boundary conflicts and immediate access to standing timber through the clear-cutting of inadequately stocked secondary forests. Simplified operational guidelines are needed to promote decentralized investments in forest plantations with the participation and support of local leaders, industry players and policy-makers. Without sustained efforts to improve the investment environment for forest plantations, the Philippines will continue to experience shortages of local

⁶⁶ The World Bank's GEF, the European Union (EU), USAID's Biodiversity Conservation Network and FPE provided major support to selected protected areas. GEF and the EU, for instance, supported 18 protected areas with US\$28 million. These funds were earmarked for community organization, PAMB strengthening, resource management planning, livelihood assistance and advocacy for legislation, among other purposes. The World Bank, ADB and JBIC also provided support to the protection, rehabilitation and management of selected watersheds in the country.

timber and wood supplies, which will make illegal logging and timber poaching highly lucrative, especially in open-access and accessible forests, such as government reforestation projects that are not well guarded and protected. In December 2004, suspension of the timber harvesting rights of IFMA holders all over the Philippines, except in much of Eastern Mindanao, strengthened the view that the private sector has no future in the Philippines' forestry sector.

Forest management by communities

As shown in Tables 2 and 5, at least 33 percent of the country's classified forest land has been allocated to upland communities of both migrants and indigenous people. The allocation of forest land to communities was largely driven by the adoption of CBFM as the strategy for sustainable forestry and social justice in the Philippines. This strategy specifies that forest communities should be considered legitimate resource managers of the nation's forests. CBFM policies include a mechanism for legitimizing resource access and use rights through two kinds of long-term tenure instrument: CADCs for indigenous people, and CBFMAs for upland migrant communities. CADCs recognize indigenous people's ancestral claims to public forests, forest land and the natural resource assets that these contain, as well as their right to occupy, develop, manage, protect and benefit from these forest lands and resources. CBFMAs legitimize the rights of migrant communities to the forests and forest land that they now occupy and on which their livelihoods depend. In both arrangements, the communities interface with the government is their respective POs.

CBFM was conceived to benefit communities in the management of production forests and forest land, the protection and management of protected areas and reservations, and the management of multiple-use forests and forest land under LGUs and other government agencies. In its pursuit of these three principles, the government seeks to promote sustainable development, democratic access to forests and forest resources, improved socio-economic conditions for upland communities, decentralization and devolution of forest and forest land management, and conservation of biodiversity and maintenance of environmental services. These five principles have guided CBFM activities since the approach was conceived three decades ago.

From its start as a forestry rehabilitation approach that covered only individual and family upland farms or claims, the Philippines' CBFM approach now promotes community-wide involvement (including that of both migrants and indigenous people) in the following areas: (1) land with productive residual and old growth forests; (2) replanted forest land and ongoing reforestation projects; (3) grasslands threatened by the expansion of upland agriculture; and (4) multiple-use land and the buffer zones of protected areas⁶⁷ and watershed reserves (Borlagdan, 1996; Pulhin, 1998). This is consistent with Executive Order 318 of 2004, which promotes SFM in the Philippines. In each of these areas, the CBFM approach seeks to ensure long-term communal tenure (including individual property rights exercised within communal tenure frameworks), diverse land-use mixes and the development of creative contractual business or production arrangements with individual and corporate investors or partners.

To date, only 30 percent of CBFMA and CADC holders have affirmed or approved RMPs and annual work plans. Only a few CADCs and CADTs have completed their ancestral domain sustainable development plans. In addition, it is not clear how the communities will obtain the funds for implementing their RMPS, given the suspension of community harvesting rights and the ending of the ADB/JBIC forestry loan project that funded most community reforestation and rehabilitation efforts (World Bank, 2004).

Except those CBFMA or CADC/CADT holders that receive grants or subsidies from LGUs, most community organizations or indigenous people are not able to protect and manage their forest land effectively. Over the last 13 years, DENR's budget for the CBFM programme averaged less than p200/ha. As a result, only 8 percent of the total area under the programme has been developed with agroforestry, orchards or tree farms (Metin, 2005). Table 6 shows who should or could fund CBFM implementation in the Philippines. Given the country's current budget deficit, those who should be

⁶⁷ Buffer and multiple-use zones range from 30 to 50 percent of protected areas according to the management plans of Bataan National Park (30 percent), Siargao Protected Area (86 percent of terrestrial area), Agusan Marsh (30 percent), Kanlaon National Park (30 to 40 percent), Mount Apo National Park (30 to 40 percent, based on map) and Mount Kitanglad (30 to 35 percent).

providing funding (DENR, LGUs) cannot do so adequately, especially for extension, capacity building of community organizations, provision of seed capital for alternative livelihoods or community enterprises, and closing business arrangements with investors.

The harvesting of mature plantation timber or secondary natural forests within CBFMA and CADC tenured areas has been a contentious issue among tenure holders, POs, policy-makers, LGUs, DENR and civil society. Since 1995, the timber resource use rights of CBFMA holders have been cancelled or suspended three times. At present, communities' timber (natural and planted) harvesting rights have been suspended indefinitely. Legitimate timber harvesting generates the revenue for communities to finance the corporate fixed costs entailed by their CBFMA and CADC commitments. For example, POs have to finance the costs of protecting the remaining natural forests, developing and managing bare forest land, assisting and expanding their membership, improving their coordination and management efforts, rehabilitating environmentally sensitive areas, and initiating community enterprises such as agroforestry and smallholder tree farms. The members of most POs can commit only limited amounts of voluntary labour or time to operate check points, carry out forest patrols and plant trees in critical areas. The shortage of employment opportunities in upland areas further limits many members' availability, as poverty drives them to augment their farm incomes by seeking wage labour outside the CBFMAs and CADCs. If POs are not granted legal harvesting rights in productive residual forests or mature planted trees, they will have nothing with which to balance these costs.

Owing to the limited public subsidies and government support for CBFM and communities' highly restricted access to timber and non-timber as sources of revenue, most forest land in these areas is likely to be abandoned over time. The inadequate support system for extending agroforestry technologies has constrained many CBFM communities' diversification of upland-based sources of income. There is also the issue of having to wait at least three to five years before an upland agroforestry system becomes productive and viable. Most agroforestry systems (especially those adopting hedgerow-based systems) require large labour investments during the early stages of development. This situation has restricted the potential of CBFM to raise communities from poverty and subsistence, and has made it very difficult for many POs to protect and manage their forest land.

There might also be the risk of increased conversion of forests (brush and accessible secondary forests) into upland agriculture, as happened in the past. The concept of a "social fence" and community-based forest protection no longer functions in CBFM areas, and the programme is perceived to have failed, even though many people believe that the policies are sound. The support structure and governance mechanisms to support the CBFM strategy have failed to match the intentions of the policy.

TABLE 6
Possible sources of funds for CBFM implementation

Key CBFM activities	Source of funds						
	DENR	Donor agencies	NGOs	POs	Resource use rights	LGUs	Private sector
1. Planning and allocation of CBFM areas	Yes	Yes	?	?	?	Yes	?
2. Social preparation of communities	Yes	Yes	Yes	Yes	?	Yes	?
3. Processing, validation and awarding of CBFM tenure	Yes	Yes	Yes	Yes	?	Yes	?
4. Helping communities prepare their RMPs and annual work plans, including resource use rights	Yes	Yes	Yes	Yes	Yes	Yes	Yes
4. Protection and management of CBFM areas	?	?	?	Yes	Yes	Yes	?

5. Development of CBFM areas, including infrastructure, plantations, tree farms, individual property rights, community enterprises and savings and credit systems	Yes						
6. Helping CBFM tenure holders obtain international certification of sustainable community forestry	?	Yes	Yes	Yes	Yes	Yes	?
7. Monitoring CBFM areas for compliance, according to key performance indicators	Yes	?	Yes	Yes	Yes	Yes	?
8. Providing natural resources management, enterprise development and agricultural extension to CBFM communities	Yes						
9. Establishment of processing plants	?	Yes	?	?	Yes	?	Yes
10. Procurement and management of business facilities	?	Yes	yes	Yes	Yes	?	?

Forest management by LGUs

As mentioned elsewhere, increasing areas of forest land in the Philippines will be allocated to LGUs or will require LGUs' attention for protection, management and support. LGUs are becoming more aware that the forest lands within their political jurisdiction are natural assets that can be converted into productive resources. These areas could become major sources of LGU revenues, while functional watersheds and safer water quality could provide savings from reduced costs for public infrastructure maintenance, disaster relief and health services. These areas could stabilize underground aquifers and become sources of local timber, wood products and high-value products including, perennial fruit crops.

Under the Local Government Code of 1991 and DENR/DILG Joint Memorandum Circular 2003–01, LGUs are expected to become directly involved in co-managing forest land that is not currently under effective management, especially watersheds that have a direct impact on the supply of domestic water, irrigation systems or the attractiveness of resorts and recreation areas. Current policies encourage or require LGUs to participate in PAMBs, watershed management and the steering committees of publicly operated water and nature-based ecotourism facilities. Under the Philippine Clean Water Act, LGUs will eventually take a more proactive role in the protection and management of headwaters. With the increasing interest in governance-oriented forest land-use planning and allocation, LGUs will be more active in tenure assessment, controlling illegal logging, enforcement, promotion of investments in forest land and assisting communities in improving their livelihood and community enterprises. Policies to make LGUs visible and active participants in forest land management are being put in place; the challenge is how to make these policies a reality, starting with co-management agreements that share the burden of rehabilitation and management.

LIVELIHOOD AND ENTERPRISE OPPORTUNITIES

In the 1970s and 1980s, the forest industry was a major provider of employment and economic opportunities in both rural and urban areas. Excluding the numbers employed in semi-legal, small-scale forest-based enterprises, illegal logging, small-scale processing and marketing, rough estimates of the numbers employed in the processing of forest products alone ranged from 120 000 to 150 000 (Ramirez and Laarman, 1993). In 1990/1991, the authors estimate that forest extraction accounted for only 10 percent of the total 313 000 person-years at the national level, while forest product

processing, forest development activities and professional/managerial support contributed at least 44, 36 and 11 percent, respectively. These figures drastically changed in the 1990s, when most TLAs were cancelled, suspended or not renewed. Many forest-based local communities became virtual “ghost” towns, and significant numbers of unemployed forest workers turned to illegal logging, rough processing and trading as they adjusted to different livelihood systems. These forest-based ventures sustained most of the local economies in areas with remaining natural and planted forests.

It should be noted that labour-intensive forest extraction could generate as many as 26 person-days per cubic metre (Dugan, 1988) while mechanized systems can engage only 1.64 person-days per cubic metre. Guiang (2004) estimated that communities have a total of at least 1.3 million ha of productive residual forest, which should be capable of producing 1.3 million m³ of wood a year without depleting the resources – 1 ha of residual forest can yield at least 1 m³ annual growth increment under a 35-year cutting cycle (Angeles, 1999). The productive residual forest in the Philippines has an annual incremental growth rate of at least 1.38 to 1.91 percent of the naturally growing stock (averaging 70 to 271 m³ per hectare in CBFM areas) and about 5 percent of the growing stock with timber stand improvement (Revilla, 1981; Natonton and Abraham, 1984).

If CBFM/CADC holders with tenure or rights to their forest land – which number almost 900 communities – were given the right to harvest and sell 500 000 m³ per year, a total of at least 60 000 full-time jobs would be created; this is equivalent to half of the employment generated during the height of timber extraction activities. With the increasing demand for local wood resulting from the gradual phase-out of TLAs and their processing facilities, illegal forest extraction and processing in open-access forest land has generated employment opportunities. The booming population and the underdevelopment of small and medium industries in urban areas have left many families with no choice but to seek livelihoods in the uplands. This situation was aggravated by the weak performance of national and local economies in the 1980s and early 1990s, which encouraged massive lowland migration to the uplands and opened self-employment opportunities in upland agriculture, agroforestry and other forest-based activities.

The major changes to the forestry sector in the 1990s, combined with the availability of US\$600 million in loan and grant funds for nationwide contract reforestation with a total annual target of at least 100 000 ha, created employment in forest development and related activities for many communities, NGOs, LGUs and forestry professionals. Reforestation, agroforestry and forest plantation developments generated at least 110 000 person-years, 40 percent of which were contributed by the private sector. However, most development assistance and grants started to wind down in the late 1990s, leading to the decline of much forestry-related employment.

The potential of each forest land allocation category to ignite local economies and generate livelihood and enterprise opportunities for local people and forest occupants depends largely on private sector investment, public sector financing for forest development activities, public subsidies to support small-scale agroforestry and tree farms, and sustained and predictable harvesting rights for timber and non-timber products in the remaining natural forests and mature planted forests.

For CBFM communities, Clausen (2003) states that “decentralizing forest resources and empowering local communities to partake in their wealth under transparent conditions has most recently become key to developing rule of law and democratic systems so essential to prosperity and ecological sustainability.” He further points out that in the Philippines, communities with mixed livelihood systems generally practise SFM. These communities do not depend on timber as their main source of income, and operate indigenous systems, upland/agroforestry farms, harvesting and processing of non-timber forest products (NTFPs), and local microenterprises. The unpredictable issue and approval of resource use rights to CBFM communities has generally constrained the process of “borrowing from nature” – i.e., the harvesting, processing and marketing of natural and existing timber and NTFPs – in order to finance sustainable agroforestry production systems, build community financial assets and reduce dependency on timber (Ramos, 1996). This strategy is difficult for communities living in and near protected areas. These communities have very restricted access to borrow from nature, and are directed towards non-destructive livelihood systems that often require subsidies and intensive capacity building assistance to make them viable (Mordeno, 2000).

Experience of supporting prime communities in the Philippines has shown that initial investments should focus on building capacities to link enterprises with support institutions, providing skills for managing economic activities, and helping to realign enterprises with

opportunities in the local economy. Many of the livelihood options that were promoted in upland communities appear not to be sustainable, replicable or viable (World Bank, 2000; 2001).

Table 7 outlines the potential of each forest land allocation category with respect to livelihood and community enterprises. These potentials can only be achieved with strong participation from private sector forestry, development assistance for forest land rehabilitation and development, and the participation of LGUs in helping communities to turn their “idle” forest land into tree farms, agroforestry farms or orchards.

TABLE 7
Potential of each forest land allocation category to provide livelihood and community enterprises at the local level

Forest land allocation category	Potential to generate employment	Potential to generate community enterprises	Comments/remarks
1. Allocation for protected areas and watershed reserves	Relatively low from forest extraction Low to medium from self-employment in service sectors, e.g., tourist guiding, agroforestry in multiple-use and buffer zones Relatively high from rehabilitation and development efforts	Low to medium, depending on opportunities for community-owned ecotourism facilities	Rehabilitation and forest development efforts depend on government financing or business contracts in multiple-use and buffer zones
2. Allocation for LGUs	Relatively high if agroforestry and forest development activities are supported Low to medium if there are opportunities for business contracting with the private sector	High, with initial support for infrastructure development for community enterprises in agroforestry or high-value crop production systems	LGUs have more flexibility in allocating financial resources to support social infrastructure, extension services and the establishment of community enterprises
3. Allocation for communities	Relatively high if communities have resource use rights from the natural and planted forest; low if they do not Low to medium opportunities from agroforestry and tree farms if individual property rights and savings and credit systems are established or developed	Relatively low, unless there are grants or profits from revenues from resource use rights High if savings and credit systems function with broad membership from the community	Heavily dependent on grants, subsidies and incomes from resource use rights
4. Allocation for the private sector	Relatively high from forest development and processing activities	High if savings and credit system for community members is established and functional	Heavily dependent on stability and predictability of business environment, combined with acceptable cost of financing, market and availability of suitable forest land for development

INSTITUTIONAL AND ORGANIZATIONAL CAPACITIES

The capacities of different types of tenure and allocation holder and of the institutions that support, supervise or monitor the protection and management of forest land vary, depending on how they are organized, directed, rewarded and managed.

Tenure and allocation holders with the capacity to establish effective forest land management – technical, organizational and financial – that achieves objectives are: those in the private sector; DENR PAMBs and PASUs for protected areas and watershed reserves; NPC, PNOC/DOE and NIA for reserves with other government agencies; and to a certain extent LGUs, especially if they are willing to engage professionals in forest management (Guiang, 2004b; Borlagdan, 1999; DENR/CBFMO, 1998). Given the right policy and financial incentives and opportunities for suitable business contracting arrangements with CBFMA or CADC holders, most private sector resource managers are effective in forest management. They are generally able to organize, mobilize, leverage

and coordinate efforts to achieve objectives, especially in establishing, managing and processing forest plantations.

The holders of CBFMAs, CADCs and CADTs are probably the weakest in terms of technical, financial and organizational capabilities. These groups of resource managers need a long-term strategy for capacity building, mentoring and follow-up. Allocations to this group are motivated by the drive for social justice, equity and poverty alleviation. DENR, LGUs and civil society may have to focus their meagre resources on strengthening the capacities of community organizations so that they can carry out their forest management functions effectively. However, support systems for communities – such as microfinance, social infrastructure, and assistance with community organization, savings and credit systems, forest management, agroforestry, etc. – are not well organized and are poorly institutionalized at the local level. DENR, NCIP and civil society in general are also sceptical about communities' ability to harvest forest products sustainably in order to provide an immediate source of income to carry out their obligations under tenure instruments (Guiang, 2004c). In addition, the sudden increase in allocations of forest land to communities caught DENR, NCIP and LGUs by surprise, and they were not ready to help communities establish sound forest management. Existing budgets, organizational structures and technical skills are inadequate to service the forest management needs of communities. There are indications, however, that the government, civil society groups and donors are beginning to allocate more funds to strengthening the capacities of community organizations that have obligations to protect and manage forest land (World Bank, 2004). Such assistance includes support to community enterprises, microfinance, savings and credit systems and alternative livelihood systems.

With the right leadership, training, operational support and rewards for good performance, government resource managers (DENR, NPC, PNOC, NIA, etc.) can implement the right programmes effectively to achieve biodiversity conservation and a sustainable flow of environmental services. Financing for forest protection, development and management is not a major problem in forest reserves with facilities that generate revenues, such as energy, irrigation and domestic water supply. DENR can also broaden its sources of finances by entering into co-management agreements or contracts with LGUs, civil society groups and the private sector. With appropriate grants and donor funds, DENR could also fund its own capacity building, support for communities and other local stakeholders, capital expenditures and some operational requirements. The potential to double DENR's budget for forest management is promising, as most LGUs are able to budget at least 10 percent of the 20 percent development fund from internal revenue allotments. Operationally, DENR could obtain more than p2 billion a year from the LGUs' 20 percent development funds.

Most LGUs (leaders and key technical staff) need assistance in protecting and managing their forest land effectively, especially that under co-management agreements, communal forests and communal watersheds. The current election cycle does not encourage LGUs to invest in forest development and management given the long-term gestation of these investments, unless such investments result in more votes, better environmental services to the population, reduced environmental hazards and an improved image for LGUs as political leaders.

FOREST POLICIES TO SUPPORT FOREST LAND ALLOCATION

As shown in Tables 1 and 5 and Annex 1, forest land allocations in the Philippines have been triggered by recent policy changes. At the national level, the Philippines has plenty of policies that promote SFM, and these have responded to changing circumstances. However, the implementation of these policies through appropriate structures, governance mechanisms and budgetary support to national and local programmes and initiatives is another issue. Some of the policies overlap, and some have been rendered obsolete by more recent decisions. The flexibility to modify forest policies also varies according to when and by whom they are issued. This section briefly discusses the stability of selected policies and their impact on tenure and forest ownership under different forest land allocations.

As shown in Figure 1, forest policies in the Philippines fall into three categories: (1) laws enacted by the Congress of the Philippines or the Regional Legislative Assembly in Mindanao; (2) presidential decrees, orders and proclamations; and (3) department administrative orders or memorandum circulars. Laws can be amended only by Congress itself. Decrees are equivalent to laws and can only be changed or modified by Congress. Department orders can be changed or modified by the DENR Secretary. Policies become more difficult to change or modify as they

progress from administrative orders to presidential issuances and acts of Congress. In the past, most policy-making followed top-down approaches – clients, local stakeholders and civil society groups were not consulted or asked to provide comments and suggestions. With increasing local demand for more responsive forest policies, presidential issuances and department orders, including proposed laws, now undergo several layers of public hearings and consultations.

DENR is mandated to provide implementing rules and regulations for presidential executive orders and laws enacted by Congress. Before they become operational, all policies are published in national dailies, after which DENR or the relevant agency – e.g., PNOC, NIA or NPC – is responsible for disseminating and explaining them to its own ranks, clients and customers and the general public. From time to time, DENR compiles and publishes a compendium of policies affecting protection, management and enforcement in the forestry sector.

Given this situation, the allocation of forest land in the Philippines can be changed easily only at the level of department administrative orders. The current allocation of 28 percent (4.165 million ha) to protected areas and watershed reserves can only be altered by repeating the procedure that established it in the first place. Allocations to communities, especially CBFMAs and CADCs (4.9 million ha), and the private sector, such as IFMAs and SIFMAs (1.76 million ha), are easier to reassign to other allocation categories, at least in theory. In practice, however, most communities are the *de facto* resource managers of their forest lands, and only the DENR Secretary or his/her designees can cancel or alter these areas. The implications of cancellations are very difficult to deal with, especially those regarding allocations to communities, indigenous people and private sector bodies that have invested huge amounts of capital in forest development and processing facilities. At least 45 percent of classified forest land may be reallocated to protected areas or watershed reserves, or be put under co-management agreements. However, CADCs that are converted to CADTs become more permanent because these are virtually “private titles” allocated to indigenous people.

Forest land allocation in the Philippines demands huge public subsidies to realize effective sound management in protected areas, watershed reserves and community-managed forest lands. At least 61 percent of classified forest land is in these categories, and when unallocated/open-access areas and unclassified forest land are included, the government is faced with the management of at least 90 percent of total forest land. Funding of forest land that generates revenue under the responsibility of other government agencies is less of a problem than it is for forest land over which DENR or LGUs are responsible. Only land that is in the private sector can be managed and supported outside the government budgetary system.

In order to reduce the government’s massive task in protecting and managing so much forest land, the immediate challenge is for LGUs and DENR to close open-access areas by establishing appropriate forms of tenure and allocation. This will provide some kind of “social fence” and put in place a *de facto* arrangement for the protection, development and management of forest land. Another challenge is for the government to strengthen the security of forest land tenure under private sector responsibility, and to deregulate (while monitoring compliance and equity-related performance) community groups’ public and private contracting of investment, technology and managerial expertise in forest land. In protected areas and watershed reserves, DENR may devolve LGUs with co-management regimes for the protection and management of smaller watersheds or protected areas that do not have high biodiversity indices or where the biodiversity is of only local importance. Through DENR, the national government could then focus on protected areas or critical watersheds that have regional, national, international and intergenerational importance. It could also concentrate on improving policies, planning and monitoring systems for each type of allocation, in collaboration with LGUs and local stakeholders, and on enforcing laws and regulations with various constituents – LGUs, civil society, community groups, the media, private sector associations and academic/research institutions.

ASSESSMENT OF SELECTED TENURE AND ALLOCATION INSTRUMENTS

Table 8 summarizes the results of an assessment of selected tenure and allocation instruments that was carried out under the USAID-funded EcoGov 2 in Northern Luzon, Central Visayas and Western and Southern Mindanao (Castillo and Guiang, 2005). Using an instrument based on the indicators in Annex 2, a total of 113 tenure and allocation holders were assessed: 75 percent were communities, 2 percent LGUs, 1 percent other agencies, 19 percent private sector, and 4 percent DENR. Twelve key performance (assessment) indicators were used to gauge improved or effective

forest management. Eight of these indicators are essential for any kind of effective on-site forest management: approved RMP; regular budget to support protection and maintenance; adoption of a policy for addressing individual property rights and prior claims of claimants/occupants; functional management structure; year-round forest protection and law enforcement activities; compliance with policies, rules and regulations; contribution to the livelihoods of communities; and a functional internal M&E system. Tenure or allocation holders were assessed as effective if they reached the third or fourth levels of each criterion.

Based on the assessment, only 25 percent of the community tenure holders were meeting the requirements of effective forest management. It should be noted that in the assessment, communities were the largest tenure group studied. LGUs and other government agencies achieved the highest scores, but these results might not represent the national situation because only a few such tenure holders were assessed. The private sector performed best, with 40 percent of tenure holders managing their forests effectively, followed by State-managed forest land, with 35 percent.

Community tenure holders performed well regarding individual property rights for occupants and claimants on their forest land, agroforestry and tree plantation developments in claimed/occupied areas, and to a certain extent the participation of women and other marginalized groups. However, community groups had the lowest score with respect to regular budgets or sources of income to support forest management activities. This means that most of their forest management and protection activities are conducted by volunteer labour or on individually claimed upland farms and cultivated areas. Private sector tenure holders did better in terms of regular budget support, enforcement, resolving conflicts and the participation of women and marginalized groups. State-managed forest lands with strong participation from LGUs (Quirino and Nueva Vizcaya) and PNO (Negros Oriental) did well in all the assessment criteria.

Regarding the assessment criteria, the following observations can be made:

- Having an approved RMP reduced or helped to resolve conflicts among tenure holders, claimants and occupants of the forest land.
- Regular budgetary support or a regular source of income was directly correlated with the tenure holder's capacity to design policies and enforce laws within its forest land, based on an established M&E system for forest management.
- Functional organizations had a positive impact on forest protection and the resolution of conflicts.
- Strong and established linkages made it possible for tenure holders to obtain funds and grants for livelihood assistance and forest development activities.

Overall, the assessment found that 75 percent of tenure holders did not have approved RMPs, 82 percent did not have regular budgetary support for forest management and protection activities, 60 percent did not have clearly defined policies regarding individual property rights, 66 percent did not have functional management organizations, 67 percent did not conduct year-round forest protection and enforcement activities, 69 percent did not comply with policies, rules and regulations, and 80 percent did not have a functional internal M&E system to monitor forest management improvements over time.

TABLE 8
Assessment of tenure holders, by allocation type

Criterion of assessment	Percentage achieving acceptable (third) and full (fourth) levels of the criterion				
	Communities	LGUs	Other agencies	Private	State
Total sampled	85	2	1	21	4
1. Draft RMP completed and submitted to DENR or NCIP	15%	50%	100%	57%	50%
2. Regular budget, source of income or committed volunteer labour for overheads, protection and maintenance	6%	100%	100%	57%	
3. Individual property rights policy for occupants/claimants adopted	35%	50%	100%	43%	50%
4. Moderately active, functional management organization	19%	100%	100%	76%	75%
5. Regular year-round forest protection and law enforcement activities	22%	100%	100%	71%	
6. Compliant (no violations) with policies, rules and regulations in tenure/allocation agreement	29%	100%	100%	34%	25%
7. Internal M&E system developed and established with unit and clear reporting system, but not fully functional	15%	100%	100%	28%	25%
8. Support for community members from non-forest and forest-based livelihood systems	20%	50%		24%	
9. Formal mechanism for resolving or managing conflicts established and only periodically used	21%	50%	100%	33%	75%
10. Formal linkage established with DENR, LGU and other resource institutions for technical assistance and small grants for community organizations	37%	100%	100%	33%	50%
11. Agricultural and forest production areas being developed by individual property right and tenure holders or through government rehabilitation contracts	36%	50%		29%	25%
12. Women and marginalized community groups participate in forest management activities such as protection, extension, livelihood, savings and credit	26%	50%	100%	29%	50%
Overall	25%	75%	83%	40%	35%

Note: In the assessment, tenure holders that achieved levels 1 and 2 were presumed not to have adopted effective on-site forest land management in their areas.

Source: Castillo and Guiang, 2005.

Effectiveness and efficiency of the different forest tenure systems

This section discusses the effectiveness of the different forest tenure systems in terms of direction and support at the national and operational levels, present and projected national needs, the capacities of tenure and allocation holders, and the involvement of local stakeholders. The effectiveness of a tenure or forest land allocation system starts with the definition of a national vision and direction and the putting into operation of these through supportive implementation policies, structures and resources to ensure that they are carried out in the most efficient manner. First, an action plan should define what needs to be done, by whom, with whom, for whom, how and for how long. Ensuring effectiveness (what are the right things to do) and efficiency (doing things in the right way), and agreeing on expected results and impacts will help achieve the objectives of SFM in the Philippines.

ALLOCATIONS FOR BIODIVERSITY CONSERVATION AND WATERSHEDS

Under this allocation category, government managers are accountable and responsible for ensuring the effectiveness and efficiency of forest land management. At the national level, the vision and direction of this kind of forest land allocation are clear and well defined in the National Integrated Protected Areas Act, proclamation orders and specific legislative acts for certain set-asides.⁶⁸ National policies that cover these set-asides are more stable than the policies that affect other allocations of forest land. However, owing to the extent of set-asides (which account for 28 percent of total forest land), effective implementation has suffered because the area concerned is too large for government managers to support effectively and efficiently.

The number and area of the set-asides, and the declining budgetary support available for them have led to limited resources being spread so thinly that forest land management has been rendered ineffective. The costs of managing protected areas and watersheds are too great for current budgets, unless environmental financing schemes with user fees and other non-traditional financing, such as integrated protected area funds, are established.

Another issue is the need to simplify protected area and watershed management, especially given the increasing interest of LGUs, communities and civil society groups. There are opportunities for collaboration and partnership, but broader participation in the governance of set-asides will require DENR to adapt itself to becoming a major provider of policies, standards, technical assistance, capacity building and direction. Its role will increasingly become that of broker and facilitator at the local and national levels, as it improves policies to attract more support for biodiversity conservation, watershed management and other related objectives.

There is clearly an urgent need to evaluate existing protected areas and watershed reserves in the context of the capacities of government resources – financial, technical and organizational. Plans for watershed areas are less clear and well defined than those for protected areas. As a result, watershed management has received fewer resources and less attention from government managers and donor agencies, except when it is directly linked to multipurpose hydroelectric dams. There is a need to prioritize protected areas and watersheds and to decide which should be managed at the national level, which at the local level and which should be disestablished to meet production and poverty alleviation objectives.

Allocations of forest land for protecting biodiversity and watersheds have been effective. Biodiversity conservation in the Philippines has improved in terms of the awareness, implementation and participation of LGUs, civil society and communities in buffer and multiple-

⁶⁸ Eight protected areas in the Philippines are covered by republic acts that establish them as biodiversity conservation areas and/or watershed reserves.

use zones, but the country continues to lose endemic species and its efforts to curb increasing threats to biodiversity are inadequate. Private sector bodies have not yet been engaged in areas that interest and benefit them. Overall, protected area management has been effective, but not efficient because resources have been spread too thinly and local capacities need to be strengthened. A number of endemic species are threatened and some protected areas are not able to control illegal logging and forest conversion because of their open-access conditions. These areas suffer from insufficient resources and inadequate stakeholder participation in protection.

Allocations of forest land with the main objective of managing watersheds have been less effective and efficient than those for protected areas, with the exception of some forest lands under PNOC or NPC. LGUs and local stakeholders still have a limited understanding of the benefits of watershed management, especially with respect to supplying domestic, industrial and irrigation water, reducing damage to lives and infrastructure in the lowlands, and preventing or controlling the pollution of rivers, coastal areas and beach resources. Although the National Strategy for Watershed Management was adopted in 1999, based on consensus among different stakeholders, the State has yet to translate it into investments in watersheds.

In addition, watershed occupants, claimants and stakeholders need to know their roles, rights and benefits in watershed management. Local decision-makers must be involved in determining what needs to be done, and how, in watersheds that are of interest to local stakeholders. Without such buy-ins of local stakeholders and clearly defined property rights, most watershed reserves will be considered open-access and will continue to be major entry points for illegal logging and forest conversion activities.

Strategies to alleviate poverty and broaden livelihood opportunities for communities in watershed reserves have not generally been effective because of restrictions and regulations. The approach of “protect, prohibit and punish” should perhaps give way to that of “protect, participate and profit” (Larsen, 2000) given that most watersheds provide more benefits to off-site than on-site communities.

ALLOCATIONS TO COMMUNITIES

At the current level of assistance, regulation and support services for CADC, CADT and CBFMA holders, the technical, organizational and financial capacity of these tenure holders to satisfy their obligations as forest managers may be less than expected. Most communities need support in improving their social infrastructure, developing their capabilities to manage forest land, and using their land assets for productive household enterprises.

Allocations to communities are a way of transferring natural resource assets to marginalized groups to promote social justice and poverty alleviation. The CBFM policy addresses the equity issue. However, the paper transfer of assets to communities must be accompanied by the provision of financial and other support from government, civil society, LGUs and/or the private sector, or it is unlikely that communities will be able to achieve the objectives of SFM. At present the extent and nature of the forest land under communities' responsibility exceeds their forest management capacity. The situation is aggravated by confusion about the objectives of CBFM: should communities manage their forest lands for poverty alleviation, forest production, biodiversity conservation or environmental protection? Although the CBFMA instrument is a co-production management agreement, government policy-makers and civil society are not sure what its objectives should be; many would like the communities to protect their forests while subjecting them to highly regulated timber production, harvesting and marketing activities.

If the transfer of forest lands to communities is meant to address social injustice and poverty alleviation, why are this set of tenure holders so overregulated and suspected of overcutting and abusing their forest resources? Why are the services of the LGUs and national line agencies concerned not designed to make communities' assets productive while protecting biodiversity and the environment and producing goods and services?

Numerous assessments have shown how communities with adequate incentives invest their own labour in developing tree farms and small-scale agroforestry systems while protecting their standing capital (Borlagdan, 1999; Borlagdan, Guiang and Pulhin, 2001; Guiang, 2004c). It has been observed that communities with communal tenure instruments protect their areas from forest fire, poaching and the entry of slash-and-burn farmers (Mickelwait, Harker and Guaing, 1999). It has also been

observed that overregulating communities' resource use rights and the nationwide cancellation of those rights leads to fear, uncertainty and suspicions of government insincerity about the CBFM strategy. The three nationwide suspensions of CBFM harvesting rights have eroded communities' motivation and commitment to protect and manage their forests. The national federation of CBFM holders has lost momentum and the means of coordination to help articulate its needs with DENR and other policy-makers.

Communities that received public subsidies, support and intermittent harvesting rights were able to protect and manage their forest land, help their members by creating livelihood and employment opportunities, and gain self-respect, capacity and confidence to manage their areas (Borlagdan, Guiang and Pulhin, 2001; Abregana, 1999; SmartWood, 2003). CBFM has great potential in supporting livelihoods, providing farm-level incentives for adopting agroforestry and tree farm technologies, and lifting marginalized communities from extreme poverty and hopelessness. The increasing participation and involvement of LGUs (provincial, municipal and barangay) in CBFM appear to be a promising substitution for what DENR and NCIP could not provide at the national and local levels. There is, however, a need for DENR, LGUs and civil society groups to develop consensus regarding the provision of forest resource use rights to communities. It is not fair for the government to expect communities to protect and manage forest areas without benefiting from the standing timber and forest development that they introduce. Without benefits for local communities, CBFM simply becomes a government tool for carrying out its forest protection tasks, and could even become a strategy that condemns poor upland communities to further and deeper poverty and injustice.

ALLOCATIONS TO THE PRIVATE SECTOR

Following the decline of the forest industry, which was highly dependent on natural forests as a source of raw materials, forest plantations now seem to be the sunrise industry in the forestry sector. Throughout the Philippines, there are highly suitable areas for the development of short-, medium- and long-rotation forest plantations. Agroclimatic conditions in Eastern Mindanao, for instance, are ideal for fast-growing small-, medium- and large-scale forest plantations. This area could easily produce the timber and wood needs of the country, which would require only 25 000 to 50 000 ha of harvestable plantations every year, depending on the rotation, yield and management of forest species (Nuevo, 1998; Guiang, 2001). Plantations at various scales could be established, with integrated processing and transportation systems under joint venture or sub-contract arrangements in IFMA, SIFMA, CBFMA, CADC and CADT areas.

Private sector holders of forest tenure allocations have developed fewer forest plantations than expected because the overall business environment, regulations and incentives are perceived as unfavourable. However, given their technical, organizational, entrepreneurial and financial capacities, this set of tenure holders could give the country's forest production a major boost. Identifying the trigger points, opportunities for interventions and right mix of incentives and regulations are the challenges for DENR, the private sector, funding agencies and civil society groups.

Given the private sector's history of forest management in the Philippines, it is increasingly difficult for private sector tenure holders to advocate the harvesting of natural timber on their forest lands, even after they have developed forest plantations. Allowing the development of plantations with the right mixture of high-value tree crops, timber and other forest species and cash crops (and even livestock) may improve the profitability, payback periods and returns on investments in tenured areas under private sector management. At present, the private sector's delays in developing forest plantations is making the Philippines increasingly dependent on imports, substitutes and supplies from illegal logging activities. In the meantime the country is losing out from the opportunity costs of time lost, reduced local economic growth and an underemployed rural population.

ALLOCATIONS TO LGUs

Although there is still only limited experience of how LGUs fare in protecting and managing forest land, what experience there is shows that with the right mix of political will, adequate resources and long-term perspective they can help to stabilize tenure rights, claims and occupations in forest lands under co-management agreements; resolve claim and boundary conflicts, which tend to reduce

productivity; mobilize available local grant resources for forest development activities; and apply political pressure for collecting taxes on the use of watershed resources (Agbayani, 2005; Velasco, 2005).

With administrative policies in place under the Local Government Code, many LGUs are becoming proactive players in planning, allocating and managing the forest land within their jurisdictions. Their activities are motivated mainly by demands from their own constituents, the fear of floods and other disasters, the need to broaden local revenue sources, and the need to expand agricultural production areas using environment-friendly, socially acceptable production technologies. Effective forest land management by LGUs may not occur immediately, but calculations show that if each municipality develops 500 to 1 000 ha, there will be a total of at least 0.5 to 1 million ha of forests to supply local demands. This is assuming that only 1 000 out of 1 480 municipalities have forest land within their political jurisdictions. Plantations could be developed directly by LGUs with communities or local resource organizations such as academic and research institutions, civic groups, schools and other interested local groups. When established and developed, these areas would be more than enough to supply the country's annual demand for timber and wood.

Many LGUs have the financial and organizational capacity to develop forest plantations and protect and manage communal forests and watersheds, with or without natural forest cover. LGUs could assign or create local natural and environmental management offices, but most need capacity building in technical forestry and related skills. They can obtain financing from their own internal revenue allotments, joint ventures, business contracts or credit. The only major constraint is the three-year cycle for electing local officials, which may discourage them from embarking on forest development that requires five to ten years before it brings benefits to local populations and constituents. The enforcement of forestry regulations by LGUs, in collaboration with tenure and allocation holders, will help to monitor forest land management within their political jurisdictions, especially if they have agreements with DENR to plan and implement approved forest land-use plans.

CONCLUSIONS

The effectiveness of different tenure and forest ownership categories in achieving SFM varies. Although relevant national policies exist, the required support systems to achieve SFM in each tenure and allocation category have not been adequately developed and put in place. The Philippine selective logging system, which supported almost three decades of forest management, has become obsolete. The shift in forest management, beginning in the late 1980s, to achieve the multiple objectives of providing biodiversity conservation, environmental services, poverty alleviation and decentralization caught forest management institutions by surprise. At present, these institutions are still struggling to align their mandates, structures, budgets and capacities with the national vision and strategies to improve planning, implementation and monitoring. The private sector, academia and many practitioners foresaw the collapse of the forest industry and shifts to other forms of management as early as the 1960s and throughout the 1980s and 1990s (Sanvictores, 1960; Nasipit Lumber Company, 1984; Olizon, 1991; Bautista, 1990). However, advocacy continued to be driven by timber-oriented forest management systems, and operational policies and implementation continued to focus on curbing illegal logging instead of addressing the basic issues of property rights, improved support to communities, the deregulation of investments in forest production, biodiversity conservation and improving environmental management services.

Recommendations for improving tenure and forest ownership

The present mix of tenure and forest ownership categories in the Philippines is the result of compromise, consensus and agreements among different stakeholders: government, scientists, practitioners, civil society, the private sector, academia, donor agencies, communities and LGUs. Unlike the past, when forest management interests were driven mainly by the private sector, the present system of forest management remains volatile with respect to the conflicting objectives of biodiversity conservation, promoting environmental services, social justice and poverty alleviation, and forest production. The present tenure and allocation categories in forest lands emerged from two decades of a suppressed political system during the martial law years. They are the results of an articulated national vision and strategies embedded in the 1987 Philippines Constitution.

The major challenge is how to muster enough energy, sustained advocacy efforts, capacity and political will to support the multiple objectives of forest management. Focus, persistence and willingness to choose, decide and act on suitable options and recommendations are needed in order to translate the SFM vision into reality, following the path of decentralization, devolution, deregulation, sound governance, subsidiarity and partnership with different stakeholders. Improved forest management in the Philippines will bring both private and public benefits, regardless of who the tenure and allocation holders are. Rather than losing all direct and indirect economic benefits from forest land, the Philippines is better off establishing effective on-site management systems under different tenure and allocation categories (Francisco, 2004).

As shown in Table 9, a major effort is needed to strengthen the rights of communities and local stakeholders in protected areas and watersheds, enforcement, results-based monitoring and decentralized forest management. At present, the bundle of tenure rights for communities, LGUs and the private sector needs to be strengthened, deregulated (especially for forest plantations) and simplified to reduce transaction costs. This is the most appropriate way of moving Philippines forestry forward, as failure to address the weak bundle of rights for community and private sector tenure holders will lead to increased illegal logging and the conversion of forest to other land uses – as has been happening in Mindanao according to forest cover data for 2004. Worsening rural poverty, increasing dependence on imported wood and forest products, and the deepening budget deficit will force policy-makers to consider forest land an asset that could be opened for mining, commercial plantations of high-value crops and government-driven land reform programmes. These triggers may not strengthen property rights, and will move in a direction that may not be favourable to sound forest management in the Philippines.

Of all categories of tenure holders and forest ownership, communities and LGUs have the greatest need of assistance to strengthen their capabilities to manage forests. The State managers of protected areas and watersheds have increasingly to use collaborative and partnership mechanisms with communities (especially in buffer and multiple-use zones), the private sector and NGOs to enable them to protect these areas to ensure biodiversity and supply environmental services to on- and off-site communities. To minimize confusion, national and local governments have to design clearer policies and guidelines and communicate which types of forest land tenure mechanisms are designed to achieve biodiversity conservation, environmental services, forest production, poverty alleviation and social justice.

TABLE 9
Bundle of rights under each tenure type

Right	State	Communities (CBFMSs, CADCs and CADTs)	Private sector (IFMAs and SIFMAs)	LGUs (communal forests, co-management)
1. Use (benefit)	Limited – buffer and multiple-use zones	Yes for agricultural crops; controlled for timber and NTFPs	State-controlled for timber and NTFPs	State-controlled for timber, NTFPs and water
2. Management (use of asset)	State-controlled	Part of approved RMP (individual property rights)	Part of approved RMP (individual property rights)	Part of approved RMP (individual property rights)
3. Income (derive)	User fee	Yes for agricultural crops; controlled for timber and NTFPs	State-controlled	Jointly decided between DENR and LGUs
4. Capital (transform)	Limited: controlled by environmental compliance certificate	None	None	None
5. Transfer	None	Inheritance: next of kin	None	None

Specifically, the shift in the Philippines tenure and forest ownership system over the last 15 to 20 years requires the government, through DENR to do the following:

- Strengthen organizational and technical capacities to assist new emerging clients in forest land management – LGUs, communities, civil society groups, other government agencies such as NCIP, PNOC and NIA, and socially and environmentally responsible private sector groups. DENR should clearly define its functions: what to do, with whom, for whom, and how. The present system of DENR technical delivery is not client-oriented and is based more on regulation than incentive.
- DENR should strengthen its overall capacity as a broker and facilitator in drawing up collaboration and co-management agreements, resolving conflicts among key parties or claimants in forest land, enforcement and compliance at the tenure/allocation level, promoting private investments and business arrangements among tenure holders, and using governance mechanisms to carry out performance-based forest management systems.
- Focus and concentrate financial, human and organizational resources in protecting and managing forest land that is allocated for public goods as set-aside, and develop and install governance-oriented systems at the local level for holding tenure and allocation holders accountable, responsible and transparent in their forest management practices.

The following subsections make some more specific recommendations.

Recommendations for improving forest land management to conserve biodiversity and promote sustainable environmental services

There is limited capacity to protect and manage existing protected areas fully. There is therefore a need to reassess the prioritization of protected areas made in the Philippines Biodiversity Conservation Priorities Project in 2001. The 430 protected areas could be reduced to slightly more than 200 sites and still address the biodiversity needs of Philippine forests. Other biodiversity values may be captured and protected under different tenure regimes. DENR and LGUs should also take measures to protect the 96 priority areas not currently under a conservation management system. Meanwhile, there is a need for guidelines for the disestablishment of existing and proposed protected areas that do not meet biodiversity conservation criteria.

Information about the biodiversity conservation role of forests is not properly disseminated and linked with forests' role in providing other environmental services such as water supply, carbon sequestration and cultural integrity. Conservation efforts should explore the development of water user fees to support the protection of forests with high biodiversity values.

The absence of commonly accepted and consistently implemented performance indicators for assessing improvements or declines in the biodiversity resources of protected areas remains a challenge. Key performance indicators for estimating or determining baselines and periodic improvements in

biodiversity conservation efforts – including changes in forest cover – should be developed and implemented. More transparency and accountability are needed in the monitoring of PAMBs' performance in managing protected areas, including measuring biophysical indicators and the publishing of financial expenditures.

Livelihood and enterprise interventions in protected areas have had mixed results in terms of reducing threats to biodiversity conservation. While individual and community livelihood activities can help improve the lives of communities living in and adjacent to protected areas, efforts should focus on encouraging communities to develop land outside these areas.

Broader and more equal stakeholder participation (of communities, the private sector and academic/research organizations) in PAMBs is needed; PAMBs are still perceived as extensions of DENR to protect and manage protected areas. Private sector groups should be represented in PAMBs, especially when there are clear indications that the private sector is directly benefiting from the environmental services provided by the protected area. DENR should provide a mechanism that defines and facilitates functional coordination among DENR, other government entities and NGOs for protected areas management.

There is inadequate funding to carry out core activities in effective protected area management. With the annual costs of managing medium to large protected areas ranging from p5 million to almost p10 million (Rambaldi and Bacudo, 2000), the Philippines can afford to fund only a few protected areas, which involves providing support through personnel (core technical and support staff), logistics (mobility, transport, communications, etc.), the construction or maintenance of necessary infrastructure (towers, monitoring stations, etc.), information dissemination, regular meetings and feedback, data gathering and analysis of biodiversity indicators, delineation of boundaries, and addressing property right claims. Given the government's budgetary constraints, there is an urgent need to broaden the sources of funds for protected area management, such as through the recently established Tropical Forest Conservation Foundation, user fees and rentals. The establishment and institutionalization of integrated protected area funds in all protected areas needs to be accelerated.

There are overlaps and conflicts in institutional mandates among the Local Government Code, NCIP, mining law and the National Integrated Protected Areas Act with respect to resource use permits, environmental requirements, the collection of fees, land-use development and enforcement. Resolution of these conflicts needs to consider community property rights in buffer and multiple-use zones, natural resource sharing arrangements and social infrastructure support from LGUs.

There is an emerging issue of conflict between the objectives of mining and those of biodiversity conservation. This is going to intensify as the government presses to identify new and immediate sources of revenue to address its worsening fiscal deficit (ESSC, 1999b; Malayang, 2003). National and local governments, NGOs, the private sector and other stakeholders need to agree on acceptable trade-offs and environmental standards in order to generate jobs and income while conserving biological diversity. NCIP's procedures for free and prior consent, DENR's issuance of resource use rights and permits, the issuance of environmental compliance certificates within protected areas, and bioprospecting requirements need to have simple, clearly defined guidelines to minimize illegal entry, harvesting, bioprospecting and collusion arrangements.

There is a need to consider increasing budgetary support through the internal revenue allotment for LGUs whose area covers large portions of national protected areas, in order to provide an incentive for LGUs to participate actively in protected area management. Other forms of incentive could also be investigated.

There is a need to review allocations for watershed management and recommend institutional strategies that would best put some watersheds under co-management agreements or devolve them to LGUs, other government agencies or academic and civil society organizations for management. Devolved and co-managed watersheds should have management boards to monitor their progress, and performance indicators for sound forest land management.

Recommendations to improve the management in forest land allocated to communities

Provide exclusive resource use rights to CBFM communities. The greatest support that the government can give to CBFM communities in a globalizing economy is to provide them with stable and exclusive tenure over forests and forest land, including exclusive harvesting rights (Honadle, 1981). Such monopolistic access would ensure the competitiveness of CBFM communities, especially in the world market for quality Philippine mahogany (dipterocarps), which is one of the best materials for

manufacturing high-value wooden furniture. Access might also encourage private sector groups to enter joint venture or other business arrangements with CBFM communities whereby they jointly operate more efficient processing facilities. However, monopolistic access has to have open and well-defined governance processes at the community level, including civil society participation in reviewing the performance of CBFM holders in their application of resource use rights, and including transparent and equitable sharing of benefits among the members of community organizations. Such arrangements have great potential for building the income, organizational strength and environmental commitment of forest communities.

Provide CBFM communities with appropriate and timely support systems. Monopolistic access to raw materials will not be enough to make CBFM communities globally competitive. They also need assistance in improving the effectiveness of their marketing and the efficiency of their transport, harvesting and processing systems. They need technicians to help them adopt low-impact harvesting systems, access to working capital loans, instruction on how to manage such funds, and business administration expertise to help them develop stable and sustainable community enterprises such as small-scale tree farms, agroforestry systems and orchards.

Help CBFM communities to obtain international certification. CBFM communities also need assistance in obtaining international certification of sustainable forestry, which would grant them access to the international market for certified wood – a market that pays premiums for good-quality products, while educating communities on sustainable forestry techniques. Although the merits of certification are known, environmental NGOs in the Philippines have yet to give it priority. As Philippines forestry emerges from a period of forest abuse in the 1960s and 1970s, many environmental NGOs and DENR officials still doubt the capacity of CBFM communities to manage forests and forest land sustainably; although most support the CBFM strategy in principle, in practice many are still reluctant to give communities timber and non-timber use rights. The international certification of CBFM communities would provide clear evidence that these self-governing entities can manage their resources sustainably. Support for international certification would ensure that when tenure holders in forests and forest land are capacitated, they can become effective self-governing entities. Currently, no donor agencies or NGOs are prepared to help shoulder the initial costs of assessment and certification.

Recommendations to improve forest land management by the private sector

DENR should clearly define whether the private sector's participation in improving forest lands management in the Philippines should be only in developing and managing plantations in their IFMAs and forest land under joint venture agreements, or whether it should also involve contracts with holders of CADCs and CBFMAs, or LGUs in co-management areas. If the government opts for this latter policy, it should deregulate the industry to the maximum extent possible, and hold private sector tenure holders accountable and responsible for achieving the standards of SFM. The present confusion about allowing the private sector to harvest secondary natural forests in their IFMAs according to their performance opens up opportunities for negotiation and rent seeking.

Provide adequate incentives and support to the private sector in establishing and operating integrated processing plants for plantations, tree farms and NTFPs to serve both the local and export markets.

Identify opportunities for the private sector to enter into business arrangements in community-managed forest land, protected areas, watersheds and LGU co-managed forest land, through transparent competitive bidding processes.

Recommendations to strengthen LGUs' participation in forest land management

Establish an M&E system at the LGU level to be jointly managed by LGUs, DENR and civil society to monitor key performance indicators for improved forest management. Such a system could start with the indicators listed in Annex 2. For shared ecosystems (large protected areas, watersheds, co-managed areas and IFMAs), the provincial LGU, regional DENR, civil society and private sector groups should create a coalition to oversee the performance of each tenure and allocation holder within the political jurisdiction of the municipality, city or province. Enforcement, the curbing of illegal logging and the promotion of investments in forest development and related processing could then become joint efforts between national and local governments, with the participation of local stakeholders. The establishment of this M&E system will gradually shift monitoring from compliance to a performance-based system based on selected key performance indicators.

LGUs must plan and construct supportive and strategic social and production-oriented infrastructures (e.g., farm-to-market roads, nurseries) to help the different tenure and allocation holders within their jurisdictions reduce forest management and marketing costs and invest more in improving forest lands as natural assets.

Given the opportunities for LGUs to manage or co-manage communal forests, watersheds and open-access areas, they should consider long-term investments in forest land as a means of broadening their sources of local revenue, ensuring local employment, minimizing environmental hazards and improving the tourism potential of their localities. They should facilitate the closure of all open-access forest land within their political jurisdictions, in collaboration with DENR, community groups, the private sector and civil society.

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ANNEX 1: MAJOR LEGAL INSTRUMENTS GOVERNING FOREST LANDOWNERSHIP, ACCESS AND CONTROL IN THE PHILIPPINES

Instrument	Basis	Description
Community-Based Forest Management Agreement (CBFMA)	DENR DAO 22-93; Executive Order 263 (1995); DENR DAO 96-29 (1996)	A production sharing agreement between a community and the government to develop, utilize, manage and conserve a specific portion of forest land, consistent with the principles of sustainable development and pursuant to a community resource management framework.
Certificate of Stewardship Contract (CSC)	Executive Order 263 (1995); DENR DAO 96-29 (1996)	A contract for 25 years, renewable for another 25 years, awarded to individuals or families occupying or tilling portions of forest land.
Industrial Forest Management Agreement (IFMA)	DENR DAO 04-97	A 25-year production sharing agreement between DENR and an individual or corporation to develop, utilize and manage a tract of forest land, other public or private land to grow timber species including rubber, and non-timber species including bamboo and rattan.
Socialized Industrial Forest Management Agreement (SIFMA)	DENR DAO 24-96	An agreement between a natural or juridical person and DENR wherein the latter grants to the former the right to develop, utilize and manage a small tract of forest land (1 to 10 ha for individuals or single families, 10 to 500 ha for associations or cooperatives), consistent with the principles of sustainable development.
Certificate of Ancestral Domain Claim (CADC)*	DENR DAO 02-93	A certificate issued by DENR to an indigenous cultural community/indigenous people declaring, identifying and recognizing its claim to a particular traditional territory, which it has possessed and occupied, communally or individually, in accordance with its customs and traditions since time immemorial.
Certificate of Ancestral Land Claim (CALC)	DENR DAO 02-93	A certificate issued by DENR to an indigenous individual, family or clan, declaring, identifying and recognizing his/her/its claim to a particular area he/she/it has traditionally possessed, occupied and used by him-/her-/itself or through his/her/its predecessors in interest since time immemorial.

Note: CADCs and CALCs are being converted into certificates of ancestral domain title (CADTs) and certificates of ancestral land title (CALTs) under the 1997 Indigenous Peoples' Rights Act.

DAO = department administrative order.

Source: World Bank, 2003.

ANNEX 2: PERFORMANCE INDICATORS OF EFFECTIVE MANAGEMENT IN NATURAL FOREST AND BARE FOREST LANDS

Performance indicators of improved management of natural forests

Natural forests = old growth and residual/secondary forests and degraded forest lands that are undergoing natural processes of regeneration.

Effective on-site management = when tenure holders meet at least six conditions. These conditions have been sufficiently met by tenure holders that have:

- an updated management plan approved or ready for approval;
- budget allocated for at least annual management operations, enforcement and forest protection activities;
- gender-oriented individual property rights rules for legitimate claimants and occupants within the tenured/allocated area, and initial implementation of these;
- a functioning management structure;
- at least two of the other conditions (water user fees between water districts and forest managers, linkages with resource institutions or the private sector, a conflict resolution system, support to non-forest based livelihoods).

Method of measurement = periodic tenure assessments conducted by DENR, LGU and civil society groups (with standard performance indicators) as the basis for determining which tenured areas are under effective management.

Performance indicators of bare forest land under productive development

Refer to bare forest land (open areas and grasslands) in production areas.

Productive development = the necessary conditions are:

- area covered by individual property rights (the Indigenous People's Rights Act), e.g., certificate of stewardship contract or communal tenure with provisions for individual property rights;
- claimants adopting sustainable upland agriculture and agroforestry systems, tree farms, plantations, orchards or other sustainable/protected uses;
- areas protected from slash-and-burn and/or wild grassland fire by tenure/rights holder.

The LGU Municipal Agricultural Office or the Municipal Environmental and Natural Resource Office must provide extension services to upland farmers.

Method of measurement = periodic tenure assessments conducted by DENR, LGUs and civil society groups (with standard performance indicators) as the basis for determining which tenured areas are under productive development.

Source: EcoGov 2 Project. 2005. Performance monitoring plan. DAI/EcoGov 2 Project. Prestige Towers, Ortigas Complex, Pasig City, Philippines.