Ecosystems & Development Journal 5(2): 41-48 April 2015 ISSN 2012-3612

POLICY PAPER

Devolving Bundles of Rights or Bundles of Responsibilities? Impacts of Forest Tenure Reform in the Philippines

Juan M. Pulhin¹ and Maricel A. Tapia²

SUMMARY

This paper examines the evolution of tenure reform in the Philippine forest lands over the last three decades which in principle has transferred "bundles of rights" from the State to local communities. It analyzes the dynamics and impacts of tenure reform and the associated policy and related changes in terms of livelihoods, income, forest condition, and equity (referred to as the LIFE indicators in this study) based on literature review and four case studies representing three different types of tenure instruments.

Despite radical efforts to restructure forest management in favor of local communities, our analysis of tenure reform in forest lands in terms of the LIFE indicators shows that the anticipated positive impacts are yet to be fully realized on the ground. The issuance of the different tenure instruments have benefited the government more by effectively recruiting local communities to take on forest management and protection responsibilities – tasks which the government was expected to perform before the tenure reform took place. However, livelihood and income of forest communities have not significantly improved in most cases. The combined effects of unstable policies and insecure use rights, over regulation and centralized issuance of resource use permit, inadequate institutional support system, poor market access and opportunities, and limited capacities at the local level prohibit genuine tenure reform from taking root.

Instead of bundles of rights and their corresponding benefits, we argue that what have been devolved by the State so far are bundles of responsibilities that put more weights to the already burdened communities. This situation thwarts the accrual of benefits to the upland poor and may impede the promotion of sustainable forest management in Community-Based Forest Management areas. The paper distilled specific lessons and recommendations to enhance the impacts of forest tenure reform on livelihood and equity and advance sustainable forest management that has relevance to other tropical countries of similar situation.

INTRODUCTION

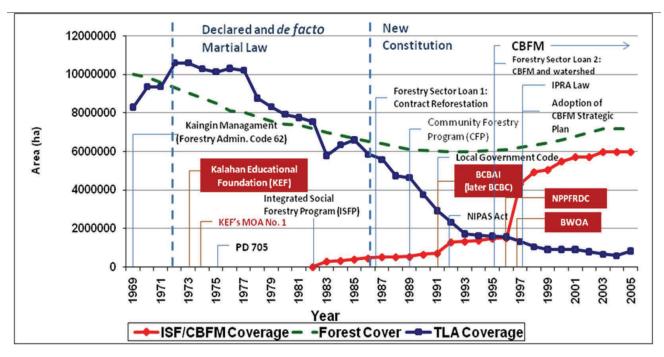
In the Philippines, as in most tropical regions, all lands in the "public domain", otherwise known as "forest lands" are owned by the state. This framework of state ownership was inherited from former colonial states, since the independent Philippine government relied on colonial legal systems of forestland management in order to use forest resources for national interests (Lynch and Talbott 1995). The centralized control over all forest lands and resources has contributed to grave inequity in terms of distribution of benefits to a privileged few and to the onslaught of these resources on which livelihood of millions of forest communities depend (Broad and Cavanagh 1993; Peluso 1992; Vitug 1993; Pulhin 1996).

Policy reform has been instituted particularly since the end of dictatorial rule in 1986 to shift the direction of forest management (Figure 1). This involved dismantling the quasimonopolistic forestry industry and installing a CommunityBased Forest Management (CBFM) system. At present, CBFM covers about 5.97 M ha or around 38% of the country's total classified forest lands involving more than 690,000 householdbeneficiaries. At the heart of the CBFM system is a tenure reform that provides tenurial security to participating upland communities on terms renewable in terms of 25 years increments. Indigenous Peoples (IPs) who have established legitimate claim over their ancestral lands are issued the Certificate of Ancestral Domain Title (CADT) which has no time limit and therefore perpetual.

This study focused on the major types of land tenure instruments representing four case studies in the context of Philippine forest decentralization process: namely the Community-Based Forest Management Program (CBFMP), Indigenous People's Rights Act (IPRA), and the devolution of forest governance to local government units (LGUs) through the 1991 Local Government Code. These models of decentralization are implemented through the issuance of different land tenure instruments:

Community-Based Forest Management Agreement (CBFMA) for CBFMP; Certificate of Ancestral Domain Claim/Title (CADC/CADT) for IPRA; and co-management agreement for

¹Professor, and ²Assistant Professor. Department of Social Forestry and Forest Governance, College of Forestry and Natural Resources, UPLB, College, Laguna 4031 Philippines Corresponding author: jmpulhin@up.edu.ph



MOA - Memorandum of Agreement NIPAS - National Integrated Protected Area System BWOA - Barobbob Watershed Occupants Association

PD - Presidential Decree IPRA - Indigenous People's Rights Act BCBC - Banila Community Based Cooperative

NPPFRDC - Ngan, Panansalan, Pagsabangan, Forest Resources Development Cooperative, Inc.

Key policies/programs and events influencing tenure reform and trends in forest cover, timber license agreement (TLA), and community-based forest management (CFBFM) coverage (1969-2005). (Sources: FMB 2005; Pulhin et al. 2006; Pulhin et al. 2007).

the devolution of forest governance through LGUs. These tenurial instruments are represented by Banila Community-Based Cooperative (BCBC) and Ngan, Panansalan, Pagsabahan Forest Resources Development Cooperative Community-Based Forest Management (NPPFRDC), Kalahan Educational Foundation (KEF), and Barobbob Watershed Occupants Association (BWOA), respectively.

The study was designed to understand and analyze the impacts

of tenure regime, regulatory framework, institutional arrangement and market transition to the LIFE indicators (livelihood, income, forest condition and equity) in the broader context of natural resources decentralization process. It adopted a twolevel analysis to achieve this objective: national and local levels. At the national level, policy documents, forestry statistics, and other relevant materials were analyzed to provide the historical and political-economic context. The impacts of the policy reform at the local level were examined using four case studies representing three major models of State-initiated decentralization process in the forestry sector, as enumerated above. Focus group discussions and household surveys were conducted in the case study sites to analyze the impacts of tenure reform and its associated interventions through the CBFM strategy in terms of livelihood, income, forest condition and equity.

Tenure Reform and Shifts in the Holders of the 'Bundles of Rights'

Prior to the tenure reform, the State enjoyed the full bundle of rights in relation to access, withdrawal, management, exclusion and alienation of forest lands. Authority of allocation and disposal of these areas in terms of what was deemed by the central government as appropriate use and management rested mainly on the Department of Environment and Natural Resources (DENR) being the State's representative on all matters pertaining to public lands. During this period, the transfer of bundle of rights was generally confined to the elite sector, particularly the Timber License Agreement (TLA) and Pastoral Lease Agreement (PLA) holders, with the full alienation of rights retained by the State. Local population dependent on the forest lands and resources for survival, including the IPs, were treated as squatters in their own land.

The shift in tenurial status through the above decentralization processes has seen a transfer of the bundle of rights to the local community and individuals living inside the forests (Table 1). In the case of KEF, the issuance of CADT legalized the rights of possession and ownership of the Ikalahans (IP group in the Kalahan area) over their ancestral domains. Except for the full alienation right where the State through the National Commission on Indigenous People has still some degree of control in

Table 1. Shifts in bundle of rights resulting from the issuance of tenure instruments such as CADT (KEF), CBFMA (BCBC and NPPFRDC) and MOA for co-management (BWOA)

CADT (KEF)	Access	Grant CADT -	Regulate access within the MOA area	Peaceful occupancy (customary reinforced by statutory right)
()	Withdrawal	Grant withdraw/	Govern the use/ extraction of agri. and	
	/Use	use rights to KEF	forest products based on its own policie but consistent with State laws	
	Management	Bestow management right to KEF	Formulate and implement policies and programs on forest management and livelihood	 Develop forest/ individual farm lots through indigenous and introduced technologies
	Exclusion	Provide access and transfer rights to KEF	Protect area from encroachment; issue Land Claim Certification to qualified families	Protect own area from encroachment; transfer land to bona fide residents of the KEF Reserve
	Alienation	Prohibits disposition of CADT Area to non-CADT members▶	Limit disposition of lands among KEF members	Uphold "damat" (customary practice of land transfer) as a mode of land
CBFMA (BCBC)	Access	Grant / cancel► CBFMA		transfer> Forest occupancy and cultivation of individual lots
	Withdrawal /Use	Grant / suspend / cancel RUP	Harvest forest products based on approved RUP	Harvest timber and agroforest crops in the individual farms
	Management	Approve and monitor reforestation and area development projects based on Community Resource Management Framework/Five-Year Work Plan (CRMF/FYWP)	Develop areas through reforestation, agroforestry based on CRMF/FYWP	➤ Develop individual farms
	Exclusion	Monitor and implement forest	 Protect CBFMA and adjacent sites; facilitate issuance and monitoring of IPR 	Prohibit encroachers to individual lots; transfer of land rights to next of kin
CBFMA	Alienation Access	Retained by the State Grant / cancel CBFMA		-► Forest occupancy and cultivation
(NPPFR DC)	Withdrawal /Use	Grant/ suspend/ cancel RUP		
	Management	Approve and monitor reforestation and area development projects based on CRMF/FYWP		Develop areas through reforestation, agroforestry, timber stand improvement, and assisted natural regeneration based on CRMF/FYWP
	Exclusion	Monitor and implement forest protection activitiesagainst illegal entry		
MOA on	Alienation Access			Recognize individual occpuancy and cultivation (based on individual MOA)
Co- Manage- ment (BWOA)	Withdrawal /Use	ernment) Prohibit timber cutting for commercial purposes (DENR); approve water supply development projects/activities (Provincial Government)	▶	Harvest agricultural crops and NTFPs within individual MOA areas; tap water supply for domestic uses
	Management	Facilitate/regulate watershed and water supply development projects/activities (Provincial Government)	management by BWOA holders including benefit sharing	Develop farms and watershed through reforestation, agroforestry and high value crops production based on MOA and land management plan
	Exclusion	Prohibit encroachment and selling/buying of land rights	rights covered by MOA	Prohibit encroachment; to individual lots; transfer land rights to next of kin or other MOA holders
	Alienation	Retained by the State State/DENR/	Local Communities	Individual/PO

⁼ represents recognition/transfer of rights

terms of ensuring that the transfer of rights will be limited to the tribe members only, the full bundle of rights has been transferred to the group with KEF as the official representative.

Meanwhile, the CBFMA issued to BCBC and NPPFRDC and the Memorandum of Agreement (MOA) on co-management issued to BWOA do not provide so much legal options to secure all aspects of ownership rights. While CBFMA allows the transfer of rights to recipient people organizations (PO) in terms of access, use, management, and exclusion, these however are very conditional and subject to a lot of bureaucratic procedures and requirements. For instance, harvesting of timber products especially timber, requires Resource Use Permit (RUP) which takes a long time to process and may also be unilaterally suspended or cancelled by the DENR anytime without due process. In worse cases, the DENR Secretary can cancel the whole CBFM as experienced in 2006.

It should be noted, however, that despite the limited transfer of rights for the CBFMA and MOA holders for co-management, land tenure security of local communities is much improved in all cases compared to the time when tenure instruments have not yet been issued. PO members are protected and hence do not have to worry about speculators and land grabbers. Furthermore, except for timber, withdrawal and selling of agricultural crops and non-timber forest products are honored by the government. The issuance of tenure instruments provided them certain political space to participate in the management of common pool resource areas, such as forested areas, which used to be solely the domain of the State and/or TLA holders. Lastly, it allowed them to exercise some rights in terms of excluding other parties in their claimed lands and resources.

Impacts of Tenure Reform on LIFE Indicators

This section analyses the impacts of tenure reform in the Philippine forest lands in terms of livelihood, income, forest condition, and equity based on experiences from four case studies representing three different types of tenure instruments under the CBFM strategy.

Impacts on Livelihood

Commercial logging was a major form of livelihood in many upland areas prior to the implementation of CBFM, and many residents are employed by logging companies, of which the former case of NPPFRDC members was a typical example. However, when the TLA expired in 1994, many employees were rendered jobless and residents resorted to different kinds of jobs. For instance, banana plantation workers reverted back to farming, among others. When CBFM was implemented, various non-forest based livelihoods were formed and timber harvesting was revived, particularly with the formation of the NPPFRDC. Such non-forest based livelihood projects include managing a consumer store, swine production, aquaculture, duck raising, poultry, meat processing, tailoring, and bakery. Timber harvesting remained a major forest-based livelihood of the cooperative at present, and income from this activity is

being used to support the above non-forest based livelihood, as well as for forest development and protection activities. However, with the series of national RUP cancellations/suspensions as well as the extremely slow and bureaucratic process involved in the RUP approval, most of the livelihood activities became economically unviable due to lack of capital.

Meanwhile, destructive livelihoods such as kaingin-making, timber poaching and charcoal-making were also common before CBFM was implemented. This was the case prior to the creation of BCBC and led to the implementation of two contract reforestation projects in Banila in 1990s. This opened employment opportunities in the community through contract labor. The adoption of CBFM has further increased the opportunities for local people in the form of additional reforestation and agroforestry projects. The former destructive practices were replaced by cut-flower production, hog-raising and agricultural trading and lending. BCBC also formed a credit cooperative where members can avail of loans for farm input with minimal interest. In addition, the cooperative was able to put up a tiger grass plantation for broom-making enterprise providing more employment to some of its members. However, recently, BCBC reported that their cooperative was bankrupted because of the many unpaid loans brought about by a major typhoon that destroyed their crops. There is also the problem of poor fund management.

The case of BWOA shared a similar challenge of sustaining a number of livelihood projects introduced by the provincial government. Forest-based livelihoods are also common in the area of which upland farming, particularly the conservationoriented system, is the most practiced. Reforestation projects have also provided an extra source of income, however funds have been dwindling through time. Also, complaints of 'favoritism' in the selection of workers for the reforestation projects were noted from the interviews. A recent development which the PO and the local government in partnership with the Environmental Governance (ECOGOV Phase 2) are working on is the implementation of payment for environmental services (PES) which could be a potential source of livelihood for both government and community. This aims to financially reward the effort of the community in protecting the watershed for ensuring the sustainable supply of water in the lowlands. However, with the increasingly becoming rampant practice of selling land rights in the area, the issue of who will benefit from this initiative becomes uncertain.

KEF, on the other hand, is an exceptional case among the four study sites. With the issuance of the tenure instrument, the local people themselves regulated the 'open access' to the forest-based resources to ensure its sustainability. For instance, swidden farming is regulated in terms of size, location and manner of preparation, as well as tree cutting, non-timber forest products collection and hunting. The use of chemicals is also prohibited. Food processing is one livelihood activity that has been earning income for KEF, which is also the most important impact of the tenure by adding value on indigenous products through processing.

Overall, tenure reform has contributed to a more environmentally conscious livelihood strategies. It resulted in the decline of destructive practices and the increasing efforts towards conservation through reforestation and sustainable farming technologies. These actions, however, are biased towards primarily improving forest cover without necessarily generating sustainable livelihood opportunities. While in general, the POs are satisfied with the impacts of the tenure reform on their livelihood, the sustainability of the introduced livelihoods is found to depend on factors where communities do not have much control of. These factors include financial capital, technical skills, and market availability. Timber harvesting is also seen promising yet vulnerable to bureaucratic manipulations and political interests. Helping communities have better control of these forces remain a great challenge in promoting sustainable livelihoods.

Impacts on Income

The impacts of tenure on income had varied results. In a formerly TLA-dominated area, such as that of the NPPFRDC, income during this period was generally higher than under the CBFM. This is understandable as monthly salaries were received by employees from the logging companies. The cooperative created through CBFM offered very limited incomegenerating activities hence staff has no permanent compensation. To address this, members look for non-forest-based livelihoods to augment their income. Nevertheless, a general improvement in the income of the communities is seen from the responses in the survey. While members with sufficient income decreased to 37% from 48% after CBFM, those who claimed that they have more sufficient income increased from 9% to 39%. This is, however, opposite the case of BCBC with an increase in the number of households with no income from 6% to 12% after the CBFM. This was attributed to 13 households who abandoned timber poaching and were rendered jobless after CBFM. The impact of tenure on income sufficiency is, however, perceived favorable with the majority (56%) claiming that their income is sufficient.

On the other hand, the impact of co-management for BWOA members has seen a similar percentage (68%) before and after the tenurial instrument with sufficient income, and slight increase in those who said that they have more than sufficient income. Almost half (49%) the respondents also said that there was no change in their income before and after the implementation of the co-management. Lastly, the case of KEF showed an improvement in income (54%), but with some increase also in the number of households who reportedly have no income from forest-based resources due to the imposition of strict rules and regulations.

Impacts on Forest Condition

Reforestation and protection of natural forests are among the major components of most CBFM projects. Therefore, it is not surprising that a favorable impact on forest condition is observed with the issuance of the tenure instruments, particularly in terms of increased forest area as shown by satellite images. improvement of forest quality and biodiversity, and minimizing fire occurrences. Some indicators of forest condition, however, have also showed varying results. For instance, water quality in the NPPFRDC area, while considered good by the members, is turning to muddy brown during rainy season and a reduction in volume is experienced during the summer season. PO members in BCBC also observed that the water quality in the area deteriorated through the years due to previous kaingin activities and soil movement during road improvement. The same was observed in the case of BWOA as waters have become turbid because of infrastructure development that took place after the co-management. High flows were also more evident as rivers became silted. In KEF, the quality and quantity of water remain the same throughout the year. Water is also very clear year round, and a minimal reduction in volume is just experienced during the summer months.

Impacts on Equity

Equity in this study is viewed in terms of:

- distribution of rights among members;
- participation in decision-making and community **b**) forestry activities:
- access to livelihood opportunities; c)
- sharing of income/benefits; d)
- sharing of costs and responsibilities; and
- access to leadership roles particularly to PO leader ship.

In general, equity was perceived to have improved across these dimensions as a result of tenure reforms. However, there were instances where inequity in some aspects was noted, in which 'low participation in community forestry activities' emerged as a consequence.

In the case of NPPFRDC, for instance, the limited transfer of rights by the tenure instrument has placed the cooperative in an unequal playing field in terms of dealing with the DENR and buyers, particularly those related to timber utilization. In terms of management and exclusion of rights, the educated, well-off, and members of the PO council are still perceived to have greater influence in the case of BWOA.

Noteworthy in the issuance of the tenure instruments is the greater participation of women in forest and community activities. Positions, rights, and livelihood activities where their participation was considered previously non-existent were opened up for them. Equal access to forest resources and livelihood opportunities for all members, regardless of gender, status and education received, was also recognized as common equity benefit among the four cases. Overall, the analysis revealed that the CADT issued to KEF provided the most secured bundle of rights to the community and the co-management issued to BWOA was considered as relatively insecure and perceived by the PO members as "much inferior" to land title. The CBFMAs issued to NPPFRDC and BCBC does not also provide much tenure security to local communities. Nevertheless, CBFMA and co-management still proved to be an improved strategy compared to the TLA system when assessed based on the LIFE indicators. Further assessment showed that livelihood and income indicators yielded the lowest benefits as revealed by the four cases studied. This reinforces earlier studies which argue that providing sustainable livelihood (and by implication improving household income) remains to be the greatest challenge in the Philippine CBFM strategy. Central to this is the further development of viable and resilient enterprises and other economic opportunities particularly for forest-dependent communities.

Considering the change in forest condition, it is obvious that the government has benefited more with the issuance of tenure instruments for arresting massive deforestation trend and improving forest cover. DENR records showed that the CBFM projects over the last 10 years have developed more than 500,000 ha of agroforestry, tree plantations, and mangrove rehabilitation within 5,503 sites. With this, it is established that the government is able to save at least PhP 127 M annually by allowing communities to manage and protect CBFMP sites, instead of hiring additional forest guards (Tesoro 1999). Finally, with regards to equity, improvement in the decision-making process between the State and local communities need further attention. The series of national cancellation/suspension of RUPs and recent nationwide cancellation of CBFMAs without due process are proofs of the negligible voice of local communities and still greater control of the DENR.

Facilitating and Constraining Factors

While tenure plays a central role in promoting the socioeconomic well-being of the local communities and improving local conditions, a number of factors are also identified that hinder or facilitate its potentials to effectively contribute to the improvement of livelihood, income, forest condition, and equity at the local level.

Policy environment is a key element in ensuring the protection of communities' bundles of rights over their forest lands and resources. A stable policy is needed to fully realize the associated impacts of tenure reforms so that PO efforts, particularly those related to livelihood, are sustained and not affected by political pressures or whims of whoever sits on the DENR top position. For example, the three national RUP suspensions/ cancellations that happened between 1994 to 2004 have dreadfully affected the income and livelihood of NPPFRDC who are highly dependent on timber harvesting (Figure 2). It should be noted that in all these suspensions/cancellations, NPPFRDC was never at fault as it never committed any violations meriting such sanction. Hence, a legislated law that supports CBFM is desirable to stabilize land tenure and resource use policy.

Regulatory procedure is also seen to hinder some benefits of tenure reform due to over-regulation, elaborate paper works, and high transactions costs. The submission of comprehensive management plans and application for RUP, for instance, are technical and tedious processes which are a major challenge among POs. The complexity of procedures has also seen to fuel corruption due to costs incurred in every transaction.

Considering that the CBFM strategy transfers forest management and protection to the local communities which should otherwise have been the responsibility of the government, the former should be provided with adequate institutional support system to build their capacity to perform such duties. Market access and opportunities are also limited in upland areas due to

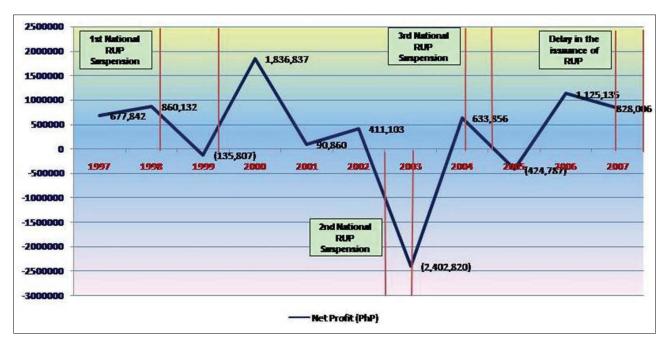


Figure 2. Effects of national RUP suspensions on NPPFRDC's income from timber harvesting (1997-2007) (Source: Pulhin and Ramirez 2005 with recent update).

their remoteness and high cost of transportation. This makes their products less competitive in prices compared to those produced in lowlands or more accessible places. Lack of market information also makes many upland communities more vulnerable to manipulation of middlemen or lowland buyers who take advantage of their unawareness in market prices. Finally, the ultimate success of the tenure reform is highly dependent on the capacity of local communities to organize themselves and act collectively, mobilize local and external resources towards a common end, and build their capital assets (i.e., natural, social, financial, physical and human). In general, weak capacity limits ability to build capital assets and in turn restricts potentials associated with tenure reforms.

CONCLUSIONS

Despite seemingly radical efforts to restructure forest management, the impacts of tenure reform in forest lands in terms of LIFE indicators suggest that the anticipated positive impacts are yet to be fully realized. Except in the case of KEF, where the transfer of the full bundle of rights is almost complete, the others have benefited the government more by effectively recruiting local communities to take on forest management and protection responsibilities. Livelihood and income of forest communities, however, have meagerly improved in most cases. The combined effects of unstable policies and insecure user rights over regulations in timber harvesting, inadequate support system from various sectors, and limited capacities at the local level prohibit genuine tenure reform from taking root. These factors thwart the accrual of benefits to the upland poor and may impede the promotion of sustainable forest management in CBFM areas. Furthermore, highly conditional 'use rights' constrict the achievement of full benefits expected from the reform and assign an even greater 'bundle of responsibilities' to the communities.

The above analysis thus leads to the following lessons learned and recommendations to enhance the impacts of forest tenure reform on livelihood and equity and the advancement of sustainable forest management that has relevance to other tropical countries of similar situation:

Security in land tenure and property rights through legislated policies is a necessary condition for successful CBFM **implementation.** Legislated policies provide more stability and clear direction in implementing and securing incentive systems for participating CBFM communities. 'Soft rights' embedded in some land tenure systems cannot be defended, can be withdrawn anytime by the DENR Secretary, and do not provide enough incentives for communities to invest in human and financial resources into forest management (Gilmour et al. 2005). A legislated policy should also be 'enabling' rather than 'enforcing' (Gilmour et al. 2005), and should be flexible enough to accommodate varying local conditions, facilitative rather than restrictive, and simple enough for community members to understand and enforce.

Community forestry has been implemented on various types of forest lands with different legal status, tenure instruments and resource use. The uniqueness of each of these forest land types necessitates the formulation of clear and consistent policies that will allow timber harvesting and other resource use based on appropriate development and utilization plan. Such policies should enable effective management and legal compliance as well as provide sufficient incentives for local communities to promote sustainable forest management.

- There is a need to simplify regulatory procedures and requirements in CBFM implementation. The highly technical and overly bureaucratic procedures and requirements imposed by the government in CBFM implementation discourages active participation of local communities, leads to high transaction costs and ultimately deprived them from benefitting fully from their management and protection of the local forest resources. Decentralization in the issuance of RUPs is also desired to reduce transaction costs and provide more economic incentives for POs
- CBFM does not only deal with trees and forest but more importantly with local communities. Therefore, a redirection of CBFM strategy from purely management to that of asset building is in order to address weak points in CBFM implementation. CBFM should be linked to the broader concern of poverty alleviation and human development to generate more support from the government and donor agencies instead of purely forest management strategies.
- Investment on continuous leadership and organizational development is needed to strengthen the capacity of POs and federations. This would enable them to negotiate for communities' rights and catalyze community and forest resource development.
- Improvement of the impacts of tenure reform on livelihood and income of local communities should be given closer attention. This should take into account appropriate and sustainable livelihood opportunities as well as market support, such as infrastructure, capital, assistance in product identification and development, market information, etc. Emerging market opportunities such as PES and the carbon market should likewise be explored and developed.
- CBFM is a multi-stakeholder effort and each partner has a vital role in promoting this strategy towards a more sustainable forest management and improvement of well*being of local communities.* The roles of the stakeholders should be clarified and strengthened to enhance support to CBFM.

REFERENCES CITED

- Broad, R. and Cavanagh, J. 1993. Plundering paradise: The struggle for the environment in the Philippines. Manila, Philippines, Anvil Publishing, Inc.
- Forest Management Bureau (FMB). 2005. Forestry Statistics, Forest Management Bureau, Department of Environment and Natural Resources, Quezon City, Philippines.
- Gilmour, D., O'Brien, N. and Nurse, M. 2005. Overview of regulatory frameworks for community forestry in Asia. In N. O'Brien, S. Matthews & M. Nurse (eds.), First regional community forestry forum: Regulatory frameworks for community forestry in Asia, Proceedings of a Regional Forum held in Bangkok, Thailand, 24-25 August 2005. RECOFTC, Bangkok, pp. 3-33.
- Lynch, O. and Talbott, K. 1995. Balancing acts: Communitybased forest management and national law in Asia and the Pacific. Baltimore, MD, USA, World Resources Institute.
- Peluso, N. L. 1992. Rich forests, poor people: Resource control and resistance in Java. Berkeley, USA, University of California Press.
- Pulhin, J. M. 1996. Community forestry: Paradoxes and perspectives in development practice. Ph.D. Thesis. The Australian National University: Canberra, Australia.
- Pulhin, J.M. and Ramirez, M.A. 2005. "Behind the fragile enterprise: Community-based timber utilization in Southern Philippines." A final report of the case study submitted to Regional Community Forestry Training Center for Asia and the Pacific (RECOFTC) with the financial assistance of International Tropical Timber Organization (ITTO) and the Forest Trends.

- Pulhin, J.M., Chokkalingam, U., Peras, R.J.J., Acosta, R.T., Carandang, A.P., Natividad, M.Q., Lasco, R.D., and Razal, R.A. 2006. Chapter II Historical review. In: Chokkalingam, U. et al. (eds.), One century of forest rehabilitation in the Philippines: Approaches, outcomes and lessons. Jakarta, Indonesia, Center for International Forestry Research.
- Pulhin, J.M., Inoue, M. and Enters, T. 2007. Three decades of community-based forest management in the Philippines: Emerging lessons for sustainable and equitable forest management. International Forestry Review, 19(4): 865-883.
- Tesoro, F.O. 1999. Strengthening the implementation of the CBFMP and CBM as Strategy for Sustainable Natural Resources Management. Natural Resources Management Program and the DENR, Quezon City, Philippines.
- Vitug, M. 1993. The politics of logging: Power from the forest. Manila, Philippines, Philippine Center for Investigative Journalism.

ACKNOWLEDGMENT

This study was part of the global research project entitled 'Improving Equity and Livelihoods in Community Forestry' implemented by the College of Forestry and Natural Resources, University of the Philippines Los Baños (UPLB), with the Center for International Forestry Research (CIFOR) under the Rights and Resources Initiative (RRI). Financial support for this study was provided by International Development and Research Centre (IDRC) of Canada and the Ford Foundation. We thank the following members of the Philippine study team who. together with the authors, led the data gathering and helped produce the country and site reports from which this paper was based: Rex Victor O. Cruz, Josefina T. Dizon, Dixon Gevaña, Hanna Leen L. Capinpin, Mark Anthony Ramirez, Chandellayne Cantre, and Rose Jane Peras.