Hanging in the Balance:
Equity in Community-Based Natural Resource Management in Asia

Edited by

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Regional Community Forestry Training Center for Asia and the Pacific

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Foreword

Since the 1980s and 1990s, the Asian region has seen a groundswell of interest in community based approaches to natural resource management, based on the promise of sustainable resource management together with stronger rights and more secure livelihoods for impoverished and marginal rural communities. In 2005 reducing poverty remains a high priority on the global agenda, represented most recently by the Millennium Development Goals. For those of us interested in Community Based Natural Resource Management (CBNRM) as a tool for sustainable livelihoods, it is timely to reflect critically on the extent to which this potential is being met. How equitably are benefits and costs being shared in CBNRM programs? To what extent are the voices of marginalized groups shaping the design and implementation of community based resource management systems?

A group of twelve practitioners and field researchers from Cambodia, China, India, Indonesia, Laos, Nepal, the Philippines, Thailand and Vietnam were invited to reflect on these questions. The 'Eleventh Workshop on Community Management of Forest Lands: Equity in CBNRM' was co-facilitated by the East-West Center and RECOFTC and funded by the Ford Foundation. The writings in this book represent the work of the participants, providing insights to country-specific experiences and lessons learned.

If there is one emerging message from these proceedings it is that there is not a clear answer to the question of whether CBNRM programs have promoted equity in rural societies in Asia. The case studies demonstrate that equity outcomes of CBNRM programs depend on many factors, including the context of policy and governance, project design, methods for facilitating engagement by marginalized social groups, effective collaboration between government and civil society, and support for the poor to invest in long term livelihood and resource use strategies. They also highlight the need for clarity about what we mean by 'equity' and the need to consider equity goals in the context of the societies in which we are working.

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1. Introduction

Community-based natural resource management (CBNRM) encompasses a diverse set of approaches and practices that broadly share a concern for integrating social and environmental goals by devolving power and authority in resource management from central government to the local level. Advocates promote CBNRM as a means for improving the socio-economic conditions of the rural poor, improving sustainable resource management and increasing the power and participation of hitherto marginalized groups (Kellert *et al.* 2000). Recent studies have questioned this potential, observing that in practice the equity outcomes of CBNRM fall short of expectations (Agarwal 2001, Agrawal and Ostrom 2001, Agrawal and Gupta 2005). Others suggest that CBNRM may promote a degree of equity if the right approach is used (Kellert *et al.* 2000, Edmunds and Wollenberg 2002, Nurse *et al.* 2004, Colfer 2005). To investigate the equity implications of CBNRM further, the East-West Center and RECOFTC invited a group of researchers and practitioners from Nepal, India, Cambodia, China, Laos, Indonesia, the Philippines, Thailand and Vietnam to participate in the 'Eleventh Workshop on Community Management of Forest Lands: Equity in CBNRM' held in Bangkok in August 2005.

The East-West Center and RECOFTC have facilitated over the past four years a series of 'writeshops' that have brought together participants from various Asian countries to document case studies on topical themes in CBNRM. These writeshops

provide an opportunity for the participants and their organizations to develop capacity for critically analyzing aspects of their field work and to document what they have learned. Lesons are fed back into field project work and into key policy fora.

This chapter introduces the theme of equity in CBNRM and provides an overview of the chapters that follow. We start by examining some of the key concepts related to equity in CBNRM, and some of the critical relationships between equity and CBNRM that have been flagged in the literature.

2. What is Equity?

Equity is not a new concept, but there has been surprisingly little detailed discussion on the meaning of equity in natural resource management (NRM). This lack of clarity in definition has influenced analyses of equity in CBNRM, where the expectation that CBNRM should promote equity generally carries implicit but unexamined notions of what equity is, the extent of 'equity' that should be promoted or achieved and the best means of doing this. As a starting point to this exercise, we examine the concept of equity and some of its embedded meanings in greater detail. In this way, the various dimensions of equity and inequity may be better understood and the real potential and weaknesses of CBNRM initiatives in promoting equity can be examined in greater depth.

2.1. Equality versus Fairness

"Equity involves getting a '*fair share*', not necessarily an equal share. What is regarded as a '*fair share*' varies according to different situations (and different cultures)" (Fisher 1989).

This definition by Fisher (1989), which is our starting point, draws attention to two related issues. First, the implication is that although there may be differences in the levels of resources or benefits received by different stakeholders, for instance according to their effort or role in a resource management system, if this rate of distribution is perceived as 'fair' then it may be regarded as an equitable arrangement. Second, it suggests that the 'benchmark' for measuring equity needs to be situationally determined to account for social contexts, norms and values. While useful as a starting point, we found this definition needed further elaboration to provide a workable framework for assessing equity in CBNRM.

2.2. Economic and Political Equity

Jacobs (1989) defines two dimensions of equity relating to the substance or outcome of a policy or resource management system, and the process by which actions are formulated and implemented. The outcome refers to the allocation of costs and benefits amongst stakeholders as a result of policy or resource management decisions. This has been called economic equity (Poteete 2004), and also allocative or

distributional equity (Jacobs 1989, Anand and Sen 2000). The distribution of benefits from community-based NRM amongst stakeholders is the most common measure of equity in the CBNRM literature. For example, Kellert and his colleagues assess the equity of CBNRM programs in terms of the distribution and allocation of socioeconomic benefits and resources. Researchers have paid less attention to equity in cost-sharing, though this is also emerging as an important area for attention. For example, the opportunity costs of attending a forest user group meeting or the labor costs of managing a community forest may be unacceptably high for the poorest in a community, which diminishes their capacity to engage in and benefit from community-based management (Nurse *et al.* 2004).

The processes by which various stakeholders make their voices heard by decision makers have equity implications in terms of access to decision-making and the ability of stakeholders to have their ideas and concerns expressed and heard. This has been referred to as procedural equity (Jacobs 1989) or political equity (Poteete 2004), a dimension which has also received significant attention in the CBNRM literature. For instance, the representation of marginal groups in resource management bodies, as well as opportunities for these groups to actually influence decision making, are the fundamental concern of authors such as Agarwal (2001) and Sarin (1998).

Agrawal and Gupta (2005) found in their study of resource user groups and their functioning in Nepal that there is often a connection between economic and political equity. They suggest that those with economic and social advantage tended to be more likely to participate in forest user groups. In our task of facilitating analysis of equity in CBNRM, we found it important to be clear and explicit about which dimensions of equity were being considered and assessed, the economic and/or political, and where appropriate to consider relationships between the two.

2.3. Equity Between Whom?

Multi-stakeholder processes span diverse social groups with differing capacities and power, functioning at different spatial scales and with ties to different localities (Jacobs 1989). Many of the authors who discuss equity in CBNRM have focused on equity between social groups at the community level. Studies from highly stratified societies such as India and Nepal have emphasized the considerable challenge faced in engaging socially marginal groups; for example women and lower castes in CBNRM (Sarin 1998, Agarwal 2001, Nurse *et al.* 2004, Agrawal and Gupta 2005). This inequity is both economic, in terms of the capacity of these groups to capture benefits, and political, in terms of their role and influence in decision making.

Jacobs (1989) suggests that the issue of equity between localities has been a central concern in the planning field where the siting of infrastructure and services has important implications for their equitable access and use. CBNRM programs have generally not explored spatial inequity, but where CBNRM seeks a more equitable balance of power between state and non-state actors, equity between stakeholders at different levels and in different localities is a critical issue. Many of the earliest CBNRM programs were successfully established in degraded forests where there were fewer

stakeholders with an economic or political interest in the resource. Several of the authors in this volume discuss the more difficult situation of gaining community access and management rights over highly valued resources such as protected areas or commercially valuable forests. This raises questions about equity between meeting the needs of local people who use resources for their daily livelihoods, and the need to protect high value areas such as national parks for the benefit of all. It also raises questions about equity between communities with access to degraded resources and communities with access to valuable resources.

In this volume, Ratna Isnaini examines a case of CBNRM in Mount Ciremai National Park, West Java, Indonesia and the issues faced by different stakeholders in the process, including rights of access for subsistence. Socheat Leakhena San discusses a new plan by the government of Cambodia to allow communities to manage existing protected areas, and the challenges they are encountering. Bhola Bhattarai looks at how establishing community access to commercially valuable forests in the terai has proved especially difficult due to significant obstacles established by the Nepali government. Another important question concerns the role of government in facilitating a fair outcome for those communities that do not live near forests but depend on them indirectly for biodiversity or commercial forest products. Domingo Bacalla reviews government regulations in the Philippines that restrict resource access to people residing adjacent to forests, leaving out large portions of a community.

CBNRM programs with sustainable resource management objectives capture to some extent the question of equity between generations, which is prominent in the sustainable development literature (see Anand and Sen 2000 for an overview). However, the concept of intergenerational equity also raises an important question about the timeframe for analyzing equity. Is it possible, for example, that short term loss may translate into longer term gains for certain social groups? The paper on Laos (by Thongmanivong Sithong and Vongvisouk Thoumthone in this volume) highlights that the poor are less likely to benefit in such situations, as they lack the capacity to make the necessary investments and to await long term returns.

Some of the papers in this volume focus on equity at the community level (such as Domingo Bacalla, Diah Djajanti, Ratna Isnaini, Harisharan Luintel, Kyrham Nongkynrih, Somying Soontornwong, Thongmanivong Sithong and Vongvisouk Thoumthone (coauthors) and Tan Nguyen), while others argue for a greater leveling of the relationship between community and state (Bhola Bhatterai, Can Liu and Socheat Leakhena San).

2.4. Who Sets the Benchmark for Equity?

If, as suggested by Fisher, we regard equity in relative rather than absolute terms; who decides what is or is not equitable? The case study of the Khasi in Northeast India presented by Kyrham Nongkynrih provides some interesting insights into this question. The exclusion of women from decision making processes at one level may be regarded as fair from the standpoint of tradition in Khasi society, but social change

and interaction with a range of external actors has stimulated some questioning amongst the Khasi about the fairness of this situation. Kyrham's paper suggests that while equity is culturally specific, cultures are dynamic, and stakeholders may need to renegotiate their thinking on equity as ideas and demands change over time.

Most of the CBNRM literature in fact does not sanction a culturally determined concept of equity. Instead, a large portion of the literature sees reducing inequity as the key agenda for CBNRM, with practitioners encouraged to take an active stance towards increasing the role, influence and benefit capture by marginal groups through the use of various mechanisms (Agarwal 2001, Edmunds and Wollenberg 2002, Colfer 2005, Agrawal and Gupta 2005). These writings posit an implicit benchmark for equity between social groups, towards which CBNRM initiatives should strive. In this context, we suggest that CBNRM is evolving into a form of social action, with governance concerns beyond resource management. Both Bhola Bhattarai and Harisharan Luintel claim that the practices of community forestry have helped communities overcome ingrained discrimination against people of lower castes. They hope that by building equality at the community level they can help facilitate it on the national level. Ratna Isnaini argues for the recognition of community rights in protected areas in Indonesia on the grounds of securing their livelihood and gaining social justice.

Writeshop participants struggled with the question of 'who decides what is equitable,' a crucial issue with important political and economic implications. We contemplated that if the improvement of equity is a central goal of CBNRM, then what is the end point to which we are aiming? We questioned if an end to inequity was the ultimate goal, or was a spectrum of equity possibilities possible and desirable? At a pragmatic level, as one writeshop participant pointed out, inequity has existed since time immemorial – are we then being unrealistic in expecting CBNRM to change this without supportive changes in wider society?

Our discussions highlighted that the process of setting the benchmark and goals is important, and requires reference to the social context as well as explicit discussion and negotiation between stakeholders. This rarely occurs in practice. As the Khasi case highlighted, it is also important to recognize that concepts of equity may also change over time and with processes of social change.

2.5. Assessing Equity in CBNRM

Table 1 below summarizes key elements to consider in relation to equity and CBNRM, drawing on the authors and issues discussed above. Assessing equity outcomes does not require us to necessarily address all of these elements; however, it is important for the concept of equity to be clearly considered and the focus of assessment clarified. The case studies presented in this volume refer to several of these.

Table 1: A Working Framework to Analyze Equity in CBNRM

Dimension	Description
Equity in…	Distribution or allocation of resources (economic) Representation/participation and influence in decision making (political)
Equity between…	Social groups within a community Stakeholders at different levels Localities Generations
The equity benchmark…	Processes for determining 'what is equitable' Culturally determined and socially based rights

3. Equity and CBNRM: Exploring the Linkages

While some scholars question the potential of CBNRM to fully address social inequity (Agrawal and Ostrom 2001, Wunder 2001, Agrawal and Gupta 2005), others agree that a number of CBNRM initiatives have been able to promote a degree of both economic and political equity (Kellert *et al.* 2000, Agarwal 2001, Edmunds and Wollenberg 2002, Colfer 2005). This depends largely on the degree to which facilitators actively intervene to engage with groups that have up to now been largely marginalized within CBNRM initiatives, including women (Agarwal 2001) and the poorest of poor (Nurse *et al.* 2004). Several scholars (Edmunds and Wollenberg 2002, Nurse *et al.* 2004, Colfer 2005) suggest strategies that show promise for improving the prospects of engaging marginalized groups in CBNRM processes.

Some papers in this volume describe the effectiveness of CBNRM techniques in establishing equity within communities. In Indonesia, Diah Djajanti examines how Perhum Perhutani, a state owned enterprise, has learned from past practices that the inclusion and participation of marginalized women is necessary for better resource management practices. This company now encourages more participation from women in an effort to create better management practices that will benefit the entire community. Harisharan Luintel presents a case on the effectiveness of civil society organizations (CSOs) in strengthening voices that have been historically marginalized by the caste system in Nepal. In Cambodia, Socheat Leakhena San explores the effectiveness of current facilitation techniques for soliciting the participation of poor households. Leakhena compares her results against benchmarks set by other authors and NGOs in order to determine the best practices for successful projects. Finally, in Thailand, Somying Soontornwong describes how a community has successfully solicited the participation of the marginalized poor in monitoring mangrove forests, increasing their catch of crabs and resulting in dramatic growths in household income.

Other scholars (Agrawal and Ostrom 2001, Johnson and Forsyth 2002) argue for clearly established property rights for local resource users if CBNRM initiatives are to have a chance at improving the economic and political situation of poor households. Johnson and Forsyth suggest that a 'rights based' approach that establishes communal rights over forest use and management is a fundamental requirement if equity between state and community resource users is to be achieved and economic benefits from these areas captured at the community level. Ostrom and Agrawal (2001) also find that for political and economic equity to be improved at the local level, decentralization policies need to address a wide range of rights and responsibilities, for example management and exclusion rights, and to go well beyond the limited rights to use specific resources.

Rights to access and manage resources form a central concern in current efforts to secure CBNRM for indigenous and other rural communities. Li (2002), however, cautions that the recognition of rights within a limited CBNRM framework with a focus on resource conservation may ultimately limit the options of communities to commercially utilize or develop these resources. Bhola Bhattarai describes how the rights of terai communities to manage forests have been stripped by the government, especially when compared to hill farmers, and how providing access to new community forest user groups in the terai has become almost impossible. A stakeholder analysis by Ratna Isnaini shows how the designation of a national park that severely limits access to and use of resouces has formed an obstacle to CBNRM. Both of these cases highlight that CBNRM cannot be effective without supportive implementing policies. Domingo Bacalla, for example, describes how community forests in the Philippines are limited to people using the resource for traditional subsistence purposes. The law does not allow communities to utilize community forests for commercial gain. The government of Laos views swidden agriculture as environmentally destructive and is consequently promoting the development of a cash crop economy in the northern hills. Sithong and Thoumthoune examine how this development makes these communities more vulnerable to commodity price fluctuations of global markets.

Varughese and Ostrom (2001) pose the question: is equity ultimately necessary for and compatible with sustainable NRM? They suggest that a degree of social inequity actually facilitates positive resource management outcomes because it provides incentives for individuals to bear a greater share of the cost and take the lead. However some uniformity in interests is also required between these groups for collaboration to occur and appropriate institutional arrangements are needed to overcome the tensions raised by social heterogeneities. Tan Nguyen explores this issue further in his examination of the equity implications of forest devolution in Vietnam, where unequal relationships between state officials and rural communities led to unequal distribution of community land plots. Tan finds that this inequality may have led to better forest management, but it came at the cost of sacrificing improvements in the livelihoods of the poorest. Tan's findings suggest we cannot simultaneously achieve both resource management and equity objectives. Ultimately we may face a tradeoff

between achieving more equitable distribution of resources (and better rural livelihoods) and better resource management. Resource managers and communities continually struggle in finding the appropriate balance between improved natural resource outcomes and greater livelihood outcomes through more equitable distribution of rights to resources. Resource managers and communities continually struggle with getting the most appropriate balance for their resource and/or community between achieving the objectives of better resource management and more equitable distribution of access rights to resources.

Wunder (2001) suggests that forest based livelihoods will not ultimately help people escape the poverty trap, although he qualifies this in more recent writings with the recognition that "forest resources are often important in poverty mitigation and avoidance, and there is often no substitute for these vital services, especially in remote areas" (Sunderlin *et al.* 2005). Can Liu notes that 400 of the 500 poorest counties in China are in forest rich areas. This raises the question for advocates of CBNRM about how far forest based initiatives will ultimately go towards alleviating poverty. The answer may depend upon whether poverty reduction is seen as a relative goal, where improvement of the current situation is the aim, or as Wunder suggests, an 'absolute concept', not related to the perceptions and relative situation of social groups (2001: 1818). In the former case, a number of the papers in this volume present evidence that community-based forest approaches are improving rural livelihoods (Bhola Bhattarai, Diah Djajanti, Harisharan Luintel, Socheat Leakhena San and Somying Soontornwong). Whether, in Wunder's terms, this is sufficient to raise the beneficiaries above an objectively defined 'poverty line' remains an open question.

4. Overview of Papers in this Volume

Bhola Bhattarai argues against new policies in Nepal that restrict community access to productive and high value forests in the terai (the flat southern portion of Nepal) on the basis that these policies create inequity between terai and hill communities. The national government counter argument is that it is better equipped to manage these resources and that the benefits of these forests should be distributed equitably through the country. Bhola however, argues that civil society organizations (CSOs) are in fact better positioned to help communities manage forests successfully through facilitation of more efficient participation and the development of connections with distant user groups. In addition, he suggests that CSOs have the potential to promote decentralization and participatory democracy, to improve livelihoods of the poor and to promote sustainable forest management.

In the Philippines, the government has declared CBNRM to be a national strategy. **Domingo Bacalla** analyzes the policy framework that promotes this approach in terms of how well it achieves equity in access to forest lands. The logging ban, in

place since December 2004, limits economic activities to subsistence activities only in forest lands allocated as Community-based Forest Management Areas, and therefore restrict the economic rights over the forest areas of numerous rural and indigenous communities and limits their opportunities to gain commercial benefits. He finds that there have been a number of successful initiatives, but that the policy framework needs to be complemented with more formal involvement by local communities in rule making. In addition, greater support from Local Government Units is needed to ensure higher levels of community participation in community-based forest management, without which disparities in equity may actually be broadened under CBNRM policies.

Can Liu performs a statistical analysis on the relationship between poverty and total factor production. By using a two-stage model of stochastic frontier approach, he looks at the productivity of households from three counties in China that have high rates of poverty yet are rich in natural resources. He concludes that the total productivity of rural households has not increased from 1991 to 2001, despite being located adjacent to abundant areas of natural resources. He argues that it is impossible for farmers to escape the poverty trap unless off-farm income is earned to increase total productivity. He further suggests that issues such as market controls, which discourage foreign investment, and land allocation, which causes land fragmentation and neighborly disputes, are leading factors in the inability of peasants to increase productivity. This is leading to increasing inequity between poor farmers in forest rich areas and farmers in other areas of China.

In Indonesia, Perhum Perhutani, a state-owned company, has realized that its traditional practices have encouraged the destruction of forests, have been ineffective in terms of soliciting community collaboration and have excluded marginalized groups such as women. **Diah Djajanti** describes a new program (Managing the Forest with Community), in which Perhum Perhutani employees encourage more equitable community participation, especially among marginalized groups such as women, and introduce benefit sharing processes to create more equitable distribution of resources. Through these practices, the community in this study has seen marked increases in NTFP extraction and incomes. Indeed, the community has also been successful at preserving forests as the incentives to convert plots to agriculture have decreased.

Numerous scholars and practitioners have recognized that civil society organizations (CSOs) can play important roles in achieving CBNRM objectives, particularly in societies stratified along ethnic, caste or gendered lines. **Harisharan Luitnel** examines the crucial role that CSOs play in the Nepali context in promoting equity in CBNRM by implementing positive discrimination for the poor as well as groups marginalized by caste and gender and benefit sharing programs through the Participatory Action and Learning (PAL) process. Through these processes and programs, communities have successfully been organized, overcoming deeply rooted cultural differences. However, Harisharan also cautions that CSOs need to critically reflect on their roles and limitations in promoting equity in CBRNM. CSOs and

communities will be better served if they can improve their relationships with government and enhance their internal organization to better promote the inclusion of marginalized voices.

While equity may be an important concept within CBNRM, we must acknowledge that it is also a social construct. **Kyrham Nongkynrih** uses a case study from the Khasi Hills District in Meghalaya, India to explore different understandings of equity within a community. Using a conceptual framework that he creates, Kyrham examines the traditional systems of forest management that have been codified into law. Forest access and collection practices are determined strictly on whether a person bears a clan name, resides in the area and is a male. Through discussions with various groups in the clans, Kyrham determines that many non-Khasi see the management regime as inequitable, but to the Khasi, the system is fair and just. The sustainability of these institutions in the face of more democratic forms of governance and ideals that are penetrating the society is perhaps the most surprising result of the study, as more recently some Khasi are questioning the limited engagement by women in decision making in tradition institutions.

As one of the least developed countries in the world, the government of Laos has been trying to diminish swidden farming, which it views as environmentally degrading, and to reduce poverty by promoting the adoption of permanent commodity-oriented agricultural crops. Growing market demands for sugar and rubber in China, and the success of a model rubber plantation have resulted in a boom of sugar cane and Para rubber plantations. **Thongmanivong Sithong** and **Vongvisouk Thoumthone** explore the impact of cash crops on the livelihoods and land tenure of local people. They conclude that rubber does not bring equitable financial benefits to farmers. Those that can mobilize capital and labor at the right time can gain more while those who cannot eventually lose out. Poor farmers that cannot invest will likely end up becoming laborers on their own land.

The Ministry of Environment in Cambodia implemented Protected Areas in the early 1990's to promote environmental conservation. After reviewing their plans, the Ministry began to establish Community Protected Areas (CPAs) for more effective management. **Socheat Leakhena San** identifies some of the issues arising out of these projects. One of the obstacles to success is the skill of the facilitators and whether they can properly draw out minority voices in the communities to ensure full participation and adequate representation of interests. Facilitators are also responsible for properly communicating plans, such as benefit sharing, that can encourage participation. Another issue Leakhena identifies is the difficulty poor households have in participating in these activities because of struggles to meet everyday subsistence needs and the lack of time and energy to participate in community meetings. Leakhena argues that the goals of biodiversity conservation and poverty alleviation need to be properly negotiated to meet the needs of people trying to escape poverty and to respond to land-use dynamics such as the conversion of forest to agriculture that results in a loss of biodiversity.

By conducting a stakeholder analysis, we can see where power resides and where the power and potential of different stakeholders can be used to bring fairer access and use of government controlled lands. **Ratna Isnaini** presents a strong argument for decentralization of government management in Mt. Ciremai National Park in Indonesia, giving communities the access they require for meeting subsistance needs. Because national park land is heavily regulated and access duely restricted, communities dependent on them have become even more marginalized in comparison with other forest dependant communties. Ratna argues that equity issues compel us to take a closer look at the interests and power within conflicts over land use, specifically in national parks. Doing so will encourage more collaborative styles of management that should be based on priciples of transparency and democratization. Through these processes, more equitable practices can be implemented.

Participation of the poor in CBNRM is an issue that is addressed frequently in these papers. **Somying Soontornwong** presents us with a case study in Thailand that has had a great deal of success in raising the livelihoods of the poor through increased participation and action research. Action research, a 'learning by doing' approach, provides room for learning lessons and reapplying them through new approaches as the community and researchers work together to improve livelihood conditions. This flexible method is credited with drawing in some of the more hesitant poor, who were busy trying to subsist, into management programs that have been successful in increasing equity between all members of a community. The approach helped to raise the level of participation of the poor from passive to more interactive participation, where they begin to make decisions based on their own experiences. Active participation has enabled poor households to take control of resource management institutions and to continue to improve them.

One strategy that many countries have taken to try and involve local communities in decision making is forest devolution, or transferring the rights, responsibilities and benefits of forest management to local people. However, the poverty alleviation objectives of devolution are not always achieved. **Tan Ngyuyen** argues that devolution in Vietnam has been inequitable as land titles have gone to people with ties to government officials and local elites. This practice marginalizes the poor in communities as they are further denied access to forests, while more powerful people gain increased access. These differences create further inequity in many communities. Tan argues that while devolution may be a strategy to encourage biodiversity protection, this goal may be incompatible with improving livelihoods of poorer people, as they are denied access to the devolved forests, and thus perpetuate inequities in rural communities.

5. Concluding Comments

The papers in this volume suggest several emerging lessons from CBNRM on equity. These include:

• The process of setting the equity benchmark and goals to be achieved through an equity framework is important, and requires reference to the social context as well as explicit discussion and negotiation between stakeholders. This rarely occurs in practice.

• Ultimately we may face a tradeoff between achieving more equitable distribution of resources (and better rural livelihoods) and better resource management. Communities, and those institutions supporting communities such as NGOs and donors, must struggle to find the most appropriate balance between achieving the objectives of better resource management and more equitable distribution of access rights to resources.

• Forests (and other common property resources) may not ultimately help people escape the poverty trap This raises the question for advocates of CBNRM about how far common property based initiatives can go towards alleviating poverty. The answer may depend upon whether poverty reduction is seen as a relative goal, where improvement of the current situation is the aim, or an 'absolute concept', not related to the perceptions and relative situation of social groups.

• CBNRM may help local people to gain use rights to their traditional lands. But many people may want to privatize these resources for commercial and other purposes. Is it equitable for commercial resource use to be restricted in CBNRM arrangements?

• CBNRM is unlikely to remove inequity from society unless the broader society is challenged and changed to accept the same expectations and responsibilities that are currently placed on CBNRM processes.

• CBNRM is evolving into a form of social action that is concerned with broader issues beyond resource management such as governance and democracy.

References

Agarwal, B. 2001. "Participatory Exclusion, Community Forestry and Gender: An analysis for South Asia and a conceptual framework." *World Development*. 30(9):1591-1605.

Agrawal, A. and K. Gupta. 2005. "Decentralization and Participation: the governance of common pool resources in Nepal's Terai." *World Development*. 33(7): 1101-1114.

Agrawal, A. and E. Ostrom. 2001. "Collective Action, Property Rights, and Decentralization in Resource Use in India and Nepal." *Politics and Society*. 29(4): 485-514.

Anand, S. and A. Sen. 2000. "Human Development and Economic Sustainability." *World Development*. 28(12): 2029-2049.

Colfer, C. J. P. 2005. *The Equitable Forest: Diversity, Community and Resource Management. RFF Press*: Washington DC.

Edmunds, D. and E. Wollenberg. 2002. "Disadvantaged Groups in Multistakeholder Negotiations." CIFOR Program Report. Bogor, Indonesia.

Fisher, R. J. 1989. "Indigenous Systems of Common Property Forest Management in Nepal." Working Paper No. 18. East West Center, Honolulu, Hawaii.

Jacobs, H. M. 1989. "Social Equity in Agricultural Land Protection." *Landscape and Urban Planning*. 17(1989): 21-33.

Johnson, C. and T. Forsyth. 2002. "In the Eyes of the State: Negotiating a ' rights based approach' to forest conservation in Thailand." *World Development*. 30(9): 1591-1605.

Kellert, S. R., J. N. Mehta, A. E. Syma and L. L. Lichtenfeld. 2000. "Community Natural Resource Management: Promise, rhetoric and reality." *Society and Natural Resources*. 13: 705-715.

Li, T. M. 2002. "Engaging Simplifications: community-based resource management, market processes and state agendas in upland Southeast Asia." *World Development*. 30(2): 265-283.

Nurse, M., P. Robinson, D. Paudel and B. Pokharel. 2004. "Towards Pro-Poor Community Forestry – Recent experiences from Dolakha and Okhaldhunga district of Nepal." Paper presented to National Workshop on Management of Common Property Resources and Equity: Exploring Lessons from Nepal, 28 May 2004. Kathmandu, Nepal.

Poteete, A. "Is Decentralization a Reliable Means of Increasing Equity?" Paper prepared for the Tenth Biennial Conference of the International Association for the Study of Common Property (IASCP), 9-13 August 2004, Oaxaca, Mexico.

Sarin, M. 1998. "Community Forest Management: whose participation...?" in I. Guijt and M. Kaul Shah (eds), *The Myth of Community: Gender issues in participatory development*. Intermediate Technology: London.

Sunderlin, W.D., A. Angelsen, B. Belcher, P. Burgers, R. Nasi, L. Santoso and S. Wunder. 2005. "Livelihoods, Forests and Conservation in Developing Countries: an overview." *World Development*, 33(9):1383-1402.

Varughese, G., E. Ostrom. 2001. "The Contested Role of Heterogeneity in Collective Action: Some evidence from community forestry in Nepal." *World Development*. 29(5):747-765.

Wunder, S. 2001. "Poverty Alleviation and Tropical Forests – What scope for synergies." *World Development*, 29(11):1817-1833.

Hanging in the Balance:
Equity in Community-Based Natural Resource Management in Asia

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Indicating Success: Evaluation of Community Protected Areas in Cambodia

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Abstract

The goal of this paper is to establish some challenges and suitable techniques for improving the livelihoods of people living in Cambodia's community protected areas. The main issues facing community protected areas are: facilitators' lack of capacity as well as insufficient training given to local people, which often leads to misunderstandings between people and institutions; some community members are interested but do not have sufficient time to be involved as they are extremely poor and do not have enough time to fully participate in community training and management; the benefit sharing between community and government needs to be communicated more efficiently and strengthened by the legal framework. Community members also need to be made aware that they have the potential to increase their livelihoods and that they have an increased stake in protecting local resources. By understanding the processes and benefits of sustainable use of natural resources, communities have become more involved in local resource management activities. However, we can also see where capacity needs to be improved in order to create more efficient and capable community protected areas.

1. Introduction

In 1993, the Cambodian Royal Decree on the Designation and Creation of Protected Areas established 23 Protected Areas (PAs) in Cambodia under the management of the Ministry of Environment, Department of Nature Conservation and Protection. As a result, 18.23% of the total area of Cambodia is officially declared as Protected Areas. This represents 3,273,200 hectares, or 30.76% of the nation's forests. These PAs were categorized into seven national parks, ten wildlife sanctuaries, three protected landscapes and three multiple use areas.

After 10 years of intensive protected area management experiences in Cambodia, the Royal Government of Cambodia, especially the Ministry of Environment,

reviewed and analyzed the protected areas management plan, action plan and the relationship between protected areas and local communities that have been living in or near protected areas. The results indicated that enhancing and effectively managing protected areas will require improvements in management planning and implementation to promote and encourage the participation of local communities. Therefore, in May of 2003, the Department of Nature Conservation and Protection, Ministry of Environment (MoE) in Cambodia, issued a proclamation to encourage community organizations to manage in the previously established protected areas. This proclamation was an initial effort toward the development of a policy of participatory management of protected areas in Cambodia.

The goal of establishing community protected areas is to gain involvement from the communities and all relevant stakeholders in the planning, managing, monitoring and evaluation of protected areas. Community Protected Areas (CPAs) are an attempt to achieve a win-win situation for both the managers and resource users in these areas and to reach the objectives of biodiversity conservation, livelihood subsistence and maintenance of cultural and spiritual values (Community Protected Area Development Office 2004). Based on this concept, this paper will focus on the livelihoods of communities after the establishment of the communities in the protected areas in Cambodia. I will do this by exploring the development process of CPAs to find out what techniques work to improve the livelihoods of people after the establishment of these areas and what challenges they face.

Eight CPA projects within the twenty three Protected Areas were selected for this study. Because we lack the funds necessary to perform in-depth surveys in all protected areas, questionnaires were sent to park directors and the directors of provincial departments. These directors facilitated the distribution of the surveys and gathered relevant information.

CPAs in Cambodia have only been operational for two to three years, but the Ministry of Environment conducted an assessment of the progress that has been made in these areas in order to gauge how well communities were achieving their goals. In addition, factors were identified that were hindering progress, and suggestions were put forth to attempt to remedy those problems. It is hoped that by conducting this study, we can measure the possibility of future success in raising the livelihoods of the communities actively involved in CPA management.

The outline of this study is divided into six sections. Following this introduction, section two will provide a brief background and history of CPAs and the livelihoods of the communities before their establishment in Cambodia. Section 3 will demonstrate the methods used to conduct the research by the team at Community Protected Area Development Office within Ministry of Environment. Section 4 presents the findings of the study and then the reasons why some CPAs do not work well based on an analysis of these finding. Section 5 is a discussion relating my findings to literature, comparing the results with other indicators of success in community-based resource management. Finally, I will conclude by drawing out the implications of these findings and making recommendations based on them.

2. Background of CPAs in Cambodia

Many villages are located in or nearby Protected Areas and dependent on the collection of non-timber forest products (NTFPs) and products like fuel wood for their daily consumption before the PAs were established. After the establishment of PAs, people continued to use the forests to support their daily needs as they had before. However, the growing population and migration of people from place to place resulted in an increased demand on the forests while the amount of resources decreased. Illegal activities, such as cutting trees for making charcoal in the forest, clearing forest for expansion of farm land, land encroachment and hunting, continued to increase.

The majority of PAs are difficult for rangers to control or patrol. Indeed, the government has neither the money nor the finances to provide adequate protection, and they became increasingly concerned with the deterioration of the forests. To counteract this problem, CPAs were established to involve local communities who live within or nearby the PAs, including highlanders and ethnic minorities, in managing the forests. The objective of establishing CPAs is to involve local communities in the planning and decision-making process of PA management. Their involvement will ensure their rights of use and proper management of natural resources and will hopefully encourage sustainable development to improve their livelihoods. The Ministry of Environment acts as coordinator, facilitator and technical supporter to the provincial departments to support these ideas.

In 1999, four CPAs were established, facilitated and sponsored by the Department of Nature Conservation and Protection (DNCP) and the Danish International Development Agency (DANIDA). From 2000 to 2002, there were 41 CPAs that were supported by other agencies. The increasing number of CPAs is a result of growing support from local people and the successful management of PAs. These successful projects led to the proclamation establishing CPAs to encourage further community organization and management. Now we have 69 Community Protected Areas in Cambodia, 24 of which hold official approval from the Ministry of Environment, with the remaining in various stages of the approval process.

The process of establishing a CPA includes the government, the communities themselves and often civil society organizations. Before developing a CPA, an assessment of the socio-economic conditions and natural resources present is conducted. The Ministry of the Environment presents these findings to communities to inform them of the realities of their situation as they are contemplating the establishment of a CPA. During this process, we also try to raise awareness about the concept of community forestry and the advantages of managing and conserving the forest. Communities often already have their own practices in managing the forest, but making them aware of other successful community forestry projects helps illustrate the importance of local management. Additionally, they can learn from other communities what management practices have been successful. People can

then share experiences and build networks between communities and through this shared understanding, a mutual respect is created that helps to enhance the project.

The training is carried out by the facilitators of the project, such as the government or an NGO. However, facilitators must be sensitive to the realities of daily life in communities. Training is not usually conducted during the rainy season, as people are busy tending crops in the field during that time. The rainy season is a good time to grow rice and others crops for their livelihoods during the rest of the year, so people usually cannot fully participate in social activities. There are, of course, some people who are not able to attend the course for various other reasons in times outside the rainy season. They are often busy with their daily activities such as housework, collecting fruits, gathering firewood and farming. It is important for the facilitator to work with the community to understand when is an appropriate time to have a training to make sure that as many people as possible are involved in the process.

CPAs can be organized four ways. First, they can be organized by zoning. A community protected area may be classified into four zones: a core zone, where only park rangers and researchers are allowed; a conservation zone, where entry is managed by the park director; a sustainable use zone, where an agreement is made on the use of natural resources; and a community protected area zone, where the community can be granted land ownership. Second, they can be organized through a participatory land use planning process that divides the area into agricultural land, residential land, community protected areas and conservation land. Third, some forests or fisheries within protected areas are given to the local community to manage and organize. Finally, CPAs can be organized by sustainable livelihood development, where local communities do not need to depend only on using natural resources, but develop alternative sources of income. These approaches have been promoted and facilitated by different projects and organizations working in various protected areas. There is yet no one standard organization method as we are waiting to see which approach works best.

The community management committee is then elected with participation from the community and institutions involved, including the local authority. After being elected, communities establish by-laws for their members regarding the use of community protected areas. By-laws address the structure and role of CPA management, decision making, principles of benefit distribution, the use of natural resources, what is prohibited, levy of fines and financial management. There are also established agreements between the Ministry of Environment and the various community committees on how the communities will manage the forest in a sustainable way. The Ministry of Environment then issues a proclamation establishing the community protected areas.

It is very important for a sense of partnership to develop so that all participants can benefit from an increase in income sources. Various projects have been working to find alternatives to supplement the income being collected from NTFPs. Proposals

have been diverse, such as tree planting, raising livestock, producing local handicrafts, weaving and eco-tour establishments. It can be difficult, however, for the community at first to diversify their income generating activities, and unfortunately this has led to the failure of some programs.

Once communities are involved in the maintenance of a CPA, and understand how their livelihoods can benefit, they usually become more involved in controlling the forest. They cooperate with rangers in patrolling the area during the collection of NTFPs to uncover and discourage illegal activities. As they have a direct stake in preserving the forest and preventing theft, they are more vigilant in their duties to themselves and the community.

3. Methodology

This study was based on literature review and surveys. Literature was reviewed from existing studies concerning protected areas in Cambodia, including monthly and annual reports from the Provincial Department of Environment and the Department of Nature Conservation and Protection, which are responsible for the management of all Protected Areas. The survey was conducted by a team working in the Community Protected Area Development Office at the Ministry of Environment from September 2003 to April 2004.

The study team divided the 23 CPAs into three groups: the coast, northwest Cambodia and northeast Cambodia. The survey sites were selected on the basis of the following factors: accessibility; existence of local communities living in the protected areas who have shown interest in being involved in protected area management; areas where there are numerous issues regarding the use of natural resources; areas where information on community participation in protected area management is not clear; and areas with community-based protected area projects which are officially recognized by the Ministry of Environment's proclamation.

Eight CPA projects within the twenty three were selected for this study (Figure 1). They include:

- Prek Thnout community protected area, Kampot district, Bokor National Park.
- Trapang Phlang community protected area, Chhuk district, Bokor National Park.
- Khnang Phnom community protected area, Svay Ler district, Kulen National Park.
- Anlong Thom community protected area, Beoung Per Wildlife Sanctuary
- Kbal Toeuk community protected area, Toeuk Phos district, Phnom Oral Wildlife Sanctuary.
- Promouy community protected area, Veal Veng district, Phnom Samkos Wildlife Sanctuary.
- Thmat Beuy Thoeun community protected area, Chom Ksan district, Kulen Prom Tep Wildlife Santuary.
- Community fishery protected area, Preah Sihanouk "Ream" National Park

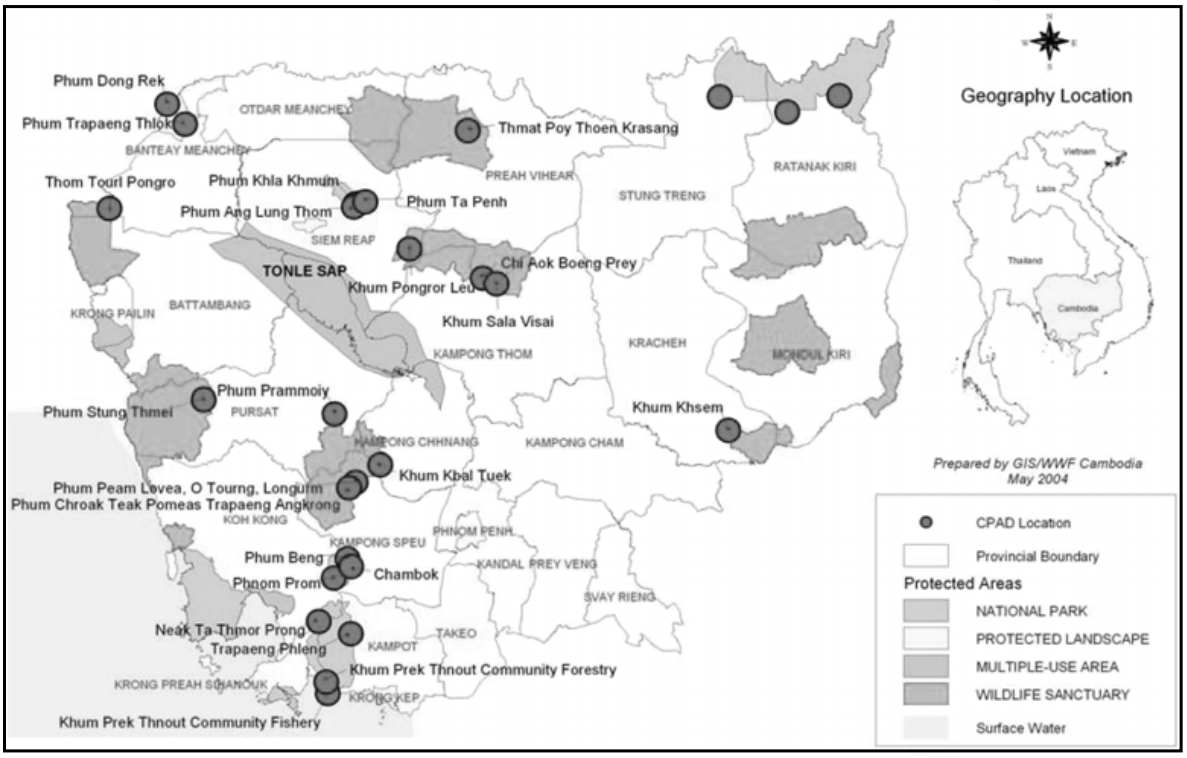

Figure 1: Protected Areas and Community Protected Areas

3.1. Data Collection Method

Qualitative questionnaires were delivered to key stakeholders: the Director of the CPA, the Director of the Provincial Environmental Department, Community committees, facilitators, NGOs and the project director. These were supplemented with personal interviews with key stakeholders, including project leaders and non-governmental organizations. Interviews focused on the support they offered, including technical support to community-based protected area projects, constraints and opportunities for the development process of projects, as well as dealing with conflict management. Further interviews were conducted with committee members of CPA projects. These interviews focused on their understanding of participation in project management and implementation, the importance of projects, their benefits from participation, including land use rights, and their important role in conflict management and resolution. A final set of interviews were conducted with the Protected Areas Director and Director of Provincial Department of Environment (PDE). These focused on the support they provided in facilitating the development of CPAs.

4. Findings

4.1. What is Working?

The forest is a very important source of livelihood for many people living around it. People often use the resources as they have for many generations, while also recognizing that the forest is owned by the state. One elder who has always used

the forest to support his livelihood claimed that it was difficult to give advice or attempt to prohibit another person from cutting down trees for commercial purposes. He felt regret about the loss of the trees as a resource, but felt no sense of personal loss because he perceived the forest as state owned. Therefore, in his mind, the community had no rights to prevent these actions and felt they must ignore them. With the establishment of CPAs, by-law agreements have also been established that guarantee communities access to resources. This creates a new trend that encourages shared responsibility between the government and communities and creates the hope that communities will use and manage the forests in a way that is deemed appropriate by the government and the community. The by-laws also give them the power to prevent access to people who exploit the forest for commercial purposes.

Raising the awareness of communities to the procedures for and benefits of being involved in managing a CPA is an integral part of the process of establishing the community management group. The facilitators attempt to increase involvement from people and improve the understanding of participatory natural resource management for the local community. Additionally, we train people to self-regulate and provide them with the ability to control their forest independently in the future.

Methods of capacity building vary depending on the community and the facilitators, but include processes such as: meeting in the villages, holding community workshops, holding annual community meetings (as an attempt to continue capacity building after the establishment of CPAs), study tours to other CPAs and adapting new techniques as the community learns. During these trainings, multiple topics are introduced such as: concepts of community forestry, methods of empowerment and leadership, indicators of successful community-based forest management, how to create activity plans, methods of reporting and taking notes, writing small scale proposals, tree planting, taking inventory of the forest, building facilitation skills and introducing methods of conflict management in communities. In order for these processes to work, it is important for a mutual respect between participants to develop. It has been noted that these workshops have helped create respect not only between community members, but between villages and between villagers and 'outsiders' such as the government and NGOs. One interviewee emphasized that people learn how to work in groups, accept ideas from others and give opportunity to the others in these trainings, and this functions to build mutual understanding and create respectful environments.

The level of involvement by the community is evidence as to the level of acceptance of CPAs. By understanding the processes and benefits of the sustainable use of natural resources, people have become more involved in community management activities. We can see their involvement through the discussion processes of preparing community by-laws, preparing management plans and trainings.

In CPAs, the community and park rangers cooperate to patrol the forest, sharing responsibility in identifying any illegal activities. While the park rangers' main responsibility is to actively patrol the forest for illegal activities, community members incorporate their patrols in with their daily routines. They look for evidence of illegal

activities when collecting non-timber forest products, not necessarily as an organized force patrolling the forest. If they do find evidence of wrongdoing, members report to their community committee to take appropriate action. The by-laws of the CPA state that the person detailing the account of illegal activities will get a reward for their help. Since the establishment of CPAs, there have been numerous instances where thieves were found and arrested in every community. Usually the first and second offences merit a lecture on the importance of conservation and community management and a small fine. The money from the fine is divided between the community, the local authority that assisted in the arrest of the offender and government. People commonly feel that the involvement of the community in preventing illegal activities will eventually result in an increase in biodiversity.

People also believe they will have a chance to increase their livelihoods as better management leads to more abundant resources. Organizations introduce people to options outside of the heavy reliance on forest resources to earn a living. This partnership development program includes finding traders to buy products produced by local people, an agriculture program for growing specialized crops, which includes finding suitable seeds for that area, a rice bank (to ensure everyone has enough rice), technical support in raising animals, a buffalo bank (a program to allow poorer people to use buffalo labor in their agriculture on a rotating basis) and small scale aquaculture (crab, fish and shellfish). For example, at the CPA Prek Thnot commune in Preah Monivong 'Bokor' National Park, people have been raising animals to sell to traders or to the market.

4.2. Problems and Constraints

Although there are many positive points that can assure a successful CPA program, we identified some problems that have arisen in the process of developing and managing CPAs. It is hoped that by addressing these problems early in the development of CPAs that future problems can be lessened, raising the potential for a positive impact on the livelihoods of the community.

Facilitators work very closely with communities through the process of CPA establishment. They have the vital role of creating the understanding necessary to implement a CPA. Some facilitators, however, have had limited understanding about their roles and limited experience in the methods to put theory into practice. This ambiguity has resulted in the failure of the community members to understand their roles in the project. Members may not understand the tasks they are responsible for and place this responsibility of management and enforcement on the community committee council. In addition, some facilitators have neglected to incorporate voices from the community who oppose the idea of the participatory approach. This failure has resulted in poor understanding and cohesion within the communities.

Facilitators are also responsible for working with people at all levels of a community; men, women, rich, poor, old and young. It is often difficult to stop more talkative people and draw out the quieter voices, but if the facilitator cannot accomplish this, then the interests of the community may be misrepresented in discussions. Often,

when we ask one person in the group their opinion, others seem to agree with them without thinking first themselves, especially if that person is an elder in the group who is considered knowledgeable. It is vital that facilitators be able to cope with the variety of personalities in a community to reveal the different perspectives that exist within it and create the optimal management plan.

People can also be excluded inadvertently because they cannot read or comprehend the information that the facilitator presents in a relatively short period of time. Indeed, sometimes the training course is conducted many times but does not achieve full comprehension by the community. Some communities were successful in the beginning of the project, but failed after a time because the facilitator left the community too early. They mistakenly assumed the community had adequately learned how to manage by themselves and capacity building had been successful. Raising awareness through the training course cannot be accomplished in one or two sessions. These activities should progress until communities are properly able to manage natural resources, while continuing to support them in the future if the need arises. The results indicate that 35 out of 69 CPAs require more training courses and 26 CPAs plan to give priority to awareness raising and training in their future plans.

Based on the survey, almost all of the 69 communities have complained that due to high levels of illiteracy, communities have little capacity to manage. A literacy survey done by the United Nations Development Program estimates that 36% of the population in Cambodia is illiterate and 27% are only semi-illiterate (UNESCO/ UNDP 2000). It is clear that most local people are illiterate, and only a few of the people who are elected in to the community committee can read and write. The high levels of illiteracy create limited general knowledge. Committee members have difficulty leading group meetings, making decisions based on proper evidence, solving problems in the community and are hesitant in communications with other authorities or NGOs. This lack of communication creates a lack of confidence in the management team as decisions are not made based on correct evidence and the support required from outside institutions is lacking due to poor communication.

Illegal activities are still a problem for management in some of the forests that have had CPAs implemented. Some military families live in or nearby CPAs and refuse to be involved in any conservation activities because it is profitable for them to exploit forest resources. They often hunt wild animals in the forest not only for their daily consumption, but also to sell at the market or to traders. Community members who attempt to stop them have had their lives threatened. Two CPAs in particular have experienced this problem. A rumor was created in the community that anyone who attempted to stop this illegal poaching would be killed. Not surprisingly, community members are hesitant to intervene.

The distribution of benefits between communities and the government is still unclear due to the lack of a legal framework and government policy. The draft legislation on Protected Area Law has not yet passed the Council of the Minister and the Proclamation and Technical Guidelines on the process of establishing CPAs is still in draft form. As a result there is no clear distinction between what government

should grant to the community when communities want to make an effort in the protection of natural resources. In the stated purpose of Community Protected Areas, people are not allowed to use natural resources for commercial purposes, but they can collect NTFPs in traditional ways for everyday needs. However, most communities wish to benefit from forest products for the future development of their community. This is not always compatible with the objectives of CPAs, which focus on conservation of resources.

Based on information obtained from CPA stakeholders, we realized that in some areas relationships between some PA directors and some organizations working with communities had not cooperated well. In some areas, directors of PAs want to have communication and collaboration with NGOs who are working with communities in the area, but these organizations do not seem eager to cooperate. Some NGO staff members think the rangers have insufficient experience in the preparation of a CPA, so they recruit working groups from outside projects. This creates some animosity between institutions and makes the implementation of CPAs more difficult as the enforcement mechanism of the government is lacking.

The participation of community members often depends on the level of their livelihood. According to the World Bank in 1997, 36 % of people in Cambodia live below the poverty line (Ministry of Planning 2002). Generally, local people depend on agricultural production, resources from the forest and selling of their labor. In a CPA, community volunteers need to be involved in forest management, but without any payment. If a family is faced with shortage, members of the family will migrate to other provinces to sell their labor, so they do not have time to participate in the patrolling of the forest and other community management tasks. For example, the yearly activity plan of the Chi Ouk Boeung Prey CPA, Beung Per Wildlife Sanctuary, describes that community members spend 13 days a year in community management tasks, 31 days in the leader group and 48 days in sub-community committee and community committee. This time might be better spent, in the opinion of some community members, in daily subsistence activities that will produce more immediate benefits to themselves.

5. Discussion

Too often, these projects are analyzed too far into the implementation, when people are less willing to alter their behavior. It is good to analyze early, so we can catch problems and fix them before they are too ingrained in the daily lives of people. I have taken our findings and compared them to published documents that have established key indicators for equity in CBNRM projects.

If we compare our findings to the experiences of others, one of the key components is the skills of the facilitator. As discussed above, we have discovered that some of the facilitators need to improve their techniques for achieving better progress in developing community-based natural resource management. Additional

training is most certainly needed, not in the steps of the planning methodology, which is already reasonably well mastered, but in the skills and techniques of group process and facilitation for difficult situations (Raintree 1999). We can see that it is important to have a well trained staff and the necessary skills are not readily obtained in short training sessions, and instead required long periods of training and follow-up to achieve better results (Barton *et al.* 1997). If facilitators can continue to learn and adapt while they are working with a community, they will improve their chances of completing a successful participatory project.

In the findings, much of the community is involved in training courses, community committee elections, planning, preparing by-laws and patrolling while many very poor families do not have enough time to participate. Participation can be seen primarily as a means to achieve specific goals such as building a better management structure, obtaining improved goods and services and getting natural resources into good condition (Ingles *et al.* 1999). A good management structure and good environment need participation from all stakeholders, but poor people are often left out of the process. Both poor and rich have a chance to run for elections but the representative from the poor may not be able to participate as much as they are likely more concerned about their household livelihood. On average, the CPAs in country usually contain five to nine men in community committee and two women; two to three men, including one woman in sub-community committee; one man as group leader and one man as vice group leader. Decision making is not balanced between the poor and rich. Men and women tend to have more even representation, but women are often still under the influence of men in the group.

CIFOR (The Center for International Forestry Research) demonstrates criterion that local institutions should contain to support a sustainable land use system. One of those is that "[c]ustomary laws and regulations must ensure fair access to community natural resources and fair distribution of their products among community members" (Ritchie *et al.* 2000). In Cambodia, we currently lack the supporting legal framework to ensure access as we are waiting for the Protected Area Law to be approved. However, all of our communities in PAs have established by-laws to ensure equitable access for all users.

If proper management of NTFPs can be achieved, local people can achieve greater equity in benefit distribution as well as reach the conservation objectives of governments and NGOs. NTFPs offer many examples of targeted benefits for poor producers, and their extraction tends to have less ecological impact than that of wood (Wunder 2001). NTFPs recover faster than wood, meaning a faster accumulation of profit. People can use these products for daily consumption or sell them in a way that ensures environmental protection. Helping communities manage and commercialize their products may be a good target for poverty alleviation for forest research and development, though it is improbable that people depending on these products will increase their livelihoods to the point that they are not dependant on them (Wunder 2001). The distribution policy must be considered between the different groups of people to maintain fairness in the community. It may often be necessary in

designing and implementing policy and other institutional interventions to distinguish between those who can improve their livelihoods through NTFP activities, and those who have no other option but to continue to gather NTFPs in order to survive (Arnold and Pérez 2001).

6. Conclusion

It is the hope of the Cambodian Ministry of Environment that this study will highlight how well CPAs are working to protect natural resources while improving the livelihoods of the communities in them. The communities continue to support the development of CPAs as they gain legitimate rights to use and manage the forest by themselves. They are presented with concepts of how to manage natural resources in a good manner, to improve their livelihoods and to maintain the forests for the next generation. Increasingly, people are becoming involved in the community to prevent illegal activities, and they have a chance to increase their income from the partnership development programs, which provide options besides relying too heavily on natural resources.

This study has illustrated that there are still lessons to be learned from CPAs in Cambodia. The programs have only just started in the past two to three years and there are still weaknesses. The limited capacity of facilitators in the new role, as well as insufficient training given to local people, often leads to misunderstandings between people and institutions. Thus, some communities are uncertain whether they can still receive benefits from the forest when they join in community development. Additionally, some people are interested but they do not have sufficient time to be involved as they are extremely poor and do not have enough time to fully participate in the community training and management. When a CPA is developed, the community committee or members in the community are met with threats from violators, so people become fearful of performing their monitoring tasks. The ability of the management team to perform is also limited due to a lack of general knowledge. The benefit sharing between community and government needs to be better communicated and strengthened by the legal framework, which is still being formulated. In some PAs, the relationship between park management and NGOs is sub-optimal, leading to a lack of communication and an increasing mistrust between two groups vital to the CPA process.

While CPAs have the potential to increase livelihoods, so that at least daily subsistence needs are met, they will not lift people out of poverty. Whenever forest dependant users begin to increase their income, they begin needing more land for agriculture, leading to increased forest conversion (Wunder 2001). Practitioners of community-based natural resources management projects need to be aware of this and be able to negotiate their ideals for biodiversity conservation with poverty alleviation. Moreover, education, health, capacity-building, human rights and democratic principles need to be considered to ensure both human and well-being

and environmental conservation (Wunder 2001). Practitioners also need to acknowledge that successful management schemes also depend on a certain amount of heterogeneity and inequality to function. People who stand to gain more are generally more inclined to assume responsibility in the management of community-based organizations. While the CPAs' goal is to improve equity, we must acknowledge that 100% equity is not possible nor even a proper ideal (Varughese and Ostrom 2001).

As the CPA concept is so new in Cambodia, it is too early to tell how the livelihoods of communities and the biodiversity of natural resources have been impacted through CPA implementation. It is our hope that by identifying early in the process what is working and what is not, and implementing changes to make a stronger system, that in the future, livelihoods will become more equitable in these communities.

References

Arnold, J.E.M. and P rez, M.R. 2001. "Can non-timber forest products match tropical forest conservation and development objectives?" *Ecological Economics*. 39: 437-447.

Barton, T., G. Borrini-Feyerabend, A. de Sherbinin and P. Warren.1997. *Our People, Our Resources*. IUCN, Gland, Switzerland and Cambridge, UK.

Community Protected Area Development Office. 2004. *Rapid Assessment Report*. 2004. Phnom Penh, Cambodia.

Ingles, A.W., A. Musch and H. Qwist-Hoffmann. 1999. The Participatory Process for Supporting Collaborative Management of Natural Resources: An overview. Rome: Food and Agriculture Organization of the United Nations. 66.

Ministry of Education, Youth and Sport. 2001. "Chapter 10: Situation Analysis." [online August 2005] URL: *http://www.moeys.gov.kh/education_reform_in_cambodia/strategic_analysis/chapter10.htm*

Ministry of Planning. 2002. "Towards a Population and Development Strategy for Cambodia." [online August 2005] URL: *http://www.un.org.kh/unfpa/about/documents/Towards_PDS.pdf*

Raintree, J.B. 1999. If I had a Hammer: Some suggestions concerning community forestry at the turn of the century. *Occasional Paper 1999/01*. Bangkok, Thailand: Regional Community Forestry Training Center (RECOFTC).

Ritchie, B. C. Mc Dougall, M. Haggith and B. de Oliveira.2000. *Criteria and Indicators of Sustainability in Community Managed Forest Landscapes: An Introductory Guide*. Indonesia: Center for International Forestry Research (CIFOR).

Varughese, G. and E. Ostrom. 2001. "The Contested Role of Heterogeneity in Collective Action: Some evidence from community forestry in Nepal." *World Development*. 29(5): 747-765.

Wunder, S. 2001. Poverty Alleviation and Tropical Forests—What Scope for Synergies? World Development. 29(11): 1817-1833.

Hanging in the Balance:
Equity in Community-Based Natural Resource Management in Asia

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Table of Contents

Total Factor Productivity Change and Poverty Reduction in China: Experiences from Three Counties

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Abstract

A two-stage model of stochastic frontier approach has been used to study the productivity of 414 households in Jinzhai County, Muchaun County and Suichuan County in the Center and West of China. This study shows that total factor productivity (TFP) of these sample households are stable during the period of 1991 to 2001 and there is direct linkage between TFP of households and poverty reduction, illustrating that improving economic performance helps to reduce the poverty trap. Rural institutional arrangements and changes, such as a household responsibility system and timber market control have affected the TFP of sample households. Different characteristics of sample households have directly influenced their economic performance. If farmers generate incomes from forestry and farming activities, it will not guarantee escape from the poverty trap. Increased use of inputs and improving economic performances are important means whereby income-generation can help to reduce poverty.

1. Introduction

China has achieved spectacular economic growth since 1978 with real per capita gross domestic product and real per capita income more than quadrupling. By 2000, China's gross national product (GNP) ranked number seven in the world in nominal terms and number two in purchasing power parity (PPP). Its GNP measured in PPP was $4966 billion, which was 48% greater than Japan's (World Bank 2002). However, despite the great success, economic development in China has not been without serious problems, particularly in poverty stricken rural regions. In 2003, even under China's low standard of income poverty (China's narrow standard of income is that farmer's annual income is 664 Yuan RMB per capita), 29 million people were considered absolutely poor (National Statistics Bureau 2004). Remoteness and isolation are correlated with poverty, 496 of the 592 officially designated poverty-

stricken counties are in forested, mountainous regions. At the same time, forestry often represents the main and sometimes the only income-generating activity in many poor regions. Statistical data suggest a significant overlap between counties officially classified as having abundant forest resources with counties classified as having severe poverty. Researchers have not yet conducted any analysis of the relationships between forest availability and farmer income. The linkage between the poor and forestry development is still under discussion.

Forest resources management and forestry development also play important roles in the southern collective forestry region of China, which includes the provinces of Zhejiang, Anhui, Fujian, Jiangxi, Hubei, Hunan, Guangdong, Hainan and Guizhou, parts of Sichuan Province and Guangxi Autonomous Region. The percent of forest area and forest stock volume of the southern collective forest region accounted for 38.40% and 17.79% of China respectively, with regard to forest plantation, the weight is 54.4% and 52.02% respectively (State Forestry Administration of China 2000).

Since the early 1980s, the Government of China has introduced the household responsibility system (HRS) and other institutional changes that have had immense impacts on the lives and livelihoods of individuals, local communities and even the national economy (Lin 1992, Zhang *et al.* 2000). There remain, however, many unanswered questions about these changes which I seek to address a few of in this paper. Have these measures affected total factor productivity changes or not? If so, what and how large have the changes been? What has been the economic performance of the southern collective forestry region after 1990? What is the relationship between total factor productivity and poverty reduction, especially for abundant forest areas?

Numerous studies have analyzed these institutional arrangements and changes in rural China (Myers 1970, Lin 1988, Schultz 1990). Some studies used provincial level data for all or most of China (Lin 1992, Kim 1990), others use township level data (Lin 1986) and some have used team-level data (Kim 1990). A few studies have used household level data, but the use of household level data for evaluating rural development after 1978 has been limited. Most researchers have used the Cobb-Douglas production function to estimate economic performance in rural China but this function does not account for inefficiency. A few researchers (Yin 1995, Liu *et al.*. 2001) have begun to look at these questions. To the best of my knowledge, the stochastic frontier production approach, especially in terms of the multi-input and multi-output trans-log production function, has seldom been used for forest abundant areas or to evaluate rural economic performance and poverty reduction in China.

This paper considers the estimation of a stochastic frontier production function as introduced by Aigner *et al.* (1977) and Meeusen and van Broeck (1977). Such a production frontier model consists of a production function of the usual regression type but with an error term equal to the sum of two parts. The first part is typically assumed to be normally distributed and represents the usual statistical noise. The second part is non-positive and represents technical inefficiency, such as the failure to produce maximal output with a given set of inputs. Realized output is bounded from above by a frontier that includes the deterministic part of the regression, plus

the part of the error representing error, so the frontier is stochastic. F rsund *et al.*. (1980) provide a good survey of such production functions and their relationship to the measurement of production efficiency. There are great potential advantages to modifying existing frontier models to allow the use of panel data (Schmidt and Sickles 1984). In this paper, I exploit these advantages using a unique panel dataset of three case study counties in the southern forest area of China to identify household-specific Malmquist total factor productivity (TFP). I also examine the independent factors for efficiency in the southern forest area of China, to find a solution for increasing efficiency and reducing poverty (i.e. the two-stage estimation procedure is adopted in this study).

Pitt and Lee (1981) estimated stochastic frontiers to predict firm-level efficiencies. They then regressed the predicted efficiencies upon a firm specific variable. However, the two-stage estimation procedure adopted by Pitt and Lee was unlikely to provide estimates as efficient as those obtained through a one-stage estimation procedure. Kumbhakar *et al.* (1991) noticed the drawbacks in the two-stage estimation procedure. They proposed that inefficiency effects be expressed as a function of a vector of firm-specific variables and a random error. Battese and Coelli (1995) specified a stochastic frontier production function model with technical inefficiency effects to identify some of the reasons for differences in predicted efficiencies among firms. The model was equivalent to that specified by Kumbhakar *et al.*. (1991), with the exception that allocation efficiency was assumed and panel data permitted. Chen and Brown (2001) adopted the two-stage model to empirically analyze shortcomings in the household responsibility system (HRS) in Shandong Province, China. In this study, I use the FRONTIER 4.1 program to estimate the stochastic frontier model of Battese and Coelli (1995).

This paper uses a unique panel dataset from 414 households in Jinzhai County, Anhui Province; Muchuan County, Sichuan Province; and Suichuan County, Jiangxi Province from 1990 to 2001. The panel dataset includes forestry production values, farming (including animal husbandry) production values, forestland area, and farmland area and investment and labor inputs for forestry and farming sectors.

The paper is organized into the following sections: In section 2, I discuss the model specification of two-stage model of stochastic frontier production analysis. In section 3, I describe the panel dataset from the three case study counties. In section 4, I present empirical results of the stochastic frontier production analysis estimations and factor analysis for TFP. In section 5, I explore the poverty reduction and TFP link. Finally, in section 6, I discuss my results and present my conclusions.

2. Model Specification

The modeling and estimation of stochastic frontier production functions, originally proposed by Aigner *et al.*. (1977) and Meeusen and van den Broeck

(1977), have been an important field of economics study in the last three decades. Reviews of applications in agriculture are by Battese (1992) and Coelli (1995).

Various models have been proposed for inefficiency effects in stochastic frontier production functions. Kumbhakar *et al.* (1991) specified a stochastic frontier production function of the Zellner-Revankar type, in which the technical efficiency effects were assumed to be a function of the values of other observable explanatory variables. In addition, their model considered allocation and scale efficiencies. Reifschneider and Stevenson (1991) also proposed a stochastic frontier model in which the technical inefficiency effects were dependent on other variables, such that the mean function and the random deviation in the model were both non-negative. Huang and Liu (1994) specified a non-neutral stochastic frontier production function, in which the technical inefficiency effects were specified in terms of various firm, specific variables, interactions among these variables and the input variables in the frontier. Battese and Coelli (1995) proposed a stochastic frontier production function for the panel data, in which the technical inefficiency effects were specified in terms of various explanatory variables, possibly including time. Coelli (1996) expanded the FRONTIER 4.1 program to estimate the stochastic frontier model of Battese and Coelli (1995), in addition to the time-varying inefficiency model of Battese and Coelli (1992).

In this paper, technical efficiency effects, technical changes, and total factor productivity changes for a panel dataset from 1990 to 2001 for three counties are modeled in terms of land-based multi-output and multi-input variables in forestry, farm, and animal husbandry productions.

The translog output distance function for the three counties can be described as:

$$Y_{it} = f(X_{it}, \beta)\exp(V_{it} - U_{it}), i = 1,2,\cdots,N \qquad (1)$$

$$t = 1,2,\cdots,T$$

Where:

Y_{it} is the forestry output value or farming production value of a household i in the year t (Yuan RMB);

t is the time trend variable, $t = 1,2,...11,12$ for the years of 1990, 1991,..., 2000 and 2001 respectively;

i is the ith sample household;

$f(.)$ is production function;

X_{it} is input vector of household i in the year i;

β is coefficient to be estimated;

V_{it} are the error terms that are assumed to be independent and identically distributed normal random errors having zero mean and unknown variance σ_v^2, i.e. $N(0, \sigma_v^2)$; $U_{it} = U_i \exp[-\eta(t-T)]$

u_i is a non-negative random error term, independently and identically distributed as $N^+(\mu,\sigma_u^2)$ intended to capture time-invariant technical efficiency in outputs;

μ, η are coefficients to be estimated.

A maximum likelihood estimate is used for coefficient estimation. I used the FRONTIER 4.1 program to estimate coefficients, the function of the maximum likelihood estimate is as the following (Battese and Coelli 1995):

$$L^*(\theta;Y)=-\frac{1}{2}\left(\sum_{i=1}^{N}T_i\right)\{\ln(2\pi+\ln\sigma^2)\}-\frac{1}{2}\sum_{i=1}^{N}\sum_{t=1}^{T_i}\{(Y_{it}-X_{it}\beta+Z_{it}\sigma)^2/\sigma^2\}$$
$$-\frac{1}{2}\sum_{i=1}^{N}\sum_{t=1}^{T_i}(\ln\phi(d_{it})-\ln\phi(d^*_{it}))^2 \qquad (2)$$

Where:

$$d_{it}=z_{it}\delta/(\gamma\sigma^2)^{1/2}$$
$$d^*_{it}=\mu^*_{it}/(\gamma(1-\gamma)\sigma^2)^{1/2}$$
$$\mu^*_{it}=(1-\gamma)z_{it}\delta-\gamma(y_{it}-x_{it}\beta)$$
$$\sigma^*=(\gamma(1-\gamma)\sigma^2)^{1/2}$$
$$\theta=(\beta',\delta',\sigma^2,\gamma)'$$

Griffith and *et al.* (1993) deducted formula (3) for testing the maximum likelihood estimate:

$$\lambda LR=-2\{\ln[L(H_0)]-\ln[L(H_1)]\} \qquad (3)$$

We can use the measures of technical efficiency and technical change to calculate the Malmquist TFP index. The technical efficiency measures are obtained as:

$$TE_{it}=E[\exp(-u_{it})|(v_{it}-u_{it})] \qquad (4)$$

And we can calculate the technical changes (TEC) as:

$$TEC=TE_{it}/TE_{is} \qquad (5)$$

We can simply evaluate the technical change index between different periods as the partial derivative of the production function with respect to time. We use a geometric mean to estimate the technical change index between adjacent period s and t. The Malmquist TFP index can be obtained as:

$$TFPI = ECT \times TCI$$
$$= TE_{it}/TE_{is} \times \{[1+\partial f(x_{it}, s, \beta)/\partial s][1+\partial f(x_{it}, t, \beta)/\partial t]\}^{1/2} \quad (6)$$

Theoretically required regularity conditions for this function include homogeneity of degree one in output and symmetry (Lovell *et al.* 1990 and Grosskopf *et al.* 1996). The basic problem with the function, as concerns econometric estimations, is the inability to observe the dependent variables. Additionally, if one sets the distance function as invariant, an intercept cannot be estimated, and OLS parameter estimates will be biased. Further, if the distance function is expressed logarithmically, the left-hand side of the distance function will be zero for all observations (Hetemaki 1996). We can use the above homogeneity of degree one in output and symmetry. We impose these constraints by normalizing the output distance function by household forestry output value. Rewriting the production function, the output function can be rewritten as:

$$\ln(FOPV)_{it} = \beta_0 + \beta_1[\ln(FAPV_{it}/FOPV_{it})] + \beta_2 \ln(INVE)_{it} + \beta_3 \ln(FOLI)_{it} + \beta_4 \ln(FALI)_{it}$$
$$+ \beta_5 \ln(FORA)_{it} + \beta_6 \ln(FARA)_{it}$$
$$+ \frac{1}{2}\{\beta_7[\ln(INVE)_{it}]^2 + \beta_8(\ln(FALI)_{it})^2 + \beta_9(\ln(FOLI)_{it})^2 + \beta_{10}(\ln(FORA)_{it})^2 + \beta_{11}\ln(FARA)_{it})^2\}$$
$$+ \beta_{12}\ln(INVE)_{it}\ln(FOLI)_{it} + \beta_{13}\ln(INVE)_{it}\ln(FALI)_{it}$$
$$+ \beta_{14}\ln(INVE)_{it}(\ln(FARA)_{it} + \beta_{15}\ln(INVE)_{it}(\ln(FORA)_{it} + \beta_{16}t\ln(INVE)_{it})$$
$$+ \beta_{17}\ln(FOLI)_{it}\ln(FALI)_{it} + \beta_{18}\ln(FOLI)_{it}\ln(FARA)_{it} + \beta_{19}\ln(FOLI)_{it}\ln(FORA)_{it}$$
$$+ \beta_{20}t\ln(FOLI)_{it} + \beta_{21}\ln(FARA)_{it}\ln(FORA)_{it} + \beta_{22}\ln(FALI)_{it}\ln(FARA)_{it} + \beta_{23}t\ln(FALI)_{it}$$
$$+ \beta_{24}\ln(FORA)_{it}\ln(FARA)_{it} + \beta_{25}t\ln(FORA)_{it} + \beta_{26}t\ln(FARA)it + \beta_{27}t + \beta_{28}t^2 + v_{it} + u_{it} \quad (7)$$

Where:

$FOPV$ is forestry production value (Yuan RMB)[1];

$FAPV$ is farming (including animal husbandry) production value (Yuan RMB);

$INVE$ is household production investment (Yuan RMB);

$FOLI$ is labor inputs for forestry activities of sample household (person-day);

$FALI$ is labor inputs for farming activities of sample household (person-day);

$FORA$ is farmland area of sample household (mu)[2];

$FARA$ is forestland area of sample household (mu);

$\beta_0, \beta_1, \ldots\ldots, \beta_{27}, \beta_{28}$ are coefficients to be estimated.

After we find the total factor productivity, we can try to determine what factors affect it. Institutional arrangements and characteristics of sample households are hypothesized to be tested.

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1 US$1~8.10 Yuan RMB in 2005

2 One mu is equivalent to 0.165 acre or 0.067 hectare

As the household responsibility system swept through China's agricultural sector, the idea of a similar program for forestry developed its own appeal in early 1980. De-collectivization has been implemented primarily by distributing forestland evenly to households on the basis of the number of persons in the household and secondly by transferring management to contractors who receive management rights together with some responsibilities from the collective authority. The contracts are made by simple negotiation or auction processes and the length of contract varies from place to place. One of the fundamental albeit indirect problems this has caused is fragmentation of cultivated land (Chen and Brown 2001, Nguyen *et al.* 1996) in which a household operates more than one separate plot of land. In the meantime, market institutional arrangements and characteristics of sample households also affect their economic performances; therefore, we considered the following model in the second stage to estimate independent factor parameters.

$$TFP_{it} = \gamma_0 + \gamma_1 \ln(FOAV)_i t + \gamma_2 \ln(FAAV)_{it} + \gamma_3 GEND_{it} + \gamma_4 HEAD_{it} + \gamma_5 \ln(EDUC)_{it} + \gamma_6 \ln(AGE)_{it} + \gamma_7 \ln(FATI)_{it} + \gamma_8 \ln(FAMS)_{it} + \gamma_9 ENCO_{it} + \gamma_{10} PPSP_{it} + \gamma_{11} COU1 + \gamma_{12} COU2 + \varepsilon_{it} \quad (8)$$

Where:

TFP is total factor productivity;

$FOAV$ is the average forestland per plot that sample household owns;

$FAAV$ is the average farmland per plot that sample household owns;

$GEND$ is the gender of the head of sample household (male=1, female=0);

$HEAD$ is headman/women of the village or sub-village (yes=1, no=0);

$EDUC$ is the number of years of education that the head of sample household received (unit: year);

AGE is the age of the head of sample household (unit: year);

$FATI$ is the number of years the head of sample household has been engaged in farming and forestry activities;

$FAMS$ is the number people of sample household;

$ENCO$ is Engel coefficient of sample household;

$PPSP$ is the ratio of timber procurement price to retail price;

$COU1$ is county dummy variable (Muchuan County =1, others=0);

$COU2$ is county dummy variable (Jinzhai County =1, others=0);

t is the time trend variable, $t = 1,2,...11,12$ for the years of 1990, 1991, ..., 2001 and 2001 respectively;

i is the ith sample household;

ε_{it} is the error term that is assumed to be independent and identically distributed normal random errors having zero mean and unknown variance σ^2 , i.e. $N(0,\sigma^2)$

$\gamma_0, \gamma_1, \gamma_2, \gamma_3, \gamma_4, \gamma_5, \gamma_6, \gamma_7, \gamma_8, \gamma_{10}, \gamma_{11}, \gamma_{12}$ are coefficients to be estimated.

3. Data

Jinzhai County, located in West Anhui Province, Central China, lies at 31°6'-31°48' N, 115°22'-116°11' E. With 28 townships and 437 villages, it has a population of 637,310, more than 90% of which lived in rural areas in 2001. This county occupied a total area of 3814 km^2. Suichuan County lies in the southwest of Jiangxi Province, Central China, or 26°- 26°45' N and 113°40'-114°40' E, it had a population of 506,620 in 2001. Muchuan County is located in the southwest of Sichuan Province, West of China, and occupied 1387.55 km^2 with a population of 254,910 in 2001. These three case study counties are well known in China for their high level of poverty and abundant forest resources. In 2001, forest cover in Jinzhai, Suichuan, and Muchuan counties was 70.30%, 75.80% and 70.30% respectively.

China's government opened the timber markets in the southern collective region in 1985. Prices rose rapidly, encouraging further timber harvests and speculation and the government eventually reversed several policies in 1986. One of these policy changes returned timber markets to the control of state procurement companies. Farmers must sell their timber at the government procurement prices. The institutional arrangement of procurement prices, retail prices and the ratio of procurement price to retail price for the three case study counties are listed in Table 1.

3.1. Sample Households

We selected 240 households in 30 villages in 6 towns in each case study county to answer questionnaires. Town, village and household samples were selected randomly.

Table 1: Retail Prices, Procurement Prices and the Ratio of Procurement Price to Retail Price in the Three Counties

Year	Muchuan			Jinzhai			Suichuan		
	Retail price (Yuan RMB/ m^3) (1)	Procure-ment price (Yuan RMB/ m^3) (2)	Ratio (3)=(2)/ (1)	Retail price (Yuan RMB/ m^3) (1)	Procure-ment price (Yuan RMB/ m^3) (2)	Ratio (3)=(2)/ (1)	Retail price (Yuan RMB/ m^3) (1)	Procure-ment price (Yuan RMB/ m^3) (2)	Ratio (3)=(2)/ (1)
1990	480.00	230.00	0.4792	336.14	210.70	0.6268	371.67	276.52	0.7440
1991	550.00	250.00	0.4545	264.91	225.19	0.8501	377.69	258.86	0.6854
1992	510.00	230.00	0.4510	310.81	253.70	0.8163	439.06	279.95	0.6376
1993	500.00	220.00	0.4400	316.88	242.15	0.7642	513.28	241.94	0.4714
1994	510.00	230.00	0.4510	314.64	245.47	0.7802	587.80	411.66	0.7003
1995	520.00	240.00	0.4615	311.76	240.62	0.7718	559.06	400.74	0.7168
1996	560.00	240.00	0.4286	305.24	210.58	0.6899	581.70	400.84	0.6891
1997	600.00	300.00	0.5000	292.30	209.07	0.7153	532.50	308.60	0.5795
1998	620.00	280.00	0.4516	308.58	190.92	0.6187	486.82	351.65	0.7223
1999	540.00	240.00	0.4444	305.58	206.42	0.6755	420.67	307.81	0.7317
2000	450.00	210.00	0.4667	302.31	195.17	0.6456	418.43	333.35	0.7967
2001	470.00	230.00	0.4894	303.68	209.09	0.6885	398.97	279.38	0.7003

Note: *Prices are in Yuan RMB and are nominal, averaged across species and grades.*
Sources: Muchuan Forestry Bureau, Jinzhai Forestry Bureau and Suichuan Forestry Bureau (1990—2001).

We received responses from 628 households covering the 12-year time span from 1990 to 2001. This paper analyzes efficiency and poverty reduction in accordance with the data and information collected from these households and secondary data from the three counties. For various reasons including failure to completely fill out the questionnaire or other inconsistencies in the data, the analysis is conducted on data from only 414 households. All production investments were deflated by the general rural retail price index of industrial produce to the real price of 1990. Forestry production values and farming production values were transformed by using the general purchasing price index of farm products to the real price of 1990 (National Statistic Bureau 2003).

Table 2 presents summary statistics of the variables of interest in the analysis. They include the sample mean value and the minimum and maximum values for each of the variables. Generally speaking, the data for the study covered small-scale, family-managed farm and forestry units, which are predominant in the three counties.

Table 2: Summery Statistics for Variables

Item	Forestry production value (Yuan RMB)	Farming production value (Yuan RMB)	Invest-ment (Yuan RMB)	Labor input for forestry activities (person-days)	Labor input for farming activities (person-days)	Area of forest-Land (mu)	Area of farmland (mu)
Max	24935.06	28577.89	4442.75	620.00	1140.00	134.50	134.00
Min	4.95	63.91	5.22	1.00	20.00	1.00	0.30
Mean	1078.33	2497.81	415.24	52.78	253.41	17.72	3.85
SD	1428.67	1775.31	295.45	71.68	144.86	19.45	3.46

Note: *These production values are in term of Yuan RMB of 1990 real price and Mu.*

Characteristics of sample households are presented in Table 3. They include the sample mean value, minimum and maximum values for each of the variables.

Table 3: Characteristics of the Sample Households' Variables

Item	Number of forestlands (plots)	Number of farmlands (plots)	The number people of sample household (# of people)	the age of the head of sample household (years)	Number of years the head of household has been engaged in farming and forestry activities (years)	Number of years of education that the head of household received (years)
Max	47.00	40.00	10.00	75.00	62.00	19.00
Min	1.00	1.00	1.00	18.00	0.01	0.01
Mean	6.00	6.84	4.22	40.17	22.28	5.36
SD	6.23	6.17	1.33	11.55	11.59	2.78

After the household responsibility system was introduced in rural China, each household received several plots of land. Table 3 shows that the maximum number of forests and farmlands received were 47 plots and 40 plots; the mean number of plots was 6.00 and 6.84. I define the average forest and farmland area per household as: average forestland = total forestland area/number of forest plots, and average farmland = total farmland area/number of farm plots.

4. Empirical Results

4.1. Parameter Estimates

In this study, I used the FRONTIER 4.1 program to estimate the two-stage model of the stochastic frontier model of Battese and Coelli (1995) for measuring the Malmquist TFP. Parameter estimates of equation (7) are reported in Table 4.

For the household frontier production model, the null hypothesis that there are no technical efficiency effects in the model can be conducted by the testing the null and alternative hypotheses of $H_0:\gamma=0$ versus $H_1:\gamma\neq 0$. Coelli (1995) suggested that the one-sided generalized likelihood-ratio should be performed when maximum likelihood estimation is involved because this test has the correct size. The calculation of the critical value for this one-sided generalized likelihood-ratio test of $H_0:\gamma=0$ versus $H_1:\gamma\neq 0$ is equal to $\chi_1^2(2\alpha)$. The critical value for this test of a size α =5% is 100.62, the LR test of the one-sided error for the regression model is 1345.6546, which exceeds $\chi_1^2(2\alpha)$, thus we can reject $H_0:\gamma=0$ in favor of $H_1:\gamma\neq 0$. There is an inefficiency effect in the model. A likelihood ratio test of the hypothesis that the one-side error component follows a one-parameter, half-normal distribution is rejected with a test statistic value of 1345.6546.

4.2. Total Factor Productivity Results

Average sample household total factor productivity (TFPs) results are shown in Table 5. The mean, maximum, minimum and standard deviation of sample household TFPs were reduced from 1990 to 2001. The TFP mean was reduced from 0.5224 to 0.4926, or down 0.0298, meaning the average inefficiency of the sample households increased. The standard deviations in Table 5 indicate that TFP differences among these households are large, although this variation decreased between 1990 and 2001 (SD decreases from 0.1772 to 0.1690).

Table 4: Parameter Estimates

parameter	Coefficient estimate	t-ratio	parameter	Coefficient estimate	t-ratio
β_0	-1.3623***	-2.0150	β_{15}	-0.0814***	-4.9698
β_1	-0.8234***	-135.2242	β_{16}	-0.0187***	-6.2394
β_2	0.4214***	3.3525	β_{17}	0.0574***	5.6982
β_3	0.2348***	3.4568	β_{18}	-0.0072	-1.2219
β_4	1.8635***	10.1533	β_{19}	0.0450***	4.7578
β_5	0.2081***	2.5704	β_{20}	-0.0094***	-6.1607
β_6	-0.2471**	-1.9591	β_{21}	-0.0592***	-4.3313
β_7	0.0900***	4.8193	β_{22}	0.1041***	5.3081
β_8	-0.0506***	-7.3731	β_{23}	-0.0430***	-12.7553
β_9	-0.1999***	-5.8118	β_{24}	-0.0585***	-5.1723
β_{10}	0.0281***	2.3211	β_{25}	-0.0116***	-5.6400
β_{11}	0.0090	0.4395	β_{26}	0.0439	15.5101
β_{12}	-0.0541***	-5.2556	β_{27}	0.3100***	13.7898
β_{13}	-0.0786***	-3.8069	β_{28}	-0.0046***	-7.7196
β_{14}	0.0542***	4.3335	γ	0.0062	0.0611
sigma-squared	0.1251	44.6862			
log likelihood function		1715.8923	LR test of the one-sided error		1345.6546

* *indicates significance at the 10% level*
** *indicates significance at the 5% level*
*** *indicates significance at the 1% level*

Table 5: Average Sample Household TFP

Year	Mean	Max	Min	SD
1990	0.5224	0.8716	0.2811	0.1772
1991	0.5166	0.8822	0.2691	0.1833
1992	0.5078	0.8822	0.2714	0.1769
1993	0.5123	0.8799	0.2703	0.1709
1994	0.5043	0.8785	0.2718	0.1743
1995	0.4986	0.8515	0.2885	0.1699
1996	0.4995	0.8624	0.3129	0.1686
1997	0.4931	0.8637	0.3112	0.1598
1998	0.4969	0.9001	0.3182	0.1655
1999	0.4990	0.8955	0.3202	0.1618
2000	0.4952	0.9393	0.3141	0.1676
2001	0.4926	0.8865	0.2742	0.1690

Average sample household TFPs by county are listed in Table 6. The TFPs of the sample households in Muchuan County were highest, while the TFPs of the sample households of Jinzhai County were the lowest among these three counties. County 1 (Muchuan) dummy variable (γ_{11}) and county 2 (Jinzhai) dummy variable (γ_{12}) in Table 6 coincided with the result, because γ_{12} is negative and γ_{11} is positive. The TFPs of the sample households in Muchuan County increased from 1990 to 2001. Meanwhile, the TFPs of sample households in Jinzhai and Suichuan counties decreased or remained stable over this time period.

In other words, Tables 5 and 6 document that the TFPs of households in these three counties did not change much during this 12-year period. This lack of change suggests that these counties represent what Schultz (1964) called traditional agriculture societies. Schultz suggested that these types of societies are in desperate need of major reforms of institutional arrangements in order to break the deadlock of poverty and stagnation

Table 6: Average Sample Household TFP by County

County	Muchuan				Jinzhai				Suichuan			
Year	Mean	Max	Min	SD	Mean	Max	Min	SD	Mean	Max	Min	SD
1990	0.7604	0.8716	0.5700	0.0608	0.3719	0.7655	0.2811	0.0474	0.4306	0.5041	0.3412	0.0308
1991	0.7711	0.8822	0.5814	0.0567	0.3509	0.4074	0.2691	0.0235	0.4362	0.5078	0.3294	0.0327
1992	0.7732	0.8822	0.5964	0.0571	0.3533	0.4104	0.2714	0.0242	0.4376	0.5134	0.3485	0.0299
1993	0.7707	0.8866	0.5989	0.0546	0.3592	0.4169	0.2703	0.0244	0.4575	0.5576	0.3651	0.0306
1994	0.7677	0.8785	0.6000	0.0544	0.3579	0.4147	0.2718	0.0234	0.4352	0.5097	0.3457	0.0286
1995	0.7702	0.8774	0.6021	0.0490	0.3615	0.4146	0.2885	0.0227	0.4327	0.5058	0.3137	0.0295
1996	0.7786	0.8870	0.6095	0.0498	0.3699	0.4263	0.3129	0.0218	0.4380	0.5146	0.3156	0.0285
1997	0.7703	0.8736	0.5971	0.0490	0.3682	0.4195	0.3112	0.0214	0.4480	0.5208	0.3284	0.0292
1998	0.7816	0.9001	0.6038	0.0520	0.3751	0.4314	0.3188	0.0223	0.4351	0.5085	0.3182	0.0293
1999	0.7787	0.9257	0.6080	0.0537	0.3864	0.4446	0.3258	0.0223	0.4342	0.5037	0.3202	0.0279
2000	0.7826	0.9393	0.6040	0.0551	0.3790	0.4420	0.3168	0.0223	0.4275	0.4971	0.3141	0.0268
2001	0.7748	0.8865	0.5994	0.0512	0.3606	0.4481	0.2742	0.0306	0.4390	0.5139	0.3213	0.0264

4.3. The Independent Factor Parameter Estimation Result

The independent factor parameter estimation results equation (8) are shown in Table 7. The number of years of education that the head of household received (EDUC) and the age of the head of the household (AGE) are not significant at the 10% level. The number of years the head of household has been engaged in farming and forestry activities (FATI) is significant at the 10% level. Engel Coefficient of sample household (ENCO) is significant at the 5% level . All the other parameters are significant at the 1% level. The following variables—average number of farmland plots a household owns (FOAV), the average number of forestland plots that a household owns (FAAV), the gender of the head of sample household (GEND), FATI (see above), the number of people in the household (FARMS) make a negative

contribution to TFPs. This suggests that farmers with smaller plots of farm and forestlands have decreased TFP. It is difficult for these farmers to gain from economies of scale because their farm and forest holdings are too small. If a household head is female, the TFP will be better than that of a male household head. The longer period of time that a head of household has been engaged in farming and forestry activities, the lower is his TFP. Larger family sizes also constrain TFP, because larger family sizes mean that they have labor, with limited forestlands and farmlands, which cause a surplus of labor. If the head of a sample household is the headman or headwoman of a village or a sub-village, he or she will have a higher TFP. If the ratio of the timber procurement price to retail price goes up, the TFP also rises, which indicates that the current timber procurement institutional arrangement places a constrains on good production performance.

Table 7: Estimated Independent Factor Parameters

Parameter	Coefficient estimate	t-ratio	Parameter	Coefficient estimate	t-ratio
γ_0	1.0648***	9.2926	γ_7	-0.0151*	-1.5652
γ_1	-0.0203***	-2.4228	γ_8	-0.1822***	-8.3533
γ_2	-0.0045***	-1.9788	γ_9	0.0780**	1.6470
γ_3	-0.0860***	-2.2213	γ_{10}	0.2369***	2.2829
γ_4	0.0044***	1.9710	γ_{11}	0.1125***	4.8454
γ_5	-0.0004	-0.0765	γ_{12}	-0.6008***	-17.9566
γ_6	-0.0015	-0.0693			

* indicates significance at the 10% level
** *indicates significance at the 5% level*
*** indicates significance at the 1% level

One possible explanation is that the educational level of the head of the sample household may not reflect the average educational level for the whole household. Generally speaking, elder family members are more conservative than younger members. Younger members voluntarily accept new technologies and other innovations. Women tend to manage their production factors more carefully than men do; they use their own labor, land and investments more economically.

5. The Poverty Reduction and TFP Link

Table 7 indicates that γ_9 (Engel coefficient) is 0.0780%. This means that every time the Engel coefficient goes up 1%, the TFP will increase by 0.078%. In other words as households get poorer, their TFP increases. This supports the hypothesis that poorer households in the three counties utilize their total

production factors more efficiently. This evidence shows that there is a direct linkage between poverty reduction and TFP. The poor use production factors more efficiently, but they control fewer production factors than the rich. For example, the average forestry investment of the rich (Engel coefficient below 0.5) is twice more that investment of the poor (Engel coefficient is equal or above 0.5). Table 8 suggests that rich households (as defined by Engel coefficient) have higher forestry production values than those of the poor. The weight of forestry production values among rich households increased and then decreased over this period while the weight of forestry production values among poor households decreased and then increased over this period.

My analysis suggests that households generated their added incomes at the cost of misusing and overusing production factor resources. We can observe that the investment of production factors increased in order to produce higher forest product value but the total factor productivity remained stable. This means that farmers must gain the increased forest production value by misusing forest resources. Improving economic performance is necessary for overcoming the poverty trap. Table 8 also suggests that many farmers are also turning to off-farm activities to escape the poverty trap.

Table 8: Income Structure Among Rich and Poor Households in Muchuan County (%)

Engel coefficient*		1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Forestry production value	0-0.5	27.19	24.70	23.57	41.52	31.34	21.43	22.19	25.06	22.15	24.53	24.63	21.94
	0.5-1	22.24	21.55	25.97	23.74	23.68	21.58	20.58	20.14	20.13	21.29	22.80	23.77
Farm production value	0-0.5	29.89	29.40	29.03	20.69	28.41	29.13	32.44	33.43	34.05	27.30	20.94	19.70
	0.5-1	31.23	31.32	29.58	32.21	33.78	36.62	38.89	36.20	35.73	31.34	26.03	24.46
Animal production value	0-0.5	20.77	17.82	21.17	20.47	24.19	28.93	28.43	24.19	22.64	23.92	26.67	24.76
	0.5-1	31.17	30.85	28.72	28.08	27.86	26.27	25.11	26.13	24.86	25.62	25.11	25.12
Off-farm production value	0-0.5	22.15	28.09	26.22	17.33	16.06	20.51	16.94	17.33	21.15	24.25	27.76	33.61
	0.5-1	15.36	16.27	15.73	15.97	14.68	15.53	15.42	17.54	19.29	21.76	26.07	26.65

** Engel coefficient of 0-0.5 is a rich household; 0.5-1 is a poor household*

6. Discussion and Conclusions

This paper has developed an analytical framework to calculate total factor productivity efficiency in rural farm households and it has showed how this efficiency measure can be estimated within a stochastic translog production frontier context. This paper also demonstrated the workability of this framework by estimating household efficiencies in a unique panel dataset of 414 households during the period between 1991and 2001.

The heterogeneous performance of the estimated efficiency results suggests we need to be cautious working with disaggregated household level data. It may be worthwhile to clump the sample units into different sub-groups for further examination. This may include measurements of both the performance of these sub-groups and analyses of variations in the physical and economic conditions facing different households. I will consider this possibility in my future research, as this analysis will require the availability of additional data.

The economic performance of households in these three counties has been stable and has not increased significantly during the 1991 to 2001 period. This suggests a number of things. First, many of the young male laborers may have moved out of farming and forestry activities to off-farming sectors, such as working in urban areas. Laborers remaining in the rural areas are female and the older generations with lower labor input intensities than that of young male laborers. Second, the prices of farm and forestry products have declined during this period. For example, timber prices in Jinzhai, Muchuan, and Suichuan counties have declined 9.66%, 2.08% and 7.34% respectively. Lower timber prices are directly related to lower household revenues, and thus TFP declines.

Additionally, market controls on timber and other forest products counteract the positive incentive that increased forest tenure provided for investment in forestry (Liu *et al.* 2001). Consequently, the overall incentive structure has failed to become attractive to forestry enterprises. This has caused efficiency to decline and technical changes to remain stagnant. For example, if the ratio of timber price to retail price is up 30%, TFP is only up 7.1070%. In any case, substantive changes in the incentives structure are necessary for improving long-term producer performance. Therefore, the timber market should be opened. All stakeholders should be involved in decision-making and governmental agencies should be responsible for making institutional arrangements for a free market in timber.

TFPs in the three counties are different. The average TFP in Muchuan is the highest, and the average TFP in Jinzhai County is the lowest. Bamboo culms and bamboo shoots are the main forest products in Muchuan County where a larger paper mill has been built, and farmers can sell their bamboo culms to the mill. In addition, since the launching of the Natural Forest Protective Program in 1998, and the implementation of a logging ban, the demand for timber substitutes such as bamboo has risen significantly (especially in Munchuan where timber import is not

possible). Bamboo culm prices increased annually at a 5-10% rate during the 1998 to 2001 period.

In Jinzhai County the key forest product is Chinese peanut. The price of peanuts has declined since 1997 because of over supply. In 1997 the price was Yuan RMB 10-12 per kilogram. By 2001, it had fallen to 2-4 Yuan RMB per kilogram. In the meantime, forestry extension in Muchuan (with the aid of the paper mill) is better than that in Jinzhai and Suichuan counties. Suichuan's main forest product is timber and the price of timber has been down in spite of the logging ban because of foreign imports. The price changes of key forest products in these three counties had caused the fluctuation of forestry production values in this study. This is reflected in the fact that TFP values have both declined and increased.

As land fragmentation has increased, traveling time between fields, transport costs and other factors have also increased. Negative externalities have also increased; such as greater potential for disputes between neighbors. Under the household responsibility system policy, forest and farm lands were allocated to households quickly without adequately mapping boundaries. This has caused numerous conflicts over property rights. Because smaller plots of forest and farm land have a negative effect on economic performance, increasing the size of average forest and farm land plots would increase economies of scale. The household responsibility system policy should be adjusted to encourage economies of scale through some re-collectivization. Other institutional arrangements for addressing this issue have appeared in these counties such as township-, village- and sub-village-level forest farms, and joint stock partnerships.

There is direct linkage between the TFP of households and poverty reduction, therefore improving economic performance is helpful for overcoming, or at least reducing, the poverty trap. In addition to the characteristics of sample households, rural institutional arrangements and changes, such as the household responsibility system and timber market controls, have a direct affect on the TFPs of sample households. Therefore, suitable institutional changes in rural China are required with regard to land tenure and market-opening, and the structures of sample households should be adjusted in the future. As stated above, the timber market should be opened, all stakeholders should be involved in decision-making, and governmental agencies should be responsible for making institutional arrangements for a free market in timber.

If farmers generate incomes from forestry and farming activities, it will improve their livelihood but it does not guarantee they will escape poverty (as defined by the Chinese government). Off-farm employment provides farmers with another way to escape the poverty trap. Indeed, increasingly, off-farm activities have been important sources for farmers' income-generation.

Production can be expanded by increased use of inputs or by improving economic performances. Increased use of inputs and improving economic performances are important means whereby income-generation can help to reduce

poverty. I hope this paper can be useful for the reform of economic and institutional changes in rural China with regard to forest resource management and poverty reduction, especially in abundant forest resource regions.

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References

Aigner, D., Lovell, K. and Schmidt, K. 1997. "Formulation and Estimation of Stochastic Frontier Production Function Models." *J. Econometrics*. 6: 21-37.

Battese, G. E. and Coelli, T. J. 1992. "Frontier Production Functions, Technical Efficiency, and Panel Data with Applications to Paddy Farmers in India." *Journal of Productivity Analysis*. 3: 153-169.

Battese, G. E. and Coelli, T. J. 1995. "A Model for Technical Inefficiency effects in a Stochastic Frontier Production Function for Panel Data." *Empirical Economics*. 20: 325-332.

Chen, K. and Brown, C. 2001. "Addressing Shortcomings in the Household Responsibility System Empirical Analysis of the Two-Farmland System in Shandong Province." *China Economic Review*. 12: 280-292.

Coelli, T. J. 1995. "Estimators and Hypothesis Tests for a Stochastic Frontier Function: a Monte Carlo Analysis." *Journal of Productivity Analysis*. 6: 247-268.

Coelli, T. J. 1996. "A Guide to FRONTIER Version 4.1: a Computer Program for StochasticFrontier Production and Cost Function Estimation." *CEPA Working Paper 96/07*. University of New England, Australia.

Førsund, F. R., Lovell, C. A. K. and Schmidt, P. 1980. "A Survey of Frontier Production Functions and their Relationship to Efficiency Measurement." *Journal of Econometrics*. 13: 5-25.

Grosskopf, S., K. Hayes, L. Taylor and W. Weber. 1996. "Budget Constrained Frontier Measures of Fiscal Equality and Efficiency in Schooling." *Review of Economics and Statistics*.

Hetemäki, L. 1996. "Do Environmental Regulations Increase Production Efficiency? Evidence from the Pulp Industry." *Essays in the Impact of Pollution Control on a Firm: a Distance Function Approach*. Helsinki Research Center.

Huang, C. J. and Liu, J. T. 1994. "Estimation of a Non-neutral Stochastic Frontier Production Function." *Journal of Productivity Analysis*. 5: 171-180.

Kumbhakar, S., Ghosh, S. C.and McGuckin, J. T. 1991. "A Generalised Production Frontier Approach for Estimating Determinants of Inefficiency in US Dairy Farms." *Journal of Business and Economic Statistics*. 9: 279-286.

Lin, J. Y. 1986. *The Impacts of the Household Responsibility System on China's Agricultural Production*. Department of Economics, University of Chicago.

Lin, J. Y. 1988. "The Household Responsibility System in China's Agricultural Reform: a Theoretical and Empirical Study." *Economic Development and Cultural Change*. 36: 353-372.

Lin, J. Y. 1992. "Rural Reforms and Agricultural growth in China." *American Economic Review*. 82: 34-51.

Liu *et al.* 2001. T*he Institutional Arrangement and Case Study on Community Forestry Development and Poverty Alleviation*. Chinese Agricultural Science and Technology Publishing Housing (in Chinese).

Lovell, C. A. K., S. Richardson, P. Tavers and L. L. Wood. 1990. "Resources and Functionings: a New View of Inequality in Australia." *Working Paper series, no. 90-8*. Department of Economics, University of North Carolina.

Meeusen, W. and van Broeck, J. 1977. "Efficiency Estimation from Cobb-Douglas Production Functions with Composed Error." *International Economic Review*. 18: 435-444.

Myers, R. H. 1970. *The Chinese Peasant Economy*. Harvard University Press.

National Statistics Bureau of China. 2003. *Statistic Yearbook 2002*. China Statistics Press (in Chinese).

National Statistics Bureau of China. 2004. *Statistic Yearbook 2003*. China Statistics Press (in Chinese).

Nguyen, T., E. Cheng and C. Findlay. 1996. "Land Fragmentation and farm productivity in China in the 1990s." *China Economic Review*. 7(2): 169-180.

Pitt, M. M. and Lee, L. F. 1981. "The Measurement and Sources of Technical Inefficiency in the Indonesian Weaving Industry." *Journal of Development Economics*. 9: 43-64.

Reifschneider, D. and R. Stevenson. 1991. Systematic Departures from the Frontier: A Framework for the Analysis of Firm Inefficiency. *International Economic Review*. 32 (3): 715-723.

Schmidt, C. and Sickles, R. C. 1984. "Production Frontiers and Panel Data." *Journal of Business & Economic Statistics*. 2(4): 367-374.

Schultz, T. W. 1964. *Transforming Traditional Agriculture*. Yale University Press.

Schultz, T. W. 1990. “The Economics of Agricultural Research”. In Eicher, C. K. and Staatz, J. M. *Agricultural Development in the Third World*. John Hopkins University Press.

World Bank. 2002. *The World Development Report 2002*. Oxford University Press.

Yin, R. S. 1995. “An Empirical Analysis of Rural Forestry in China, 1978-1990.” Ph D Dissertation, the University of Georgia; Athens, Georgia.

Yin, R.S. 1999. “Production Efficiency and Cost Competitiveness of Pulp Production in the Pacific Rim.” *Forest Products Journal*. 49(7/8): 43-49.

Zhang, Y., Uusivuori, J., and Kuuluvainen, J. 2000. “Impacts of Economic Reforms on Rural Forestry in China.” *Forest Policy and Economics*. 1: 27-40.

Who is in? Who is out? Equity and Customary Community Forest Management in Meghalaya, India

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Abstract

This paper explores equity in customary community forest management. The focus is whether customary community forest management is equitable. The paper explores this issue based on an extensive fieldwork conducted in the Khasi Hills District, India and by consulting secondary materials. The paper demonstrates that customs and traditions define the users, the users' participation, their role in decision-making, their inclusion and exclusion, and their rights of access and rights to use resources. The outcome from the study shows that equity needs to be considered in a context specific light.

1. Introduction

Meghalaya is located in the Northeast of India, occupying an area of 22,429 sq. km. According to the 2001 Census (Registrar General 2001), the total population of Meghalaya is 2,306,069 persons. The majority of the population is indigenous, with 85% living in the rural areas. The two major indigenous communities in the state are the Khasi-Jaintia and Garo; the rest comprised the Lalung, Hajong, Koch, Karbi and Biate groups. These indigenous communities are provided special Constitutional status in India that allows social relationships, social interactions and authority within the community to be defined by customs and traditions (Nongkynrih 2001).

Often indigenous management systems are considered as having a more equitable system for distribution of benefits from forests and other natural resources (Furze *et al.* 1996, Nongbri 2003, Fitzpatrick 2005). However, in general, this assumption has not been critically explored. I will explore the issue of equity in customary community forest management by raising the question of what is equitable and inequitable. Section two presents a theoretical framework for examining political equity,

which forms the basis of this paper. This will be followed with a presentation of the background on traditional institutions, forest, traditional classification of forest and forest policy in Meghalaya. I will then provide an analysis of political equity in the management of community forest followed by the conclusion.

2. A Working Framework on Political Equity

There are two types of community forest management (Ascher 1995, Hunnam *et al.* 1996, Durst *et al.* 2005: 1-27). One type is community forest management that is guided and influenced by policies, acts or laws of the government. The second is community forest management which is governed by customary beliefs and practices and is under the control of traditional authorities (Weber *et al* 2000). In terms of equity, much has been analyzed in the case of the former type, but less so in the latter. It is a theoretical problem I have encountered in the pursuit of studying and analyzing customary community forest management. To overcome this problem, I have drawn on the literature about community-based natural resource management facilitated by government to identify instrumental elements, such as the definition, concepts and approaches to analyzing equity. The purpose is to formulate, develop and promote the evolution of a working framework on political equity. A working framework is important to help an author maintain objectivity, especially if the author is also part of the community of which he/she is studying.

Defining equity is difficult and subjective, but according to Fisher and Malla, "The word equity has connotations of 'fairness' and 'justice', not necessarily of equality" (Fisher and Malla 1987: 4). We are then left with the question of what is fair. In the opinion of Fisher, "what is regarded as a 'fair share' varies according to different situations [and different cultures]" (Fisher 1989:17). Poteete agrees and argues that, "what is equitable cannot be divorced from the specific cultural contexts in which [rules] are made. Even within a single culture, different principles of equity apply in different circumstances" (Poteete 2004: 4). The definitions and explanations by Fisher and Malla and Poteete are accepted because it is applicable in the present case study.

According to Poteete, equity can be analyzed in two ways: political and economic (Poteete 2004). Poteete defines political equity as representation of the relevant groups, their participation in group activities, and their level of influence in decisions (2004: 13). The definition by Poteete (2004) stresses participation and decision-making as the basis of political equity, but other equally vital issues such as the organization of communities in terms of membership, authority, power, leadership, rules and regulations, customs and laws and membership rights also need to be considered and included.

A meaningful understanding and analysis of political equity needs to be placed in the context of community, another term which has many meanings. A community has its own values, norms, rules or customs which define social relationships, actor's actions and also maintains its collectivity. According to Kenny, community "refers to

a group of people who share a common identity, such as geographical location, class or ethnic background, or who share a special interest, such as common concern about the destruction of rainforests" (Kenny 2002: 9). Poteete (2004) suggests that though community cannot be ignored, it also cannot be generalized. The assumption that a 'community is a homogenous group' is a general assumption. Heterogeneity exists in communities and realities of social hierarchy, or social divisions determine equity and perceptions of fairness (Furze *et al.* 1996: 9, Poteete 2004). Another perspective highlights the roles of rights and institutions (e.g. the state) that govern and determine the rights of members in determining equity outcomes (Johnson and Forsyth 2002). A community therefore has norms, customs, values and social divisions that regulate its function.

It is these functions within a community that determine who can participate and who cannot. Agarwal's arguments on participation demonstrate that institutions in the form of formal bodies operating at the local level shape the nature and type of participation of women (Agarwal 2001). Participation, according to Agarwal (2001) is "determined by rules, norms, and perceptions, in addition to the endowments and attributes of those affected" (1623-1624).

Both Agarwal (2001) and Poteete (2004) agree that participation does not ensure equity, because as Agarwal puts it, "participation is not the panacea many assume. There are limits to what participation alone (even if interactive) can achieve in terms of equity and efficiency, given pre-existing socioeconomic inequalities, and relations of power" (Agarwal 2001: 1625). Poteete adds that "[I]nclusion in the general membership does not guarantee representation in executive bodies or equitable influence over decision –making" (Poteete 2004: 15).

From the works of the authors discussed above, we can select and identify the main instrumental elements as: authority and power, access and rights, and participation and decision-making (Agarwal 2001, Johnson and Forsyth 2002, Poteete 2004). Each of the elements are used and applied as interdependent parts, which holistically form a framework of political equity (Table 1). The elements are not absolute, but provide the basis for this paper, against which the case study will be tested.

Table 1: Framework of Political Equity

Element	Operational Aspect
Authority and Power	What is the structure and function of authority? What is its legitimacy? What power does it exercise?
Rights	Who defines rights? Who enjoys the rights? Who benefits from these rights?
Participation and Decision making	Who can participate and at what level? Who makes decisions for whom?

This political equity framework is applied to a case study in Meghalaya, India. In the Khasi hills the local administrative units are the traditional institutions. One of the traditional institutions commonly found is known as the *Hima*, a territorial and political unit of several villages. Under the *Hima* there are villages which function as autonomous units. This traditional institution manages and controls its own territory according to customs and traditions (Nongkynrih 2001).

The study was conducted in *Hima* Mawphlang, a traditional institution of the Khasi-Jaintia (referred to in this paper as Khasi). *Hima* Mawphlang is about 25 km southeast of Shillong (the state capital of Meghalaya). The traditional institution is a cluster of 16 villages, which are multi-clan in character but mono-ethnic in composition (both are majority Khasi populations), and with multiple religious persuasions. From the point of modern-bureaucratic administration, the *Hima* falls under the East Khasi Hills District of Meghalaya and under the Khasi Hills Autonomous District Council (KHADC) which confirms the election and succession of Chiefs and headmen and the protection of traditional customs and practices.

I conducted the field investigation as part of a project of the International Centre for Integrated Mountain Development (ICIMOD), Nepal. The *Hima* Mawphlang was selected as the area of the study primarily due to it being the only area with a traditional institution that has codified customary beliefs and practices.

Both primary data and secondary data were collected by the author. Semi-structured interviews were conducted with men and women, including separate focus group discussions with women, a series of discussions with the Chief and his councils of ministers as well as separate discussions with the village headmen and members of the council. Subsequent visits and interactions took place between 2003 and 2004 with the Chief and the council of ministers. Secondary data from published materials was used to support primary data collected in *Hima* Mawphlang in 2002.

3. Background

Meghalaya (meaning abode of the clouds) is found in the North East of India (Figure 1), and falls under provisions of the Sixth Schedule of the Indian Constitution. The state follows a three-tiered system of political administration (Box 1).

The power and authority of the Legislative Assembly as granted by the Constitution of India is above the Autonomous District Councils (ADCs). The ADCs are given the authority over the traditional institutions in matters related with appointment and succession of chiefs and headmen, and other matters (KHADC 1959). The members of the Legislative Assembly and ADCs are elected, and their roles and functions are separated. In contrast, the traditional institutions are hereditary and function according to local customs and traditions.

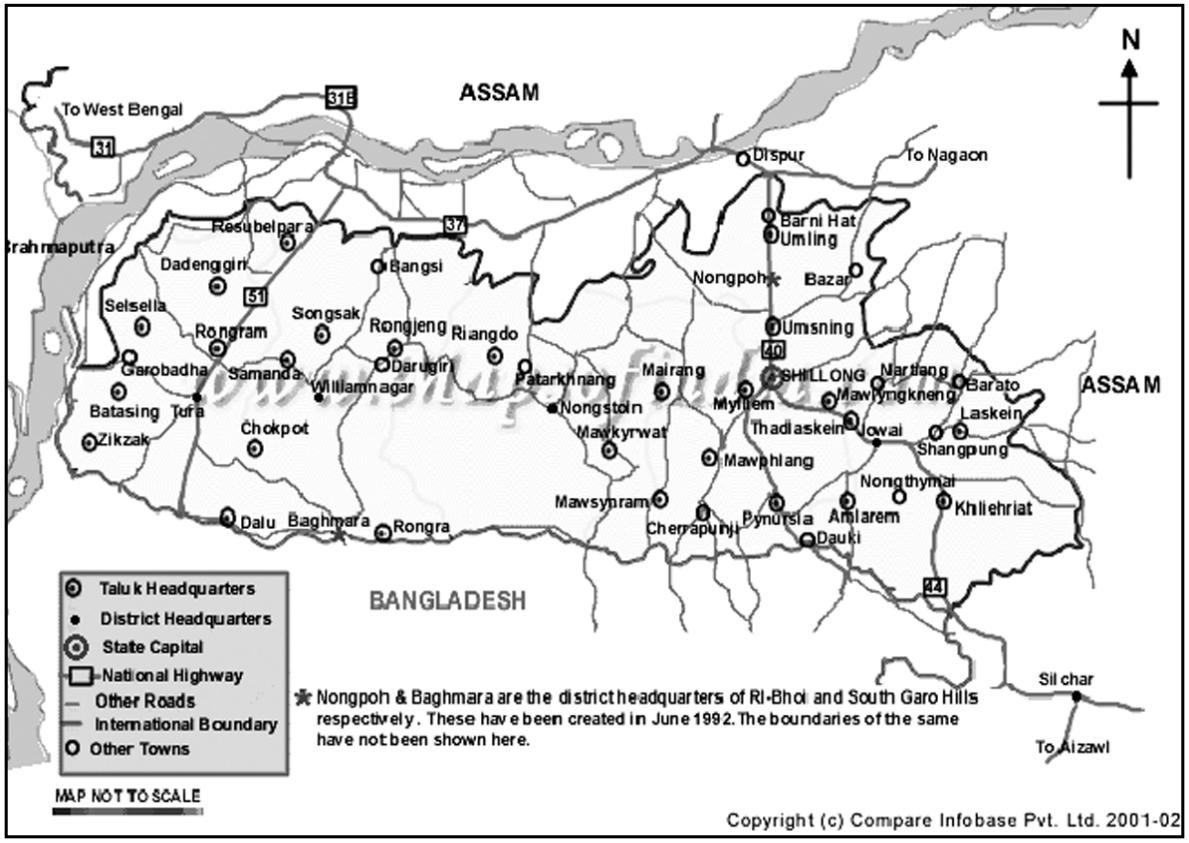

Figure 1: Map of Meghalaya

Box 1: Three Types of Political Administration in Meghalaya

1. Meghalaya Legislative Assembly, the Government and its various departments
2. Three Autonomous District Councils (Khasi, Jaintia and Garo)
3. Traditional Institutions, each having their own territorial unit, comprising several villages. Each village has its own territory and is represented by a headman selected from among male adults

3.1. Forests in Meghalaya

Meghalaya is rich in a variety of forests. According to the government of Meghalaya, forestlands are separated into three broad categories: 1) Reserve Forests or National Parks, which are under the direct control and management of the state government. Such forestland falls within the ambit of Union or State laws; 2) Green Block Forests, District Council Reserve Forests and Unclassed Forests and are directly controlled and managed by the Autonomous District Councils; and 3) Forestlands that are either owned privately (by clans, domestic groups, individuals or organizations) or under the control and management of the traditional institutions (*Hima*) (KHADC 1958). The size of each of these classified forestlands according to government statistics (in hectares, (ha)) show that in 1998-99, the total Reserve Forest was 71,270 ha; Protected Forest was 15,410 ha (excluding the protected forest under District

Council); National Park was 26,740 ha; and the Unclassed Forest was 850,300 ha. The total area under forest is 949,550 ha (Government of Meghalaya 2000: 38).

4. Study Results

4.1. Traditional Classification of Forests

Across the territory of the *Hima* there are many forests (*Khlaw*). They are separated into several types (Box 2), each type is meant for specific purposes of management and use.

Box 2: Traditional Classification of *Khlaw Adong*

(i) ***Ka Khlaw Nongkynrih:***
This forest is protected and reserved only for community service needs. It is from this forest that trees are cut and felled for construction of schools, youth clubhouses, footbridges, and similar projects. It can also be used in emergency cases.

(ii) ***Ka Khlaw-Adong Kseh-Mawngap:***
This forest is used only for cutting of timber for construction of houses and for other community-based constructions.

(iii) ***Ka Khlaw-Adong Wah-Lwai:***
Only selected species of trees are permitted to be cut from this forest and then only in extreme situations (i.e., if there are no full grown trees available in any of the above named forests that can be felled for construction of a house). The *Hima*, only after careful examination and consideration, will decide whether trees may be used in these situations.

(iv) ***Ka Khlaw-Kor-Um Kharai-Masi:***
This forest is kept apart as the catchment area for spring water and serves as the source of water supply for the *Hima*. The entire zone is restricted to human and cattle entry.

(v) ***Ka Khlaw-Dymmiew-Blah:***
The trees in this forest are completely protected and cannot be felled for any purposes. Only full grown grasses, small wild trees and weeds on the outer ring of the forest are permitted for harvest and use.

(vi) ***Ka Khlaw Adong Wah-Sein-Iong:***
In this forest trees can be felled only for making coffins and the preparation of the cremating ground. Only five out of the sixteen villages are given access to fell tress and only for above purposes. Additionally the villages are responsible for conservation and protection. Each village has to get formal permission from the *Hima* before felling any trees.

(vii) ***Ka Khlaw Adong-Kyiem:***
Only grasses are permitted to be harvested from this forest.

(viii) ***Ka Khlaw Adong Shnong Jathang:***
This forest is located in Jathang village, which has been given the role to protect and conserve it. The residents of the village enjoy only the right to cut trees for cremation purposes and only with the permission from the village headman. In case the residents or the village council needs to cut tress from the forest for any other purposes, the headman must consult and seek permission from the *Hima*.

Source: Codified Rules and Regulations of Hima Mawphlang, 1982

According to the information provided by the elders of the *Hima*, prior to 1982 administration was conducted by local customs and traditions. Since it was not written down, interpretation of the customs varied, sometimes resulting in uncertainty and confusion about the regulations of community. The outcome led to indiscriminate use of forests. The danger of forest depletion led to the codification of customary rules and regulations, with subsequent ratification by the council of the *Hima* in 1982 and by the Khasi Hills Autonomous District Councils (KHADC) the same year.

The codified rules and regulations of 1982 stipulated in very clear terms the conditions the access and use of community forests. The terms and conditions deal specifically with two types of community forest. The *Khlaw Adong* (community protected forest) (Box 3), and *Khlaw Raid* (community forest). Normally the penalty for violators is US$ 2, but the *Hima* also has flexibility and can punish the user depending on the nature and gravity of actions committed.

Box 3: Regulations on Access and Use of *Khlaw Adong*

(i) No trees can be uprooted or cut from the protected forests. Any person found in violation is liable for punishment and penalty.
(ii) Every resident of the *Hima* is responsible for protecting the forest, and can take necessary action against anyone breaking the law.
(iii) It is illegal to set the forests on fire and culprits will be severely punished.
(iv) It is illegal to use the lands located on the fringes of the protected forests for any type of cultivation or to cut any tree from such areas.
(v) The full grown grasses inside the protected forests cannot be cut without the prior permission of the Chief and ministers.

Source: Codified Rules and Regulations of Hima Mawphlang, 1982

The second type of community forest is known as *Khlaw Raid*. Such forests are partially protected and access and rights to users are restricted. The rules and regulations are different from the protected forest (Box 4). The government of Meghalaya exerts minimal control over this forest because the greater autonomy in management of the forest lies with traditional institutions, clans and individuals (Darlong 2004). In December 1996, the Supreme Court of India banned timber logging and commercialization with the intention to control the large scale, indiscriminate felling of trees (Nongbri 2003:163). Currently, the forest department is trying to introduce Joint Forest Management in the State by creating a dialogue with traditional institutions. There is also an emerging debate on the draft Forest Bill for many tribal areas in the country.

Box 4: Regulations on Access and Use of *Khlaw Raid*

(i) The boundary lands adjacent to the community forests demarcated by the *Hima* cannot be used for any type of cultivation.

(ii) It is illegal to set community forests on fire and such actions are punishable.

(iii) Every permanent resident is permitted to collect dried branches and twigs for domestic fuelwood. But a person can collect only once a day. If a person is found to have collected more than once in a day, the person is fined US$ 1. The permission to collect firewood does not give the right to users to cut or fell trees.

(iv) It is permitted to collect wild grown grasses from the forest, but it is banned to use the spade to dig the grasses from the forests. The collected grass can be used for one's need or can be sold within the *Hima* only. It is illegal to commercialize forest products outside the *Hima*.

(v) Only residents of the *Hima* are allowed to fell trees for construction of houses, and they must first gain permission from the *Hima*. However, it is not permissible to cut trees for fencing or for the construction of piggery sheds.

(vi) It is punishable by the law of the *Hima* for any person to cut or fell trees for commercial purposes.

(vii) The chopping of branches or cutting of leaves from the trees is considered an illegal action. Such actions are punishable by the *Hima*.

(viii) The grazing of cattle in the open fields of the *Hima* is stipulated as follows: From the months of March to November, cattle have to be kept inside sheds or grazed under supervision of the owners of the cattle. During this period it is not permitted to graze animals in the paddy fields or forests, and the caretaker of the cattle should be above the age of twelve years. From the months November to February the cattle can be let loose to graze in the open fields.

Source: Codified Rules and Regulations of Hima Mawphlang, 1982

4.2. The Community

The Khasi are a matrilineal society, with property handed down through women and people taking the clan name of their mother. Without the clan identity, both male and female members in a real or abstract sense, are *persona non-grata* in the society. Another part of clan identity comes from the place of residence of the domestic group (*iing*). The residents are divided into two groups, those from the *Hima* and those from outside.

As per the customary practices, the Trai-*Hima* are the only allowed users of the community forests. They are the permanent residents of the constituent villages of *Hima*. These permanent residents belong to the domestic groups living in any of the 16 villages. The other category of persons living in the *Hima* is referred to as the Bar-*Hima*. These are non-permanent residents living in the *Hima* either because of being employed in government offices or working as daily wage laborers, and do not enjoy equal rights in the use of the community forests.

A third category of non-permanent residents are non-Khasi, locally referred to as *Dkhar*. This classification of foreigners provides them with restrictive and limited rights. This group of people are accepted in the *Hima* if they are performing a particular

task or job, but the customs and law of the State clearly do not provide them with the right to buy land and their permanent residence in *Hima* is not accepted. They can live temporarily to complete a job or task and are then compelled to leave.

4.3. The Authority and Power Structure of *Hima* Mawphlang

The traditional institution of the *Hima* is based on customs and traditions. Customary beliefs and practices legitimize the twelve clans' political positions and their status as distinct from other clans. The *Lyngdoh-Mawphlang* clan is the provider of the Representative Head known as the *Lyngdoh* (Chief) of the *Hima*. He represents the *Hima* in all its functions and duties. Additionally, four *Myntris* (ministers) are appointed to assist the Chief.

At the *Hima* level, the political organization is divided into 1) the Chief and the Councils of ministers, who are the political administrators, and 2) the Council of the *Hima*, comprising the 16 village headmen, representative adult males, the chief and the ministers. According to the customary beliefs and practices, the Council of the *Hima* is the highest authority. Participation of women, young people and non-permanent residents in the council of *Hima* is not permitted.

The everyday political administration of the *Hima* lies with the Chief and the Council of ministers. They oversee and are responsible for the maintenance of law and order, organizing the annual festival, settling intra-village boundary disputes, interacting with government departments, implementing government schemes and organizing the annual council meetings. Additionally they submit an annual report that includes audited statement of accounts, and the status of management and control of community lands and forests. However, they are required to report to the Council of the *Hima* and seek its approval in matters concerning land, forests and many other important issues.

The role of the *Hima* has become increasingly important as all issues concerning land and forests are under its authority. The process of decision-making is governed and guided by the 1982 codification of customary beliefs and practices, but in most cases the opinions of the Chief and the Council of ministers count more than the views and opinions of members of the Council. This is dependent, however, on whether their opinions are within the codified rules and regulations. The Chief and the Council of ministers seek, deliberate and make decisions. However, the Council of the *Hima* has the power and authority to veto decisions and can impeach the Chief and the Council of ministers when they misuse or exercise their authority beyond what is defined in the rules and regulations.

4.4. The Rights to Access and Use Community Forests

The permanent residents of the *Hima* enjoy rights to access and use the community forests and other common property resources. They can collect fuel wood, cut trees for construction of houses, collect wild vegetables, orchids and medicinal herbs and quarry sand and stones from permitted sites. The non-permanent residents are allowed only to collect wild vegetables from the community forest and to use the

water sources only for drinking and washing.

The inclusion or exclusion of residents has many justifications. First, at the larger level of collectivity, the rule of matrilineal descent from a Khasi mother determines whether the individual belongs to the same indigenous community. This identity goes right to the level of social relationships between two persons. By not being born of a Khasi mother, and not carrying her clan name, a person is a foreigner, and automatically is excluded in rights to own land or use the forest. Secondly, at the level of *Hima*, if a person is a Khasi, but has migrated from another area, that individual cannot participate in the decision making institutions, and do not enjoy rights to access and use the forests. Women and young people are also excluded from participating in *Hima* decision making. Within the *Hima* the right to occupy the political offices of the Chief and ministers is reserved only for adult males from the twelve founding clans, other clans are excluded.

4.5. Perceptions on Participation and Decision-Making

There are two types of perceptions gathered from the field. One is the perception of residents of the *Hima* Mawphlang, and the second is the perceptions of Khasi people in general on traditional institutions. When I asked the non-permanent residents about their participation, they reply that "it is a common practice and we do not have any problem because in our *Hima* and village the same applies to residents coming from another *Hima* or village." The same practice is common among the indigenous communities of Meghalaya in general, and the Khasi in particular.

The same question was posed to a group of women about their participation in the council, they replied, "it is a practice that has been there since time immemorial and we do not want to change, but let it be in the same way." The women said that they are more concerned with managing their domestic groups, because as a matrilineal society, women must shoulder these responsibilities. They stated that they are faced with and are compounded by additional problems like early marriage of children, drunkenness of adult male members, no alternative employment for young children and that the income generated cannot meet the expenses incurred in the management of the family. Unlike their male counterparts, the women feel that they must spend more time at work than at leisure. The pressure they have to face in sustaining the livelihoods of the domestic groups and caring the members of the domestic groups are daily burdens that are heavy to carry.

On being asked whether they (women) would like to be active participant so that they can voice their problems at the council meetings, they replied that "most of these issues we discuss with our brothers, maternal uncles and husband before the meetings, and we request them to deliberate and take necessary steps." They also stated that the *Hima* is finding ways and means to solve the problems they have highlighted by taking up the issues with relevant government departments and political leaders.

Decision-making in the *Hima* is vested in the hands of the adult male members

of permanent residence. When one of the headmen was asked about community forest management, he stated, "before the codification of the 1982 Rules and Regulations, village councils enjoyed more autonomy and could make their own decisions. But after the codification, the autonomy of the village council has been taken over by the *Hima*. Our role in forest management is today defined by the *Hima*, and we have to act accordingly."

I discussed the issue of the 1982 Codified rules and regulations with the Council members of the *Hima* and asked them how they felt about the rules and regulations. The members requested the Chief to speak. After he spoke, I asked them again how they felt, and their opinions were similar to that of the Chief. "The rules and regulations framed by our elders benefit the *Hima* and its people, and it is also a mechanism to conserve, protect and to serve the interests of the present and the future generations."

The same question was raised with a group of women separately. One of the elderly women of the *Hima* said, "prior to the formulation of the rules and regulations, the richer domestic groups used to hire daily wage laborers to cut and collect domestic fuel wood from the community forests. They were able to collect more than what they needed, but a poor domestic group could not do so because they do not have the means. After the adoption and implementation of the rules and regulations all of us are permitted to collect only once a day."

When discussing with the residents in general about the codification, they said it is one of the most important decisions taken by the elders of *Hima*. They felt that without rules, people would have exploited the community forests without any consideration for the future. The other significant aspect is the legitimacy of the political administration and management of community forests under the *Hima*. Everyone agreed the codification has streamlined the procedure of political administration of community forests.

However, in the last two decades the Khasi society has faced a number of challenges and as a result, serious debates about traditional institutions are being pursued in public. The challenges and debates are not only political in nature but are also rooted in the issue of equity. I would like to highlight four challenges being presented to traditional institutions.

First, the succession to political office of chieftainship is a major source of conflict among the domestic groups belonging to the same clan. The clan council is the body that selects an adult male from among themselves to assume and occupy the office. Due to internal conflicts, there is often more than one claimant to the position, and the Autonomous District Councils are not able to confirm anyone. The political vacuum at the chief's office has led to confusion in the administration at the local level. In such situations the ADCs usually appoints an acting chief, who can be anyone, who is not necessarily from the particular clan (KHADC 1959). There have been serious allegations about acting chiefs misusing power and authority by permitting timber contractors to cut trees from the community forests and selling off community lands with rich mineral resources. This has resulted in conflicts between traditional

institutions and the ADCs on the succession and confirmation of chiefs, headmen and royalty rights.

Second, the case of *Hima* Mawphlang is exceptional because of the codified rules and regulations. However, there are cases where chiefs of other *Hima*, in collusion with some of the ministers and timber merchants, have converted large tracts of community forests into private property without the consent of the people of *Hima*. Such forestlands are registered in the revenue department of the government of Meghalaya. This has legitimized the conversion into private ownership. Personal benefits received by those who hold power in the traditional authority is a threat to the equity of the customary based community forestry (Khatar Shnong Socio Organisation 2004: 14-19).

Third, parliamentary politics and the induced development schemes of the nation-state are changing the political behavior of the people. Traditional institutions are based on customs and the decision-making process is based on consensus. The party-based politics of electing representatives to the Meghalaya Legislative Assembly (MLAs) and the Autonomous District Councils is creating divisions and political factionalism in traditional institutions. The former wields power over development programs, and the latter has control over traditional institutions. Both bodies are legal authorities and have tremendous influence over people in general and traditional institutions in particular. People are complaining that "leaders of traditional institutions, who are community leaders, have been politicized and their decisions are no longer fair and just because they give preference to supporters of their party. The outcome is such that the poor are increasingly becoming marginalized." The influence of democratic power and authority is overwhelming and traditional institutions are being exploited as vote banks. It is also causing unscrupulous use of natural resources by the new emerging elites from the community (Nongkynrih 2005). People fear that the process is a potential threat, likely leading to more unfair outcomes.

Lastly, the majority of traditional institutions are effective in providing users with the rights to use community forests, but do not instill responsibility among users to replenish these forests. This is one of the major problems in the sustainability of the local environment (Khatar Shnong Socio Organisation 2004). Even in the case of *Hima* Mawphlang, it has only protected indiscriminate felling of trees, but has yet to define user's responsibility in replenishing what they take.

These and other issues such as internal conflicts within *Hima*, uncontrolled access and use of community forests, lack of accountability and transparency in implementing development programs of the nation-state and participation of women in decision-making are being debated in public forums and meetings. There are two separate views on the issues of traditions and customs. Development based organizations and workers, intellectuals, women's organizations and the general public argue that traditions and customs can be changed to adjust to the changes affecting the community at various levels. The changes propagated by this group are: traditional institutions must incorporate in their political system transparency and accountability; women must be active participants in decision-making bodies of traditional

institutions; and the right to use forests resources must be complimented with the responsibility to replenish them.

The second group is a forum of heads of traditional institutions, and their main agenda is the separation from ADCs, particularly from Khasi Hills. They are demanding that the government of India provide them with more political autonomy. Both groups have common ground on the issue of ownership and control of lands and forests, which is an understanding that it must not be surrendered to outsiders.

These different factors from within and outside are impacting traditional institutions. The outcome of such processes, as portrayed by Varughese and Ostrom, depends on "whether the institutions they design are consistent with principles underlying robust, long-living, self-governed systems" (2001: 763).

5. Analyzing the Political Equity Framework

Any one definition of community is difficult to define and apply. I agree with Poteete (2004), that communities are not homogenous groups and that within a community there are numerous social divisions. This certainly holds true for the Khasi. There are three social divisions in the community, determined by ethnicity, matrilineal descent and residential status:

(i) A person who is a citizen from the same nation-state but different ethnic community and matrilineal ideology, is placed at the bottom of the social ladder.

(ii) In the middle of the community social structure is a person of the same ethnic community and a follower of the matrilineal descent, but a migrant from another territory.

(iii) At the top of the social ladder is a person of the same ethnic community, who is a follower of the matrilineal descent, and is permanently residing in the defined boundary of the traditional institution.

Even within these categories, not everyone is an equal member of the traditional institution. Only adult male members of category (iii) are active participants in the decision-making body. The active adult male participants of traditional institutions are heard and informed, but few occupy the political office in the traditional authority. Political rights and rights of access are governed by rules of kinship and identification with political territory and the dynamics of insider versus outsider. These different levels of participation, whether by choice or force, correspond to levels of participation as put forth by Agarwal and Poteete (Agarwal 2001, Poteete 2004). This hierarchy of participation illustrates different levels of inequity that are institutionalized within the Khasi community. Similarly, the principle of social division applies in the case of access and rights of users and inclusion or exclusion. It may be considered 'fair' for those in category (ii) and (iii), and unfair for those in category (i).

6. Conclusion

The analysis based on the working framework has provided an understanding of equity, and shows that equity is inseparable from ethnicity, rule of descent, status of residence, gender, authority and customary beliefs and practices. The framework also shows that equity is context specific.

The codified rules and regulations on customary beliefs and practices define and determine equity. Additionally, the Constitution of India has legitimized the customary beliefs and practices of the society, meaning that customary beliefs and practices are legal and recognizable. The customary method of applying the concept of equity differs from that of the nation-state as the codified rules and regulations clearly separate persons from among the same ethnic community and those from other ethnic backgrounds. The selective criteria used to determine the status of people carry along with them the rights of inclusion or exclusion.

The definitions of equity by Fisher and Malla and Poteete support the case study since, for the *Hima* Mawphlang community, what is considered 'fair share' in customary beliefs and practices defines what is equitable, even though by other definitions it is not. This is an internal arrangement and is accepted. Extending the argument further, the Khasi society in general, and the *Hima* in particular, rely on customary beliefs and practices, not the government of India or Meghalaya, to structure, define and regulate the rights of members of the society. Therefore, for the Khasi, customary beliefs and practices are considered just and fair.

But the challenges and the ensuing debates over traditional local institutions are a reflection that the traditional authority, which has provided the legitimacy to govern, control and manage the community, is under pressure from factors or forces within and from outside. These are impacts of parliamentary democracy, the internal demands of incorporating system of transparency and accountability and the inclusion of women in decision-making.

These factors have impacts on traditional institutions, but under these circumstances can they be sustained and continue in the future? "A self-organized resource governance system exists where actors, who are major appropriators of the resource, are involved over time in making and adapting rules within collective choice arenas regarding inclusion or exclusion of participants, appropriation, monitoring and sanctioning, and conflict resolution" (Varguese and Ostrom 2001: 748). The Khasi society is demanding that traditional institutions change and incorporate values of equity, transparency and accountability, and neutrality.

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References

Agarwal, B. 2001. "Participatory Exclusions, Community Forestry, and Gender: An Analysis for South Asia and a Conceptual Framework." *World Development*. 29(10): 1623-1648.

Ascher, W. 1995. *Communities and Sustainable Forestry in Developing Countries*. International Center for Self-Governance:California.

Darlong, T. V. 2004. To Jhum or Not To Jhum. Guwahati: The Missing Link.

Durst, B. P. *et al.* (eds.) 2005. *In Search of Excellence: Exemplary forest management in the Asia and the Pacific*. Bangkok. FAO Regional Office for Asia and the Pacific.

Fisher, R. J. and Y. B. Malla. 1987. "Planting Trees on Private Farmland in Nepal: the Equity Aspect." Presented in Multipurpose Trees for Small Farm Use Workshop, 1-15 November 1987. Pattaya, Thailand.

Fisher. R.J. 1989. Indigenous Systems of Common Property Forest Management in Nepal. Hawaii: East West Center, 18.

Fitzpatrick, D. 2005. "'Best Practice' Options for the Legal Recognition of Customary Tenure." *Development and Change*. 36(3): 449-475.

Furze, B., T. Lacy and J. Birckhead. 1996. *Culture Conservation and Biodiversity*. John Wiley & Sons:England.

Government of Meghalaya. 2000. *Pocket Statistical Hand-Book, Meghalaya 2000*. Directorate of Economics and Statistics: Shillong.

Hunnam, P., K. Means and P. Chatterson. 1996. "Community Resource Conservation–WWF in Melanesia" in *Developing Alternatives: Community Development Strategies and Environmental Issues in the Pacific.* Wallace, H. (ed.) Victoria University of Technology: St. Albans.

Johnson, C. and T. Forsyth. 2002. "In the Eyes of the State: Negotiating a 'Rights-Based Approach' to Forest Conservation in Thailand." *World Development.* 30(9): 1591-1605.

Khasi Hills Autonomous District Council (KHADC). 1958. *Management and Control of Forests Act (as amended)*. Shillong: KHADC.

Khasi Hills Autonomous District Council (KHADC). 1959. A*ppoint and Succession of Chiefs and Headmen Act (as amended)*. Shillong: KHADC.

Kenny, S .1999. *Developing for the Future Communities*. Nelson Thomson Learning; Melbourne.

Kenny, S. 2002. *Community Development Theory and Practice*. Deakin University; Australia.

Khatar Shnong Socio Organisation. 2004. *Report on Land Ownership and Natural Resource Management*. Sohra: P. Riahtam.

Lyngdohship, Mawphlang. 1982. *Ka Riti Synshar Khadar* (Codified Rules and Regulations). Mawphlang: *Hima* Mawphlang.

Meghalaya Government. Map of Meghalaya, [online 18 August 2005] http// www.meghalaya.nic.in

Nongbri, Tiplut. 2003. *Development, Ethnicity and Gender*. Rawat Publications; New Delhi.

Nongkynrih, A.K. 2001. "Ka Shnong: The Microcosm of Hynniewtrep Society." *Indian Horizons*. 48(3): 121-151.

Nongkynrih, A.K. "Democratic Institutions, Rural Development Policy and Tribal Society: A Case Study in North East India." *Presented in the Fourth International Rural Network Conference, Rural Communities: The Power of Place*, *19-26 July 2005*. Abindon-Virginia, United States.

Poteete, A. R. "Is Decentralization a Reliable Means of Increasing Equity?" *Prepared for the Tenth Biennial Conference of the International Association for the Study of Common Property (IASCP)*, 9-13 August 2004. Oaxaca, Mexico.

Registrar General. 2001. *Census of India*. New Delhi: Registrar General & Census Commissioner.

Varughese, G and E. Ostrom. 2001. "The Contested Role of Heterogeneity in Collective Action: Some Evidence from Community Forestry in Nepal." *World Development*. 29(5): 747-765.

Weber, Ron *et al.* (eds.) 2000. *Indigenous Peoples and Conservation Organizations*. Washington DC: World Wildlife Fund.

Managing forest with Community (PHBM) in Central Java: Promoting Equity in Access to NTFPs

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Abstract

The implementation of the program Managing Forest with Community (Pengelolaan Hutan Bersama Masyarakat or PHBM) is widely expected by the community to bring more equitable access to forest resources in Java. Perum Perhutani is a state owned enterprise managing forests in Java that has started to implement a process of land sharing and sharing of rights to harvest non-timber forest products (NTFPs). A case of reforestation through the PHBM process, which is combining forest vegetation and multipurpose trees in the Gunung Lasem forest area, Central Java, has provided more access for the local community to non timber forest resources than they previously had. The analysis here highlights that, on the whole, the equity outcomes of PHBM implementation have been positive.

1. Introduction

Reformation in Indonesia in 1997 had important effects on forest areas in Rakitan Village, Gunung Lasem forest sub-district, Central Java which is classified as a protected forest and water catchment area. Illegal logging was occurring everywhere during the reformation era, which denuded trees and ruined the forestland that had been previously planted. The reformation era also saw a peak in the opening of forests by local villagers who were planting agricultural crops. Indeed, between 1998 and 1999 an area in the Gunung Ijo forest of almost 74.6 hectares (ha) was cleared. These activities also removed habitat for native animals and allowed wild pigs and monkeys to ravage the crops; the largest such attack happening in the year 2000. Deforestation in the Gunung Lasem forest also decreased the quality of water in each of the six springs fed by this area.

Through the Managing Forest with the Community (*Pengelolaan Hutan Bersama Masyarakat* or PHBM) process, the local community, together with Perum Perhutani (a state owned company managing the area) have been working to rehabilitate the

Gunung Lasem area by planting forest vegetation, including multipurpose trees that produce fruits and herbs. As the analysis in this paper will show the PHBM program has opened up access for rural villagers of Rakitan Village to non-timber forest products (NTFPs) in the Gunung Lasem forest area.

In the next section, I present some background information on the case study, including the history of land ownership and social conditions. The arrangements for use of NTFPs are explored following the explanation of the Managing Forest with the Community concept developed by Perum Perhutani. Equity of access in this paper is explored in economic terms as I consider whether there is equitable benefit sharing between Perhutani and the local community. This will include an analysis of legal arrangements and gender roles.

2. Methodology

Data collection in this study was conducted through consultation with local villagers, NGOs and local community organizations (*Lembaga Masyarakat Desa Hutan* or LMDH). Data was collected in February and March of 2004. Collection of information and field data were conducted through a participatory approach, which positioned the villager not only as an object but also as partner in discussion (Wolfensohn 1994). Methods were drawn from Participatory Conservation Planning (PCP), Participatory Mapping, and Participatory Rural Appraisal (PRA). Activity calendars, natural resource maps, classification of gender roles, resource change analysis and the history of the village were determined using the PRA method. Group discussions and direct dialogues in the field were typically done using this method as well.

3. Background

3.1. History of Rakitan Village

Rakitan Village is located in Gunung Lasem sub-district forest, which is part of Sluke Municipal, in the district of Kabupaten Rembang, Central Java and is under the administrative area of Kebonharjo Forest District (KPH Kebonharjo) (Figure 1). It is located 5 km from and has good accessibility to the capital of Sluke Municipal town. Rakitan Village lies at 400 m above sea level, has an average temperature of 30 °C and accumulates around 30mm of precipitation per year. With its administrative area covering 386,867 ha, Rakitan Village is hilly, with substantial forest cover and is situated close to the Java Sea. Neighboring villages include Sluke Village to the north, Sanetan Village to the west and Bendo Village to the east. Rakitan Village also has six water springs which irrigate rain-fed paddy fields in the lowland areas. On the south there is a protected forest that is classified as state forest for management by Perum Perhutani. The areas of state forest included in Rakitan Village are quite large, covering

62% of the total village area. This is much greater than the area covered by dry land agriculture fields (106 ha or 27% of total village area). This means that forest plays a potentially important part in community life in Rakitan Village.

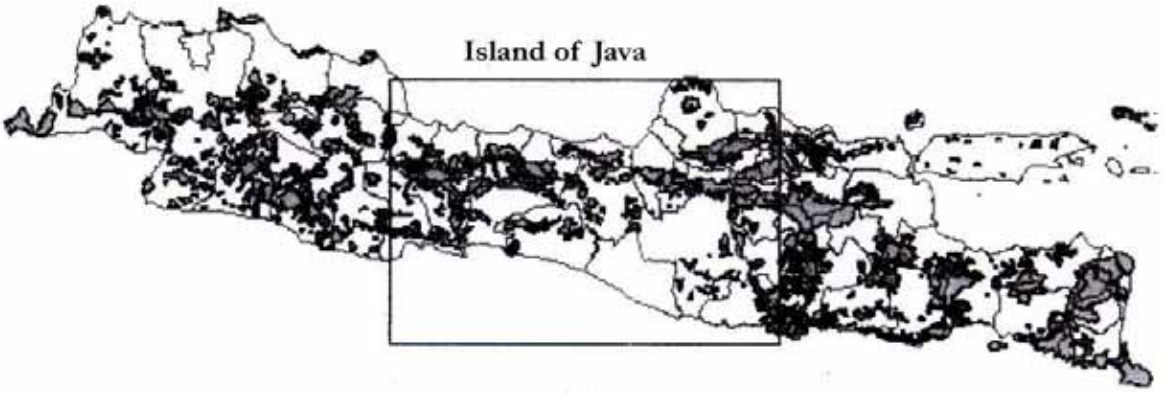

Figure 1: Map of Kebonharjo Forest District

The population of Rakitan Village has increased tenfold from the year 1905 to the present (Table 1) and has been divided into 4 *Rukun Tetangga* (sub-village districts), each consisting of 215 households. The composition of the population is outlined in Table 2. With a total area of 386,867 ha and population of 750 persons, the population density is approximately 195 persons per sq km, which is categorized as dense by Indonesia's government. There is also a relatively even gender balance, which should be supported by gender equity in access to resources.

Table 1:. Timeline of Rakitan Village

No	Time of The Year	Occurrence
1	1905	Population of ± 20 households. (± 80 persons)
2	1905 – 1936	Population ± 50 households. Expansion of state forest areas in 1925 (±37.5 ha) in 1936 (±11 ha) by the Dutch government. Many villagers working as *pesanggem* [1]
3	1936 – 1945	Agriculture expands
4	1948	Second aggression by the Dutch
5	1952	Local Department of Forestry supports multipurpose trees
6	1968	Typhus epidemic kills many people
7	1969	Land slides
8	1972, 1976	Reforestation by local community
9	1979	Floods on agriculture fields from forest clearance
10	1988 – present	Population has grown to ± 750 persons Declared as undeveloped village by local government in 1989 Electricity established in 1997 Built accessible concrete roads in 1998

Source : Primary Data from Rakitan Village, 2004 (Sastroprawiro and Taufik 2004)

[1] Pesanggem refers to farmers who plant agriculture crops in the state forestlands temporarily

Table 2: Population of Rakitan Village in 2004

No	Age Group (yr)	Male (persons)	Female (persons)	Total (persons)	Percentage (%)
1	0-9	56	69	125	17
2	10-14	29	30	59	8
3	15-26	73	79	152	20
4	27-40	111	88	199	27
5	41-56	60	69	129	17
6	>56	41	45	86	11
	Total	370	380	750	100

Source : Analysis Data Kepala Desa Rakitan, 2004 (Sastroprawiro and Taufik 2004)

Table 2 shows that the productive age group (15-55 years) dominates the population of Rakitan, comprising about 64% of the total population. Most of the villagers are working in the agriculture sectors (i.e. farmers, 92%; agriculture labor, 1%; and fishermen, 1%). Others are working in the marketing sector (5%) and for private companies (1%). Those working in the agriculture sector also work as *pesanggem* on forest lands or join the LMDH in collaboration with Perum Perhutani through the PHBM program.

3.2. The Change in Natural Resources

Since Rakitan was founded, the daily livelihoods of the villagers have been dependent on agriculture and forests. Planting rice fields, working in dry land agriculture and collecting firewood have been key livelihood activities. The expansion of state forestland by about 48.5 ha from 1925 to 1936 reduced community lands in the area of Gunung Ijo, which in turn constrained the availability of land that could be converted for agriculture. Before the conversion of landownership, the community lands were originally planted with agricultural crops such as cassava, corn, rice and forest vegetations such as mahogany and *sonokeling (Dalbergia latifolia)*. As a result of this expansion, the community in Rakitan Village began working as *pesanggem* and they were granted lands of 0.5–1 ha from state forest lands to be planted with a *taungya*[2] system.

Through the *Inpres Desa Tertinggal* or IDT program (a government program to improve undeveloped villages), the local government supported the building of terraces in forestland to reduce erosion following the unsuccessful reforestation effort of 1976. A long dry season in that year had caused drought and also reduced clove production. Following this, bare lands in the forest resulted in the flooding of paddy fields downstream in 1979, causing failure in crop harvests. The reforestation efforts,

2 Taungya is also called tumpang sari, a system that allows local people to intercrop forestland with their own crops during the first few years of tree growth, in return for protecting the young forest plants.

including the planting of *pete* (*Parkia speciosa hask*) and the planting of clove during that period, have contributed to community incomes to a certain extent.

Despite the recent rehabilitation efforts, forestland was still being converted to agriculture in Rakitan Village. According to Roberts (1996) forest ecosystems are often damaged irreparably, and will no longer provide habitat for biodiversity, catchment protection and utility for local communities. In Rakitan Village, the diminished forest cover has minimized habitat for wild animals, resulting in many agriculture fields being ravaged by monkeys and wild pigs.

4. Managing Forest with the Community Concept

In 2001 Perum Perhutani, a state owned enterprise with the authority to manage forests in Java, developed a collaborative forest management process with community which is called *Pengelolaan Hutan Bersama Masyarakat* or PHBM (Managing Forest with the Community). PHBM was an advance on *Pembangunan Masyarakat Desa Huta*n, or PMDH (Forest Village Community Development program initiated by Perum Perhutani in 1992), in that the mechanics of the process were decided through a series of multi-stakeholder fora, involving local community, NGOs, local government and Perum Perhutani (Mayers and Vermeulen 2002).

PHBM is intended to guide forest resource management in a way that improves the community's welfare, their quality of life and their economic and social capacities. This guidance is implemented by coordinating the role and responsibility of Perhutani, the local community and stakeholders related to forest resource management. The other purposes of this guidance are to increase the quality of forest resources, forest productivity, and forest security and to form an adjustable forest resource management that can suit the social dynamics of the local community around the forest.

PHBM is being implemented by Perhutani, the local community and its stakeholders through structured discussions such as workshops and seminars. This process has resulted in a collective agreement to implement the PHBM system as a management strategy for state forests. Positive, political support has been declared by many local governments and stakeholders, especially in the effort to rehabilitate the forest (Dishut Jateng 2005, Nuryaman 2002).

In the year 2000, Perum Perhutani rehabilitated the protected forest in Gunung Lasem sub-district forest by reforesting 20.4 ha through its local management unit KPH Kebonharjo. In 2001 the rehabilitation continued upon a land area of 52.2 ha. Those activities were conducted through the PHBM process in which the decisions were made through a series of multi stakeholder discussions involving local villagers, NGOs, local government and Perhutani. In practice, the dialogues conducted with the community and stakeholders were carried out in a way so that all sides could be involved in the process. The dialogues either took place at night through religious meetings (*pengajian*), which were attended by almost all villagers, or they took place directly in the fields.

When the local community decides to collaborate with Perhutani, the agreement concerning benefit sharing then has to be appointed regarding the participation of each party in forest management activities during the growing period. Benefit sharing is essential in serving as one of the incentives for collaboration, which is needed to ensure sustainability. However for effective collaboration, Nketiah (2005) stated that all stakeholders need to know and be satisfied with what would come out of the inputs they make to forest management. She also added that benefit sharing is referred to as "fair and equitable sharing of forest benefits", nevertheless Poteete (2004) argued that equity might lead to equality but not necessarily. I agree with Poteete as the benefit sharing portion of forest resource products between Perhutani and the local community is not equal, however it is promoting equity, and both parties accept the agreement.

4.1. Non-Timber Forest Products as an Alternative

Non-timber forest products (NTFPs) such as edible fruits and nuts, mushrooms, gums, resins, aromatic plants, bush meat and honey contribute significantly to the satisfaction of daily subsistence needs, in particular for rural populations in developing countries (Walter 2003). In many cases, development of non-timber forest resources has assisted stakeholders in obtaining opportunities to merge forest conservation with economic development at the community and national levels (CBD 2003). This creates many opportunities within a single plant, as fruits, flowers, resins, leaves, roots, bark and stems are often harvested separately.

With regard to cleared forest regions, Perhutani together with the local community conducts reforestation efforts, utilizing forest vegetation species and fruit and multipurpose trees. Typical forest vegetation species planted were mahogany, *sonokeling* (*Dalbergia speciosa*), *johar* (*Cassia siamea lam*) and *kepoh* (*Sterculia foetida*). Multipurpose trees planted with the cooperation of the community were jackfruits, durians, longans, *pete* (*parkia*) and leucaena. Further, canopy tolerant crops were planted on the terracering floor, such as *lengkuas* (*galanga*), ginger, *kunyit* (*tumeric*), etc.

The purpose of producing NTFPs in Rakitan Village is to meet local and national demand for these products, in addition to increasing local community income. The multipurpose trees such as jackfruits, durian, guava, *srikaya* (*Annona squamosa*), *rambutan, melinjo* (*Gnetum gnemon l*), *kluwih, lengkeng* (longans), *pete* (*Parkia speciosa hask*) and clove were planted for income resources throughout the year, as well as for firewood.

Many agroforestry projects have successfully increased crop production by 25% to 100% by using multipurpose trees to prevent soil erosion, enhance soil fertility and provide a favorable micro-climate for crops and livestock (CIDA 2004). However, precautions are also necessary. Walter (2003) explained that high market values combined with high demands may also cause overexploitation of species providing NTFP. This can cause an increase of forestland clearing activities for agricultural purposes, since the agricultural sector still promises better cash for the local community.

4.2. Collaborative Forest Management between the Community and the Company

Over the last two decades, Indonesia has shown a gradual shift in forestry policy from a focus on timber production to community-based forestry systems which focus on multiple forest products (CIFOR 2005). These are based on collaborative working agreements with communities to protect the forest from illegal logging activities and conversion of forestlands. Lately, this collaborative agreement has been implemented in reforestation programs as well as in nursery programs. However there are some important issues to be explored with this trend, such as the impacts of this policy shift and how large scale state enterprises like Perhutani have been undertaking collaborative management with communities.

During the second half of the 1980, Perhutani had implemented PMDH, which was not successful since participation of local community was limited. Theoretically PMDH allows local community participation in all activities of forest management; however in practice the scheme is only as simple as land-to-labor deals (Mayers and Vermeulen 2002). There was little sharing of the many technical decisions needed to maintain a productive forest since these had been determined by Perhutani. In the previous approach many problems stemmed from lack of communication between Perhutani and the community and lack of knowledge concerning the PMDH concept and the agreement between the two parties involved.

Putz (2003) indicates that the motivation for enterprises to collaborate with communities come from public pressure, discriminating markets, high cost of other wood sources and land, potential to reduce cost of land-holding, potential to increase resource security, potential to reduce labor cost and opportunity to avoid social risk. Others believe that forestry officers attempt to build relationships with villagers as a way of controlling their exploitation of the forests and improving surveillance of forest communities (Amanor 2005). In the case of Perum Perhutani the motivation to collaborate with community may have come mainly from accumulated problems such as loss of forest resources due to illegal logging in the reformation era of 1998-1999, public pressures (TMPMD 2002) and discriminating markets caused by the suspension of the FSC (Forest Stewardship Council) certificates (Setiabudi 2004).

Deforestation in the reformation era had reduced wood production and affected the company's income. Perhutani has been criticized and accused of ruining forest in Java, and was also criticized for being incapable of managing forest. In fact, I argue that Perhutani does have detailed forest resource planning capability, since Perhutani has provided a model for collaborative planning of forests by the semi-private sector with communities (PMDH program) in Indonesia. However, unfortunately, in practice this PMDH scheme resulted in a lack of satisfaction for local people and stakeholders

The main problem was the lack of serious commitment from Perhutani to community involvement in its forest management. Indeed, in 2001 the Forest Stewardship Council (FSC) suspended six of the FSC certificates belonging to Perhutani management units (Colchester *et al.* 2003). In 2003, the United States also rejected 1000 containers of garden furniture, all Perhutani products (Setiabudi 2004).

Responding to these pressures, Perhutani shifted towards a new policy through the implementation of PHBM. This collaborative management approach is intended to share the benefit with communities to conserve forest resource for sustainable use.

Putz (2003) considers the motivations for communities to collaborate with companies, finding among them the potential for higher returns from land and labor than alternatives could provide, the possibility of a reliable cash income, an opportunity to benefit from idle land, secure land tenure and tree rights and the availability of technical and financial support. For Rakitan villagers, the willingness to collaborate with Perhutani was likely fueled by their despair from some unexpected natural disasters such as land slides and floods, their awareness of their limited knowledge and financial resources to solve their problems, and the potential for getting additional income from land and labor.

When the local community decided to collaborate with Perhutani, they formed the *Lembaga Masyarakat Desa Hutan*, or LMDH (Community of Forest Village Organization) and elected the Leader of LMDH as their representative for co-signing the Memorandum of Understanding, or MOU, with Perhutani. The LMDH leader is expected to take the views and aspirations of the LMDH members and discuss them with Perhutani and other stakeholders so that the agreement can be reached.

5. Equity implications of PHBM in Gunung Lasem Forest Sub-district

The existence of natural reserve areas significantly affects the lives of the communities around them. Therefore the condition of that area can only be protected when the community is involved in the management process (Iddi 1998). Initially, Perhutani implemented the PHBM system in villages located around the protected forest of Gunung Lasem forest sub-district for management of natural forest reserves. Rakitan Village has since been chosen as one of the subjects for this program.

The aim of this approach was to encourage the participation of the local community in maintaining and conserving the integrity of forested regions, and reforestation of degraded forest areas through planting of various kinds of forest vegetation and multipurpose trees. In this program, Perhutani underwrites the land, cost of seedlings and other expenses in the planting process, while the local community provides labor for planting and maintenance.

Through PHBM, Perhutani has started to increase the level of community involvement in forest management. One of the strategic policies is compartment allocation of state forest areas for collaborative management with the local community. These areas are known as lap compartments. These lap compartments are allocated as specific nurture areas, which are within the Perhutani working area, to be managed in cooperation with the local communities of certain villages. Most of the villages surrounding the forest have been assigned to specific lap compartments. Knowledge

regarding the lap compartment regions and their boundaries has been introduced to the local communities through continuous dialogue so that programs initiated have strong grassroots support. The collaborative management approach is applied to the lap compartments where local villagers together with Perhutani share their rights and responsibilities.

Compartment number 11 (Figure 2) was assigned as the lap compartment of Rakitan Village which covers the area of 119.4 ha. Forestlands were planted with coconut, clove, durian, jackfruits, *petai*, *duku*, *mlinjo*, *kemiri*, pepper, galanga (on terraces), ginger and tumeric crops (on the terrace floor) in addition to teak, mahogany, *dalbergia*, *johar* and *kepoh*.

Such rehabilitation is improving the status of the watershed, maintaining the water management functions of that area and increasing biodiversity in the forests. Compared with other villages in Sluke Kabupaten, Rakitan Village has the least impacts from modernization and development processes taking place in other rural areas. This is mainly due to factors such as its heavy dependence on the agriculture sector, its relative distance from markets and its location at the foot of Lasem Mountain, which is far away from town. Nonetheless Rakitan Village has continued to experience significant environmental change through 1960s until 2000s. Table 3 summarizes biodiversity change in area of Rakitan Village.

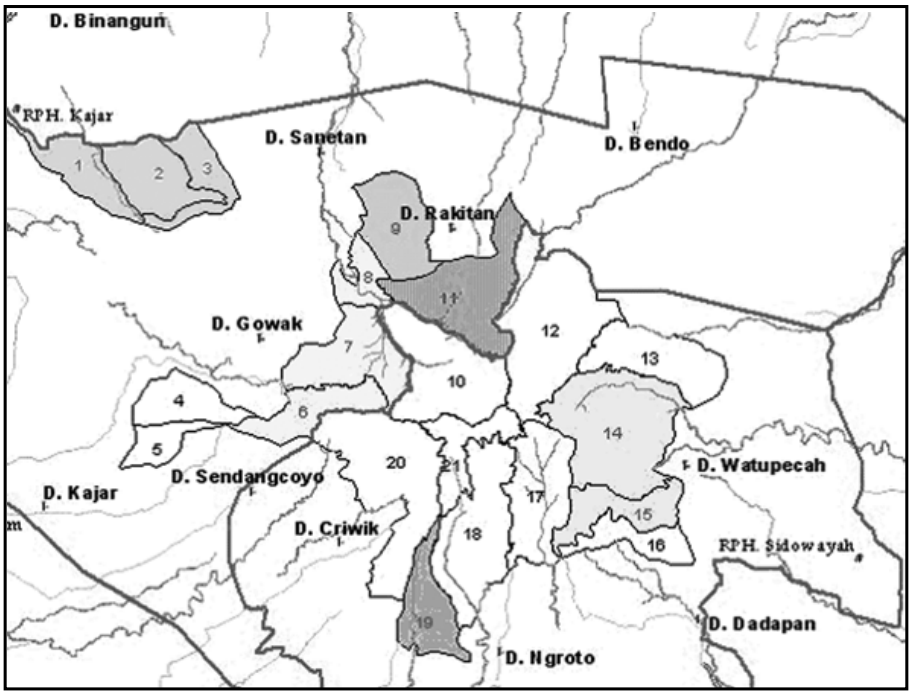

Figure 2: Assigned Lap Compartment of Rakitan Village

The population of some forest vegetation, such as teak (on private lands) and *dalbergia*, have increased because those have been planted during the reforestation process. The multipurpose trees such as *pete*, jackfruits, coffee, *kemlanding*, ginger and tumeric have also increased since those were chosen by the local community to be planted among the forest vegetation. However, the impacts of this new ecological

balance may need to be carefully considered. For example, the number of young *pete* (*Parkia speciosa*) trees has decreased because of disease that attacked the young plants. While increased fruit production has increased the population of wild pigs and monkeys which are frequently attacking agriculture fields.

Based on data collected through dialogues with the Rakitan's villagers and local NGOs, community perceptions of the reforestation program through PHBM were mainly positive. The local community recognized that the Gunung Ijo (Figure 3) and Gunung Tatar forest areas had to be preserved, and they considered that their access to water was absolutely dependant on the integrity of the forest in those highlands.

Rakitan villagers also felt that under PHBM, they had the freedom to choose the types of vegetation to be developed in the village. Importantly, they generally felt that they had better communications with Perhutani's field staff than they had previously. However, not all of Rakitan villagers expressed these views, since in some parts of the village, forestland was still being converted to agriculture and illegal logging was still occurring. Dialogues were undertaken by Perhutani with violators of regulations in order to resolve these problems.

Table 3: Changes in the Types of Vegetation and Animals in Rakitan Village

No	Alteration	Year 1960s	Year 2000s
	Vegetations :		
1	Teak on private land	none	plenty
2	Teak on forest	few	none
3	*Sonokeling* (*Dalbergia sp*)	none	plenty
4	*Gondang*	some	few
5	*Winong*	some	few
6	*Walikukun*	some	few
7	*Pete* (*Parkia speciosa*)	few	some
8	Jackfruits	few	some
9	Coffee	few	some
10	*Kemlanding*	few	plenty
11	Mini Orange	some	few
12	Ginger	few	plenty
13	Tumeric	few	plenty
	Animals :		
1	Wild pig	some	plenty
2	Deer	some	few
3	Monkey	some	plenty
4	Wild rooster	some	few
5	*Kutilang* bird	few	plenty
6	Squirrel	few	plenty
7	Garangan	few	plenty
8	*Emprit* bird	few	plenty
9	Tiger	few	none

Source : Change Analysis of Rakitan Village (through PRA Method) (Sastroprawiro and Taufik 2004)

Figure 3: Protected Forest in Gunung Ijo Area

Rakitan Village was categorized as undeveloped village in 1989, but by 2004 it was proposed as a horticulture production center by *Pemerintah Kabupaten* (Local government) through the *Bonang Binangun Sluke* Project (Local Government project in developing Agro-ecotourism in Watulayar). This was in part due to the additional income that has been gained by the local community from an increase in fruit and herb products under the PHBM program. However, many of the trees are still young (less than 5 years old) and have not yet produced fruits. Once mature, an average jackfruit tree during harvesting time can produce twenty to thirty jackfruits, where the average price for one jackfruit is 5000 rupiah (US$ 0.60). Additionally, in one day a couple can collect up to 70 kg of ginger and tumeric, where the average price of ginger is 2500 rupiah (US$ 0.30) per kg and the average price of tumeric is 800 rupiah (US$ 0.10) per kg. Chili production on 0.3 ha land is up to 50 kg as its average price is 2000 rupiah per kg (as a comparison, the price of rice is 2000 rupiah per kg).

5.1. Equity in Participation

Participation in the PHBM program occurs through a series of discussions involving the local community, represented by LMDH, NGOs, local government and Perhutani. Any party can suggest any possible solution, and in this sense the potential for participation by individuals is equal. According to Pretty's typology of participation (1995), the level of community participation in Rakitan Village is interactive participation since every stakeholder has an equal right in suggesting what necessary actions have to be done, and their suggestions are listened to and integrated. For example, Perhutani suggested the local villagers plant the specific types of forest vegetation, while the local villagers chose to implement traditional conservation techniques to preserve the sustainability of the forest in Gunung Lasem area. They planted coconut, clove, durian, *petai*, *duku*, *mlinjo*, *kemiri*, pepper, teak and *galanga* on the terrace, wherein the canopy –tolerant crops such as ginger and *kunir* (tumeric) were planted on the terrace floor. According to local villagers, such diversification can conserve soil fertility and decrease the risk of plant diseases, in addition to increasing their income.

The earlier PMDH system was only allowing people to participate for material incentives such as access to forestlands and cash for labor. Furthermore the PHBM program builds upon PMDH in its level of participation because previously the local community could form a group to discuss predetermined objectives suggested by Perhutani, but now the local community can contribute to setting these objectives.

All parties were invited to plan in the rehabilitation of forests by combining forest vegetation and multipurpose trees. Community members chose the type of vegetation they wanted to develop, and also have been provided guidelines on what kind of species were suitable for planting based on land suitability analysis and existence of a good market. Further analysis of possible future markets was suggested by Perhutani to the local government.

5.2. Equity in Benefit Sharing

Since the main purpose of PHBM is to share resources and their management, they require management options that are a 'win-win' for the parties concerned and that strengthen and support the relationship between them. Benefit-sharing means sharing "all forms of compensation for the utilization of natural resources whether monetary or non-monetary and includes, in particular, the participation of stakeholders" (Walter 2003). Benefits include non-monetary benefits, such as strengthened capacity in communities and government, as well as improvements to livelihoods both in terms of income and subsistence access to resources.

Collaborative Forest Management, involving Perhutani, local community and its stakeholders in Rakitan Village, Gunung Lasem sub-district forest, has given more equitable access for rural villagers to non-timber forest products. However collaboration is only possible when all actors involved are convinced of the returns from their input. Equitable benefit sharing is considered an important incentive that has the potential to foster collaboration (Nketiah *et al.* 2005).

Given that forests are closely linked to social conditions in the village community, the Perhutani management approach is based around increasing the ability of the local communities to preserve forests through compartment sharing and production sharing. Arrangements for benefit sharing from fruit products were outlined in the MOU signed by Perhutani and the leader of LMDH Sido Mulyo of Rakitan Village (Box 1).

In addition, the duration covered by the agreement is one cycle of main tree life duration. After 5 years land cultivation activities should be stopped, multipurpose trees productions continue until the end of agreement. Both parties agree that if there are any disputes that cannot be resolved through negotiation, legal action will be taken. This agreement will be evaluated every 2 years.

The MOU between Perhutani and the LMDH of Rakitan Village gives 100% of the share of cash crops in addition to 70% of the share of fruit products, with the remaining 30% going to Perhutani. This portion was agreed for the following reasons: edible fruit products can increase community well-being, in addition to Perhutani's obligation to put aside part of its profit to increase the local community welfare; and

Box 1: Memorandum of Understanding between Perhutani Kebonharjo Forest District (KPH Kebonharjo) and the LMDH Sido Mulyo of Rakitan Village

Perhutani Kebonharjo Forest District (KPH Kebonharjo) agrees to:

- Facilitate the community and stakeholders and work with them in forming plans, monitoring and evaluating every activities involved in this agreement (planting, maintaining, securing and harvesting forest resources)
- Assist in increasing employment opportunities through various activities related to social forestry
- Receive support from community and stakeholders in terms of conserving forest resources
- Assist in increasing village economic development and income of the community
- Provide cultivation techniques of horticulture trees
- Assist in increasing community capacities in fields needed
- Finalize the legalization of a cooperative, provide necessary capital and training for members of local village organization, provide easy access to wood materials needed for firewood
- Give preference to local labor in KPH Kebonharjo activities involving planting, production or building skills
- Provide all main trees such as teak, mahogany, *dalbergia* and *kepoh*
- Receive benefit sharing of 30% for horticulture products

The LMDH Sido Mulyo of Rakitan Village agrees to:

- Form plans, monitor and evaluate activities together with Perhutani and stakeholders.
- Provide human resources for forest rehabilitation, in term of planting and maintenance.
- Actively preserve and protect the forest in the area surrounding the village with the assistance of KPH Kebonharjo
- Manage the land for one cycle of main tree life duration (about 35-40 years)
- Plant and maintain trees such as teak, mahogany, *dalbergia* and *kepoh*; cash crops such as galanga, ginger, and tumeric (for the first 5 years); and multipurpose trees like fruit trees.
- Receive benefit sharing of 100% for agriculture crop products, and 70% for horticulture products

secondly, producing edible fruits is not the core business of Perhutani which earlier was focused on timber production but has now shifted to multiple forest products including timber, resins, gums, cayuput oil, and honey. Since the main intention of this program is to conserve the protected forest and secure the existence of the forest, the 30% for Perhutani will be brought back to the community as development costs (cost for seedlings, labor and capacity building).

The balance of benefits would be different in the other parts of the forest area in KPH Kebonharjo, such as those in the forest surrounding Tengger Village, which is classified as production forest. In this case, where the main product is timber, benefit sharing arrangement allocates 75% to Perhutani with a maximum of 25% for the local community. Many have argued that this is unbalanced, however Poteete

(2004) stated that equity refers to whether something is fair, just or impartial. To assess this, more research is needed on the level of local community participation in forest management activities during the growing period. From the perspective of Perhutani, the minimum share of 75% for Perhutani is regarded as reasonable since part of that share must be returned back to the community through the General Development Fund (*Dana Pembangunan Semesta* or DPS) which will be managed by the central government. As a state owned enterprise, Perhutani has to allocate 55% of the yearly net profit for DPS (Central Government Regulation No. 30/2003). However, this share may not be returned to the same community, because the distribution of the funds will be determined by the central government. Of course, it might be more equitable for the local community to get direct returns, however there are some areas in Indonesia which do not have enough resources to support their communities, and their community needs be subsidized by the central government. The funds for this purpose come from other areas that have enough resources.

Benefit sharing among members of the local community was discussed in LMDH meetings. In this case, Perhutani has given the authority in decision making to LMDH members. In conjunction with this program, the strengthening of LMDH and enhancement of local community involvement in forest management is encouraged under the agreement as a non-monetary benefit.

5.3. Equity in Gender

Women and men have different roles and responsibilities in their families, households and communities. They have different knowledge of, access to and control over natural resources and different opportunities to participate in decisions regarding natural resource use. Understanding women's and men's relationships to the environment is an important role in developing solutions for more sustainable use of natural resources (Sass 2002). Gender analysis in this case study is based on role differentiation between men and women. This has been categorized into four types of work: reproduction, production, nursing community and political community. Reproductive work encompasses domestic and unpaid work; while production is work that which produces goods or income; nursing community is defined as work that encourages togetherness, solidarity and unity of the community; and political work consists of decision making and relative influence in the community (Altieri 2005). Table 4 shows the relationship between gender and different types of work in Rakitan Village.

As Table 4 shows, most reproductive (domestic) work is done by women, whereas men only participate in some of this type of work. It can be seen that in general, women have the same level of involvement in the productive work of managing natural resources, but have a greater role in reproductive (domestic) labor. In Javanese communities, however, the reproductive work is considered less important than the productive work, which produces money, even though the domestic work takes more time. So far economic parameters are still regarded as the main measure of productive

Table 4: Identification of Gender Roles in Work Catagories

Category	Type of activity	Gender		Time
Reproductive	1. Cooking	F		daily
(domestic)	*2.* Collecting water	F		daily
	3. Washing	F		daily
	4. Collecting fire woods	F	M	daily
	5. Collecting animal's food	F	M	daily
	6. Taking care of goats	F		daily
	7. Taking care of cows		M	sometimes
	8. Selling chickens	F		daily
	9. Selling cows / goats		M	sometimes
	10. Taking care of children for school	F		daily
	11. Taking care of elderly	F		daily
	12. Shopping	F		daily
	13. Cleaning the house	F		daily
	14. Fixing utilities		M	sometimes
Productive	15. Plowing		M	seasonal
(farm, forest)	16. Planting	F		
	17. Taking care of plants	F	M	
	18. Harvesting	F	M	
	19. Taking products	F	M	
	20. Selling agric. products		M	
Productive	21. Trading (polangan) of animals		M	seasonal
(off farming)	22. Trading (grabatan)	F		seasonal
	23. Selling vegetables	F		daily
	24. Driver, Ojeg		M	seasonal
	25. Working to town	F	M	seasonal
Nursing comm.	26. Health group	F		certain time
	27. Religion group	F	M	
	28. Working together		M	
	29. Building roads		M	
	30. Social group	F		
	31. Funeral	F	M	
	32. Wedding ceremony	F	M	
	33. Circumcising	F	M	
	34. Ritual ceremony	F	M	
Political comm.	35. Village meeting		M	certain time
	36. Village leader election	F	M	
	37. General election	F	M	
	38. Support distribution		M	

Source : Primarily Data Analysis of Rakitan Village, 2004 (Sastroprawiro and Taufik 2004)

work. Therefore the role of women is considered less than that of men. The study found that while women work both inside and outside the home, men work almost exclusively outside the home. Men dominate in the political community area and in the productive activities on and off the farm.

While both women and men are involved in economic activities such as working in the field, women have additional domestic responsibilities. Since most of the domestic activities are undertaken by women, their knowledge of how to find good quality firewood and grass for animal fodder is often more detailed than that of men. This reality has been utilized by the local government and Perhutani to include women in the conservation efforts; such as in growing trees for firewood.

The education background of most women in the Rakitan Village was limited to elementary school. This is a result of the tradition of getting married right after the village girls graduated from elementary school, but is also related to the cost of tuition fees and women's responsibilities to support their parents and the men in the village community. The lack of education has also impeded women's participation in the political community, in addition to the influence of Javanese culture that places men's role in the community higher than that of women.

Through data collected from the field, it was found that the household schedule of women in Rakitan Village starts earlier than men's. Most women have started their daily activities by 4:00 a.m. while men start their activities an hour later. In the afternoon, after finishing household activities, women usually join men working in the fields, collecting firewood and animal fodder (Figure 4) until late in the afternoon. This indicates that women are actively involved working in the fields and physically, their activities take longer time than that of men, since the women stay in the field all afternoon, while men bring the firewood and fodder back home in the early afternoon, before they return to the field. It is also noted that women's participation in religious meetings is longer than that of men; therefore women's role in nursing the community is greater than men's. Capacity building efforts for women have been promoted through these meetings. It becomes clear that PHBM is involving women and because of this, women are benefiting through the capacity building process.

Figure 4: A Woman of Rakitan Village Carries Grass for Animal Fodder

6. Conclusion

When PHBM was implemented, many questioned whether this program could provide more equitable access for the local community to forest resources as they suspected that the new system was only a superficial change in the previously unsuccessful system (Kompas 2003, Djogo 2004). It became a challenge for Perhutani to show that the new scheme was implemented practically to increase community participation in all steps of forest resource management.

The implementation of PHBM in Rakitan Village, Central Java is one example of the accomplishment of Perhutani's collaboration with community that promotes more equitable access for the local community to NTFPs. By combining forest vegetations with multipurpose trees in conserving the protected forest areas, the reforestation program has performed not only to preserve biological functions of the area, but also to contribute additional income for the community involved through land and production sharing.

By assigning lap compartments for collaborative management between Perhutani and the local community through PHBM, Perhutani has increased the participation of the local community in decision making, as well as provided increased access for local villagers to forest resources. Traditional conservation techniques have been chosen by the local villagers who believe that such diversification can conserve soil fertility and decrease the risk of plant diseases. The increase of biodiversity in Gunung Lasem forest can be considered as an environmental improvement which is suitable with the aim of protected forest functions.

The proportion of benefit sharing for NTFPs between the local community and Perhutani, specifically fruits and herbs, also suggests significantly equitable access to the resources, since Perhutani is focusing in its core business on other forest resources. For timber products however, the equity of the benefit sharing system is still debated by many practitioners and NGOs; even Perhutani has formally implemented the policy throughout its working areas as a priority for improving degradated forest. However, it should be noted that the formation of a production sharing policy had involved not only internal personnel of Perhutani, but also practitioners, academics and NGOs through a sequence of discussions.

It is still premature to economically measure the livelihood improvement caused by the development of multipurpose trees which produce NTFPs, since the trees planted are not mature enough to produce fruits. However, from the population of fruit trees, it can be expected that NTFPs would provide significant additional income for the local community, with the assumption that no significant obstacles exist in marketing the products. Despite the potentially high productions of NTFPs and the resulting promise of an increased income, caution is needed to ensure that the agreement does not lead to the overexploitation of species providing NTFPs.

Javanese culture still deeply affects the roles of men and women in Rakitan Village. Families who appreciated of these roles may be able to produce greater income than those that do not. Men dominate in the productive activities on and off

farming, and in the political community, whereas women undertake the domestic activities which take more time but are less appreciated. However, through PHBM, equity in gender roles has been increased by involving women in the forest conservation activities since they have the best local knowledge and depend on the forest for daily subsistence.

Despite its sufficient infrastructure support, Rakitan Village is located relatively far from the potential markets. Therefore, the possibility of an excess of NTFP products should be anticipated by inventing suitable post-harvesting treatments and fruit preservation technology as the alternative way to market variety products, in addition to developing potential future markets.

I realize that the implementation of PHBM, in practice, may not satisfy every party involved, as many weaknesses still exist; from the unwillingness to equitably share the land, roles and benefits to the unsupportive actions by local communities and stakeholders as well as some of Perhutani's personnel. However the initial step, conserving Gunung Lasem protected forest involving Rakitan Village community through PHBM is worthy of credit and support.

References

Altieri, M. 2005. "Gender and Development." [online August 17, 2005] URL:http://www.iirr.org/saem/page70-74.htm

Amanor, K.S. 2005. "Equity in Forest Benefit Sharing and Poverty Alleviation." Tropenbos International, The Netherlands.

Beneria, L. and Bisnath, S. 1996. "Gender and Poverty : An Analysis for Action." [online August 17, 2005] URL:http://www.iggi.unesco.or.kr/web/iggi_docs/02/952393547.pdf

CBD. 2003. "Forest Biological Diversity: Integration of Non-Timber Forest Resource in Forest Inventory and Management." [online August 17, 2005] URL:http://www.biodiv.org/doc/meetings/sbstta-09/information/sbstta-09-inf-14-en.doc

CIDA. 2004. "Trees and Agriculture in Asia : The Role of Trees and Forests in CIDA's Strategy for Promoting Sustainable Rural Development Through Agriculture." [online August 18, 2005] URL: http://www.rcfa-cfan.org/english/issues.16.htm

CIFOR. 2005. "Forest and Non-Timber Forest Products." [online August 7, 2005] URL: http://www.cifor.cgiar.org/docs/_ref/aboutcifor/factsheet/ntfp.htm

Colchester, M. *et al.* 2003. "The Applications of FSC Principles 2 and 3 in Indonesia: Obstacles and Possibilities." WALHI, AMAN and The Rainforest Foundation.

Dishut Jateng. 2005. "Garis Besar PHBM di Provinsi Jawa Tengah "(Main Points of PHBM in Central Java Province). [online August 10, 2005] URL: http://www.dinashut-jateng.go.id/hal.php?id=23-26k

Djogo, T. 2004. "Pengelolaan hutan berbasis masyarakat: wacana dan pelaksanaannya" (Community-based Forest Management and Its Impementation). [online August 22, 2005] URL: http://beritabumi.or.id/artikelvt.php?idartikel=36

FAO. 1995. "Report on the International Expert Consultation on Non-Wood Forest Products." FAO Corporate Document Repository. [online August 9, 2005] URL: http://www.fao.org/documents

Iddi, S. 1998. "National Forest Program: Newsletter Message." [online August 17, 2005] URL: http://nfp.co.tz/index2.htm

Indonesian Embassy of UK. 2000. "Moving to a Forest-Based Economy." [online August 16, 2005] URL: http://www.indonesianembassy.org.uk/forest-9.html

Kompas. 2003. "Hutan Jawa Kebun Kayu" (Forest in Java Timber Plantation). [online August 23, 2005] URL: http://www.kompas.com/kompas-cetak/0302/09/Fokus/120828.htm

Matsui, Y. 1999. *Women in the New Asia*. Zed Books: London & NewYork.

Mayers, J. and S. Vermeulen. 2002. "Company-community partnerships. From raw deals to mutual gains?" A component of the International Collaborative Research Project steered by IIED: Instruments for sustainable private sector forestry. Earth Print Limited.

Mayoux, L. 2002. "Microfinance and Women Empowerment: Rethingking Best Practice." [online August 17, 2005] URL:http://devnet.anu.edu.au/online%20versions%20pdf/57/Mayoux.pdf

Michon, G. and de Foresta, H. 1996. "Agroforests as an alternative to pure plantation for the domestication and commercialization of Non-Timber Forest Products. Domestication and commercialization of non-timber forest products in agroforestry systems." [online August 18, 2005] URL: http://www.fao.org/documents/show_cdr.asp?url_file=/docrep/w3735e/w3735e21.htm

Nketiah, K.S., J.A.S. Ameyaw and B. Owusu, Jr. 2005. "Equity in Forest Benefit Sharing: Stakeholders' Views." [online August 15, 2005] URL: http://www.tropenbos.org/files/Benefitsharingsmall.pdf

Nuryaman. 2002. "Bangun Hutan Bersama Masyarakat : PHBM Mengubah Masyarakat Jadi Pelaku Utama Pengelolaan Hutan" (Managing Forest with Community: PHBM Changes Community as Primary Actor in Forest Management). [online August 16, 2005] URL: http://www.pili.or.id/news/2002/indonesia/incl5_31b.html#Bangun_Hutan

Perum Perhutani. 2001. "Keputusan Dewan Pengawas Perum Perhutani No. 136/KPTS/ DIR/ 2001 tentang Pengelolaan Sumberdaya Hutan Bersama Masyarakat" (Perum Perhutani Board of Surveillance Decree No 136/KPTS/DIR/2001: Managing Forest with Community). Jakarta, Indonesia.

Perum Perhutani. 2002. "Keputusan Direksi PT Perhutani (Persero) No. 001/KPTS/DIR/2002 tentang Pedoman Berbagi Hasil Kayu" (PT Perhutani (Persero) Board of Director Decree No. 001/KPTS/DIR/2002 : Guidance of Timber Production Sharing). Jakarta. Indonesia.

Perum Perhutani. 2002. "Transformasi Menuju Perhutani Masa Depan" (Transformation Toward the Future of Perhutani) (unpublished paper). Jakarta, Indonesia.

Peraturan Pemerintah No. 30/2003: "Tentang Perusahaan Kehutanan Negara Perum Perhutani" (Central Government Regulation No. 30/2003 : State Forest Company Perum Perhutani). Jakarta, Indonesia.

Poteete, A.R. 2004. "Is Decentralization a Reliable Means of Increasing Equity?" Prepared for the Tenth Biennial Conference of the International Association for the Study of Common Property (IASCP). 9-13 August 2004. Oaxaca, Mexico.

Pretty, J.N. 1995. Regenerating Agriculture: Policies and Practice for Sustainability and Self-reliance, Vikas Publishing House: New Delhi.

Putz, F.E. 2003. "Companies partnering with communities." [online August 9, 2005] URL: http://www.blackwell-synergy.com/doi/full/10.1046/j.1523-1739.2003.01730.

Roberts, T. 1996. "Stop the Clear Cutting: Address the Issues. Maine Green Forestry Issues." [online August 15, 2005] URL http://www.mainegreens.org/index.html#top

Robinson, B. and A. Solongo. 2000. "The Gender Dimension of Economic Transition in Mongolia." [online August 17, 2005] URL: http://www.eldis.org/fulltext/GenderMong.pdf

Saas, J. 2002. "Women, Men and Environmental Change : The Gender Dimensions of Environmental Policies and Programs." [online August 19, 2005] URL: http://www.prb.org/Content/ContentGroups/Report/025/Women,_Men,_and_Environmental_Change__The_Gender_Dimensions_

Sastroprawiro, S. and Taufik, A. 2004. Pemetaan Sosial, Sumberdaya Alam dan Lingkungan di Desa Rakitan Kecamatan Sluke kabupaten Rembang: Studi Dalam Rangka Kelola Sosial Sistem Pengelolaan Hutan Lestari Perum Perhutani KPH Kebonharjo (Social, Natural Resources and Environmental Mapping in Rakitan Village, Sluke Municipal, Rembang: Study of Social Management, Sustainable Forest Management System, Perum Perhutani, Kebonharjo Forest District). Perum Perhutani KPH Kebonharjo. Central Java.

Setiabudi, B. (ed.) 2004. "Mewujudkan Komitmen Pengelolaan Sumberdaya Hutan Bersertifikat Ekolabel di Perum Perhutani: Pembelajaran dari Review Program Sertifikasi SFM Perum Perhutani." (Building Commitment in Ecolabel Forest Reource Management in Perum Perhutani: Learning from the Review of SFM Certification Program). Pokja Sertifikasi Ekolabel.

Walter, S. 2003. "Certification and Benefit Sharing Mechanism in the Field of Non-Wood Forest Products – An Overview." [online August 9, 2005] URL: http://www.fao.org/DOCREP/ARTICLE/001/AB542E01_htm

Wolfensohn, J. 1994. T*he World Bank Participation Sourcebook.* The World Bank Group.

Enabling Policy and Procedures in a National Park: A Struggle for Equity Case Study in Kuningan District, West Java

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Abstract

Policies established by decision-makers without involving communities and other stakeholders will increase socio-economic gaps and promote conflict in natural resource management. This paper discusses the establishment of Mt. Ciremai National Park through policies implemented by the Ministry of Forestry. By presenting a policy review and stakeholder analysis this paper argues that advocacy for enabling policy and procedures for collaborative management in national parks is a struggle to restore community forest management rights.

1. Introduction

When Soeharto's New Order Regime declared The Basic Forest Law No 5/1967, forestry policy in Indonesia became centralized and communities were denied involvement in managing the forest. Through this law, the government claimed ownership of up to 75% of Indonesia's forest territory (President Republik Indonesia 1967). Under the control of forest management, no area was allocated for use and management by the 21.2% of Indonesia's population who live around the forests and who are some of the poorest in the country. Many of the people who live around forests have forest dependent livelihoods (12.3% in all of Indonesia), work in the forestry sector (7%) and depend on agro forestry systems (59.8%) (The Central Statistic Bureau of Republic Indonesia 2004). The policy has performed poorly for these people and led to the emergence of socio-economic gaps between communities and state and local governments, as well as caused conflicts in natural resource management.

An important impact of this policy has been deforestation, with forest cover decreasing from 75% to 63.3% of Indonesia's land territory between 1967 and 2004. This is despite the various management regimes and classifications to protect 91.4% of forests that are under government control. These include: conservation areas (21.1%), protected forest areas (26.5%) production forest (25.2%), limited production forest (14.7%) and production forest that can be converted to other purposes (12.3%) (Menteri Kehutanan Republik Indonesia 2005).

This paper argues that equity and environmental issues compel us to consider options for improving forest management. In particular, I consider whether community-based forest management is a potential approach for improving the management of forests in national parks. Such an approach would require collaboration among communities and state and local governments in park management, and it would need to be based on good forest governance principles such as transparency, accountability, status of rights and responsibilities, democratization, participation, equity and equality of power (Mayers and Vermuelen 2005). The focus here is on identifying what policies and procedures would be required to enable community forest management rights and livelihoods in national parks.

In the sections below, I start with some background on the establishment of Mount Ciremai National Park, West Java, Indonesia and the implications for community rights; I then analyze the linkages between policy and the potential for community management in Mount Ciremai National Park.

2. The Changing Status Of Mt. Ciremai

Mount Ciremai is the highest mountain in West Java, Indonesia, covering an area of 15, 518.23 ha, with the highest point of the mountain at 3,078 meters above sea level. The geographical position of the peak is 7º 13' 00" South Latitude and 108º 24' 00" East Longitude (Djatmiko 2005). Administratively, Mt. Ciremai falls under the authority of two districts, Kuningan District (8,205.38 ha) and Majalengka District (7,308.05 ha).

Mount Ciremai has a number of important values from a conservation perspective. First, the Mount Ciremai Protected Area ecosystem is relatively diverse with lowland forest, rainforest and mountainous forest, which contain naturally diverse primary forest. These features give Mount Ciremai Protected Area a high degree of biodiversity with various species of flora and fauna, including several endangered species. Second, the forest area is also important as water catchments for the Districts of Kuningan, Majalengka and Cirebon. Third, the park also has potential for ecotourism, research, education and contains several archaeological sites.

In 1999, a program called Forest Management with Communities (Pengelolaan Hutan Bersama Masyarakat or PHBM) was initiated in the Kuningan District. This program involved collaborative forest management between communities, local government, Perhutani (a state owned forest company) and national and local NGOs.

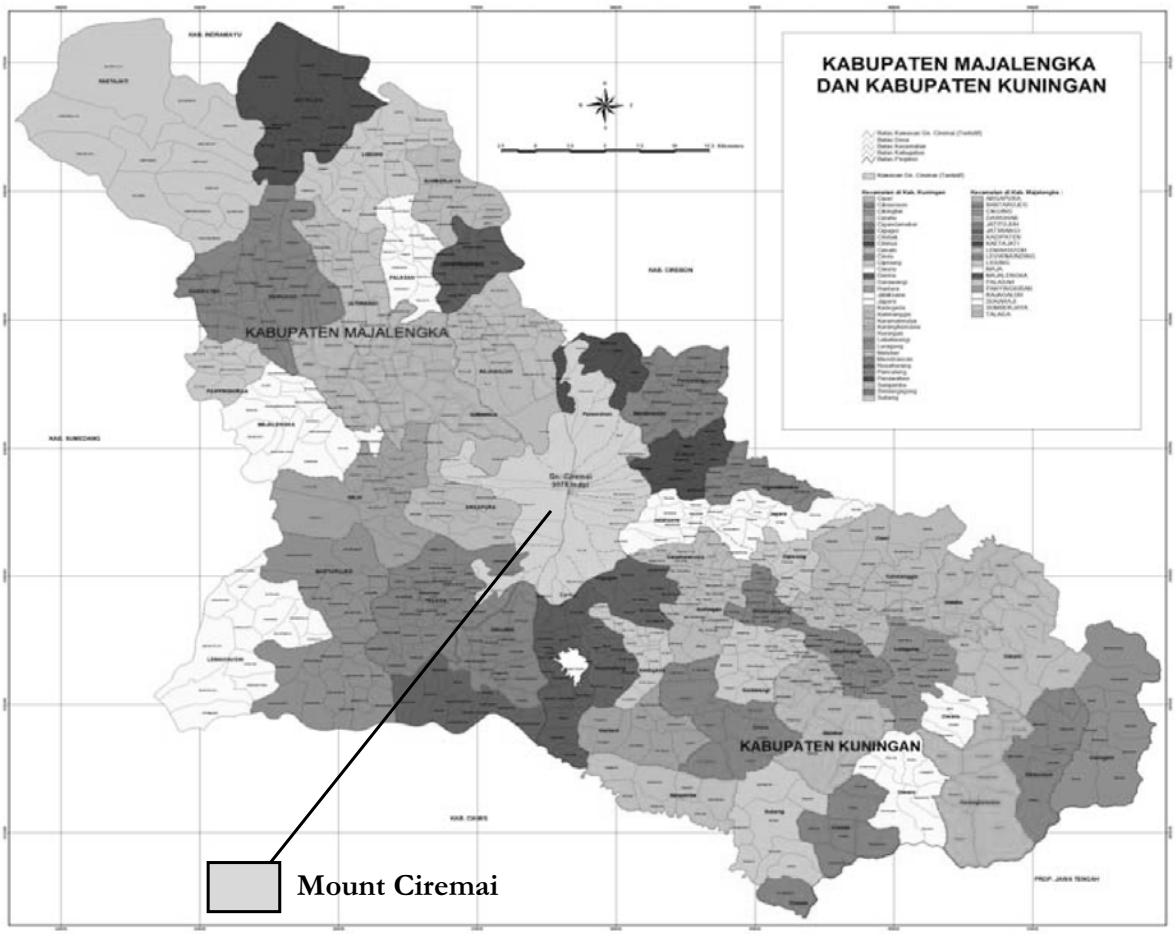

Figure 1: Map of Mount Ciremai National Park

This program aimed to give forest management rights to forest farmers under a Memorandum of Understanding (MoU). The three-party MoU is signed by a forest farmer representative, the Perhutani District Officer and the village headman. Overall, this program seeks to develop local forest governance by managing the forests in Kuningan District (see Box 1 for more details).

The situation changed on 4 July 2003, when the government declared that Mount Ciremai would change from a production oriented forest to a protected area, creating a fundamental shift in the rights of forest farmers to use and manage forests (Menteri Kehutanan Republik Indonesia 2003). The new status of Mount Ciremai as a National Park was formalized in 2004 by Ministerial Decree No.424/Menhut-II/2004. The management goals for the park include conservation, preservation and protection to optimize the sustainability of biodiversity and the ecosystem on Mount Ciremai, and through this to improve community livelihoods.

Conceptually, the Ministerial Decree No.424/Menhut-II/2004 incorporates ecological, economic and social aspects of forest management. However, in practice, ecological concerns take precedence. The declaration of a national park has brought protests from forest farmers and communities who live around Mount Ciremai National Park. The reasons for these protests include:

- Denial of access rights for local communities living around the national park, which severely impacts their livelihoods.
- Procedures to establish the national park did not allow public hearings for forest farmers and communities to understand and defend their rights.
- Policy procedures for declaring a Ministerial Decree No.424/Menhut-II/ 2004 did not include the collaboration process that was developed in the forest management with communities program (PHBM).
- The Ministry of Forestry failed to follow their own policies and procedures in changing the status of the forest areas, such as the integrated research outlined in Ministerial Decree No 70/Kpts-II/2001 refers Ministerial Decree No. 48/Kpts-II/2004 .
- There has been no guarantee from the Ministry of Forestry to community rights in the national park(KOMPAS 2005).

2.1. Forest Policy in the National Parks of Indonesia

National parks, as mentioned in Indonesian Government Law No.5/1990, are areas with original ecosystems that can be managed by a zoning system. These parks are used for research, knowledge development, and education, supporting biodiversity conservation, tourism and recreation. Today, there are 50 national parks in Indonesia covering 15 million ha (66% of total protected area or 10% of total forest area) (Menteri Kehutanan Republik Indoneisa 2005).

Box 1: Forest Management with Communities in Kuningan District, West Java, Indonesia

Facilitated by LATIN (Lembaga Alam Tropika Indonesia/The Indonesian Tropical Institute), PHBM invited a range of stakeholders to join in negotiations to determine the management of local forest resources. This program also aimed to develop a new discourse in Indonesian forest management that integrated sustainable development within a model of community-based natural resource management.

The program was initiated in 1999, based on an agreement signed by the Perhutani Executive Director and Kuningan District Government Officer on 2 February 2001. This program has used collaborative management and agreed to a benefit sharing regime that enables community rights based on a partnership between forest farmers and Perhutani, the manager of the forest. Indications of good forest governance were seen in terms of the power balance, transparency, accountability and participation. The negotiation process was founded on trust among stakeholders in order to collaborate on and define their rights and responsibilities in relation to forest management.

A survey conducted by LATIN in 2003 showed a high degree of satisfaction with the collaboration process, reporting three main reasons forest farmers became involved with PHBM. First PHBM provided guaranteed community forest management rights (69%); second, it improved their income (28%) and thirdly, it improved their capacity in managing forest (11%). More than 220 Forest User Groups (FUGs), which consist of 6600 households from 24 villages around forest on the slopes of Mount Ciremai, have been involved in this program.

Source: Setiamihardja 2003

Although the Ministry of Forestry has developed policy and procedures to support the establishment of national parks with aims to conserve biodiversity, preserve germ plasma resources and create a buffer zone system protection , these goals have not been achieved. As expressed by WALHI[1], most Indonesian conservation areas are under pressure from logging, mining and other threats like road building, even despite their conservation status (2004). The marginalization of indigenous communities plays a large role in promoting these threats, because when local people are disenfranchised from their traditional lands, they become poor and lose the incentive to preserve the forests. This makes them susceptible victims for timber barons who practice illegal logging. In 2003, WALHI recorded forced community evictions in Komodo National Park in East Nusa Tenggara, Meru Betiri National Park in East Java, Kutai National Park in East Kalimantan, Lore Lindu National Park in Southeast Sulawesi, Gunung Halimun in West Java, and numerous others.

The published policy related to national parks has been implicated in isolating park managers from the local communities around forests. For the government, conservation goals are incompatible with development. Conservation is interpreted as protection of species, ecosystems and habitats; whereas development is interpreted as natural resource exploitation, something that seems incompatible with conservation goals. National park management arrangements therefore diminish community rights in managing forests that in many cases have been the source of their livelihoods for generations. As a result, the policy has increased socio-economic gaps and promoted conflict in natural resource management.

The government and communities had high expectations that decentralization would bring better forest resource management by district governments, the benefits of which would accrue to local people, based on the restoration of community rights in natural forest resource management and redefined relationships between communities and state and local governments. There was hope that forest resources would be genuinely seen as public property to be allocated, managed and controlled within a democratic system (President Republic Indonesia 1999).

In practice, national park management in Indonesia is mostly governed from the Ministry of Forestry and often disregards or marginalizes local and indigenous communities that have lived in those areas for generations. The national park officers work directly under the central authority of the Ministry of Forestry and the Directorate General of Forest Protection and Nature Conservation. This requires high costs, capacity and dedication in managing forest areas from the national park officers. Because of this, the relationships between national park officers and local district governments are limited to coordination purposes. Local district governments have no authority in national park officers' affairs, even if the area of the national park is in the territory of the districts. This means that decentralization does not delegate power over the national park to the local government. Conservation areas are often designated without consultation with the people who live in and depend on the region for their livelihoods.

1 WALHI= Wahana Lingkungan Hidup Indonesia/Friends of the Earth Indonesia

All of these developments reflect the fact that policy and procedures for national park management have ignored social factors around national park areas. According to Mayers and Bass (2004), a forest policy specifies rights for certain people regarding the use of a society's forest management which it is felt will contribute to the achievement of some of the objectives of that society. It also stated that policy positions, statements, practices and even outcomes are based fundamentally on value judgments.

Because there are many different stakeholder values and desired outcomes, it is necessary for stakeholders to be involved in policy making to better reflect and address the needs and concerns of a wide range of stakeholders, which has not occurred in this case.

2.2. New Understanding of National Park Management

Changing perspectives on national park and protected area management is a new concern for social equity in conservation. This is driven by practical considerations (in many circumstances conservation cannot and will not happen without the support of the relevant communities) but also by more widely shared ethical and moral concerns. According to IUCN[2] (1994), the aims of protected areas now include the sustainable use of natural resources, the preservation of ecosystem services and integration with broader social development processes, along with the core role of biodiversity conservation. Giving more respect to cultural values is increasingly seen as an essential component of biodiversity conservation (Table 1).

3. Methodology

The issues outlined in the previous section have led to the development of a research project in Kuningan Districts between six Indonesian organizations, including LATIN[3] , INFRONT[4] , PMGC[5] , local NGOs (KANOPI and AKAR)[6] and LAWALATA, IPB[7] , to better understand the impacts of the establishment of Mount Ciremai National Park.

2 IUCN: The World Conservation Union

3 LATIN: The Indonesian Tropical Institute is a national NGO working on community forestry issues. Established in 1989 and based in Bogor.

4 INFRONT: the Institute for Forest and Environment Studies is an association of researchers who are interested in forestry and environmental issues in Indonesia. Based in Yogyakarta.

5 PMGC: the Mount Ciremai Partnership Association is an association of independent stakeholders who have interests in protecting forests in Mount Ciremai. The members are forest farmers, individuals, NGOs and nature clubs. Members come from the two districts of Kuningan and Majalengka. Based in District Kuningan and Majalengka, West Java Indonesia

6 KANOPI: a local NGO in the Kuningan District, has been involved with PHBM project for 4 years AKAR: a local NGO in the Kuningan District, that has been concerned with sustainable natural resource in Mount Ciremai

7 LAWALATA-IPB is the Student Nature Club of Bogor Agricultural University (IPB)

Table 1: A Paradigm Shift in Protected Area Management

The conventional understanding of protected areas	The Emerging understanding of protected area
Establish as separate units	Plan as part of national, regional and international system
Manage as islands	Manage as elements of networks (protected areas connected by "corridors", "stepping stones" and biodiversity-friendly land uses)
Manage reactively, within a short time scale, with little regard to lessons from experience	Manage adaptively, on a long time perspective, taking advantage of ongoing learning
Protection of existing natural and landscape assets	Protection, but also restoration and rehabilitation, so that lost or eroded values can be recovered
Set up and run for conservation (not for productive use) and scenic protection (not ecosystem functioning)	Set up and run for conservation but also for scientific, socio-economic (including the maintenance of ecosystem services) and cultural objectives
Established in a theoretic way	Established as political act, requiring sensitivity, consultations and astute judgment
Managed by natural scientists and natural resource experts	Managed by multi-skilled individuals, including some with social skills
Established and managed as a means to control the activities of local people, without regards to their needs and without their involvement	Established and run with, for and in some cases by local people; sensitive to concerns of local communities (who are empowered as participants in decision making)
Run by the central government	Run by many partners, including different tiers of government, local communities, indigenous groups the private sector, NGOs and others
Paid for by taxpayers	Paid for by many sources and, as much as possible, self sustaining
Benefits of conservation assumed as self-evident	Benefits of conservation evaluated and quantified
Primarily benefits visitors and tourists	Benefits primarily the local communities who assume the opportunity costs of conservation
Viewed as an asset for which national considerations prevail over local ones	Viewed as a community heritage as well as a national asset

Source: IUCN 2004

There have been three main phases in this research:

1. Data and information gathering, policy and regulation analysis, needs assessment, stakeholder analysis and presentation of initial findings;
2. Synthesis from results phase 1; and
3. Discussion of policy options and final recommendations.

Included with data and information gathering are: policy and regulation studies, social analysis, economic and financial analysis, institutional analysis, technical analysis and biodiversity ground check.

- Policy and regulation analyses are conducted to understand and analyze Ministry of Forestry roles in managing the national park.
- Social analyses, including livelihoods analysis, analysis of social conflict and assessment of community characteristics, are used to better understand communities.
- Economic and financial analysis is used to understand the efficiency and effectiveness of management and land use in Mount Ciremai National Park.
- Institutional analysis identifies the institutions, roles, and relationships between organizations related with Mount Ciremai National Park management.
- Participatory appraisal has been used to analyze local patterns of activity, including seasonal calendars, activity calendars, cultivation planning and other similar data.
- Biodiversity surveys are used to gather current data about species, distribution and habitats for flora and fauna in the Mount Ciremai area.

This paper focuses more on policy analysis and the related stakeholder analysis in Mt Ciremai National Park management, the results and analysis of which will support restoring processes and rights of community forest management.

The first step here will be to review policy and regulation to better understand the state's role in protected area and conservation management at the national level. This will form the basis for the policy gap analysis from a local perspective. The aim will be to illustrate a picture about the interrelationships and possible gaps between policy and regulation at different scales in managing national parks.

The stakeholder analysis is then used to understand the perspectives of different actors in relation to national and local policy. A range of stakeholders are concerned with new policy in Mount Ciremai National Park and it is important to understand their interests and relationships as a basis for improving policy at the local and national level. The identification of stakeholders has been based on in-depth interviews with a range of stakeholders. The "4 Rs" approach has been used to assess stakeholders' "rights, responsibilities, revenues and relationships" in relation to other stakeholder groups (Mayers 2001). In addition I have used the stakeholder analysis to:

1. Diagnose problems: to identify and openly discuss imbalances between private operators' responsibilities, their rights and benefits and the health of relationships between the state and other stakeholders.

2. Assess and compare policies: assessing how forest regulations are affecting the rights and responsibilities of different stakeholders.

4. Policy and Regulation: State Authority

Analysis of policy documents is the basis of policy analysis, but it is also important to consider the context, process, intentions and outcomes of that policy. The language, style and length of policy documents can tell us much about context and process, although it is only recently that they have tended to give direct information about how they were formulated. However, by keeping these dimensions in mind while reviewing documents, we can identify the implications of policy, notably implementation issues and potential instruments.

Table 2 presents the laws and regulations related to national park management in Mt. Ciremai from a policy review process. These are outlined in relation to topics of concern to relevant stakeholders.

Table 2: Policy Review for Mt. Ciremai National Park

Topics	Law/Regulation	Content
Participation	Government Law No 5/1990 • Section 37, Subsection 1-3	Government will involve community in biodiversity conservation and ecosystem with appropriate activities. This law improves community capacity and their awareness through education and information
Responsibilities at different levels	Government Law No 5/1990 • Section 4	Biodiversity conservation and the ecosystem are government and community responsibilities
	Government Law No.22/1999 • Section 7, Subsection 2 • Section 119, Subsection 1	Delegation of authority from the Ministry of Forestry to district and municipal government in the management of forest land. The duties of authorities include setting out policy for national and local planning and development control, local fiscal balance, state administration system and state economic agency, empowering human resources, using natural resources and strategic use of high technology, conservation and national standardization. The purpose is to enhance effectiveness in managing forest for local development

Topics	Law/Regulation	Content
Responsibilities at different levels	The Basic Forest Law No 41/1999 • Section 60, Subsection 1 • Section 61	Ministry of Forestry still has responsibility in controlling forest management by local government and forest enforcement activity
	Government Regulation No.68/1998 • Section 11	Ministry of Forestry has authority to manage Nature Reserves and Wildlife Reserves
	Presidential Decree No.32/1990 • Section 39, Subsection 1 The Basic Forest Law No.41/1999 • Section 62 • Section 63 • Section 66, Subsection 1 and 2	The protected area forestlands in Indonesia can be managed by third parties. However, the process of interviewing and supervising management activity is the responsibility of the Ministry of Forestry, local government and communities.
Management goals	Government Law No 5/1990 • Section 2 • Section 3 • Section 5 (c)	The objectives of biodiversity conservation and the ecosystem are to achieve sustainable biodiversity and equitable ecosystems in natural resources management and to increase community livelihoods and human quality of life
Exploitation	Government Regulation No.34/2002 • Section 15 • Section 16 • Section 18 • Section 20 • Section 18 • Section 19, Subsection 1 and 2	Approved Protected Forest area exploitation includes: a. Land utilization b. Environment services and utilization (nature recreation, adventures sport, carbon trade and forest and environment rescue) c. Non timber forest product (herb medicine cultivation, plant cultivation, mushrooms cultivation, bee and honey cultivation, wildlife sanctuary and swallow nest breeding) Exploitation of protected forest area should not diminish the main protection function of the forest. It should also not damage the landscape.

Topics	Law/Regulation	Content
Exploitation	The Basic Forest Law No41/1999 • Section 38 Presidential Decree No.32/1990 • Section 38, Subsection 2,3,4	Mining as a form of forest land utilization is allowed only in production forest and protected forest. It can be permitted in accordance with other regulations and when mineral deposits, water springs and other natural resources are indicated to be of high value to the state. When mining activity occurs in a protected area, the responsibility to protect and sustain the environment lies with mining management. They have to preserve the aims of the protected area.
Zoning	Government Law No.5/1999 • Section 32	National parks are managed by zoning systems including main (protection) zones, exploitation zone plus other zones as needed.

Source of policy and regulation: President Republik Indonesia 1990a, b, 1998, 1999a, b, c, 2002, INFRONT 2005

4.1. Participation

Participation is most commonly used to refer to some aspect of involvement of local populations in the design, implementation, and evaluation of the project (Brown and Wyckoff-Baird 1992). Instead, participation should include all relevant stakeholder groups in a way that enables each to understand their stake in, and their ability to impact, the process. In addition, the process needs to identify target beneficiaries to initiate the flow of information and decision-making.

From Table 2, we know that government law restores community rights to access the forest in Mt. Ciremai National Park. This access fulfills basic livelihood requirements for communities. The dilemma is in ensuring that such access is compatible with the goals of ecologically sustainable management of the park. Definition and procedures about community rights still need to be developed through collaborative approaches. The procedures are also included with explanations about incentives communities receive through their participation.

In order to increase community participation in national park management, it is essential that local communities be able to communicate their perspectives to government agencies and that, in turn, those agencies are able to understand and respond to those concerns.

4.2. Responsibilities at Different Levels

In analyzing policy it is important to recognize the gap between policy and practice. This gap may arise from a misunderstanding of policy, differing perspectives and biases of stakeholders or differing interpretations of how to implement policy. This highlights the need to have good information as a basis for developing policy, rather than hasty new policy pronouncements and prescriptions about what is needed (Mayers and Bass 2004).

Although the Ministry of Forestry has delegated the authority to manage the forest to the District Officer of the Forestry Department, the ultimate authority for national park management still lies with the Ministry of Forestry. Gaps have not only occurred during implementation at the level of stakeholders, but also between the actual regulations that have been made. For example, decentralization involves delegation of authority from the Ministry of Forestry in managing the forest. However, to be implemented in practice it needs to allow for meaningful delegation of powers over forests to local government and accountable local institutions and be accompanied by a clear and unified legal framework (Katerere 2004). In the case of Mount Ciremai, this has not occurred. Mechanisms to better coordinate the rights and responsibilities of the forestry department, national park management agencies, local government and local communities are still needed to develop proper collaborative approaches. It is important for this to be further supported by regulations that enable integrated management in national park areas. This could, for example, address land use management between villages and the distribution of rights amongst communities. This is also important if conflicts of interest are to be avoided between local stakeholders and between stakeholders at the national and local levels.

4.3. Management Goals

Besides the achievement of sustainability and equitability in biodiversity and ecosystems, the prominent characteristic of management goals (Table 2) is to increase community livelihoods and human quality of life. This means considering government policy on both conservation and development issues. Many case studies show that the Ministry of Forestry creates retroactive policies in national parks, but they need to take the time to ensure that communities are not marginalized. The recognition of the value of improved collaborative approaches between local communities, the Ministry of Forestry, local governments, the private sector and NGOs is proved essential to stakeholders' participation in the management of Mt. Ciremai National Park.

4.4. Exploitation

Table 2 illustrates that the Ministry of Forestry has allowed the development of regulations concerning exploitation of natural resources that may be allowed in national parks. This allows business interests and commercial activities in the national park. However there is no accompanying regulation to control these commercial activities and provide compensation to ensure the achievement of conservation objectives.

Such regulations are needed to avoid irresponsible exploitation of natural resources by commercial interests. In contrast, communities have been disrupted and impoverished by being forced to abandon the use of resources upon which their livelihoods depended, without any redress through compensation (WALHI 2004).

These issues need to be addressed in policy, but a precondition for effective implementation of this regulation is meaningful decentralization with community-based management objectives in national parks, ensuring that commercial use is compatible with park management goals. These regulations could also enable the establishment of management of national parks by the private sector or other stakeholders. Because of these gaps, the regulations could potentially cause damage to the national park environment and increase conflict with local communities.

4.5. Zoning System

According to Government Law No. 5/1990, there are three types of zoning systems in national parks; main protection zone, utilization zone and wildwood zone. All have similar functions for protected areas and reserves, inventory of the protected areas and research development.

Theoretically, the concept of establishing a zone of limited or non-use around a protected area as a means of reducing human pressures is a rational proposition (Brown and Wyckoff-Baird 1992). However, the conservation and development objectives and strategies underlying the implementation of the concept have yet to be adequately defined. An important aspect of this policy review is that a zoning system should be developed through participatory processes. Local communities are also in the best position to know the area and provide continual, intensive attention.

5. Understanding Stakeholder Power

Stakeholders are defined here as those who have rights or interests in a system. It can be individuals, communities, social groups, governments or organizations who can affect, or are affected by the achievement of the national park goals. In this case study, the categorization of stakeholders is into primary or secondary, based on whether they are immediately affected by, or can immediately affect, the system (Table 3). The managing forest in national parks is the focus of an intervention and those who the intervention is aimed at will be amongst the primary stakeholders (Mayers 2005).

Table 3: Stakeholder Analysis in Mt Ciremai National Park

Stakeholders	Rights	Responsibilities	Interest
Direct Primary Stakeholders			
Ministry of Forestry	• Making Regulation and Policy • Managing the forest	Forest conservation	High. Policy support
Perhutani	• Managing the forest	Land use	Medium. Direct income from managing the forest
Forest Department of Kuningan District	• Controlling and arranging enforcement	Forest resource development	High. Forestland territory, implementation and control
Local Communities in Kuningan	• Managing forest resources • Access to the forest	• Land use access • Daily income	Beneficiary of program. Direct income from forest
Natural Resource and Conservation Agency , Region II West Java	• Managing conservation area	Forest resource conservation	High, control of conservation area management
Indirect Primary Stakeholders			
Kuningan District Government Officer	• Making regulation • enforcement	Administrative managementn	High. Policy support
Development and Planning Agency of Kuningan District	• Coordinating district development	Area development	Low. Limited human resources support
Agriculture Department of Kuningan District	• Coordinating agriculture activities	Agriculture development	High. Determine intensity to use forest land for agriculture
Tourism Department of Kuningan	• Coordinating tourism activities	Tourism management	High. Coordination of tourism activities
District Natural Resources and Irrigation Department of Kuningan District		Natural resource management	High. Policy support

Stakeholders	Rights	Responsibilities	Interest
Indirect Primary Stakeholders (continued)			
Environment Department of Kuningan District		Sustainable resource and environmental management	High. Supporting human resources for conservation activity
Local Income Department of Kuningan District	• Controlling local income	Local income	Low. Budget allocation
Local Water Supply Company	• Water resource exploitation	Continuity of water supply	High. Natural resource exploitation
Indocement Mineral Water Company	• Water resource exploitation	Continuity of water supply	High. Natural resource exploitation
Nature Club	• Access to nature	Using the area for camping and other activities	High. Human resource
Secondary Stakeholders			
Community Development Agency of Kuningan District		Community Empowerment	
Indonesian Association of Hotel and Restaurant	• Income from tourism services	Tourism service	Direct income from tourism services
Implementation and Service Agency for PHBM in Kuningan District	• Program synchronization	Sustainable forest resource management	High. Technical support for communication to all stakeholders
Local and national NGO	• Involving with the program	Sustainable community livelihoods and forest management	High. Technical assistance for community organizers and processes
Kuningan University (local private university)	• Technology application, education and research	Field research and development	Low. Doing field research in any conservation area
Indonesian Army	• Using the area	security precaution for Indonesian territory	Low. Do not have operational activity

Stakeholders	Rights	Responsibilities	Interest
Secondary Stakeholders			
Legislative of Kuningan District	• Regulation maker • controlling	Good forest governance	Low. Do not have operational activity
International Donor		Supporting fund Sustainable forest resource and environment	Low. Global issues

Source: INFRONT 2005

For example, direct primary stakeholders in forest policy in the Mt. Ciremai case include local communities who live in or near the relevant forests, the Forest Department of the Republic of Indonesia, Kuningan District and Perhutani. Indirect primary stakeholders are the Natural Resource and Conservation Agency Region II West Java, entrepreneurs (a local water company and Indocement Mineral Water Company), other departments who are related to forest management, nature clubs and local and national NGOs. Secondary stakeholders are academics and researchers, community-based organizations, civil society organizations (LPI PHBM [8], Community Development Agency of Kuningan District), the Indonesian Army, the Legislature of Kuningan District and international donors.

These stakeholders have very different degrees of power to control decisions that have effects on policies and institutions. And they have different degrees of potential to contribute to achieving a particular objective.

5.1. Rights

The most important rights shown on Table 3 are the rights to access and to manage the forest for local communities around Mt. Ciremai. There is ample evidence in this area that farmers will grow trees and take responsibility for national parks and woodlands, but without secure rights this may be limited. Thus government and policy play a key enabling role, as shown in Table 2, where policies and regulations guide exploitation such as agricultural activity and forest access in the National Park. This often means paying more attention to smallholder forestry and management approaches that enable public interests to be achieved through shared state property and common property regimes.

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7 LPI PHBM: Lembaga Pelayanan Implementasi Pengelolaan Hutan Bersama Masyarakat (Implementation and Services Agency for Forest Management with Communities). It is collaboration institution and non – profit organization for technical assistant in implementing PHBM Program. The members are representatives of local government, the Forest Department of Kuningan District, Perhutani local NGOs, the Forest Farmer Association and individuals who are interested in developing PHBM program.

In the establishment of Mt. Ciremai National Park, communities lost rights to manage the forest, as well as rights to influence and be involved with the decision-making processes. It was not only for direct primary stakeholders such as communities and Perhutani: both groups are losing the rights to manage the forest land that they had through the PHBM program. Other indirect primary and secondary stakeholders lost their power in supporting decision-making for forest lands to the State Government and Ministry of Forestry.

Some useful approaches to collaborating with stakeholders in the Mt. Ciremai National Park have included forum and participation processes. These have helped to understand multiple perspectives and will help to negotiate and create deals between the needs of the wider society and local actors. Government may organize the forum, but it needs broad involvement of stakeholders, and strong links both vertically (local-national-global) and horizontally (between sectors and disciplines). The forum could be a regular event, as continuously improving policy is a useful goal in itself. The resulting policies are owned by stakeholders broadly, not just the forest authorities. These processes become "alive processes" not "dead paper" (Mayers and Bass, 2004).

5.2 Defining Responsibilities

As demonstrated in Table 3, the dimension of stakeholder responsibilities varies. Direct primary stakeholders have broader responsibilities than other stakeholders. This partly results from their level of risk in forest management. The state and local government are prominent in their responsibility for making and implementing policies and regulations. Some of these responsibilities are already outlined in regulations (see Table 2).

The responsibility of the Ministry of Forestry is forest conservation; however there is no regulation that outlines the meaning of conservation. Nevertheless State Government, through the Ministry of Forestry, is currently pushing a conservationist and protectionist agenda, while the state government also has regional and local pressure to contend with. The need to balance and negotiate these perspectives creates the potential to develop new understandings in working for collaborative forest management in Mt Ciremai National Park.

There is also the potential for actors to engage with other sectors. If this succeeds, more effective, efficient and better integrated policy can be created. Cross-sectoral involvement in the policy process can improve learning and coordination across institutional boundaries. One example could be collaboration between the Forestry Department and the Agriculture Department in at a local district level to develop agro forestry system in national park. This collaboration would be used to make procedures about access community to national park.

5.3. Interest

High levels of responsibility (e.g. in the form of regulations) without a parallel increase incentives (returns, revenues and rights) leads to poor implementation through a lack of enforcement capacity on the part of the regulator (often the state). As

shown in the information in Table 3, almost all of the stakeholders will benefit from the implementation of Mt. Ciremai National Park management at different scales. It should be noted that interest should not be measured solely from a financial perspective. For the community, access to participating in decision-making and managing forest in the national park might provide more support to improve their livelihoods.

For Perhutani, direct income received and the restoration of their role in managing the forest area as before the establishment of Mt. Ciremai National Park could motivate them to assist with forest management in national parks. For other stakeholders in Kuningan District (Development and Planning Agency, Agriculture Department, Tourism Department, Natural Resources and Irrigation Department, Environment Department), involvement in national park management will create additional work.

5.4. Relationships

Relationships are key to developing good dialogue and communication among stakeholders, since problems can emerge at any time and require intensive dialogue to resolve. The responsibilities of different stakeholders in Table 3 influence their power and potential in building relationships with other stakeholders. According to Mayers (2005), stakeholders have very different degrees of power to control decisions that have effects on policies and institutions, and they have different degrees of potential to contribute, or importance to achieving a particular objective (Table 4).

- *Power* is the ability to participate in decision making or to influence policies or institutions stemming from the control of decisions with positive or negative effects. Stakeholder power can be understood as the extent to which stakeholders are able to persuade or coerce others into making decisions and following certain courses of action. Power may derive from the nature of a stakeholder's organization or their position in relation to other stakeholders.
- *Potential* is to affect, or to be affected by, policies and institutions residing in particular characteristics specific to context and location, such as knowledge and rights. Of particular concern here are the stakeholders who have high potential but little power. These stakeholders' problems, needs and interests are likely to be the most important for many initiatives to improve policies and institutions' processes (Mayers 2005).

In Table 4 a direct primary stakeholder, the Ministry of Forestry, has high potential to build collaboration with other stakeholders as well as high power at the policy and decision maker at the national level, with influence at the local level. The high power and potential of Perhutani derives from their access to policy makers as well as their funds and resources. Because the Ministry of Forestry still centralizes many policies and procedures, it gives the Forest Department of Kuningan District low power but high potential for coordination and technical assistance in implementing policy and procedures at the local level. This does not, however, mean that they have

Table 4: Four general strategies for stakeholder relations management in Mt. Ciremai National Park

Stakeholders Power	High Potential	Low Potential
Direct Primary Stakeholders		
High Power	• Ministry of Forestry • Perhutani	Forest Department of Kuningan District
Low Power	• Local Communities	Natural Resource and Conservation Agency Indirect Primary Stakeholders
Indirect Primary Stakeholders		
High Power	Kuningan District Government Officer	
Low Power	• Development and Planning Agency of Kuningan District • Agriculture Department of Kuningan District • Tourism Department of Kuningan District • Environment Department of Kuningan District • Natural resources and Irrigation Department of Kuningan District	• Local Income Department of Kuningan District • Local Water Supply and mineral water Company • Nature Club
Secondary Stakeholders		
High Power		Legislative of Kuningan District
Low Power	•Implementation and Service Agency for PHBM in Kuningan District •Local and national NGO •Kuningan University (local private university) •International Donors	•Community development Agency of Kuningan District •Indonesian Association of Hotel And Restaurant •Indonesian Army

Adapted from Mayers 2005

low power in decision making. Local communities in Mt. Ciremai National Park have high potential as human resources and in their knowledge of the park, but low power in decision making and policy. This is a result of policies and procedures that have ignored them as a stakeholder with rights to participate in policy making. The Ministry of Forestry will pay attention to them as a power that can not be ignored when local communities are organized.

An indirect primary stakeholder, the Kuningan District Government Officer, has decision making power at local level. With delegation of authority from the Ministry of Forestry, they also have high potential in supporting policy and procedures regarding the management of Mt. Ciremai National Park. Even though other stakeholders have low power, with their specification tasks related to natural forest resources, each of them has high potential to support and be involved in managing forests in Mt. Ciremai National Park through collaborative approaches. For example, the Agriculture Department and the Tourism Department have high potential because they have regulations to guarantee their exploitation activity in national parks. But clear mechanisms on how to implement the regulations are still needed.

The second stakeholder mentioned in Table 4, Kuningan District, has high power in making and deciding the policy at local levels. The implementation and Service Agency for PHBM in Kuningan District has low power, but has high potential to strengthen the communication process as a mediator and facilitator in the implementation of community forestry in Mt. Ciremai National Park. Local and national NGOs have high potential to mobilize human resources as technical assistants and facilitators in community forest development. As the only private local university in Kuningan District, accredited with legal status from local government, Kuningan University has high power in academic authority to do field research in three types of zone in conservation areas. These activities are also granted by a Ministerial Decree (Ministry of Forestry 2003, 2004). International donors have low power but high potential because they can participate as facilitators and provide financial assistance. They are open for collaboration in management of national parks without directing the intervention.

6. Conclusion

From the discussion above, it is evident that the Ministry of Forestry has tended to see the state itself as the prime beneficiary of the forest as a protected area. Efforts to increase community forest rights and access to forest lands are fundamental to the implementation of collaborative approaches in Mt. Ciremai National Park management. Yet a policy review and stakeholder analysis can be used by the Ministry of Forestry to experiment with ways to provide communities with legal access to national parks, to delegate the authority and to share responsibility for national park management with local government (the District Officer and Local Forestry Department) and communities.

Distribution of rights between government and communities is a part of the delegation of authority. These include the responsibility of national park management to develop an understanding of stakeholders, their values and their capabilities (which can change over time as capabilities develop). For decentralization to be meaningful, efforts are needed to give communities more secure access to national parks under Ministry of Forestry regulations and policy. According to the Ford Foundation (1998),

these rights benefit communities by enhancing their livelihoods and involving them in forest management in national parks without government harassment, official arrangements providing access or secure tenure to encourage communities to think of the long term and to use forests sustainability. Giving legal rights of access to national parks advances the local government and local community's autonomy and decision-making power relative to the state. Legal rights to forests give people an official, sanctioned voice in forest management.

Efforts to enable policy and procedures in national parks that give more rights and implement changes in management practices that benefit communities depends upon transformation in the institutions charged with overseeing the national park. One theme that runs through efforts to enable policy and procedures in national parks is the importance of building collaboration among the Ministry of Forestry, communities, government agencies, NGOs and other sectors of society. Collaboration strengthens the institutional base of community-based natural resources by bringing together stakeholder power and potential from each sector of society. It is a long process and a struggle to restore community rights and this issue needs serious attention from all stakeholders to join in the negotiations, to determine the purposes and management of national parks.

References

Brown, M. and B. Wyckoff-Baird. 1992. *Designing Integrated Conservation and Development Projects*. Biodiversity Support Program. USAID: Washington DC.

Djatmiko, W.A. 2005. *Biodiversity of Mount Ciremai.* The Indonesian Tropical Institute (LATIN): Bogor.

Ford Foundation, 1998. *Forest for Sustainable Rural Development. A Review of Ford Foundation-Supported Community Forestry Program in Asia*. Ford Foundation:New York.

INFRONT. 2005. *Developing Land Use Model in Mount Ciremai National Park*. Institute for Forest and Environment Studies (INFRONT): Yogyakarta.

IUCN. 1994. *Guide to the Convention on Biological Diversity*. IUCN: Gland, Switzerland and Cambridge, UK.

IUCN. 2004. "Indigeneus and Local Communities and Protected Areas. Towards Equity and Enhanced Conservation. Guidance on Policy and Practice for Co-managed Protected Areas and Community Conserved Areas." *Best Practice Protected Area Guideline Series No.11.* The World Conservation Union (IUCN): Gland, Switzerland.

Kateree, YM. 2004. "Forest Governance: Moving from Rhetoric to Reality." *Paper on Assuring Food and Nutrition Security in Africa, Africa April 1-3 2004*. Centre for International Forest Research (CIFOR): Bogor.

KOMPAS. “Gunung Ciremai Dijadikan Taman Nasional” (Ciremai Mountain Becomes a National Park) [online August 2005] URL: http://www.kompas.com/kompas-cetak/0411/01/daerah/1357803.htm.

Mayers, J. 2001. *Power Tools Series: “The Four Rs”*. International Institute for Environment and Development (IIED): London.

Mayers, J. and Bass, S. 2004. *Policy that Works for Forest and People: Real Prospects for Governance and Livelihoods*. International Institute for Environment and Development (IIED): London.

Mayers, J. 2005. *Stakeholders Power Analysis*. International Institute for Environment and Development (IIED): London.

Mayers, J. and S. Vermuelen. 2005. *The Pyramid: A Diagnostic and Planning Tool for Good Forest Governance*. International Institute for Environment and Development (IIED): London.

Menteri Kehutanan Republik Indonesia. 2003. Keputusan Menteri Kehutanan No. 195/Kpts-II/2003 tentang Penunjukan Areal Hutan di Provinsi Jawa Barat seluas 816.603 (delapan ratus enam belas ribu enam ratus tiga) hektar sebagai kawasan hutan diantaranya Kawasan Hutan Lindung di Kelompok Hutan Gunung Ciremai, Kabupaten Kuningan dan Majalengka *(The Ministry Forestry of Republic Indonesia. 2003. Ministerial Decree No 195/Kpts-II/2003, 4 July 2003, about Declaration of 816,603 (eight hundred sixty thousand six hundred and three ha) of Forest Area in West Java as Protected Forest Area.including Mt.Ciremai Area, District of Kuningan and District of Majalengka. Issued on July 2003).*

Menteri Kehutanan Republik Indonesia. 2004. Keputusan Menteri Kehutanan No. SK 424/Menhut-II/2004 Tentang Perubahan Fungsi Kawasan Hutan Lindung Pada Kelompok Hutan Gunung Ciremai Seluas 15.500 (Lima Belas Ribu Lima Ratus) Hektar Terletak Di Kabupaten Kuningan Dan Majalengka, Provinsi Jawa Barat Menjadi Taman Nasional Gunung Ciremai. (The Ministry of Forestry Republic Indonesia. 2004. *The Changing Status 15.500 ha of Mt. Ciremai Protected Forest in District of Kuningan and District of Majalengka, West Java Province as National Park. Issued on October 2004).*

Menteri Kehutanan Republik Indonesia. 2005. Rencana Strategis Departemen Kehutanan 2005-2009. Lampiran Peraturan Menteri Kehutanan. No.p.04/Menhut-II/2005. *(The Ministry of Forestry Repiblic Indonesia.2005. Strategic Plan 2005-2009. Ministry of Forestry Regulation No.p.04/Menhut-II/2005. Appendix. Issued on February 2005).*

The Central Statistic Bureau of Republic Indonesia. 2004. *Statistic of Indonesia 19932004:* Jakarta.

Presiden Republik Indonesia. 1967. Undang-Undang Republik Indonesia No. 5 tahun 1967 Tentang Kehutanan . *(The President of Republic Indonesia. 1967. The Basic Forest Law No.5/1967).*

Presiden Republik Indonesia. 1990a. Keputusan Presiden Republik Indonesia No. 32 Tahun 1990 Tentang Pengelolaan Kawasan Lindung. *(The President of Republic Indonesia. 1990. Presidential Decree No.32/1990 Protected Area Management. Issued on July 1990) .*

Presiden Republik Indonesia. 1990b. Undang-undang Republik Indonesia No. 5 Tahun 1990 Tentang Konservasi Sumberdaya Alam Hayati dan Ekosistemnya. *(The President of Republic Indonesia. 1990.Government Law No.5/1990: The Biodiversity Conservation and Ecosystem Law.Chapter I Section 5. Issued on August 1990).*

Presiden Republik Indonesia. 1998. Peraturan Pemerintah Indonesia No. 32 Tahun 1998 Tentang Kawasan Suaka Alam dan Kawasan Pelestarian Alam. *(The President of Republic Indonesia. 1998. The Government Regulation No. 32/1998 : Natural Reserves and Natural Conservation. Issued on August 1998).*

Presiden Republik Indonesia. 1999a. Undang-undang Pemerintah Republik Indonesia No.22 Tahun 1999 Tentang Pemerintah Daerah *(The President of Republic Indonesia. 1999. Government Law No. 22/1999 on Local Government. Issued on May 1999).*

Presiden Republik Indonesia. 1999b. Undang-undang Republik Indonesia No. 25 Tahun 1999 tentang Perimbangan Keuangan antara Pusat dan Daerah.*(The President of Republic Indonesia. 1999. Government Law No. 25/1999 Regarding Inter-Governmental Fiscal Balance. Issued on May 1999).*

Presiden Republik Indonesia. 1999c. Undang-undang Republik Indonesia No.41 Tahun 1999 Tentang Kehutanan *(The President of Republic Indonesia. 1999. The Government Law No 41/1999: The Basic Forestry Law. Issued on September 1999).*

Presiden Republik Indonesia. 2002. Peraturan Pemerintah Indonesia No.34 Tahun 2002 Tentang Tata Hutan dan Penyusunan Rencana Pengelolaan Hutan, Pemanfaatan Hutan dan Penggunaan Kawasan Hutan *(The President of Republic Indonesia. 2002. Government Regulation No 34/2002 Forest Management, Planning, and Utilization. Issued on June 2002).*

Setiamihardja, A. 2003. *Implementation of Forest Management with Community to Empowering Community Forest Livelihoods*. Paper on Sharing Experience Seminar, LATIN September 7 2003. The Indonesian Tropical Institute (LATIN): Bogor.

WALHI (Indonesian Forum for the Environment). [online August 2005] URL: http:// www.eng.walhi.or.id/quickfinder/media?topic_id=49

Hanging in the Balance:
Equity in Community-Based Natural Resource Management in Asia

Edited by

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RECOFTC

EAST-WEST CENTER

Regional Community Forestry Training Center for Asia and the Pacific

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Impacts of Cash Crops on Rural Livelihoods: A Case study from Muang Sing, Luang Namtha Province, Northern Lao PDR

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Abstract

The landscape of Northern Lao PDR is a tapestry of mountainous terrain dissected by river valleys, and is rich with both ethnic and biological diversity. Poverty levels are high and most people have traditionally depended on swidden agriculture for their subsistence. The government of Lao PDR seeks to stop swidden farming, which it views as environmentally degrading, and to reduce poverty by promoting the adoption of permanent commodity-oriented agricultural crops. Growing market demands for sugar and rubber in China, and the success of a model rubber plantation in Luang Namtha province, have resulted in a boom of sugar cane and Para rubber plantations. This paper investigates the impact of cash crops on livelihoods and land tenure of local people in Sing District, or Muang Sing. The study focuses on equity, particularly in terms of access to land and natural resources among local people after the introduction of cash crops. We examine issues of land tenure, the implications of transitioning from self-sufficient food production to market based production, outside influences on agricultural production and land use, and government policies on swidden cultivation, opium eradication, land allocation, and village consolidation.

1. Introduction

The Millennium Ecosystem Assessment (MEA 2005) focused the world's attention on widespread poverty and equity issues, particularly in the least developed countries. With its annual per capita Gross Domestic Product (GDP) of approximately US $350 and a Human Development Index of 135 out of 147 (UNDP 2004) Lao PDR is considered to be one of the least developed countries in the world. The Lao government seeks to graduate from this classification by 2020 (GOL 2004). Many development programs have been implemented that have had significant impact on the utilization of natural resources and the livelihoods of rural people. The results, so far, show an increasing penetration of market forces into many sectors of the economy and the opening up of opportunities for resource exploitation. During this process, the government and political institutions have had to grapple with challenges emerging from the reorientation of economic policies from a highly centralized economy to a more open and free market system, which is known in Lao PDR as the New Economic Mechanism, or Re-thinking (Rigg 2003).

The Lao government introduced the New Economic Mechanism (NEM) in 1996 to reform from a planned economy to a market-based economy. The program also urged farmers to transition from subsistence-based production towards cash-crops. Throughout the 1980s and 1990s, the government promoted agricultural intensification and cash-crop production (rice, maize, soy beans), as well as industrial tree planting (teak, eucalyptus, rubber), in order to improve the livelihoods of rural people and to develop the national economy. Integration of rural farmers into the market has become a key issue in the 2000s.

Poverty is high in the uplands of the northern provinces, particularly in remote upland areas that have limited infrastructure and limited access to social services and markets, including education and health care. The percentage of people who live under the poverty line is estimated to be 38.6% of the population (UNDP 2001).

While government programs have been struggling to achieve the development goals, agricultural intensification in the upland areas has been difficult due to lack of basic infrastructure and financial resources. Recently however, increasing demand for cash crops in China is rapidly transforming the upland landscape in northern Laos. Not only are rural farmers engaged in cash-crop production, including maize, sugar cane, and rubber, but Chinese farmers and small-scale entrepreneurs are crossing the border in southern Yunnan province of Sipsongpanna (or Xishuangbanna) to become involved in agricultural intensification in northern Laos. While we believe that political stability is facilitating regional economic integration, we also believe that a scarcity of agricultural lands in southern Yunnan province is promoting Chinese farmers and small-scale entrepreneurs to cross the international border between China and Lao PDR in order to invest in rubber and other cash crops. Farmers in Lao PDR are responding differently to the current situation. While some lease out their seasonally uncultivated field, others become involved in longer-term contract farming with Chinese farmers and entrepreneurs.

In the current paper, we discuss the findings of a study conducted in the Sing District of Luang Namtha province where traditional farming practices have been changing gradually in response to the economic transformation and regional market integration. The study investigates the impact of cash crops, mainly sugar cane and rubber, on equity. In particular, we examine how cash-crop production affects household economy and access to resources. We also investigate cash-crop expansion and land tenure changes in the village. The current study demonstrates that the rapid expansion of cash crops such as rubber will have a long-term impact on equity within villages, and in particular will have a negative impact on the livelihoods of poor people. There is an urgent need to investigate the forces that are driving the change towards cash-crop production, and how this is changing local people's access to resources in order to seek a more sustainable resource management strategy in the upland areas of northern Laos.

This paper is divided into five sections. Following this first section, which has provided an overview of the study, the second section describes project methodology; the third section presents background information about land use, government policies and the current status of rubber plantations; the fourth section discusses the impacts of rubber plantations on equity and peoples' livelihoods; and the final sections suggests project conclusions and policy recommendations.

2. Methodology

In our study, a team of researchers and students from the Faculty of Forestry (including the authors) conducted interviews with local government officials, village leaders, and village households in Sing District four times between January 2004 and July 2005. Interviews at the local government level included three offices: the district agriculture and forestry office, the district planning office (DPO) and the Lao-German Cooperation Project. In all three offices we asked questions concerning their local development strategies and their assessment of the current situation regarding agriculture and forestry in upland areas. In the interview with the DPO, we also asked about foreign investment and trade especially along the border areas.

At the village level we selected a total of 7 villages in four sub-districts (including Mom, Xiengkheng, Xay and Nakham) and interviewed members of the village authorities, including both political and administrative leaders of the village, to learn about the village history, agricultural practices in each village, and their experiences with selling crops to China. We also conducted semi-structured interviews with households that planted cash crops such as sugar cane, maize, and rubber. Villagers were grouped by the amount of land they owned (Table 1). Families who have sufficient land to meet their food requirements and can invest in different types of commercial crops were placed into the first group of well-off families. Families who have sufficient land to meet their subsistence food requirement and who still use traditional cultivation methods (including paddy rice production, upland shifting cultivation and small

household gardening) were placed into the second group of middle-level families. Families that do not have sufficient land to meet their subsistence food needs throughout the year were placed in the third group of poor families.

Table 1: Characteristics of Households in the Research Site

Class	Numbers of HH interviewed	Average land holding (plots)	Farming characteristics
Well-off	6	5-6	Paddy rice, swidden, sugar cane, rubber and livestock raising
Middle	7	3-4	Paddy rice, swidden, sugar cane, rubber and livestock raising
Poor	5	3	Swidden rice, hire labor, NTFP gathering and hunting and some livestock mainly small animal as poultry

Note: HH=household

3. Background

Sing District or Muang Sing is located approximately 70 km to the north of the center of Luang Namtha province. It borders Myanmar to the northwest along the Mekong River and China to the north along a land border (Figure 1).

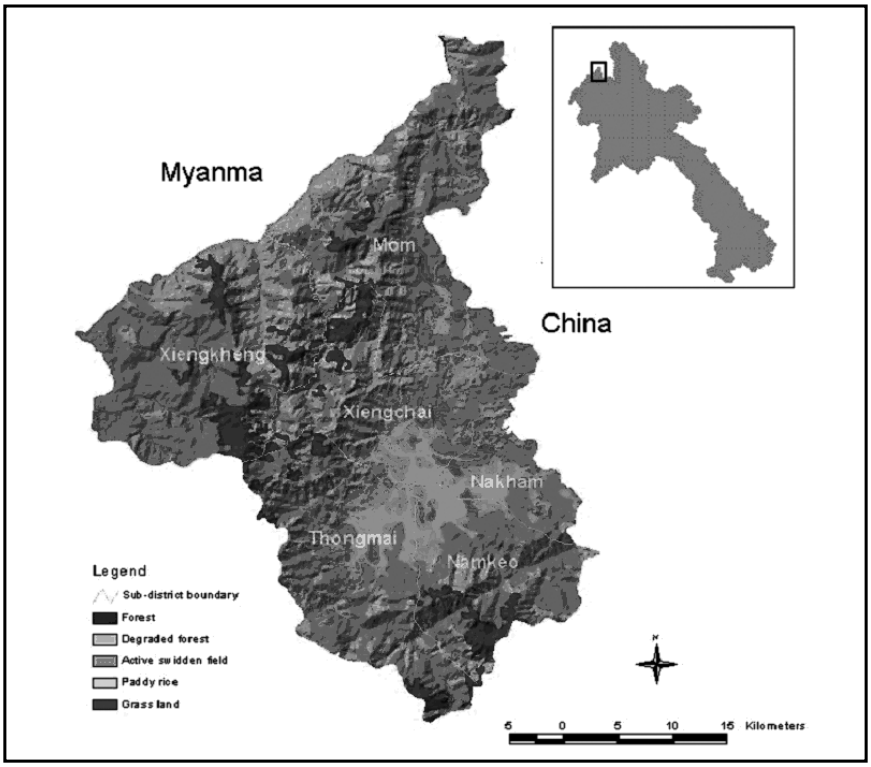

Figure 1: Sing District

A majority of the district is mountainous and has little potential for perennial agriculture development. The district is divided into 6 sub-districts and 95 villages. There is a total of 30,578 inhabitants of which the majority is Akha people who comprise about 70% of the total population (Figure 2).

Traditionally, Akha live in small villages with people of their own and kinship lineage. Their daily life is highly dependent on the forest as they consume many kinds of wild vegetables and meat. It is difficult to estimate the value of these products as has been studied in other parts of northern Laos (Foppes 2003). Akha have a long tradition of swidden cultivation practices.

The Tai Lue is the second largest ethnic group in the district. Tai Lue people prefer to settle in lowland areas near rivers or streams where there is potential for paddy rice development. They primarily plant rice, beans, different kinds of vegetables, and fruit trees as well as raise livestock. Tai Lue communities have a long tradition of trading cash crops, such as sugar cane, maize, and ginger as well as livestock and non-timber forest products (NTFPs) with Chinese farmers. They have been pioneers in terms of growing a variety of cash crops according to market demands from China. Presently, the Tai Lue population in Sing District is 6,882 people or about 13% of the total population.

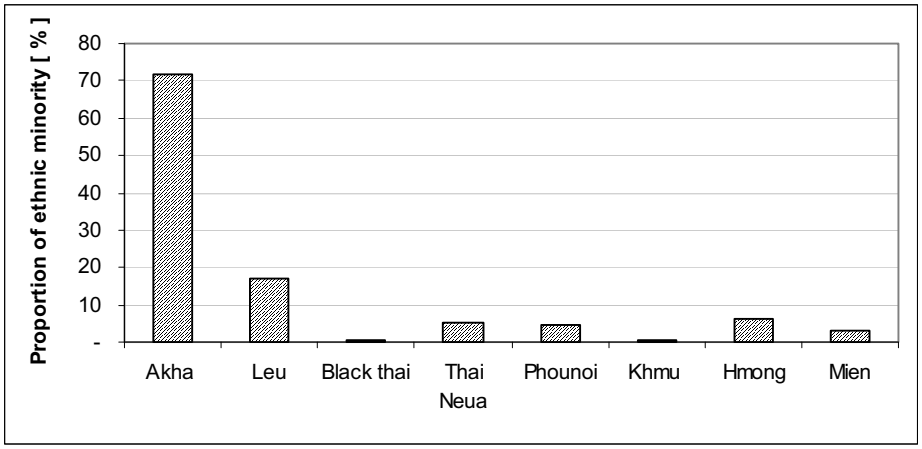

Figure 2: Ethnic groups in Sing District

Generally, all ethnic groups and communities in Sing District have a long tradition of upland farming. Major crops in the upland areas include rice, maize, cassava and opium. Rice is the main staple food, which is mainly produced for household consumption. Maize and cassava are used to feed livestock such as pigs and poultry. Major sources of cash income include opium, livestock and NTFPs. Many of these communities regard forest and land as common property that anybody can access and use. As pointed out by Rigg (2003), traditional swidden practices are now changing due to several factors, including population increase, consolidation of villages, and government policies on shifting cultivation and opium elimination.

When we look at forest-cover change in northern Laos (Luang Namtha, Luang Prabang, Udomsay and Bokeo provinces), forest cover increased from 65% to 91%

between 1993 and 2003. Meanwhile swidden agriculture decreased sharply from 32% to 8% during the same period while permanent agricultural land did not change significantly. Figure 3 does not indicate rubber as a separate category, as it is classified as forest.

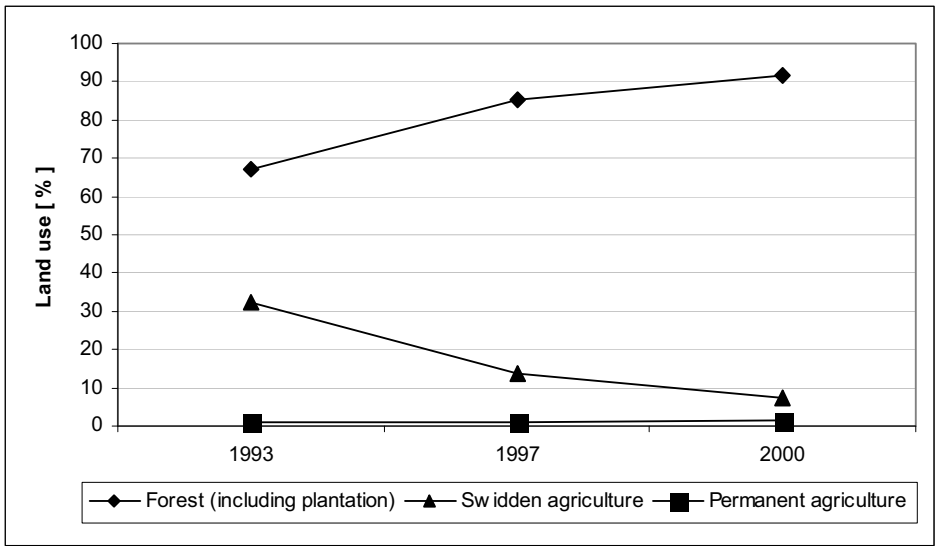

Figure 3: Forest Cover and Land Use in Northern Lao PDR

Among the choices of cash crops available to farmers, rubber is expanding the most rapidly. In Luang Namtha province the area of rubber increased from 120 ha in 1994 to 2,950 ha in 2004. In 2004, the National Agriculture and Forestry Research Institute (NAFRI 2005) conducted a land suitability assessment for industrial tree plantations in the Luang Namtha province, which suggests 62,600 ha or 6.7% of the provincial land area is appropriate for tree plantations. The current rubber area represents only 4.7% of this suitable area. However, the rate of increase has more than doubled between 2003 and 2004, as shown in Figure 4.

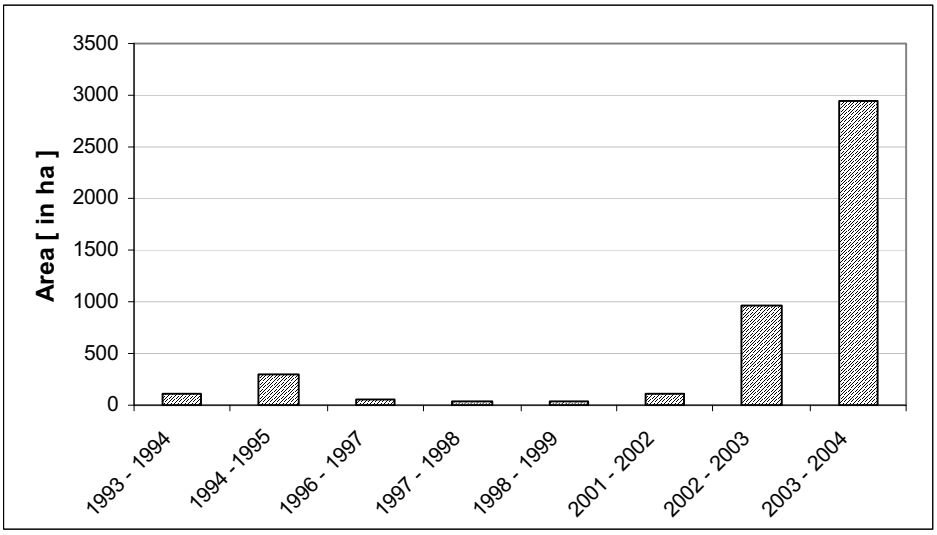

Figure 4: Rubber Plantation Area in Luang Namtha Province

Small-scale farmers plant most of the rubber grown in Lao PDR. The case of Ban (village) Hat Yao Luang Namtha province is the most well known among the villages that began to plant rubber almost 10 years ago. Hmong farmers in Hat Yao are now tapping and exporting latex to China. Their demonstrated success, as well as encouragement from Chinese entrepreneurs, have caused a boom in rubber planting throughout Lao PDR (Alton 2005, Bluhm *et al.* 2005).

3.1. Government Policy on Land and Cash Crop Production

Since the New Economic Mechanism was introduced in the mid 1980s, the government has promoted many development and conservation programs to attain the dual objectives of improving the national economy and protecting the natural environment. A number of new regulations and laws were issued in the 1990s. These include the National Socio-Economic Development Plan and Development Strategy, and Land Use Planning and Land Allocation (LUPLA)[1].

LUPLA is a particularly important national program, which decentralizes natural resource management to the village level, and encourages villagers to protect and use land effectively (Eklind and Johanssan 1997). Under the LUPLA, village boundaries are defined, and land use areas are zoned. Normally, village land is divided into categories based on the availability of resources such as forest, agriculture and residential land. Following the Forest Law, forests are classified further into five main categories, which include: (1) protection forest, (2) conservation forest, (3) production forest, (4) regeneration forest and (5) degraded forest. Forests are defined as community property, with the exception of degraded forests, which can be allocated to individual households for agricultural purposes.

Government officials began implementing LUPLA in Sing District in 1995 using a participatory approach that involves villagers from the beginning. Currently, LUPLA has been completed in 54 villages, or about 60% of the total villages in the district. In combination with the government's effort to voluntarily relocate upland villagers to lower elevations where they can access public services, local officials are under pressure to finish LUPLA in the remaining villages by the end of 2005. A recent study by Rock (2003), however, suggests that LUPLA is being implemented too rapidly due to a shortage of financial resources.

LUPLA regulations allow villagers to use land for swidden cultivation and to maintain long-term usufruct rights to their land, while prohibiting farmers to leave land fallow for more than three years. Agricultural land parcels that remain unused for more than three years revert back to the community as common property. As a consequence, farmers living in villages where LUPLA had been conducted are forced to plant something on their land to retain their use rights. As a result, many farmers plant trees such as rubber to insure their claim over land, even if the government did not designate the area for rubber plantation.

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[1] It is also known as the Land and Forest Allocation (LFA)

Village relocation and consolidation are other important issues in Muang Sing. In upland areas, villages are sparsely located and access to public services such as schools and hospitals is difficult. Therefore, many upland villages with small populations are encouraged to relocate or to consolidate with neighboring villages so that government services can reach them more easily.

In 1990, the Lao PDR agreed to cooperate with the United States and the United Nations to substitute opium with other cash crops like coffee or mulberry trees. In 1992, the government established the Narcotics Control Agency in order to eradicate opium production. According to the Sing DAFO officer, they believe that they have successfully eradicated opium production from the district. However, finding adequate alternative cash crops for the upland farmers remains a big challenge. So far the district government offices are encouraging farmers to grow cash crops such as sugar cane, Job's tears[2] and maize. In the upland areas, they are also promoting livestock production for export to Thailand. However, cash crops production remains a challenge as market prices fluctuate depending on market demand.

4. Results and Discussion

4.1. Cash Crops and Low Income Households

Increased demand for natural rubber in China is significantly affecting traditional farming systems in the upland areas of Sing District. However, the impact differs among families within a village. Based on our fieldwork, pioneering families who were the first to arrive in a village tend to have access to more land with better soil quality. Today, these families have successfully intensified their land use and constitute the well-off and middle-income families. On the other hand, our survey indicates that low-income farmers have less access to land. Furthermore, their fields tend to be further from the road and difficult to access compared to other classes of families.

Below is a quote from a villager in Lomue village telling why he continues to grow upland rice instead of seemingly more lucrative cash crops:

"My land is located far away from the road and the village. It is difficult to arrange transportation if I grow crops other than rice. If I plant rubber, I won't have enough land to produce rice for my family. I don't have any paddy field as I arrived in this village quite late. It is therefore, quite hazardous for my family to wait for 7 to 8 years to know results of planting rubber."

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2 Job's tears (*Coix lacryma-jobi*) is a plant that looks like maize; the fruit has droplet-shaped, pearly white and very hard cover; it is commonly used as food, medicine and bead jewelry for women such as bracelet, necklace, etc. This plant may be called by different names depending on the location such as David's tears, Saint Mary's tears or Christ's tears.

For Mom village (Figure 5) we see the size of landholding according to the time of migration: 1973-76, 1977-93 and 1994-2000. Meanwhile, for Lomue village (Figure 6), the trend is divided into the following time periods: 1984-89, 1990-95 and 1996-2000. In both villages, land-tenure patterns appear similar. Land holding differs significantly among villagers depending on their settlement history. The earlier the farmers settled in the village the more access they have to paddy and other agricultural lands.

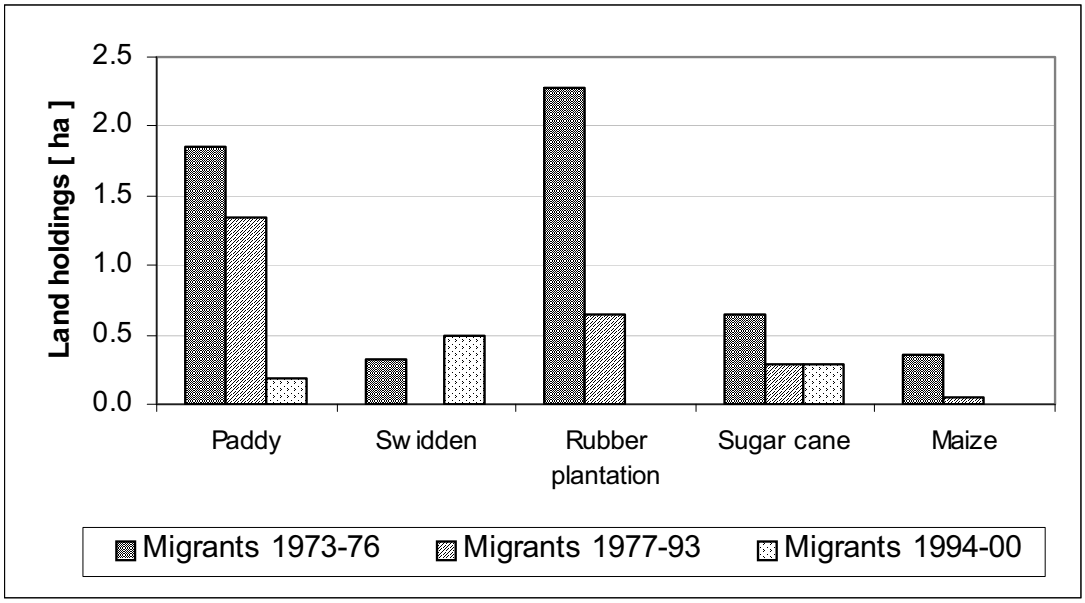

Figure 5: Land Holding by Type and Period of Migration in Ban Mom

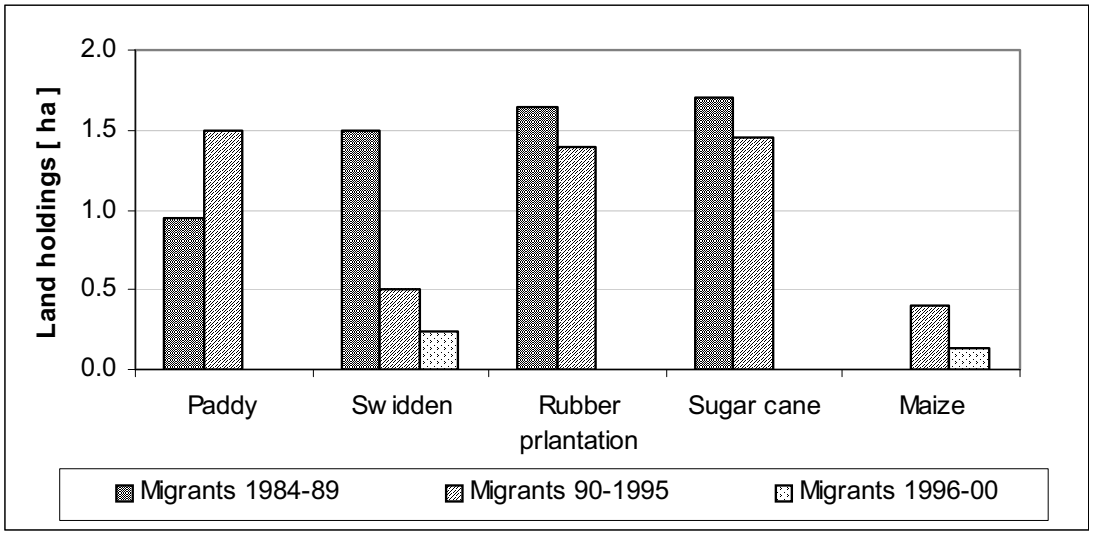

Figure 6: Land Holding by Type and Period of Migration in Ban Lomue

Figures 5 and 6 also show the different land-use practices in the two villages. The Akha in Ban Lomue have a long tradition of swidden cultivation while the Tai Lue in Ban Mom are traditionally lowland paddy farmers. Figure 5 shows that on average, early settlers in Mom village tend to have larger land holdings. For instance,

the average size of a paddy is 2.8 ha, and the average size of a rubber field is above 2.3 ha. The Mom were among the first to convert their swidden fields and fallow land into sugar cane and rubber. In contrast, the newest settlers in the village that arrived from 1994 to 2000 have limited access to paddy fields (0.6 ha), as well as other agricultural land suitable for cash crops.

In Lomue village (Figure 6), those that settled between 1984 and 1989 have larger swidden (1.5 ha) and sugar cane fields. In contrast to Mom, families that settled between 1990 and 1995 also tend to have sizeable area of sugar cane field (1.5 ha). New settlers in Lomue are dependent on swidden, as was the case in Mom village; however, average land holdings are smaller than those of new settlers in Mom.

Figure 7 shows land use in two villages based on household economic status. When Chinese traders invited villagers to grow sugar cane for market, wealthy and middle-income families converted their swidden fields near the road to sugar cane. More recently, farmers are planting rubber on the same type of land. Poor families have not been able to take advantage of the opportunity to plant sugar cane and rubber for several reasons. First, their swidden fields tend to be located further from the road and hence require additional labor inputs to get the product to market. Second, poor villagers cannot plant sugar cane and rubber in their swiddens because they do not have paddy fields. Without access to paddy on which to grow their food crops, these households cannot afford to convert their only land resource to cash crops. Third, some poor villagers expressed concern that even if they grew sugar cane for the market, that the quality of their cane might not meet the traders' requirements. Finally, if a farmer chooses to plant rubber he has to wait seven or eight years before he sees a benefit. Poor households cannot afford to plant rubber in their swidden because it would leave them without any source of food for a number of years. Wealthy and middle-income families can plant sugar cane and rubber in their swidden fields, because they have paddy fields for meeting their food requirements.

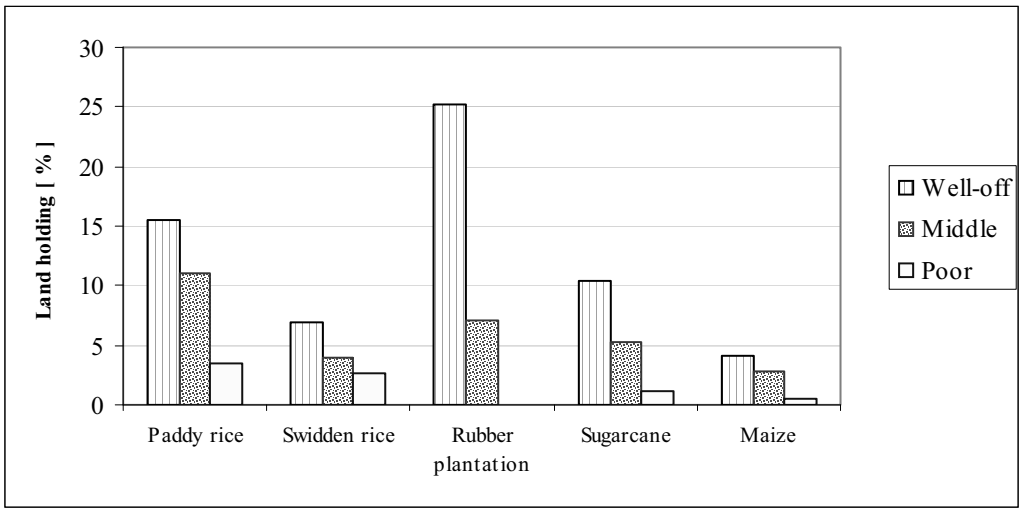

Figure 7: Percent of Land by Land-use Practice and Household Economic Status

Figures 8 and 9 show agriculture labor and income according to the household's economic status. In-depth interviews with village households in the two villages suggested that villagers earned income from different sources. The main sources of income for well-off families were primarily paddy rice and sugar cane, as rubber is not yet tapped commercially in these villages. Middle-income families also benefited from paddy rice production and sugar cane but not as much as well-off families. This is because they have less land for paddy and cash crop production than well-off families. Poor households focused their labor on sugar cane and swidden production, as they have no paddy fields. However, we need to be cautious in labeling households as poor because their low income may be related to their stage in the family cycle. New families that have just separated from their parents are classified as poor, as well as families that have recently moved down from upland areas. The availability of land places limits on all families for both paddy and cash crops. Farmers, who do not grow rice to meet their food needs, usually have to work for other families in order to earn income for purchasing food. These families also access forest resources in order to collect NTFPs including bamboo shoots and vegetables for domestic consumption. Our interviews suggest that on average, well-off families earn more than 10 million kip (US $925) per year, while middle and low income households earn about 5 to10 million kip and less than 5 million kip per year respectively (Figure 9).

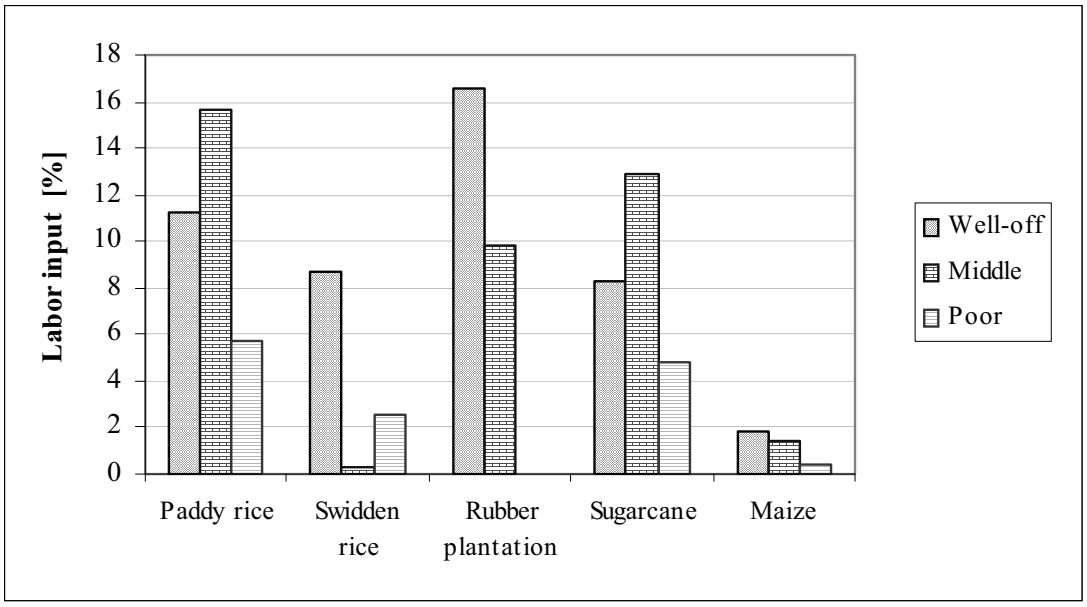

Figure 8: Labor by Land-use Practice and Household Economic Status

Sugar cane production boomed in the district in 2000 when the price of sugar cane was about 130-135 yuan per ton (US$15.80-$16.50). Sugar cane production took the form of contract farming where local farmers signed a contract with sugar cane processing companies in China directly or indirectly. Sugar cane processing companies provided seedlings, fertilizer and other inputs, and villagers with land near the road were encouraged to plant sugar cane. The company subtracted the costs of

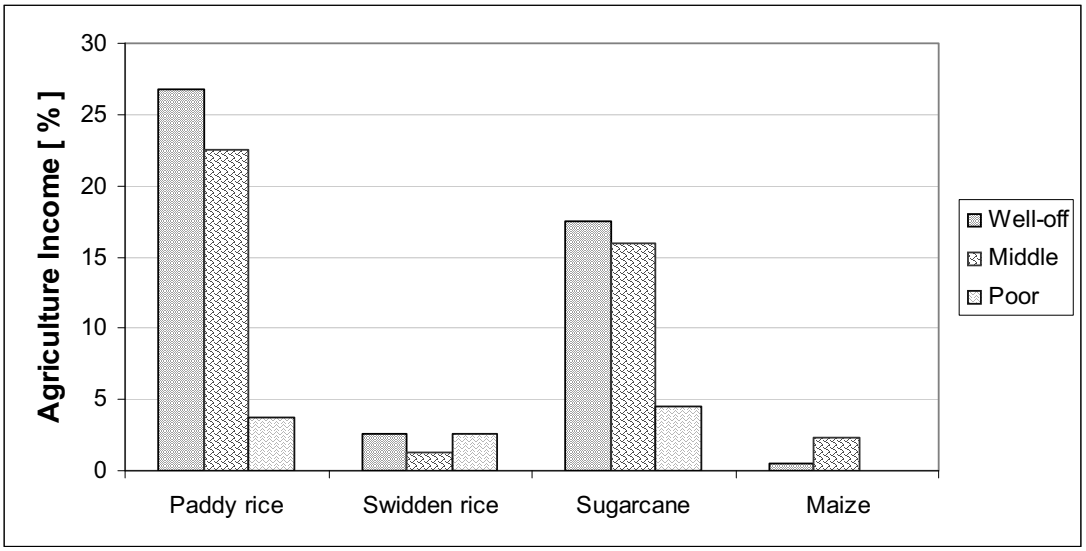

Figure 9: Household Income by Land-use Practice and Economic Status

input and gave the remaining profit to the farmers. Sugar cane saplings can be harvested consecutively for three years; therefore, in the second, third, and fourth years most of the profits went to farmers unless they purchased fertilizers or pesticides on credit. In the first few years after the boom, farmers earned high income from sugar cane, however, the price begun to plunge as more farmers began to grow sugar cane (Manivong *et al.* 2003).

In the aftermath of the sugar cane boom, many well-off and middle-income families began to plant rubber in their former swidden fields as an alternative to sugar cane. Meanwhile, some of the poor farmers who were interviewed also planted rubber as they became involved in contract farming with private investors and farmers and received capital inputs. In some cases, farmers not only received capital inputs but also became indebted to investors as they could not produce enough rice for household consumption. As a result of indebtedness, some farmers had to forfeit their future share of income from rubber production.

According to the villagers, many farmers along the border began to plant rubber on a contractual basis with Chinese farmers on the other side of the border. The contract is an informal arrangement between Akha or Tai Lue farmers on both sided of the border. The Chinese farmers provide capital, seedlings or technical support and the Lao farmers contribute land and labor. When the latex is harvested, profits are divided between the two farmers. Sometimes the share is 60% for the Chinese and 40% for the Lao farmers.

Rubber planting can also cause social tensions. In Mom village, for example, a poor man was killed because he stole rubber seedlings from another well-off family. Conflicts between villages are also on the rise as rubber reinforces private land tenure regimes in areas that were used as common property in the past (i.e. swiddens and fallows).

4.2. Natural Forest Encroachment and Biodiversity Destruction

Villagers have wanted to plant more rubber since the market began to boom in 2004 but have been limited by a lack of land. As a consequence, many forests have been cleared to plant rubber. In Ban Lomue, for example, villagers encroached on the village's protected area to grow rubber. In Ban Oudomsin and Ban Namdeth Mai, villagers are involved in a dispute concerning a conservation forest of about 40 ha that was cleared for rubber. Villagers in each village argue that the land belongs to their village. The headmen of both villages have agreed to stop the encroachment, but villagers continue to clear land. The conflict has been submitted to the district office for resolution. As previously discussed, in many villages the LUPLA was not effectively implemented and areas delineated as village forests are often regarded as common property. In these cases it is relatively easy for farmers with capital and power to convert these lands to private property and then to plant rubber. Figure 10 shows a piece of land cleared by a family to prepare for the rubber in Mom village. The clearing encroaches on the village's conservation forest.

Villagers in Muang Sing have traditionally depended on natural forests, especially poorer households, as major sources of food (wild meats and vegetables) and income. Natural forests provided benefits for their daily life for which it is difficult to estimate a value. However, the majority of people do not recognize the forests' immeasurable value. We found in our interviews that the forests were a major source of income for many people. Approximately 60% of the income villagers earned came from NTFPs such as bamboo, rattan shoots, cardamom, Meuak bark (*Debregaesia hypoleuca*), and wildlife. Many of these products were sold or exported overseas, mainly to China. Approximately 25% of villagers' income came from handicrafts, 15% from sugar cane and other cash crops, and only 10% from rice production.

Income from the forest, however, while the largest single source in the village, is relatively small. Seeing the potentially much greater income they could get from rubber, a majority of villagers have begun to see rubber as more important to their long-term future than continuation of the forests. A villager in Ban Don Chai stated that he used to buy NTFPs from villagers around Muang Sing to sell in China. But the amount of NTFPs villagers can now collect is less than five years ago, so he is changing his strategy from selling NTFPs to planting rubber. He did not know if the reduction in the availability of NTFPs was related to the expansion of rubber production.

There is little information and literature on biodiversity in Muang Sing. However, through the fieldwork we observed a number of cases of wildlife utilization. Trapping instruments were found in all villages, wild meat can be seen in the market and wildlife dishes can be ordered in the restaurants. Going to the forest to hunt or capture wildlife is common in all villages. Villagers, particularly ethnic minorities, have a long tradition of collecting wildlife for food, medicine or trade. According to Tizard *et al.* (1997) many large mammals, amphibians, reptiles, fish and birds exist at Nam Ha National Protected Area. At least 38 large mammals and 288 species, many of which are key species of conservation concern, can be found in the protected area. As once

forested areas are converted into rubber plantations, collecting NTFPs and hunting will be concentrated in the remaining forests. Increasing rubber areas will threaten wildlife habitats.

Figure 10: Land Cleared for Rubber Planting near Conservation Forest

4.3. Rubber Plantations and Risk

Farmers in Muang Sing, particularly in Mom sub-district, began planting rubber about 8 years ago. At that time about 40 families planted rubber in their swidden fields. In 1999 many of these trees died because of an unusual frost that swept across the region killing thousands of trees across the border in China. Even though their trees died villagers still had to pay back the capital their relatives from China had invested. Interest rates depended on negotiations between partners. Some families had to return the investment plus 40%, 50% or even 60% interest.

In Lao PDR there is no experimental research on rubber production, and most of the technical information has been gained from experiences in China. Rubber production varies according to the variety and quality of the seedling. Lao farmers have little knowledge about rubber. They cannot identify which varieties are best suited for different environments. Villagers even have difficulty identifying which variety they are buying. It is difficult to tell whether a young rubber seedling will be productive or not. Successful rubber propagation also depends on the age of seedling. A seedling should be a least one-year old before it is grafted onto a rootstock. If seedlings are grafted when they are too young, they may die young or yield less rubber.

Grafting is another important issue for rubber production. Two weeks after grafting you should be able to tell whether the graft was successful or not. But it is difficult for villagers to know which grafts were successful. If they buy an unsuccessful grafting, the rubber tree will grow up to produce less latex.

Currently there is no problem with excessive rubber production in Lao PDR because most trees are not old enough to be tapped. In addition, the demand from China is high while their rubber trees are relatively old. Chinese factories import approximately 70% of their rubber from other countries such as Thailand and Malaysia

(Manivong *et al.* 2003). However, we do not know what will happen in the future. Even though the demand in China is currently high, the rubber growing areas in other countries in the region such as northern Thailand, Myanmar, Vietnam and Cambodia are also increasing. History suggests that sooner or later the price of rubber will fall.

Government officials may classify rubber as forest cover but a rubber plantation does not have an under story (bushes and grasses), nor any wildlife. Domestic animals will not graze in a rubber forest. Farmers in Lao PDR have traditionally seen raising livestock as an important source of income and labor. Domestic animals such as cattle and buffalo are normally left to graze freely in the forest. People are not used to raising animals in specific pasture areas. The enormous portions of the landscape devoted to rubber plantation will certainly impact traditional animal raising activities in the future. Many villagers are concerned with this issue already. In addition, they will face labor shortages. Rubber plantation requires a large amount of labor and villagers will not have time to take care of livestock. Some villagers suggested that they will not need other income earning activities if they have a large area of rubber and that income from rubber products will be sufficient for their households needs. This places them at great risk if anything should happen to their rubber trees (frost, fire, or pests) or the rubber market crashes.

5. Conclusion

The study shows that rubber plantations have had an impact on the economy, society and physical environment of rural areas. Farmers that invest in rubber tend to have high expectations of income accruing from rubber, but it is a long-term investment and there are a number of factors that can severely impact this investment. In Lao PDR there is no experimental research on rubber production, most of the technical information is from experiences from China, making it difficult to predict future impacts.

Many forest areas have been cleared without recognizing the negative, but difficult to assess, impacts on people whose livelihoods have traditionally depended on forests. Most of the people who grow rubber are mainly from wealthier families, while poor farmers are losing access to agricultural land. There is an urgent need to investigate the forces that are driving the change towards cash-crop production, and how this is changing local people's access to resources in order to seek a sustainable resource management strategy in the upland areas of northern Laos.

Rubber does not bring equitable financial benefits to farmers. Those who can mobilize capital and labor at the right time can gain more while those who cannot eventually lose out. Poor farmers who cannot invest will likely end up becoming laborers on their own land.

There is a need to revise the LUPLA and the follow-up activities of the plan. Suitable land for rubber plantations should be defined and remaining natural forests

in good condition must be protected. Instead of promoting only one option for stabilizing swidden cultivation, integrated farming systems should be promoted for sustaining rural livelihoods. Diversification of cash crops will ensure farmers' income better than mono-cropping and it will also help to reduce farmers' exposure to risk from uncertain markets.

References

Alton, C. *et al.* 2005. *Para Rubber Study: Hevea brasiliensis*. National Agriculture and Forestry Research Institute: Vientiane.

Eklind, E. and C. Johanssan. 1997. *Land Allocation and Land Use Planning in Rural Areas in Lao PDR*. Department of Civil and Environmental Engineering, Royal Institute of Technology: Stockholm Sweden.

Foppes, J. 2003. "The Role of Non-Timber Forest Products in Community Base Natural Resource Managment in Lao PDR." Workshop on Community Base Natural Resource Management (CBNRM), Bhutan.

GOL. 2004. *National Growth and Poverty Eradication Strategies*. Vientiane, Lao PDR. Manivong, V., K. *et al.* 2003. *Field Report on Rubber and Sugar cane Markets in Northern Laos*. NAFRI: Vientiane.

MEA. 2005. *Ecosystems and Human Well-Being: Current State and Trends*. Island Press: Washington D.C.

National Agriculture and Forestry Research Institute. 2005. Land Suitability Assessment for Agriculture and Forest Plantation, Northern Laos (Luang Prabang, Udomxay, Luang Namtha and Bokeo). Vientiane, Lao PDR.

Rigg, J. 2003. *Forests, Marketisation, Livelihoods and the Poor in the Lao PDR.* [online August 2005] URL: http://www.ssc.ruc.dk/inco/Publications/conferencepapers/Copenhagen Jonathan.pdf

Rock, F. 2003. *Improvement and Adaptation of The Land Use Planning/Land Allocation Process in the RDMA Program Areas of Luang Namtha and Bokeo*. GTZ: Vientiane.

Tizard, R., P. *et al*. 1997. *A Wildlife and Habitat Survey of Nam Ha and Nam Kong Protected Areas*, Luang Namtha Province, Lao PDR. Vientiane, Lao PDR, CPAWM, WCS.

UNDP. 2001. *National Human Development Report Lao PDR*. 2001. Advancing Rural Development. United Nation Development Programme: Vientiane, Laos.

UNDP. 2004. *Millennium Development Goals Progress Report Lao PDR*. UNDP. Vientiane, Lao PDR.

Hanging in the Balance:
Equity in Community-Based Natural Resource Management in Asia

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Do Civil Society Organizations Promote Equity in Community Forestry? A Reflection from Nepal's Experiences

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Abstract

Equity issues in Nepal's community forestry are dynamic, with many dimensions and occurring at different levels. These issues are deepened in Nepalese society as a result of historically and culturally constructed unequal power relations based on caste, class, gender and regional settlement. Civil society organizations (CSOs), with an aim to create a more just society, attempt to influence these historical and cultural contexts by promoting political and economic equity in community forestry. CSOs institute processes of positive discrimination and benefit-sharing to the poor and marginalized by promoting deliberative practices, particularly the innovative and reflective approach as used in participatory action and learning processes. At the national level, CSOs facilitate discourses to deepen the understanding of complex issues, such as equity, among the diverse range of community forestry stakeholders. However, they also need to critically reflect on their limitations. Moreover, a complimentary rather than antagonistic role in relation to state authorities could help to improve their relationships with government. This will create an environment conducive to joint formulation of policy with state authorities and support stakeholders to overcome the complex and deeply rooted issues of equity in community forestry.

1. Introduction

In contributing to the Millennium Development Goals, the tenth five-year plan in Nepal attempts to expedite poverty alleviation by giving priority to high economic growth, good governance and social justice (Map 1). In this context, strategies are directed towards achieving set goals through participatory development processes. The plan emphasizes the need for the effective role of women in the national economic and social development and mainstreaming the downtrodden

and ethnic minorities in the development process. It further emphasizes the need to clearly define the role of government, local bodies, the private sector and civil society organizations (CSOs). In this light, the community forestry program has been implemented with the highest priority for the last 26 years. To date, 14,021 Community Forest User Groups (CFUGs) have been managing a total of 1,173,567 hectares (ha) of forest through which 35% of the country's population have been deriving benefits (Department of Forest 2005). About 35% of the total development budget allocated to the Ministry of Forest and Soil Conservation (MoFSC) has been spent on the program.

Map 1: Nepal

Nepalese society has historically been very socially, economically and culturally diverse. This heterogeneity has created deep inequities within the society that are manifested in unequal power relations defined by caste, class, gender and regional settlement (Bista 1991). Hindu culture and fatalism, part of the basic Nepalese cultural system, are highly connected with various forms of social inequity and dependency. Rich people and those of a so-called higher caste have a hierarchical attitude and a

feeling of superiority towards the poor and people of other ethnic groups. Poor and ethnic minorities have historically been excluded from mainstream state politics and bureaucratic positions and are denied proportional representation by the government (Bista 1991). Nepalese society is traditionally patriarchal and thus the social systems and state policies have tended to favor men and exclude women in most formal and informal collective decision making processes. Moreover, religious and geographical differences in rights and allocation of resources also prevail in the modern Nepalese society, which directly hinders development efforts and contributes to further inequity in the society.

The failure of the state's bureaucratic mechanisms to promote sustainable and equitable forest resource management in Nepal has prompted a search for community-based forest management alternatives (Agrawal and Gibson 1999). Community forestry is one form of community-based alternatives, and has been widely applied in Nepal. Advocates of community-based management argue that community forestry offers the best prospect for the inclusion of the poor and marginalized in Nepalese society along with a method of promoting sustainable management of the nation's forest. However, inequity in community forestry in Nepal continues to exist in multi-dimensional forms and at different scales and intensities (Hobley 1996, Malla 2001, Agarwal 2000 and 2001, Malla *et al.* 2002, Ojha *et al.* 2002, Paudel and Ojha 2002, Timsina 2002, 2003, Banjade 2003, ODG/NORMS 2003, Bhattarai and Ojha 2001 in Timsina and Ojha 2003). These inequities are the result of the existence of ad hoc, top-down and inappropriate decision-making processes in both the communities and facilitating institutions. Thus, there is an urgent need to promote equity and the inclusion of the poor, marginalized and excluded in the community. One means of doing this is by democratizing and institutionalizing systematic, bottom-up decision-making systems in both communities and the supporting institutions.

Many argue that CSOs have the task of fostering popular participation (Bhatnagar and Williams 1992, OECD in Clark 1995). Their responsibilities should include articulating the needs of the weak, working in remote areas, changing the attitudes and practices of local officials and nurturing the productive capacity of the most vulnerable groups of society. Moreover, in modern societies they are associated with the democratic values of participation and accountability, which help facilitate public discourses (Chandhoke 1995). They may run parallel activities with the state, but they also can play roles opposite the state, representing weaker members of the society and organizing them to become more influential in decision-making and resource allocation. Their methods entail moving from a supply side approach concentrating on project delivery, to an emphasis on the demand side, helping communities articulate their concerns and participate in development processes (Clark 1995).

With the introduction of the rights based approach in development projects, the contribution of CSOs has become increasingly important to address complex global problems such as poverty and environmental degradation, as well as local issues such as equity, governance and conflict management. In addition, they can contribute to the good governance debate by facilitating discussions between

marginalized groups and prominent citizens in national development planning, including community forestry processes (Bhatnagar and Williams 1992). However, their contribution in the development sector and the process of social change largely depends on their relationship with state authorities (Clark 1995). It seems that the state's treatment of them is mixed in nature, anywhere from hostile to benevolent, which has been noticed by community forestry practitioners in Nepal (Hadenious and Uggla 1996).

In this paper I will demonstrate how CSOs facilitate equity in decision-making and benefit sharing at the CFUG level. Further, I will explain how they facilitate discourses of equity at the national level. Primarily, I draw information from my own field research and experiences. In addition, I bring information from various published and unpublished writings such as policy briefs, technical notes, articles and project documents. The paper proceeds as follows: section 2 provides the analytical framework of the paper; section 3 presents background information on equity and CSOs in the context of policies and practices in Nepal's community forestry; section 4 discusses examples and lessons learned from equity promotions that have been facilitated at the CFUG and national levels; section 5 discusses the potential and challenges for CSOs to promote equity in economic and political aspects; finally, section 6 concludes the paper with some important insights on the contribution of CSOs to creating more just community forestry in Nepal.

2. Conceptual Framework

The term inequity refers to differences in access to natural resource that are not only unnecessary and avoidable but also are considered unfair and unjust (Whitehead 2000). Opinions about what is fair and just vary according to spatial and temporal dimensions of culture and the value systems of societies, but the widely used common criterion is the degree of choice involved that one can enjoy. Where people have little or no access to decision making processes regarding the management of forest resources, the access to resources is more likely to be considered unfair and unjust. Since equity is subjective, dynamic and relative in nature and contested in community forestry discourses, defining it is a very difficult task (Malla and Fisher 1987). I have tried to limit this paper to Whitehead's definition of equity (2000): *ideally everyone should have a fair opportunity to participate in decision making processes and thus access resources with their full potential.* More pragmatically, this definition includes that no one should be disadvantaged from achieving this potential, if it can be avoided. While critically focusing on the prevailing inequity in Nepalese society, community forestry needs to create opportunities for positive discrimination for the marginalized and poor such as providing exclusive opportunities to decide on the management of, and their access to, the community forest resources. This will bring the existing disparities in resource access by different sections of the local community (i.e. inequity) down to the lowest level possible.

Based on this definition of equity, development policy attempting to increase equity should not focus on eliminating all differences so that everyone enjoys an equal resource access and equal opportunities in decision-making processes. Rather, the focus should be to reduce or eliminate aspects of access and decision-making that are considered to be both avoidable and unfair in a democratic society. Different groups of stakeholders and actors may arrive at a point where the distribution of access is equitable in a specific context as prescribed by local discourse. Facilitating such discourses through formal institutional processes at various levels promotes critical reflection on resource equity, as well as socio-cultural values and practices. Facilitating these discourses may require special efforts. CSOs are more reflective, flexible and committed social groups who are well positioned to facilitate this delicate dialogue.

CSOs are non-profit organizations, encompassing non-government organizations, community-based organizations and user federations. These establishments are generally considered a space for multiple groups to compete for access to decision-making power (Brinkerhoff and Kulibaba in Mcllwaine 1998). They are also potential locations of power outside of the state (VonDoepp in Mcllwaine 1998). Liberals view CSOs as autonomous in the sphere of freedom and liberty while the neo-Marxists view them as a site of oppression and power inequalities (Mcllwaine 1998). Though the nature of CSOs is considered partly from the liberal perspective, they are not considered a panacea. In this paper, they are considered as organized civil groups that act independently and freely within a broad and flexible policy framework to raise the voices of the oppressed and marginalized and strengthen the economic and social welfare of society. They promote equity at the CFUG level by institutionalizing deliberative governance and at the national level by facilitating discursive politics.

3. CSOs and Equity in Nepal's Community Forestry

The current community forestry policy of Nepal is broadly guided by the Master Plan for Forestry Sector (HMG/N 1989). One of the objectives of the MPFS is to promote equity in communities, while adapting to local variations in traditional forest management systems. The MPFS aims to ensure the access of all users to the forest resources, meeting their basic needs. Additionally, it aims to promote participation of forest users in decision-making and benefit sharing, indicating a goal of political and economic equity at the community level, and to promote the sustainable use of forest resources to ensure inter-generational equity. On the basis of MPFS, the government has further developed different strategies to achieve these objectives: first, to hand over all accessible forest area to the communities with higher priority as they are willing and able to manage them; second, to involve women and poor in the management of forests; third, to entitle CFUGs to enjoy the revenue generated from

the community forestry; and finally, to change the role of forest bureaucracy from controlling functions to facilitating, advising and providing services.

However, the government has not put adequate efforts to translate these policy statements into practice all over the country and thus it is becoming less likely to achieve the policy goals. There is evidence that many local communities, particularly in the *Terai*[1]region, are not able to secure rights of access to their community forests due to reluctance from government officials to handing over those forests (Bhattarai[2], this volume). Furthermore, the government has imposed a tax on the income of the *Terai's* CFUGs, which is gained by selling timber of *Sal* (*Shorea robusta*) and *Khair* (*Acacia catechu*) to outside communities and traders. Such a tax has not been imposed on the community forests of the hill region.

Government is not able to provide adequate services to CFUGs to help ensure access for the poor and marginalized to decision-making forums, forest resources and community funds. The elites in rural communities are very influential in decision-making and are consequently generating more benefits out of community forestry than the poor and marginalized. Many restrictions have been placed on the needy and poor on entering the forest by the elite dominated executive committees. Some researchers and analysts therefore see community forestry as a political issue being hijacked by the Department of Forests and donor agencies at the national level and by powerful, rural elites at the community level. This has resulted in consolidation of power in the processes of planning and implementing programs (Ojha *et al.* 2002, Timsina 2002, Malla 2001).

Methodological practices being used in community forestry are also being questioned, as these do not usually include the poor and marginalized in the decision-making process (Cleaver 2001). The Participatory Rural Appraisal approach, for example, has been criticized because the tools are often being used without proper understanding of the existing power relationship of the communities, further reinforcing existing exclusions and inequity (Cooke and Kothari 2001).

As second-generation issues in community forestry such as equity, good governance, conflict management and social justice have begun to appear, there is increased demand for new sets of skills and institutions to effectively facilitate the community forestry processes. At the same time, the establishment of a multi-party, democratic political system in the country is creating an environment conducive to the establishment of CSOs. Their contributions to the democratic practices, social change, politics and development have been recognized, and as a result, more CSOs have been emerging. Building on local indigenous knowledge and practices, they have been working effectively in local and national contexts to articulate people's interests, helping them to organize and enhance their capacity to access livelihood

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1 *Terai* refers to the plain area of the southern part of the country, which extends from east to west and comprises 17% of country's land, including the most productive forests.

2 Member Secretary, FECOFUN.

services and assets. In this spirit, the Forest Regulation of 1995[3] has explicitly encouraged them to emerge and provide necessary services to CFUGs. In addition, the newly prepared non-governmental service providers' guidelines in 2003 have also clearly spelled out their roles.

However, their role is particularly contested in the forestry sector, as the state has been the policy maker, owner, manager and facilitator of forest management processes. Their contributions are sought as the scope of work has expanded gradually from conservation to the empowerment of poor, marginalized and oppressed. However, there are few CSOs exclusively working in community forestry (Timsina *et al.* 2004b). With emergence the of the Federation of Community Forest Users of Nepal (FECOFUN[4]) and other critical forestry non-government organizations (NGOs), a strong civil force in the forestry sector has emerged, which has influenced the policies and practices in favor of citizens (Timsina *et al.* 2004b). However, they have little formal recognition in the policy and strategic arenas.

4. Facilitating Equity at the Community Level

There is an assumption that though members of CFUGs have diversified interests and capacities, they share similar socio-cultural, political and historical contexts and are interdependent. Thus, there is not only the possibility of unequal power relations but also scope for interaction, collaboration, innovation and synergy among members. However, social equity can be achieved with collaboration among users only when the dialogue among them is authentic, rather than rhetorical or ritualistic for which each must accurately, sincerely and legitimately represent the interest for which he or she claims to speak (Isaacs 1999, Innes and Booher 2003). Equitable communication could not be achieved while placing groups of unequal power relations together (Edmunds and Wollenberg 2002). A systematic action and reflection process called the participatory action and learning (PAL) process has been implemented to institutionalize deliberative governance so as to facilitate more

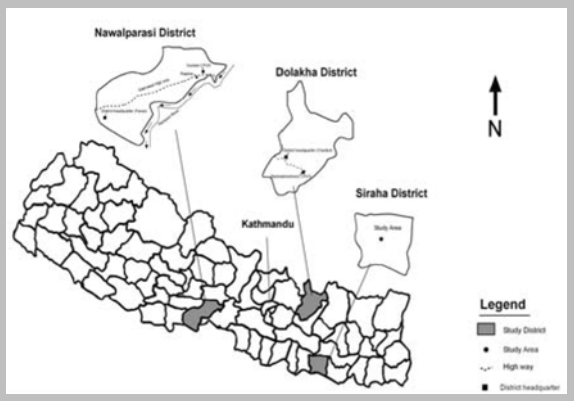
3 It is clearly mentioned that it is within the authority of CFUGs to obtain necessary assistance from the CSOs (rule number 38).

4 FECOFUN is a network established with the aim to conduct policy advocacy to ensure the equitable sharing of forest resources and foster dynamism in the forest management. Currently they work all over the country and more than 14,000 CFUGs are affiliated with them.

equitable and sustainable community forestry development processes in three CFUGs[5] ; namely Baishakheshwori, Gagan Khola and Sundari (Box 1).

Box 1: Brief Background of the CFUGs

Baishakheswori CFUG is located in the Dolakha district of the central mid-hill region of Nepal. 102 ha. of community forest has been legally handed over, which comprises 126 user households, of whom a majority is of the Sherpa ethnic group. At present, there are 13 members in the CFUG committee, including five women.



Gagan Khola CFUG is located in the Siraha district of the eastern *Terai* region of Nepal. 75 ha of community forest was officially handed over, which comprises 165 user households with a variety of ethnic and caste[6] groups.

Sundari CFUG is located in Nawalparasi district of the midwestern *Terai* region of Nepal. A total of approximately 1400 households are the users of a 390 ha community forest. The users comprise different castes such as *Brahmin, Chhetri, Gurung, Tharu* and *dalit*[7]. With the exception of the Tharus, all the people have migrated from the hills and Burma (currently Myanmar) in the last 40 years.

The differences between various class, castes and gender are obvious in all CFUGs. Most poor people have no access to forest resources and decision-making processes. A poor, old man from Sundari CFUG claimed "we are not getting anything from the forest and only the rich and elite are enjoying the benefits." The people consider a position in the CFUG committee as a symbol of high social status and crave to get it, so only the rich and powerful can hold it. A group of dalits in Gagan Khola CFUG said "we are not eligible to be in the high status positions such as Chairperson, Secretary and Treasurer and only the rich people can hold them." A group of people in Baishakheshwori CFUG said "there is always hold of a particular group of people in the CFUG committee."

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5 The case studies of Sundari and Baishakheshwori CFUGs are taken from the project entitled Developing Methodology for Sustainable Management of Medicinal Plants in India and Nepal (2003-2006) which have been jointly implemented by ForestAction, Nepal; Foundation for Revitalization of Local Health Tradition (FRLHT), India and Environmental Change Institute of the University of Oxford, UK and funded by Forestry Research Programme (FRP) of Department for International Development (DfID), UK.
The case study of Gagan Khola is taken from the project entitled Strengthening Advocacy and Local Government Accountability (2002-2003) which has been jointly implemented by ForestAction, Nepal; Forum for Protection of Public Interest (Pro-public), Nepal; Informal Sectors Service Centre (INSEC), Nepal and funded by USAID through The Asia Foundation (TAF).

6 Caste is a system of social stratification in Hindu society based primarily on occupations.

7 *Dalit* denotes a group of castes, which has been considered as untouchable according to the Hindu religion and has long been suppressed in the Hindu society.

When facilitated well, the PAL process is an inclusive and interactive model, which facilitates the critical understanding of the community forestry process collectively and also allows an intervention to take place in a holistic way, challenging the power relationships and thus positively affecting equity. It provides the space to local people for unconstrained dialogues that bring the poor and marginalized to the forefront and facilitates the meaningful negotiation needed to achieve equity outcomes through regular and critically reflective interactions among different sub-groups within the CFUGs. PAL can be used to focus on second-generation issues, including improving governance and empowering the poor and marginalized. It accomplishes this by creating an environment conducive to bringing diverse perspectives, interests, knowledge and information from within and beyond the community into the discussion. How the PAL process functions, through workshops and discussions, and produces positive changes, is documented elsewhere (refer to Malla *et al.* 2001a & 2001b, Banjade *et al.* 2004, and Timsina *et al.* 2004 for details). The joint teams to conduct PAL processes have generally possessed good facilitation skills and comprised external facilitators, researchers and community members. A high degree of commitment, well-focused attitudes, hard work, sincerity and sensitivity were encouraged to facilitate the process. As an active member of the facilitation team on the behalf of ForestAction, I have reflected on the actions of research teams and communities and identified the following outcomes of the PAL process:

Outcome of the PAL process in the 3 CFUGs:

- *Identification of poor:* On the basis of criteria developed collectively, poor households have been identified so as to provide them with special support.
- *Differential membership fee:* The membership fee for the poor has been significantly reduced to an affordable rate and exempted for the poorest.
- *Differential rates of forest products:* The CFUGs reduced (in some cases exempted) the rate of forest products for the poor.
- *Special support for identified poor:* The Baishakheshwori CFUG has allocated forestland and provided technical support to cultivate NTFPs; financial support to cultivate cereal crops; financial and technical support for raising goats; employment as forest guards and wage laborers; and scholarships for the children of the poorest. Gagan Khola CFUG has allocated forestland and provided technical support to cultivate aromatic grasses and a revolving fund for savings and credit facilities. Sundari CFUG has built houses for the homeless (Figure 1); provided financial and technical support for raising goats, and allocated forestland to cultivate NTFPs.

- *Inclusive policy space for women, poor and marginalized:* The CFUGs have made provisions for the representation of the poor, women, *dalit* and people from all the toles [8] in the CFUG committee with the aim that voices of all categories people will be heard in decision making.
- *Simplified rules for obtaining forest products:* The CFUGs have simplified rules and procedures for obtaining forest products from the forest so as to ensure the poor can easily follow them.
- *Diversified objectives of the forest management:* All three CFUGs have incorporated the management of NTFPs in their forest operational plan[9] with the realization that these are the resources contributing the most to the poor users' livelihoods.

A poor family's house in Sundari CFUG

Sundari CFUG built the family a new house

Figure 1: House Built in Sundari CFUG

8 A tole is a small cluster of settlements or hamlets usually found in the rural villages.

9 Forest operational plans are the forest-working plans of the CFUG. It is mandatory for the community to prepare one before having the community forest handed over to the CFUG. CFUGs need to follow the plan once it is approved. However, they can amend it if they feel necessary.

Besides these tangible outcomes, the CFUGs have become sensitized towards the adoption of social justice and good governance principles and have institutionalized the PAL process. These cases demonstrate that these groups are interested in promoting equity, not only by treating all users equally, but also by providing more political and economic advantages to the poor and marginalized. Economically, they have decided to provide forest products either through lower rates, waived or reduced membership fees, free membership, and provided the community's resources (funds and lands) exclusively to the poor and marginalized. Politically, they have decided to involve the poor and marginalized in decision-making bodies, such as CFUG committees, and have also decided to listen to the voices of the poor and all users by deciding to conduct PAL processes in the future. These decisions are the outcomes of the series of deliberative interactions of the sub-groups in the community.

It is important to look at the details of the PAL process to understand the strategy of addressing equity. Before going to the field to facilitate the process, the issue of equity is reviewed by the team of facilitators, with respect to theory and practice, and is later discussed with the communities and finalized in the specific local community forestry context. The research team and the community attempted to ensure a clear understanding of equity as a purely socio-political issue deeply rooted in Nepal's cultural context. The PAL process, with its institutional and managerial measures, can promote equity by critically reflecting on the practices and values of the communities. Moreover, the process can be instrumental in addressing the prevailing social inequity and vital to changing the context of it by critically informing the broader socio-cultural practices and values.

The PAL process should ultimately be implemented by CFUGs following some initial support. In order to accomplish this goal, strategic features of the process are made more understandable, simpler, adaptable and cost-effective in the local context. Some of the features of the process derived from the experiences are: critical inquiry for reflection; collective planning for future courses of action; sensitization for empowerment; coaching for capacity building; adoption of inclusive participatory processes; social analysis of the issues; dynamic facilitation; appreciation of the existence of differences in capacity, interest and perspectives; and institutionalization of the process. A series of discussions with various focus groups have been held to sensitize and empower them and triangulate their perspectives on issues. The analysis of such perspectives in a broader socio-cultural picture gives an understanding of the political position of those sub-groups in the community. This helped us to analyze the level of access those sub-groups have to decision-making and benefit sharing.

Since the PAL process builds on a participatory 'learning by doing' approach, adequate exercises in terms of preparation, action and reflection have to be done in a systematic fashion (Malla *et al.* 2001a and 2001b). Facilitating institutions need to overcome a number of cultural and political forces resisting change. Groups of middle class people from the Gagan Khola and Sundari CFUGs, for example, opposed the exclusive provision for the poor and marginalized claiming that all the people in the village are poor in one way or other. They further cited that there is insufficient

support to the poor and marginalized in the Forest Act of 1993 and Forest Regulation of 1995. A political approach and strategy is required to tackle these resistances. Creating equity in these situations requires dynamism in the process itself in which facilitators need to play a number of roles: firstly a *coaching role* as sensitization, knowledge and empowerment are needed for facilitating change; secondly a *process facilitation role* while marginalized sections are becoming empowered and taking the lead role in the discussions; thirdly an *advocacy role* to push the agenda of marginalized sections while the powerful and elite attempt to dominate them; and fourthly, a *negotiating role* as conflicts erupt among sub-groups.

Careful planning and action, adequate reflection as well as flexibility in facilitating the process are needed to effectively perform these roles. Moreover, the facilitating teams and institutions need to have a high degree of patience, commitment, flexibility and skill to work in a truly participatory approach. These institutional qualities can be more easily promoted in CSOs than government as they are intrinsically able to change their working approach, organizational structure and incentive structure with less formality than other institutions. Additionally, they are demonstrating their capacity to institutionalize innovative methodologies and non-conventional approaches for addressing complex issues like equity. However, the effectiveness of the process should be monitored collaboratively to understand how this is impacting people's livelihoods and their resource base. In addition, applying the PAL process on a greater scale through policy still needs to be addressed.

4.1. Facilitating Discourses on Equity at the National Level

Since the community forestry program formally began in Nepal with the preparation of the Master Plan for Forestry Sector in 1989, forestry officials have been involved in the hasty formation of CFUGs without adequate community mobilization. This is possibly because of a limited understanding and appreciation of community mobilization and because their performance evaluations are positively influenced when they record a high number of forests handed over to CFUGs (DFO, pers. comm. 1993). At the same time, some CSOs have been involved in the formation of CFUGs with a higher degree of community mobilization. In most cases, CFUGs facilitated by CSOs have been performing comparatively better than CFUGs facilitated by forestry officials, which can be attributed to better community mobilization at the time of formation (Bhola Bhattarai, pers. comm. 2005). The causes of differences in institutional capacity of CFUGs have been debated at local, district and national levels. CSOs have significantly contributed in the debate to help government officials realize the importance of community mobilization. To systematize the CFUG formation process, the government prepared a community forestry directive in 1994.

Many CSOs, including NGOs, community-based organizations, clubs and federations have been supporting CFUGs. They have facilitated the mobilization of community resources; development of CFUG constitutions and forest operational plans; the development of local level enterprises and infrastructure; improved internal governance; and development of methodologies for sustainable management of

forests and pro-poor approaches. Furthermore, CSOs have actively been advocating for political space for themselves and CFUG representatives at the national level to contribute to policy formulation processes. They have also supported government initiatives by providing feedback on the development of policies and programs.

CSOs have been playing a significant role in creating and strengthening institutional structures and democratizing their organizational processes. Examples of such institutional networks are community forestry user networks, community forestry learning groups, multi-stakeholder forums, and community forestry supporters' network at many different levels. They also have begun to establish good working relationships with key people in government institutions to foster the exchange of knowledge, contribute in the policy making process and at the same time help them to understand the complexity of socio-political and cultural issues, including equity. More recently, they have been bringing the issue of equity into public discussions in different ways, forms and levels (Box 2).

These initiatives have been not only instrumental in enhancing critical understanding of equity but also become a great milestone to address equity issues. These initiatives have made tremendous progress in promoting new ways of thinking and action by linking cutting edge innovations in theory and practice and developing functional knowledge networks of local, national and international actors for promoting social justice and equity in community forestry (ForestAction 2004). Nurturing the insights of reflective and deliberative practices, CSOs look to develop and disseminate pragmatic innovations, which prove to be useful for addressing social justice and equity issues. They have demonstrated their distinctive strengths, commitment and enthusiasm to work with the rural poor for social transformation.

Moreover, CSOs are increasingly viewed as an indispensable part of democratic societies as it is believed they advocate for voices of the oppressed and marginalized, and for the welfare and the economic progress for the people. They respect local initiatives as they build on local capacities, knowledge, resources and socio-cultural practices. They have demonstrated capacity to create local knowledge through experience. In addition, they adapt and modify scientific knowledge in local contexts. Local people's knowledge is created and adapted through a dynamic process that integrates scientific information with practical considerations and outcomes. They are quite flexible as their knowledge is constantly modified with the new information and experiences that are encountered while decisions are made and action is taken (Portela 1994). In addition, some CSOs, particularly NGOs and private sector organizations, are flexible enough that over time they can adapt to new issues because of their less hierarchical organizational structures, quick decision-making systems and non-conventional yet professional response to issues. This further adds value to their work, and their projects are becoming more successful than work done by conventional bureaucracy of the governmen

Box 2: Examples of CSO Initiatives to Facilitate Discourses on Equity

Case 1. Discourses of facilitation and critical awareness

ForestAction, a leading forestry sector NGO, has facilitated discourses to raise the critical understanding on equity issues since its establishment in 2000 (ForestAction 2004). They have organized seminars and workshops at the district and national levels to broaden and deepen understanding on key community forestry issues; produced and widely disseminated written materials in the Nepali and English languages to share the ideas with both national and international professional communities. They are also producing posters, cartoons and visuals to provoke discussions on the equity issues at community and national levels. Moreover, they have been actively involved in topical discussions in radio and television programs.

Case 2. Advocacy actions and capacity building

FECOFUN has organized a number of campaigns, speeches and demonstrations and lobbied with wider political forces and stakeholders to exert pressure on the government to prepare and implement policies promoting equity since its establishment in 1995. Some of the issues being discussed include: exempting the tax currently imposed on community forestry in the *Terai*; resisting collaborative forest management policy prepared by government alone; formulating a pro-poor community forestry policy and handing over community forest to the people in the *Terai*. Moreover, the role of FECOFUN has been instrumental in challenging the state authorities' efforts to approach community forestry with a more technical approach and undermine political and social issues such as the roles, rights and responsibilities of communities in forest management (Chhetry *et al.* 2005).

Furthermore, FECOFUN, along with other NGOs and government agencies, has been heavily involved in capacity building in the CFUGs, creating awareness about the rights and the responsibilities of local people towards forest resource management by producing newsletters and radio programs, community forestry support programs and trainings.

Case 3. Gender sensitive organizational structure and program

FECOFUN has a constitutional provision to elect at least 50% women in its executive committees at all levels (village to national), and a requirement that they be included in key positions. They have also developed indicators to monitor equity (of women, the poor, ethnic minorities and marginalized groups) in its organizational structures and decision-making processes. It has facilitated the same in CFUGs in many districts.

The gender, poverty and social equity (GPSE) learning group, for example, has emerged and includes the participation of a wide range of development actors, predominately CSOs, in Nepal. CSOs have been providing support to the GPSE at the Ministry of Forest and Soil Conservation (MoFSC) to develop monitoring indicators for the forestry sector that are specific to issues the GPSE is primarily concerned with.

Case 4. Policy facilitation

The Asia Network for Sustainable Agriculture and Bio-resources (ANSAB) worked with other CSOs and significantly contributed to the formulation of the NTFP

policy in 2004, which many stakeholders in the Nepalese forestry sector have appreciated. Many other CSOs have been actively providing their feedback and suggestions in the policy formulation processes as and when opportunity arises.

Case 5. Field level innovations

ForestAction has been actively involving in developing innovative practices and methodologies at the community to national levels to facilitate the community forestry processes in a more just way. The PAL process described in the previous section is one example of developing the pro-poor focused NTFP management guidelines and NTFP based enterprise. They also facilitate other action research processes to assist CFUGs in becoming more adaptive to the ever changing and complex environment.

In the Sarlahi district, FECOFUN, with support from NGOs, has developed an innovative approach to develop community forestry in the *Terai* with the consent of the distant users of the southern part of the district. This entailed creating a provision in the forest operational plan that distant users will also receive forest products according to their basic needs.

ANSAB has been developing and promoting community-based natural resource enterprises in different part of the country.

The critical awareness on equity issues among community forestry stakeholders has been raised significantly. This was evident at the Fourth Community Forestry National Workshop as a large number of papers related to equity issues were presented (Department of Forests 2004). The workshop participants have strongly recommended improvements to address equity in policy and practices. These recommendations are concerned with positive discriminations towards women, poor and marginalized groups in terms of political and economic spaces, and specifically include: at least 25% of the CFUG funding be allocated to pro-poor activities; legal provisions for allocating community forestland to the poorest; a capacity building program for the poorest to have more power, to allow more access to decision making processes; and promoting pro-poor research, training and participatory monitoring and evaluation.

Since the second-generation issues in community forestry have been acknowledged, there is a tremendous need for support from the diverse disciplines of social sciences, law, management and statistics to address these issues properly. As the bureaucratic structure of the Department of Forest employs only forest technicians who do not possess such professional knowledge and skills, there is an acute need for professional services from the other institutions. Since the CSOs specifically address societal issues by concentrating their efforts on developing knowledge, skills and professional expertise in specific fields, they provide these professional services in a cost effective way, as they do not require the huge permanent structures that are needed for a functional bureaucracy. Their contributions in facilitating discourses on second-generation issues of community forestry have been appreciated by various local, national and international stakeholders. In this connection, the Ministry of Forest and Soil Conservation (MoFSC) has prepared

non-governmental service providers' guidelines in 2003 to secure services from the CSOs and other supporting agencies. However, CSOs' contributions and potential have not been adequately appreciated and realized and thus policy forums have not been sufficiently provided.

As CSOs respond to the prevailing issues in a local community, they become more popular among the communities, particularly the poor and marginalized. The trust that is built allows them to reach wider audiences in remote areas as well as internationally. Despite the difficulties caused by the ongoing political conflict in the country, they have been facilitating a number of initiatives and projects related to empowering the poor and marginalized by enhancing their access and control over resource management, decision-making and the knowledge base.

5. Are Civil Society Organizations a Panacea?

Due to their intrinsic characteristics and behavior, many CSOs lack a critical self-examination of their activities. There is not a clearly spelled out accountability structure for them. On the basis of their contributions to political solutions for some contemporary development concerns, they may conclude that they are a panacea. In contrast, there are some non-political CSOs that may not focus on addressing politically and culturally rooted problems, and therefore do not contribute to the broader social change process. Moreover, the "associational culture" developed among them may not only exclude the voices of the poor, marginalized and oppressed but also promote "quiet encroachment'" upon them (Bayat in Mcllwaine 1998). For example, the forest hand-over issue of the potential and proposed CFUGs in the *Terai* could not be organizationally included in the advocacy agenda of FECOFUN since it has the provision of membership that only those CFUGs which are already registered in the District Forest Office can be represented. Additionally, much of their efforts have not been able to pass beyond the divide between the state and community elite to address the issue of forest access for the poor and marginalized (Timsina and Sharma 2003). The question of how the poor, marginalized and oppressed can effectively take part in the community forestry deliberations, and how and to what extent the elite-dominated CSOs have been able to represent them, has not been properly addressed (Timsina *et al.* 2004b). However, inclusion of these types of issues within the rubric of CSOs is possible (Becker in Mcllwaine 1998).

Since most CSOs build on local capacities, they may carry the local semi-feudal characteristics of the communities into the organizational working structures. It cannot be assumed that locally evolved laws and customs are always democratic and equitable. By being over-optimistic about their impartiality and capacity, they may contribute to the reinforcement of prevailing social and economic inequality (Benda-Beckmann *et al.* 1998).

Many CSOs do not allow external agencies and experts to monitor and evaluate their activities; they create a cocoon for their work, conducting the planning,

implementation, monitoring and evaluation in isolation from mainstream development. Furthermore, some of them do not value the work of other CSOs appropriately and maintain a competitive perspective, which leads them to a diminished capacity to understand issues, deliver services and influence policy. Some CSOs, particularly NGOs, have limited capacity to work on issues at a wider geographical level due to limited financial and human resources and their organizational structure. Thus their work may not always represent the issue on a wider scale. Some institutions, even if they have relatively high resources, focus their activities in limited geographical areas (often on road sides, accessible areas, district head-quarters and in towns) and restrict actions to what is accepted within the discipline. In contrast, some CSOs such as FECOFUN have been working on a large geographical scale, but are unable to manage their huge organizational affairs effectively, largely due to limited financial and capable human resources. However, it is important to note that some CSOs acknowledge these issues and work to overcome them.

In addition, some challenges exist due to the inconsistency of policies and practices of government institutions. Government institutions have been bypassing capable CSOs who have been critical of policy processes, instead favoring government-oriented CSOs for policy development. This allows the government institutions to politically demonstrate that they have consulted CSOs, but to retain discretionary power for decision-making. This was clearly demonstrated when the MoFSC prepared policy for the Collaborative Forest Management Plan in the *Terai*, which resulted in decreased equity between *Terai* and hill farmers, and no CSOs were permitted to voice their opinions. Moreover, there is still a general tendency of government officials to discount the capacity of CSOs to contribute in the development and social change processes and label them as 'project-oriented' or 'dollar cultivators'. This may be partly true because CSOs efforts are fragmented in nature as projects are guided by donors. This has created the question of sustainability, integrity and accountability of CSOs. Despite their constant interaction with a wide network of professionals, activists and institutions both locally and globally, their joint and integrated efforts have not adequately been realized in practice.

6. Conclusions

CSOs are promoting equity in community forestry by facilitating discussions among decision-making stakeholders at different levels. There exists the potential to create and institutionalize positive discrimination for the poor and marginalized in resource access and including them in decision-making processes. However, a demonstrated political orientation, commitment, careful planning and skilful facilitation are essential.

Though the members and sub-groups of a community are heterogeneous in terms of need, interest, capacity and power, they share similar socio-cultural, biophysical, political and historical contexts. Their reciprocal relationship not only

causes unequal power relations but also creates an incentive for them to collaborate and create better livelihoods. Due to deeply rooted unequal power relationships in Nepali society, there is the possibility of unfair participation from the poor, marginalized and oppressed in decision-making processes. Thus, there is a need for politically oriented facilitation to empower the poor, marginalized and oppressed, which can be institutionalized by promoting deliberative governance at the CFUG level. Addressing equity at this level enables all community members to be involved in formulation and amendment of rules and implementation of activities. However, care should be taken to emphasize adaptive learning processes through conscientious action and monitoring. PAL processes institutionalized at the CFUG level have demonstrated their effective contribution to the social change processes.

Equity has been increasingly acknowledged as subjective, dynamic and relative in nature, and stakeholders have experienced difficulty in building a shared understanding of it. While some community forestry actors, particularly government authorities, look at it in an apolitical way, some actors, particularly CSOs, see it as a very political issue. To foster a deeper and broader understanding of the issue and create useful, strategic policy recommendations, deliberate discourses among stakeholders are essential at the national level. Further, these discourses provide opportunities to stakeholders who normally have little or no access to policy and decision-making processes, and the policies that result from this dialogue are more likely to be considered fair and just. Discussions on the issue may broaden the scope of understanding on a wider level and thus explore the potentials for contribution in the social change process.

The features of CSOs place them in a better position to take the initiative to promote critical political discussions by creating and institutionalizing methodologies to address equity from local to national levels. In this endeavor, they have been helping sensitize all stakeholders, including government institutions, to look at the interface of social and biophysical aspects of forest resource management by bringing social issues such as equity, conflict management and governance into public debate. In addition, they have played vital roles in the development and management of knowledge networks, with the goal of promoting democratic practices. Moreover, they have been facilitating debate about the inherent diversity and differentiation among stakeholders in community forestry. These debates focus on examining how dominant groups are structurally more advantaged to exercise power and to create more legitimate claims of knowledge (Chhetry *et al.* 2005). They are developing innovative, locally suitable practices to promote equity and social justice at various levels. Ample spaces for them to contribute to policy formulation and implementation processes are instrumental to institutionalize more just and dynamic institutions, processes and policies.

While CSOs have advantages to facilitate many development interventions and social changes, they also face both internal and external challenges. Often CSOs are treated as service providers by state authorities rather than as civil forces that speak for the poor, marginalized and oppressed. They are often uncritical in their role and

contribution to broader societal change. These factors may limit their ability to work for the benefit of the target groups. However, those which function transparently and demonstrate consistency in speech and action and have a wide and reputable network to access power, knowledge and resources are more trustworthy and reliable. Thus to enhance their contribution, they should build on their strengths and promote better relationships with state authorities, the public and donors. A complimentary rather than comparative basis may be useful to strengthen their relationship with the state (Stephen 1998). The better relationship gives CSOs greater leverage to influence discourses and thus, the policies. CSOs' engagement in discourses and policy processes exert pressure on legitimate power holders to be more responsive and accountable to citizens (Timsina *et al.* 2004b). They may be visualized as civil spaces, to progress which may forward the agendas of poor, marginalized and oppressed in the development and social change discourses at various levels (Mcllwaine 1998). However, regular critical reflections by CSOs on their activities are essential.

References

Agarwal, B. 2000. *Group Functioning and Community Forestry in South Asia: A Gender Analysis and Conceptual Framework*. The United Nations University, WIDER.

Agarwal, B. 2001. "Participatory Exclusions, Community Forestry, and Gender: An Analysis for South Asia and a Conceptual Framework." *World Development*. 29(10): 1623-1648.

Agrawal, A. and C. Gibson. 1999. "Enchantment and Disenchantment: The Role of Community in Natural Resource Conservation." *World Development*. 27(4): 629-650.

Banjade, M. R. 2003. *Local Perception and Use of Information in Community Forest User Groups of Nepal*. Thesis. Wageningen University and Research Center: The Netherlands.

Banjade, M.R., H. Luintel and H. R. Neupane. 2004. "An Action Learning Process for Social Inclusion in Community Forestry." *Proceedings of the Fourth National Community Forestry Workshop*. Department of Forest, HMG/N. Katmandu, Nepal.

Benda-Beckmann, F.V, K. von Benda-Beckmann and J. Spiertz. 1998. "Equity and Legal Pluralism: Taking Customary Law into Account in Natural Resource Policies". *In Searching for Equity: Conceptions of Justice and Equity in Peasant Irrigation*. Boelans and Davida (eds). 57-69. Van Gorcum & Company: Assen, Netherlands.

Bhatnagar, B. and A. Williams. 1992. *Participatory Development and the World Bank: Potential Directions for Change*. World Bank: Washington, D.C.

Bhattarai, B. 2005. *Personal communication*. 10 August.

Bista, D.B. 1991. *Fatalism and Development: Nepal's Struggle for Modernization.* Orient Longman: Calcutta.

Chandhoke, N. 1995. *State and Civil Society: Explorations in Political Theory*. Sage Publications: New Delhi.

Chhetry, R. B., N. P. Timsina, H. R. Ojha and K. P. Paudel. 2005. "Management of Knowledge System in Natural Resources: Exploring Policy and Institutional Framework in Nepal." A Project Report Prepared by ForestAction, Katmandu, Nepal.

Clark, J. 1995. "The State, Popular Participation, and the Voluntary Sector." *World Development*. 23(4):593-601.

Cleaver, F. 2001. "Institutions, Agency and the Limitations of Participatory Approaches to Development." In B. Cooke and U. Kothari (Eds.) *Participation: The New Tyranny*. Zed Books:New York.

Cooke, B. and U. Kothari. 2001. "The Case for Participation as Tyranny." In Cooke B. and Kothari, U. (Eds.) *Participation: The New Tyranny*. Zed Books; New York. 1-15

District Forest Officer. 1993. *Personal communication*. April 23.

HMG/N, Department of Forest, 1989. Master Plan for the Forestry Sector. Katmandu, Nepal.

Department of Forest. 2004. *The Proceeding of Fourth National Community Forestry Workshop*. Department of Forest, HMG/N; Katmandu, Nepal.

Department of Forest. 2005. *Community Forestry Database of Department of Forest (16th Aug. 2005)*. Katmandu: Nepal.

Edmunds, D. and E. Wollenberg. 2002. "Disadvantaged Groups in Multi-stakeholder Negotiations." CIFOR Programme Report. http://www.cbnrm.net/pdf/edmunds_d_001.pdf

Forest Resources Studies and Action Team (ForestAction) 2004. *Annual Report*. Katmandu, Nepal.

Hadenius, A. and F. Uggla. 1996. "Making Civil Society Work, Promoting Democratic Development: What Can State and Donors Do?" *World Development*. 24(10): 1621-39.

Hobley, M., 1996. *Participatory Forestry: The Process of Change in India and Nepal*, ODI: London.

Innes, J. E. and D. E. Booher. 2003. *Collaborative Policy Making: Governance through Dialogue. Deliberately Policy Analysis – Understanding Governance in the Network Society*. Cambridge University Press.

Isaacs, W. 1999. *Dialogue and the Art of Thinking Togethe*r. Doubleday: New York.

Malla, Y. B. 2001. "Changing Policies and the Persistence of Patron-Client Relations in Nepal: Stakeholders' Response to Change in Forest Policies." *Environmental History*. 6 (2): 287-307.

Malla, Y.B. and R. J. Fisher. 1987. "Planting Trees on Private Farmland in Nepal: The Equity Aspect." Paper Presented in Multipurpose Trees for Small Farm Use Workshop in Pattaya, Thailand 1-5 November, 1987. organized by Winrock International – F/FRED.

Malla, Y., P. Branney, B. Bhattarai and P. Tamrakar. 2001a. *Innovation forestry: a synthesis of small-scale forest management practice from Nepal. A Field Worker's Guidebook for Supporting Community Forest Management*. Forest User Groups Forest Management Project (FFMP), DIRD, UK and LFP/HMGN/DFID: Nepal.

Malla, Y., P. Branney, B. Bhattarai and P. Tamrakar. 2001b. *Participatory Action and Learning: A Field Worker's Guidebook for Supporting Community Forest Management*. Forest User Groups Forest Management Project (FFMP), DIRD, UK and LFP/HMGN/DFID: Nepal.

Mcllwaine, C. 1998. "Civil Society and Development Geography." *Progress in Human Geography*. 22(3): 415-424.

Ojha, H., B. Pokharel, K. Paudel and C. McDougall. 2002. *Stakeholder Collaboration, Adaptive Management and Social Learning: A Comparative Review of Eight Community Forestry Sites in Nepal*. ForestAction, Katmandu and CIFOR, Jakarta.

Portela, J. 1994. "Agriculture: Is the Art de la Localite Back? The Role and Function of Indigenous Knowledge in Rural Communities." In J.B. Dent and M.J. McGregor (Eds.) *Rural Farming System Analysis: European Perspectives*. CAB International: Oxon.UK. 269-279.

Stephen, P. 1998. "Are Non-Government Organizations Problematic Organizations?" Thesis. Deakin University, Australia.

Timsina, N. P. and N. S. Sharma. 2003. "State Versus Community: A Confusing Policy Discourse in Nepal's Forest Management." *Journal of Forest and Livelihood.* 2(2): 8-16.

Timsina, N. P. 2002. *Political Economy of Forest Resource Use and Management: An Analysis of Stakeholders' Interests and Actions in Nepal's Community Forest Management*. The University of Reading, UK.

Timsina, N. P. and H. R. Ojha. 2003. "Social Justice in Common Property Natural Resource Management: A Conceptual Framework." *Proceedings of the National Workshop on Management of Common Property Resources and Equity: Exploring the Lessons from Nepal,* May 28, 2003. ForestAction: Katmandu, Nepal.

Timsina, N. P., H. Luintel, K. Bhandari and A. Thapaliya. 2004a. "Action and Learning: An Approach for Facilitating a Change in Knowledge and Power Relationship in Community Forestry." *Journal of Forest and Livelihood*. 4(1): 5-12.

Timsina, N. P., Ojha, H.R. and Paudel, K.P. 2004b. "Deliberative Governance and Public Sphere: A Reflection on Nepal's Community Forestry." *Proceedings of the Fourth National Community Forestry Workshop*. Department of Forest, HMG/N. Katmandu, Nepal.

Whitehead, M 2000. "The Concepts and Principles of Equity and Health." World Health Organization, Regional Office for Europe, Copenhagen [online 4 Aug. 2005] URL: http://ftp.who.dk/Document/PAE/conceptsrpd414.pdf

Hanging in the Balance:
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Widening the Gap between *Terai* and Hill Farmers in Nepal: The Implications of the New Forest Policy 2000

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Abstract

Community forestry programs in Nepal have implemented successful policy programs that encourage peoples' participation in decision making and benefit sharing within poor and marginalized communities. Government policies, such as the Master Plan for the Forestry Sector (1988), the Forest Act (1993) and the Regulations of 1995 are key foundations for community forestry in Nepal. They have the potential to promote decentralization, devolution, participatory democracy, democratic governance, human rights, improve livelihoods of the poor and sustainable forest management in the country. However the more recent Forest Policy of 2000, along with the Collaborative Forests Management Plan (CFMP) in 2003, discourage the handover of national forest to communities in the Terai, Churia, and inner Terai regions and impose a system of collaboration between government and communities instead of allowing communities to determine how their local resources can be utilized. The Forest Policy of 2000 and the CFMP guidelines are highly debated policies in Nepal and are seen to be causing further inequities between Terai and hill people in Nepal.

1. Introduction

Nepal has been developing community forestry projects for over 25 years, creating many successes and hopes for the future. Formal polices have been adopted that codified community forestry into the legal framework and marked a transfer from government control to a situation where local people are assigned rights and responsibilities for the conservation, development and utilization of forest resources. More recently, however, there have been policy changes that have caused serious concern for the people working to bring this more democratic governance

system to communities who live near forests. This paper explores the implications for equity between *Terai* and hill forest users that are a result of recent forest policy shifts in Nepal.

Nepal is regarded as the heart of the Himalayas and is a very mountainous country. However, a considerable proportion of Nepal is in the *Terai* region, the plain area of the southern part of the country which extends from east to west and comprises 17% of the total land, including the most productive forest (Figure 1). The *Terai* is inhabited by half of Nepal's population but holds only 10% of the total forest. Since the Nepalese government's legal recognition of community forestry in the 1990s, the paradigm for forest management in Nepal has shifted. The Forest Act of 1993 gave legal rights to local communities to manage community forests, establishing the power in the local population to determine the ways in which resources are managed, decisions made and benefits and burdens are shared. This was accompanied by a change in management to include poverty alleviation and rural development in the goals of forestry management. Over time, community forestry in Nepal has been largely successful in not only reversing forest degradation, but also in catering to local needs for forest products.

However, more recently, due to the Revised Forest Policy of 2000, the implementation of community forestry law and policy has not been uniform throughout the geographic span of the country. This particularly disadvantages people of the *Terai*, inner *Terai* and *Churia* regions, and it is creating inequity in the political and economic access rights for forest user groups in different areas of the country.

The forest policy implementation of 2000 is one of the most recent and hotly debated policies in Nepal. In this paper I will argue that this policy promotes inequity in forest access between hill and *Terai* communities. I analyze the Forest Policy of 2000 from the perspective of equity at the national policy level between the hill and *Terai* regions, rather than at the micro or intra-community level. The particular focus is on political inequity, in terms of the role of *Terai* communities in decision making, access to forests and benefit sharing. Moreover, the forest policy also has economic implications for these communities in the individual and collective benefits they can get from the forest management. I will further argue that sustainable forest management will be served if *Terai* communities have opportunities to manage their forest resources under a community forestry approach, provided they have support to build their capacity for forest management. I will also demonstrate the ample capacity of *Terai* communities to conduct responsible forest management.

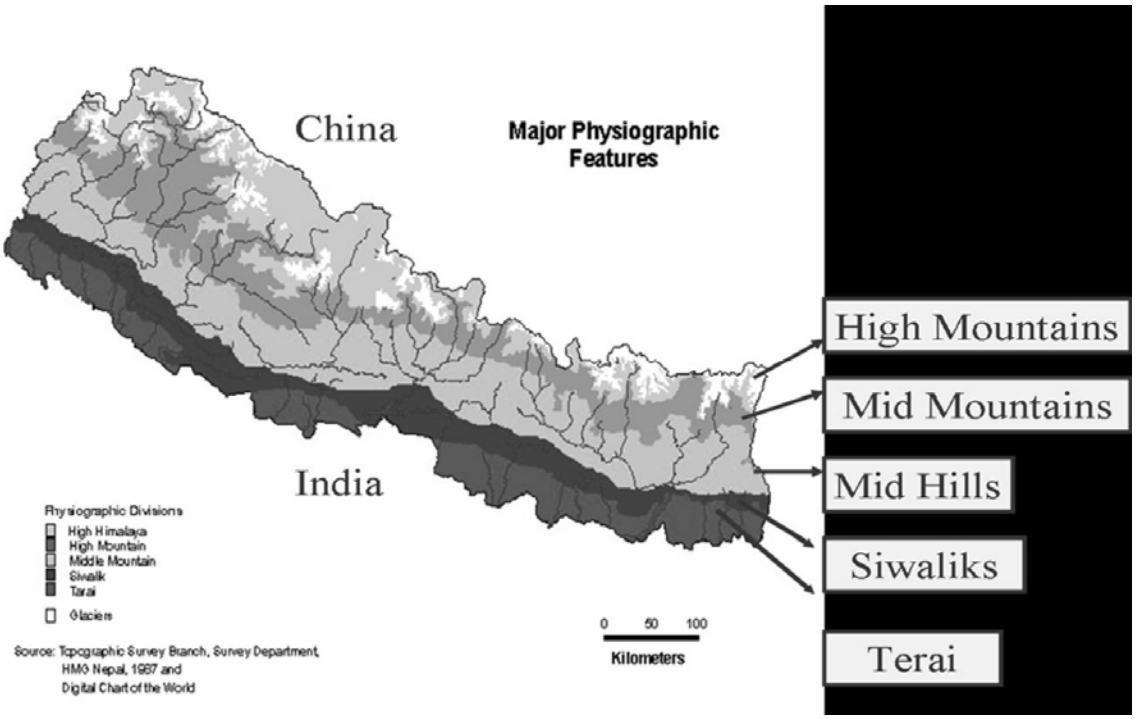

Figure 1: Map of Nepal

The following section briefly discusses my methodology. Section 3 gives a short overview of Nepal's forest policies and the general background of Collaborative Forest Management Plan (CFMP), which was enacted under the government management forest provision and the Forest Policy of 2000. I will also discuss the status of community forestry in the *Terai*. Section 4 analyzes the implications of the Forest Policy 2000, which gives inequitable treatment to *Terai* communities. This section will also discuss the capability of these communities to successfully manage their forests, and highlights the differences between community forestry and CFMP from an equity perspective. Finally, section 5 concludes the paper with some options for the future of *Terai* forest management.

2. Methodology

This paper is based on my own experiences of working with community forestry and social mobilization in the Federation of Community Forestry Users, Nepal (FECOFUN) for the past 10 years. I will draw on some specific data collected from 24 districts of the *Terai*. The data includes information on registered Community Forest User Groups (CFUGs)[1] with forest rights, registered CFUGs

1 Forest Act 1993 section 2 (h) and (r) defined that "community forest" means a national forest handed over to an user group pursuant to section 25 for its development, conservation and utilization for the collective interest. "User group" refers to groups registered pursuant to section 42 for the management and utilization of community forest.

without forest rights and informal groups who are not registered with no forest rights (potential community forest user group- PCFUGs)[2]. FECOFUN has also conducted studies about the experiences and future potential of CFUGs in the *Terai*. Data were collected from district FECOFUN offices, the District Forest Office and informal PCFUGs by the FECOFUN's facilitators in Nepal. I will also use secondary data from published and unpublished works from FECOFUN and other organizations.

3. Changing Forest Policies in Nepal: An Overview

Between 1964 and 1986, Nepal's forests were reduced from 45% to 37.4% of the total land area. This was reduced again to 29% in 1989. Due to the alarming rate of deforestation in Nepal, twenty five years ago the World Bank reported that Nepal would be converted to desert if forest degradation was allowed to continue at such a rapid pace. During that period forest policy and management were under state control, and the government machinery was not effective in protecting and managing the forest. However, the government gradually adopted a new outlook for forest policy through a series of government decisions outlined in Table 1.

With the installation of a democratic system of government in 1990, the Nepali political environment became favorable to community forestry. The Master Plan of 1988 and the Forest Act of 1993 are key foundational policies for community forestry in Nepal. The Forest Act of 1993 categorizes forest into private and national forest, which includes community forest, leasehold forest, religious forest, protected forest and government forest. According to this act, community forests are those that have been handed over to a user group with the entitlement to "develop, conserve, use and manage the forest and sell and distribute the forest product independently by fixing their prices according to work plan" (Article 25 (1)). Article 30 also gives the priority to community forestry in national forests that are suitable to handover to user groups. Because of this act, millions of hectares of national forest were handed over to community groups to manage in a potentially more effective way.

The Forest Act of 1993 and Regulation of 1995 successfully promoted democratic processes at the village level. These policies have enabled the formation of community forestry user groups, and there are now 13,749 CFUGs managing 1,134,372 ha of national forest under community forestry arrangement. However, of the total forest user groups, only 1819 are in the *Terai*, much fewer than in the hill areas. Although law and policy do not discriminate against the *Terai* communities outright, this disparity stems from the reluctance of the forest administration to hand over the valuable *Terai* forests to communities. Since *Terai* forests are productive and high in value, the Department of Forests (DOF) is keen to keep management

2 PCFUGs are registered or non registered groups, who have no legal authority to manage forest. They do not have approved operational plan from District Forest Office, but they are managing the forest.

Table 1: Timeline of Government Decisions on *Terai* Forest Management

Date	Decision	Implications for control of forest management
1957	Nationalization of private forest	Control of the state over the forest of the country
1961	The Forest Act	Timber management of the government managed forest
1967	Forest regulation with special provision	Reinforced state authority, more power to the forest bureaucracy
1976	*Panchayat* forest and *panchyat* protected forest Act	The importance of peoples' participation in forest management is realized
1988	Master plan for the forestry sector	Emphasized the sustainable management of forest and livelihood of the community
1993	Forest Act	Legal basis for formation of Forest User Groups
1995	Forest Regulation	FUGs were able to be registered in the District Forest Office
1997	An Operational Forest Management Plan (OFMP) is prepared for 17 *Terai* district by Department of Forest (DOF)[3]	OFMP was not based on community involvement, but was geared towards timber harvesting under 'scientific management'. The plan failed due to opposition from local communities and civil society organizations (CSOs)
1998	Second amendment of Forest Act 1993 drafted by Ministry of Forest and Soil Conservation (MoFSC)	Opposition from CFUGs because the draft did not support the CFUG model. Draft did not proceed due to opposition
2000	Forest Policy 2000	Forest policy passed by cabinet without wider consultation, imposing a 40% tax on CFUGS and restrictions on forest handover in the *Terai*. Supreme Court of Nepal rules this policy as unconstitutional, with little effect
2003	Collaborative Forest Management Plan (CFMP) guideline imposed by MoFSC	MoFSC imposes the CFMP Guideline for *terai* forests, without wider consultation. DFOs are piloting CFMPs in11 *Terai* districts, but the guideline is opposed by *Terai* communities who prefer a community forestry approach

3 The Department of Forest is the responsible body for the management of all types of forest under the MoFSC.

under the government control and capture a large amount of revenue from the *Terai* forest and as a result, there are different policies applying to the two different regions. However, the government is not managing the forest well and the opportunities for community management and arrangements for revenue sharing have been neglected.

3.1. The Operational Forest Management Plan Concept

In the mid 1990s the DOF developed an Operational Forest Management Plan (OFMP) for each of the 17 *Terai* districts. The DOF created this technical plan to manage *Terai* forests in a "scientific manner", but the plan was handicapped both by financial and non-financial issues (Neupane 1997, Baral 2002). Donors did not support the operation of OFMP, since *Terai* communities were opposed to the plan, which effectively blocked its implementation.

In the meantime, some programs began to promote the community forestry approach used in the hills of Nepal in the *Terai*, inner *Terai* and *Churia* region. At the national level, the network of FECOFUN, plus 15 other non-governmental organizations (NGOs), created the *Terai* Community Forestry Action Team (TECOFAT). In the mid 1990s TECOFAT mobilized communities from around Nepal on wide ranging social and political concerns, which led to the failure of OFMP and the growth of community forestry. Numerous CFUGs were formed in the *Terai* and they began to successfully manage the forest. However this approach was not supported by government, which instead attempted to impose a model manifested in the Collaborative Forest Management Plan (CFMP).

3.2. The Collaborative Forest Management Plan

Opinion is divided in government agencies over the role of communities in managing the *Terai* forests. One senior government official has written that *Terai* forests should be managed by a "collaborative approach" involving both government and community, and argues that *Terai* forest should be managed with multi-stakeholder participation (KCH 2004). Many want to keep the forests under government management, reasoning that the government should collect revenue from the productive forests of the *Terai*. This reasoning argues that products from these forests need to be distributed throughout the country, including to urban populations, and the government should therefore be responsible for these areas. Government officials do not seem to consider the possibility that community forest user groups may be able to distribute products all over the county as or more efficiently than the government (Bhattarai 2004).

Amidst this debate, the Forest Policy of 2000 emerged, discouraging the handover of national forest to communities in the *Terai*, *Churia*, and inner *Terai*. The policy required that CFUGs in the *Terai* deposit 40% of the revenue they generate from the sale of timber with the government. This was successfully challenged in the Supreme Court by FECOFUN, resulting in a reduction in the amount collected by the government (see Box 1).

Box 1: Forest Policy 2000 Challenged in the Supreme Court

In the legal challenge to the Forest Policy mounted by FECOFUN, the Supreme Court of Nepal ruled that the requirement that CFUGs deposit 40% of forest revenue with government lacked a legal basis. The court observed that the decision to withhold *Terai* forests from community forest development, limiting their access to only barren and shrub lands and denying their right to benefit from community forests, went against the principles of Decentralization enshrined in Article 26 (4) of the Constitution. However, as the decision was a policy decision the court was powerless to require any remedial measures on the part of government. Nevertheless the government did reduce the 40% requirement to 15% for two forest species (*sal* and *khayair*) in the *Terai* forest.

(Decision dated 20 March 2003.)

The Collaborative Forest Management Plan (CFMP) Guideline was developed in 2003, and passed by the secretary of MoFSC. DFOs are now trying to make CFMPs where communities have already formed PCFUGs. Confrontation between DFO and local communities has occurred in some cases, and forests are being destroyed by contractors who are exploiting the confusion created by the process. By the time a CFM plan is passed by MoFSC, such forests may already be cleared. The CFMP system is thus slow and unable to tackle the pressing forest management issues being faced in the *Terai*.

In *Terai* districts, the Department of Forest has attempted to gain greater control over the higher value (relative to the hills) of *Terai* forest, rather than devolve towards community forestry (Seeley *et al.* 2003). There are about 4000 informal community forestry user groups formed that are involved in forest management (Britt 2002).

3.3. Community Forest User Groups in the *Terai*

According to the national community forestry database (HMG/N 2005) there are now more than 13,749 CFUGs in Nepal, with 1891 found in districts defined as *Terai* and inner *Terai* (see Table 2). Only about 10% of the *Terai* and inner *Terai* forests have been handed over to CFUGs, compared with the 23.6% of hill forests that have been handed over.

Table 2: Community Forestry in Nepal (Hill and *Terai*)

Particular	Nepal	*Terai*	Hill
Forest area	5.5 million ha	1.9 million ha	3.6 million ha
No. of CFUGs	13,749	1,819	11,858
Area handed over to CFUGs	1,134,372 ha	282,890 ha	851,482 ha
Average area/Household (HH)	0.073 ha	0.79 ha	0.702 ha
CF covered HH	1,568,615	356,687	1,211,928
Average HH/CFUG	114	188	102

Source: DOF, database and district profiles.

Since 2000, the new forest policy resulted in a virtual freeze on all new community forest handovers in the *Terai*, with the exception in the three districts supported by the *Churia* Forest Development Project (ChFDP) in the eastern *Terai*. The new policy explicitly singled out the *Terai*, *Churia* and the inner *Terai* areas as special cases regarding community forestry implementation. This is in contrast to the 1993 Act, which makes no such distinction (Bampton 2004). Previously registered *Terai* CFUGs with approved operational plans have a legal right for creating and utilizing a forest utilization fund. These 1819 CFUGs can manage their forests and develop their community from this fund. However, with the Forest Policy of 2000, the process has been halted and the *Terai* groups who have not been granted legal rights for forest management cannot enjoy similar rights.

4. Implications of the Forest Policy 2000

4.1. A Comparison of the Impacts on Forest Policy 2000 on Hill and *Terai* People

Community forestry as practiced by CFUGs has brought important changes to the benefits that communities can gain from the country's forests, and implementing bodies have made efforts to address disparities based on caste, ethnic background and gender (Kanel 2004). However, the requirement to work with the CFMP model in the *Terai* is creating a divide between the rights given to hill and *Terai* communities. Table 3 analyzes some key differences between CF and CFMP. The Forest Policy of 2000 creates inequity among forest users as those communities who have access to community forestry are allowed greater access than those who do not enjoy such rights. Unregistered PFUGs in the *Terai*, however, are nevertheless protecting the forest and utilizing the funds to improve their members' livelihoods and community development. The lack of legal recognition poses an on going issue for these groups. Without legal status for the groups, PFUGs are not required to operate in a transparent manner, which has tended to work against the poor, and without transparency the poor and marginalized groups in communities are less likely to gain livelihood benefits and opportunities. In community forestry people have rights to forest, but in CFMP forest rights depend on the forest administration.

Nepali forest users have rallied against the CFMP (Figure 2), but the government is not listening to their voices. Given the sensitive political situation in Nepal, this kind of response from the government may further destabilize the situation.

Table 3: An Analysis of Equity Differences between Community Forestry and Collaborative Forest Management Plan

Subject/area	Community Forestry (under Forest Act 1993 and Regulation 1995)	Collaborative Forest Management Plan
Decision making: *Preparation and amendment of operational plan*	Forest users have full rights to prepare operational plan and they can amend their forest operational plan according to their needs. DFO is responsible for technical service. In case, the user group cannot perform its functions in accordance with the operational plan, which may cause significant adverse effects on the environment a DFO may decide to cancel the registration of such group. But, it is also provisioned that the DFO should have to hand back the community forest taken from a CFUG when their concerns have been addressed.	The Department of Forest is responsible for the preparation of the Operational Plan and it approve by MoFSC. There is no role for local communities.
Role of communities	Communities are responsible for the implementation of the operational plan. They participate in meetings, assemblies, and each and every decision making process of the FUG. Women, dalit marginalized and deprived groups have equal rights in decision making. CFUGs organize the tole meeting, interest group meeting, to hear their voice. Now CFUGs include 50% women in their executive committee, dalit and marginalized communities also include in CFUGs' committee. Some CFUGs have governance indicators and practice to ensure the space of women, poor and marginalized. They participate in forest management and social development. And have a right to elect committee members.	In CFMP, the local communities' role is confined to protecting the forest, controlling grazing, fires and so on. They do not have any decision making authority or role.
Economic equity; *Benefit sharing*	Local communities can collect firewood, fodder, leaf litter, grass, timber, non timber forest products (NTFPs) from the forest. Income from forest resources can be spent on community development activities, according to their own decision made by the general assembly. Some CFUGs are allocating fund to the poor household for their income generation activities. And now some CFUGs are allocating forest land to the landless for their livelihood. CFUG have rights to collect fund from forest product. They can collect and distribute the forest product. They have 100% rights for managing the fund.	If an operational plan is approved by MOFSC, DFO has the authority to sell and distribute the forest products. Of the income gained, 75% of the income must be deposited in central treasury, and the remaining 25% is for the DFCC fund. [DFCC is chaired by district development committee-chairman and DFO is the secretary of DFCC]. There is no provision for local communities.

Source: CFMP Guidelines

Rally against CFMP organized by FECOFUN in March of 2000, after the government decision to implement the CFMP. About 25,000 forest users participated.

Figure 2: Large Protest Rally in Katmandu

4.2. Lack of Legal Authority for Forest User Groups

Since the government is not willing to hand over *Terai* forest to the communities, people are managing the forest without legal authority. In a recent study by FECOFUN, it was found that 2402 CFUGs from the *Terai* are registered at the DFO office (FECOFUN 2004). Out of this, there are 383 CFUGs registered without an approved operational plan for forest management. Without a plan approved by the DFO, CFUGs cannot legally take measures to manage their forests. 178 CFUGs have already completed a detailed survey of forest, but they lack an operational plan. Further, 33 CFUGs have prepared an operational plan but did not get approval from the DFO (Table 4). Because they have never gained the status of a legitimate CFUG, there has been increasing pressure on these groups to hand over very important and productive national forest in the *Terai* to the government.

There are 291 informal or proposed community forest user groups (PFUG) in the *Terai* (Bhattarai and Dhungana 2004). By definition, these groups are not registered and their operational plan has not been approved. These informal PFUGs are managing about 63,000 ha of forest, and contain approximately 98,000 household. Even without legal rights, PFUGs are informally managing and collecting funds from the forest. The FECOFUN study shows that PFUGs have a total of Rs. 1,725,276 (US$23,962) in savings, but without proper registration they cannot deposit this money into the bank.

Although community forestry is already established to some extent in the *Terai*, the policy of the government actively discriminates against *Terai* people in their ability to formally benefit from forests on the basis of geographical habitation. While the government is open to community forestry in the middle and high hills, it has enforced a restrictive policy in the *Terai*. This is against spirit of the 1993 Forest Act and the right to equality guaranteed by the constitution of Nepal (Bhattarai and Khanal 2005).

4.3 Demonstrated Capability of CFUGs in Managing the *Terai* Forest.

The CFUGs that have been established in the *Terai* are active and are managing the forests quite effectively, learning valuable lessons about the processes and functions

Table 4. Details of Proposed Community Forests in the *Terai*, Inner *Terai* and *Churia*

District	No of PFUG			Average of PFUG (of detailed survey)			Avg. number of GA
	Detailed survey	Short-cut survey	Total	area ha	Savings Rs.	HH	
1. Banke	9		9	73.5	7333	461	3
2. Bara	2		2	45	19500	139	7
3. Bardia	10	10	20	24.9	12300	91	3
4. Chitawan	10	6	16	716.2	84167	1011	1
5. Dang	10		10	141.8	1700	291	4
6. Dhanusha	12	4	16	93.2	5167	98	3
7. Jhapa	6		6	NA	NA	405	3
8. Kailali	10		10	294.3	64750	567	4
9. Kanchanpur	9	6	15	144.2	90000	183	0
10. Kapilbastu	10		10	160	33667	430	4
11. Mahottari	3	4	7	102	8500	252	4
12. Makawanpur	7		7	142	23250	234	NA
13. Morang	9		9	183.1	NA	403	3
14. Nawalparasi	10	2	12	155.9	259167	687	3
15. Rautahat	4		4	194.4	NA	130	NA
16. Rupandehi	11	10	21	141.5	18250	297	3
17. Saptari	4		4	69.4	6637	91	4
18. Sarlahi	11		11	147.3	16000	204	3
19. Sindhuli	10	8	18	124.2	2131	101	0
20. Siraha	5	9	14	105	0	113	2
21. Sunsari	10	48	58	849.3	607816	493	4
22. Surkhet	5	5	10	83.7	NA	121	3
23. Udaypur	1	1	2	1100	1500	43	8
Total /average	**178**	**113**	**291**	**215.5**	**75012**	**337**	**3**

Notes: (1) PFUG level data from Parsa not available; (2) there are more PFUGs in Udaypur but the field work had to be cut short for logistical reasons.

of community forestry. Communities have realized that if the CFUG formation process is not fully adopted at the time of formation, the groups will be less successful at managing themselves. But those who request and receive facilitation support from

the DFO and the NGO sectors can manage forest quite successfully. Additionally, communities have argued that CFUGs are contributing to national development. Usually community development is the responsibility of the state, but now CFUGs are involved in numerous projects such as building irrigation infrastructure, providing clean drinking water, constructing schools and allocating funds, forests and land to the poor and marginalized for their livelihoods.

Social composition in the *Terai* is generally heterogeneous in nature, with diverse sets of interests and needs. There is often a wide gap between the rich and poor, upper and lower castes, and males and females. However, community forestry has brought a gradual means of social change to some of villages (Dangi 1997, Thakur 1997). Upper caste and so-called untouchables previously would not sit together; people from higher castes did not buy and drink milk and water from the lower castes and untouchables. With the advent of community forestry programs, these groups are interacting with each other, sitting together and discussing forest management and community development. Higher caste people are using milk and water from lower caste people and females are becoming committee members and holding higher positions within CFUGs (FECOFUN executive members and facilitators *pers. comm.*) (Figure 3).

Source: FECOFUN

Figure 3: Forest Users in Nawalparasi Discussing in General Assembly

One good example of CFUGs initiating development activities is the Kankali CFUG, which has prepared tree nurseries and promoted plantations of multipurpose tree species. Recently the CFUG has started a poverty reduction campaign. The group selected the poorest of the users among the community and now provides goats free of cost. The poor must return the first goat produced back to the CFUG to ensure the program's sustainability and that the service can be provided to other people. They have developed an effective monitoring mechanism to care for all programs, called Forest Product Utilization, where users can take forest products like dried fuel wood and forage over time. The distribution of these products is done when collection has been completed in the depot every week. Users can take any type of timber (as

quality is divided into five classes), paying 100-220 rupees according quality. If timber remains in CFUG depot, it can be sold to the users outside the community area.

CFUGs have also implemented many changes in resource protection and management. Illegal cutting and encroachment has considerably decreased in many areas of Nepal due to these measures (Thakur 1997). Further, rather than being at odds with community livelihoods, many CFUGs have managed to balance resource protection with economic benefits for their users. The Malati community forestry user group (Bakdhawa VDC- 7, 8 and 9) of the Saptari District is one example. This CFUG has 74 ha of forest and involves 131 households. After gaining rights to the forest area, households divided the forest among people who were able to plant fodder and grass on it. The Malati community has also established a livestock business, which has evolved into a dairy cooperative with Rs. 15,000,000 (US $20,833) in their savings and an income of Rs 20-30 thousand monthly (US $278-$417) per family.

One example is the community of Sundari, who established their CFUG in 1994, and the District Forest Office in Nawalparasi registered and approved the constitution of the Sundari CFUG in 1996. The CFUG was then formalized and includes more than 1300 households and the executive committee (EC) consists of 13 members, of which 4 are women and who are from various castes and ethnic groups. This CFUG includes many sections of people in the community; rich, poor, educated, uneducated, men, women and indigenous castes. This CFUG covers a total area of 390 ha.

Previously deforested areas have now been covered with new trees, particularly *sal* (*Shorea robusta*), which is the dominant species. The daily forest needs of the local people are met from the timber gathered from the felling of trees, pruning and thinning. However, the equitable distribution of collected forest products to its members is a complex and difficult process. To ease this process a separate monitoring sub-committee has been created in this CFUG and the distribution system has been significantly improved on the basis of past experiences. Initially, when the timber was distributed to households as logs, many of the households received hollowed and damaged logs. To overcome this problem the committee started to distribute sawn timber. For sustainable management, this CFUG has arranged to offer training for capacity building in forest conservation to at least one member from each household yearly at the rate of 10% of the community each year.

In another example, the Shantinagari community forest user group, Itahari-Sunsari, was formed previously as an ad-hoc committee that went on to establish a CFUG and their constitution was accepted and registered by the DFO in 1997. The forest area has yet to be handed over to the user group, although a detailed inventory of the forest has been already been completed by government. Forest product utilization, fines and penalties, as well as other forest promotion activities are well covered by the CFUG. The forest area is divided into seven blocks according to the natural boundaries, species diversity and forest diversity. The total forest area covered by the CFUG is 736.5 ha.

The main tree species in this forest include S*al, Tatari, Aulia, Sindure, Kusum, Asare, Jamujn, Karma, Barro Harro, and Simal*. The forest cover ranges from average to sparse in heavy settlement areas. Users have said that most of the area was previously treeless, but after protection it has regenerated. Community users also take plots in forest areas up to 0.35 ha for forage of the understory. The Santinagari CFUG conducts activities for poverty alleviation and community development and has constructed a community building which is used for administration of CFUG affairs. The building was constructed with the help of voluntary labor from villagers, indicating a high level of commitment in the community to the CFUG's operations

The Sundari CFUG has carried out a number of community welfare and development activities in addition to its forest management work, especially in working to address the issue of poverty reduction by offering a number of income generating schemes for the poor. These include goat rearing, bee keeping, free distribution of forest products and construction of houses. After identifying the very poor households from the community, the EC has distributed a productive breed of goat to each household. To assist other households with their livelihood income, the CFUG provides necessary support and training on bee keeping. The EC has identified 30 very poor households from the CFUG and with co-ordination with the VDC and other local organizations have also taken the initiatives to construct drinking water facilities and provide free education for these poor families.

Another issue addressed by the Shantinagari CFUG is structural security of the river embankment through bioengineering and physical construction. The CFUG also spends a moderate amount in road gravelling and maintenance (see Figure 4) and has been able to employ one of the poor users as an office security man. Before the CFUG existed, about 400-500 users depended on firewood collection. About 50% of the community collected fuel wood to cook their daily meals and others for income, but such activities were stopped by the CFUG. Initially there was concern about those needing fuel woods for immediate subsistence, but as time passed the CFUG collaborated with a cooperative society and has allowed access for users. Others

Source: FECOFUN

Figure 4: CFUG Members Constructing a Path

are engaging in small scale animal husbandry.

This CFUG has been working continuously for the development of the community in terms of poverty alleviation, rehabilitation of the disabled, underground irrigation, channel construction, school establishment, bio-gas plant installation and community hall construction. The money required for all these development activities is generated from timber and other community forest products.

Shantinagari CFUGs are using the forest in many ways though it has yet to be formally handed over by the government. Sparse and bare forest areas were provided to users to cultivate forage species, and caring for trees is the joint responsibility of users. The CFUG has planted beneficial trees and has provided lands to individual users to grow forage grass. Formerly villagers had to buy most of the grass to feed their cattle, making it difficult to create a profit from items like milk, which was just 2 rupees/liter. Now the abundant grass in the forest has reduced the forage cost and household profits have increased by up to 10 rupees/liter, helping to increase the livelihoods of some of the poorest users.

These examples demonstrate that if *Terai* community forest users receive support from the service provider with rights based approach they can make a positive impact on resource management and community development. There are many other examples of this kind that have emerged in FECOFUN research (see Box 2):

Box 2: Some Successful Local Initiatives

1. FECOFUN Kailali district chapter has mobilized local communities to protect the block forest of the Basanta region. People from other villages have also agreed to join the CFUG.
2. In Chitawan, local communities are beginning to manage the Barandavhar block forest. They have formed 10 CFUGs there, but have been unable to gain management rights.
3. In Sarlahi district, DFO imposed CFMP in Phuljore Illaka, but people rejected CFMP and they have formed CFUG named Phuljore Community Forestry User Group.
4. FECOFUN Sarlahi district chapter have mobilized their local facilitator to form CFUGs; they have succeeded in forming 11. They organize meetings, interactions, household meetings etc. Distance users are included in newly formed CFUGs.
5. In Jhapa, CFUGs are discussing to establish a depot to distribute forest products to the distance users as well as urban areas.
6. In Surkhet, CFUGs and the DFO made a decision about forest product distribution and where forest products would be distributed within the district first. If it is sufficient for the district they can sell and distribute to outside communities.
7. In Bardiya, at a stakeholder meeting, the CFUG set the selling rate for forest products. If the CFUG decides to sell any products outside the community, they have to use that rate.
8. In the Morang district, PFUG members were successful in controlling timber cut by the Timber Corporation of Nepal (TCN) in the community managed national forest. Community members were eventually able to prevent TCN from entering the forest area.

4.4. The Role of Advocacy Organizations

PFUGs are not registered with the DFO under the Community Forest Act. Instead, they are informal forest user groups without legal status. According to the Forest Act of 1993, if a community forms a forest user group, it should register with the DFO, but in the *Terai* self-organized groups have not registered and do not have an approved operational plan because of the restrictions of the Forest Policy of 2000 and CFMP guidelines. PFUGs cannot join FECOFUN under its current constitution, which requires members to be registered with the District Forest Office, and so they are therefore unable to access resources and capacity building opportunities.

FECOFUN is the largest civil society organization in Nepal and represents the 14,000 CFUGs around the country. It is a forest-users advocacy organization, representing community perspectives and rights in national debates on resource management. Forest user groups form the basic building blocks of FECOFUN, with democratic decision-making procedures followed throughout the multi-tiered structure that makes up the organizational profile. Since 1995, forest users have worked together to establish FECOFUN as a national federation with village, range-post, district, regional and national chapters.

FECOFUN has been providing support to *Terai* communities by working with the registered CFUGs. Some of the initiatives in this area include:

- A *Terai* program unit based with the central office that provides training in forest management and is responsible for planning, implementation and monitoring of the program
- Information and human resources supplied to community forestry bodies
- Support to the *Terai* CFUGs in litigation and advocacy issues
- Assistance to forest user groups in developing their constitution and operational plans through the CFUG support program
- Lobbying forest department staff in support of CF for *Terai* forest user groups

Apart from FECOFUN, there are other civil society organizations advocating for community forestry in Nepal. Some of the other CSOs that are active include: the Himalayan Grassroots Women for Natural Resources Management (HIMAWANTI), Forest and Environmental coordination committee (FECC), National Advocacy Forum for Nepal (NAFAN) and ForestAction. These are the major advocacy organizations in the community forestry sector in Nepal, but they lack the human and financial resources to perform this role. Other organizations in Nepal place their emphasis on extension and implementation support, or are working in the hills but not in the *Terai* area.

The attitudes of government officials are also posing a barrier to change. Their outlook does not favor a people centered approach and officials have shown that they want to capture resources and power instead of providing them to communities

(Box 3). Some government officials have expressed their deep concern about the government's recent move to centralize power and withdraw the authority of forest management from the community forest law and regulation, including those relating to *Terai* forest management, after handing over forest to communities. As a result, they try to hold the power, which is causing a "backlash" against and the "death" of community forestry in Nepal (FECOFUN 1995, Britt 2001, Timsina and Paudel 2003).

Box 3: Lack of Legal Rights Fosters Corruption Amongst Forestry Officers

One government forestry official has admitted to taking as much as Rs. 125,000 (US $1736) for conducting a forest inventory. In the case of Laligurans CFUG located in Danabari- Ilam, the group has registered in 1997 though formed earlier but it has not been able to perform any mentionable developmental programs and other pro-poor focus activities. Although the group was registered in 1997, a Ranger (DFO staff), former executive committee chairperson and contractor took most of the fund raised from timber sale, amounting to around Rs. 3,100,000 (US $43,055).

The Forest Policy of 2000 has had serious implications for *Terai* communities and has created inequity in the formal rights to forest for *Terai* people. The number of CFUGs actually handed over is less than the number of PFUGs that currently exist in the *Terai*. PFUGs continue to search for help from the advocacy organizations that they have no legal entitlement to receive due to restrictions from the government. FECOFUN is the potential organization to support to the PFUGs, but FECOFUN alone cannot do anything, because of legal limitations (Luintel 2005). Additionally, because the number of CFUGs handed over in the *Terai* region is less than hill area, the representation of the *Terai* is less than in hill regions in FECOFUN. Because of the government policies, the *Terai* communities cannot be a priority in advocacy organizations. However, some advocacy initiative has been taken by PFUGs. In some districts, they have formed networks to share problems and methods of management, and some have met with policy makers to change the Forest Policy of 2000. PFUGs often participate in programs and demonstrations organized by FECOFUN.

5. Conclusion

Recent confrontations over the proper management of the *Terai*, inner *Terai* and *Churia* forests of Nepal owe to the tension between community forestry promoted by CSOs and communities and the collaborative forest management imposed by the government. The Forest Policy of 2000 and the CFMP guidelines in 2003 have created inequity between hill and *Terai* communities and also between communities in the *Terai* who have been able to establish CFUGs and those who have not. The restricted access and 15% tax imposed on *Terai* forest communities will create further disadvantages for CFUGs and PFUGs in the region, especially for user groups who are managing degraded forest. At the same time, hill CFUGs are permitted

to use 100% of their income towards forest and community development and enjoy full access to the forests.

The CFMP has been actively promoted by the Department of Forests in a number of districts in the *Terai*, leading the community forestry process to stall. Community forestry projects in Nepal operate according to operational plans and local decisions made by communities themselves. It is a democratic process that includes the people who have the most knowledge of and are most dependent on those resources. However, as the CMFP policy is imposed, communities that have been managing the forest for ten to twelve years without legal rights have lost the rights as given to them in the 1993 law.

Wider consultation with relevant stakeholders is needed on the future of community forestry in the *Terai* region. For goals of conservation and livelihood improvement to be achieved, it is vital that communities in the *Terai* region of Nepal be treated as equal to their counterparts in other regions of the country, allowing them full and equitable access to their local resources and encouraging their transition to a better quality of life. Because *Terai* communities have been restricted through these policies, they will remain poor and marginalized, especially in relation to the rest of the country, unless these policies can be changed.

References

Bampton, J. 2003. "District forest coordination committee; an emerging stakeholder platform for collaborative forest management in Nepal's *Terai*," *Journal of Forest and Livelihood*. 2(2): 35-47.

Baral, J. 2002. "Depleting Forests, Silent Spectators: Who Should Manage Nepal's *Terai* Forest?" *Journal of Forest and Livelihood*. 2(1): 34-40.

Bhattarai, A. and D. Khanal.2005. "Communities, Forests and laws." *FECOFUN,* PRO-Public and CIEL.

Bhattarai, B. and H. Dhungana. 2004. Status of Potential Community Forest in the *Terai* and the Churia region of Nepal.

Bhattarai, B. 2004. *Terai* Forest Management; Community Forest or Collaborative? *Ban Sampada.*

Britt, C. 2002. Changing the boundaries of forest politics; community forestry, social mobilization and federation building in Nepal viewed through the lens of environmental sociology and PAR. *Dissertation* prepared for Cornell University; Ithica, New York.

Dangi R.B. 1997. Changing Attitudes towards Community Land; a Collective Voice for Community Forestry in Bardia, *Community Participatory Forestry Development Experiences in the Terai Region of Nepal*, IOF/ ITTO, 1998.

FECOFUN. 1995. *Constitution and Organizational Regulations.*

Forest Act. 1993. HMG/N.

Forest Regulation. 1995. HMG/N.

Kanel K. R. 2004. Twenty Five years' of Community Forestry; Contribution to Millennium Development Goals, *CF Fourth National Workshops' proceeding.*

KC H. S. 2004. Collaborative process in *Terai* forest resource, *Ban Sampada.*

Luintel, H. (this volume). "Do Civil Society Organizations Promote Equity in Community Forestry? A Reflection from Nepal's Experiences"

MoFSC. 2003. *Collaborative Forest Management Manual*.

Neupane, H. P.1997. *Experiences of Community Forestry in Terai Region of Nepal, Community Participatory Forestry Development Experiences in the Terai Region of Nepal (Nepali version)*, IOF/ ITTO, 1998.

Joint Technical Review Committee of Community Forestry. 2001. Report. MoFSC/ DoF/ CED, JTRCF.

Seeley, J. *et al*. *"Social structure, livelihood and the management of common pool resources in Nepal."* ODG and NORMS 2003.

Thakur, J. K. 1997. Community Forestry Program In Saptari, *Community Participatory Forestry Development Experiences in The Terai Region of Nepal, IOF/ ITTO*, 1998.

Thakur, R. B. 1997. "Status and Prospect of Community forest in Dang District." *Community Participatory Forestry Development Experiences in the Terai Region of Nepal, IOF/ ITTO,* 1998.

Timsina, N. and N Paudel. 2003. "State versus Community: A Confusing Policy Dsicourse in Nepal's Forest Management." *Journal of Forest and Livelihood*. 2(2): 8-16.

Hanging in the Balance:
Equity in Community-Based Natural Resource Management in Asia

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Improving Rural Livelihood Through CBNRM: A Case of Self-organization in Community Mangrove Management in Thailand

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Abstract

Forest resources around the world continue to decrease at alarming rates and the marginalized poor, who often depend on these resources, are often accused of being a significant cause of deforestation and degradation even as they struggle to survive. Meanwhile alternative natural resource conservation practitioners have tried to illustrate the potential of the marginalized poor to manage and conserve natural resources when they have a channel to participate in management. The participatory approach to forest management is one means for increasing the equity of poor user groups in forested regions, while at the same time promoting sustainable forest practices. This paper will illustrate the potential of participatory community-based natural resource management (CBNRM) to alleviate poverty in a mangrove community in the eastern coast of Thailand. Through the successful experience presented in this paper, I hope that the lessons learned can be applied on a broader scale to empower local communities to successfully manage the forest and improve their livelihoods.

1. Introduction

The debate over community forestry in Thailand has intensified in the last decade, becoming an increasingly politicized issue. The discourse of community forestry in this country extends between a centralized government controlled forest management scheme, which promotes reforestation and commercial tree plantations on former croplands, to a decentralized process, based on concepts of community rights and common property systems. This approach is strongly promoted by civil society organizations and academics, involving conservation-oriented, community-based forest management by forest communities in marginal areas (Hirsch and Wyatt 1997). For approximately fifteen years, grass-roots organizations have had to be patient while waiting for community forestry debates to be resolved and for the community approach to become codified into law.

The community-based resource management approach has become increasingly accepted in the past fifteen years as a means for grass-roots organizations and the government sector to motivate diverse stakeholders to become involved in natural resource management at both national and community levels. However, the debate continues over how to properly involve and encourage participation from various stakeholders and to increase the equity of access to natural resources among poor users. This research will examine how participatory natural resource management improves economic equity among rural users in Pred Nai mangrove community.

This paper will illustrate the results of a case study of the Pred Nai mangrove community, Trat province in the eastern-seaboard of Thailand. The Regional Community Forestry Training Center for Asia and the Pacific (RECOFTC) has conducted action research on local participatory community forest management planning. This type of planning is thought to improve community livelihoods through economic development. The research will demonstrate what factors and opportunities become available to the poor in participatory natural resource management and how this improves the equity in their livelihoods.

The research paper will be divided in 5 sections. This introduction will be followed by a background of the community forestry movement in Thailand in the second section. The development of Pred Nai mangrove community-based management organization and its experiences in the process of participatory community forest management will be discussed in the section 3. Section 4 will discuss the results, presenting evidence of the improvement of natural resources and the equity of the community livelihood. Finally, the conclusion will address suggestions for community forestry practitioners and stakeholders.

2. Background and Situation of the Pred Nai Mangrove Community

The management of forests in Thailand has been the responsibility of the Thai government since the establishment of the Royal Forestry Department (RFD) in 1896. However, since then Thailand's forested area has rapidly declined from 53.33% of the total land area in 1961 to 25.28% in 1998 (Charuppat 1998), and further to 25.02% in 1999. In 1999, the FAO estimated that only 22.8% of the total country area was forested, including mangrove forests and highland forests (Table 1). The Thai government initiated the Land Act of 1954, authorizing land ownership rights, encouraging the clearing of forestlands as a means to gain title, promoting a policy of monoculture-cropping and continuing to allow logging for export. This act has caused conflicts over land and land rights to increase for over 50 years as people are excluded from land they traditionally used.

Table 1: Status of Forest Area in Thailand

Year	Remaining Forest (Rai)	Remaining Forest (%)
1961	171,017,812	53.33
1973	138,578,125	43.21
1975	128,278,755	40.00
1976	124,010,625	38.67
1978	109,515,000	34.15
1982	97,875,000	30.52
1985	94,291,349	29.40
1988	89,877,182	28.03
1989	89,635,625	27.95
1991	85,436,284	26.64
1993	83,470,967	26.03
1995	82,178,161	25.62
1998	81,076,428	25.28
1999	80,242,572	25.02

Source: Charuppat (1998); 1 hectare (ha) equals 6.25 rai (Thai)

Mangrove forests in particular are exceptional ecosystems. Mangroves provide numerous benefits for people and play an important role in both human and biological systems. According to the National Economy and Social Development Plan, Thailand lost 50-60% of its mangrove forests, mainly due to conversion to shrimp aquaculture from 1961–1996. The continued shrimp farm expansion and release of chemicals that ended up in the mangroves are having a devastating impact upon the quality of the coastal environment. Many people live and work among the mangrove forests and the destruction of the resources and ecological functions that these forests provide are having negative impacts on the economic livelihoods and cultural heritage of many communities.

Ultimately, sustainable management of the diverse forests was deemed to be impossible for the government. In response, community forestry was introduced in Thailand about 15 years ago as an alternative to economic, state-oriented and scientific forestry. A community forest was identified as a "forest where local people can collect forest products to meet their local needs. Community forestry means that local people have the right to make their own decisions about how and what a forest is managed for, as long as it is in a sustainable manner" (Sukwong 2004).

Fisher (1999) made the connection between forest conservation and the livelihoods of the people who live in and near forests. He argued that because they already use forest resources for subsistence, food security and income generation, they have a direct stake in the conservation of the forest. These groups of people may be the best resource we have in conservation as they have the best local knowledge, which they rely on it for daily subsistence and market activities.

Furthermore, Fisher (1999) also suggested that equity involves everyone receiving a "fair share," but that equity does not necessarily imply an equal share to access, resources and profits. The implication here is that the poor in a community can have an equitable share in the access of natural resources, even while they receive a smaller share than others who may have more time or power to contribute to the management of the resource. The goal of most CBRM projects is to increase equity livelihoods, however we must recognize that equity will never be equal. This paper will use the debate on the role of equity to examine the process of community mangrove forestry management in Pred Nai and how poor users gain economic and political equity to improve their livelihood at the local level.

Even though forests are the property of the state, rights of access to forest resources are determined by people who live in or near the forest through social agreements. This implies that property is a social relationship among people (Bruce and Fortmann 1993). Access, and the ability to restrict it, is vital for the ability of local communities to properly manage the mangrove forests. Since access is often controlled by people and groups with power, it is especially important to guarantee access for more marginalized groups within the community in order increase their economic equity.

In Thailand the poor are still considered trespassers in forests and accorded no legal rights of access because all forests and forest products are owned by the state. In some cases where access for the poor to forest products is recognized and permitted, income from forest products contributed to increased livelihoods. Participatory community-based management also holds the potential to defend and legitimize local property rights by granting communities authority to manage specific resources in a specific geographic area. Through this, it is hoped that the livelihoods of the poor will become more equitable.

Agarwal (2001) argues that internal heterogeneity may result in inequitable distribution of resources as voices of the poor are marginalized and not allowed to fully participate. This has serious implications for community-based natural resource management. Space needs to be made for the marginalized poor in community decision making, and they need to be encouraged to be involved in the process to guarantee their rights of access in community management plans.

However, there are constraints to the participation of the poor. Many projects are attempted in the name of participation, but recently, people have forwarded the notion that there may be more than one way to participate. Pretty (2004) created a framework useful in analyzing different forms of participation (Table 2).

Table 2: Typology of Participation

Typology	Characteristics
1. Manipulative participation	Participation is a pretense, with representatives in power who are unelected
2. Passive participation	People participate by being told what to do, usually by external people. People's responses are not listened to
3. Participation by consultation	People participate by being asked questions, which do not have to be listened to, and external agents define problems, gather information and control analysis
4.Participation for material incentives	Participate because labor is rewarded with food, cash or other incentive. People are not involved in the process of learning
5. Functional participation	External agencies see participation as a means of lowering costs. People may be involved in decision making, but only after major decision are made by external agents
6. Interactive participation	People participate in joint analysis and the formation and strengthening of local institutions. Participation is a right. Multiple perspectives are sought. Communities begin to take control of local decisions
7. Self-mobilization	People take action independently of external institutions. Though they may seek the advice or help from external actors, they retain the control of decisions and resources. May or may not challenge existing power

Source: Adapted from Pretty (2004)

Pretty discusses how, during the process of participatory natural resource management, poor user groups often have difficulty increasing their involvement in projects from passive participation to self-mobilization, the highest form, because of their limited time and limited vision in linking their benefits with their participation (2004). One challenge of this paper is to examine and identify factors and conditions that can open more channels of participation for the poor in the process of community-based natural resource management.

3. Twenty Years Experience: Involvement of Actors in CBNRM

Pred Nai village is a mangrove community, located in Muang district, Trat province on the eastern coast of Thailand, bordering Cambodia and the Gulf of Thailand (Figure 1). The population of Pred Nai is about 591 people, including

169 families. The village area is about 380 hectares (ha), of which residential area covers 42% and agricultural land 58%.

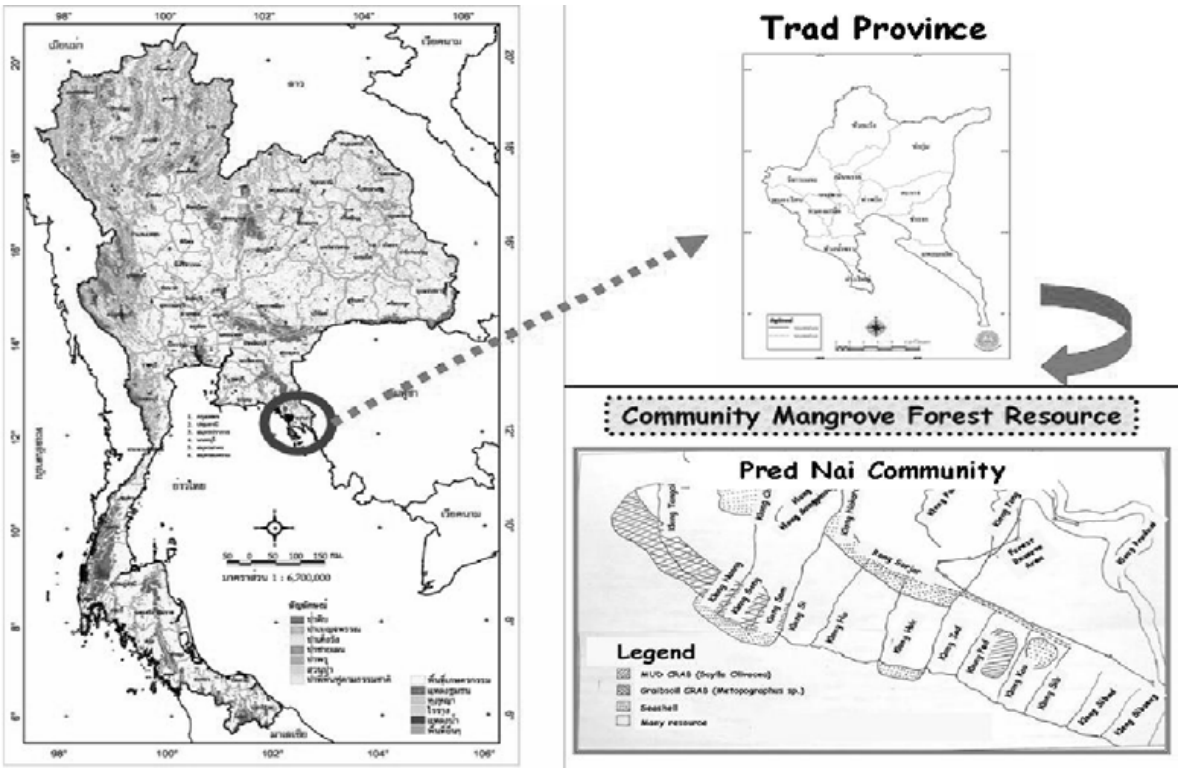

Figure 1: Thailand and the Pred Nai Mangrove Community

Settlement of the Pred Nai area began in 1850s. The main occupation of the original settlers was rice farming, but villagers also harvested crabs, fish and shellfish. Forest products from the mangrove forest were also used to supplement their livelihood. One of the main forest products was *Prong* (*Ceriops tagal*, a tree commonly found in mangrove forests), which was used to make a pole that was used in pepper fields. Currently, the main economic activities have expanded to include harvesting rubber from plantations, growing fruit, cultivating shrimp, and fishing and collecting from the aquatic resources. Many of the poor and landless families are also employed as laborers in Pred Nai.

Shrimp aquaculture flourished in the 1980s, and the local economy became quite dependant on it as a source of income. However, the industry collapsed in 1990-1996, and falling prices caused a dramatic increase in the debt of local villagers. At the same time villagers noticed increased degradation of the mangrove ecosystem and a scarcity of other marine products due to shrimp farming and charcoal production. In response to the destruction of some of the last remaining mangrove ecosystems and the associated degradation of local fisheries, the Pred Nai Community Forest Group was formed in 1986. Covering a 4800-hectare area, they have developed a sustainable system for the management of mangroves and marine resources. They have successfully involved diverse actors in the community, including government agents, religious leaders, teachers and community members of all ranks and status.

3.1. The Pred Nai Community Forestry Group

Three objectives of the Pred Nai Community Forestry Group were identified: conservation and restoration of mangrove forest for the regeneration of aquatic resources; preventing exploitation of natural resources by outsiders; and development of the community and the mangrove forest for future generations. Members of the managing committee of the conservation group have a very strong sense of ownership regarding the mangrove forest. Indeed, they explicitly demand legal recognition of the forest as a community forest. They also recognize that landless villagers in Pred Nai, estimated to be about 20-30% of total households, need access to aquatic resources for their livelihood and they support improving the productivity of those resources (RECOFTC 2003).

The Pred Nai Community Forestry Group drew upon the strengths of local traditions and village elders, such as Pra Subin Pyuto[2], a respected monk. They began inviting the community to collaborate using the village savings group fund as a base for meetings and discussion. The group began by creating a management plan to increase planting in the mangrove area and allow some sections to naturally regenerate. Government agencies and other supporting organizations also stepped in to support the community, such as the Social Investment Fund (SIF), the Thailand Research Fund and the Education Institute. The group has been successful in developing a forest management plan, including mapping local resources, patrolling forests and revising rules and regulations as necessary.

3.2. Role of RECOFTC as a Facilitator in the Participatory Process

The Regional Community Forestry Training Center for Asia and the Pacific (RECOFTC) has been working in Pred Nai since December 1998. According to the project proposal, the villagers approached RECOFTC for support in developing the community's capacity "to conserve the mangrove forest for resource utilization, to formulate a management plan and to develop alternative technologies for improving the productivity of natural resources, particularly aquatic resources" (RECOFTC 2000). RECOFTC agreed to work with the community and support their organizing process, with the goal of helping develop a community that will eventually be able to sustainability manage the mangrove forest and natural resources themselves.

RECOFTC also promotes collaboration with communities both within and outside of Thailand to encourage the exchange of ideas about sustainable utilization of natural resources in the region. To accomplish this, several short-term objectives have to be pursued. First, the community has to be encouraged to develop technologies for sustainable production of aquatic/forest resources as part of a learning process[3]. Secondly, the capability of the community in developing and implementing

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2 Pra Subin Pyuto initiated the Savings Group in Trat Province. His idea of a savings group and strengthening civil society in rural areas has expanded and been linked with neighborhood provinces on the east coast of Thailand.

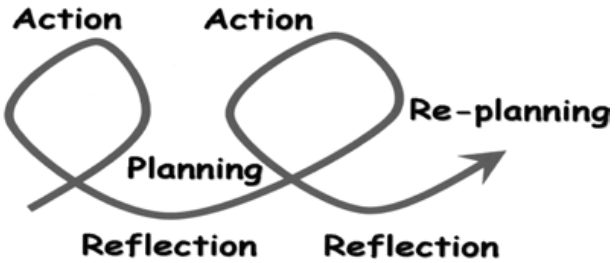
3 Stated goal of RECOFTC proposal for the project in 1998.

an appropriate forest and natural resource management plan must be strengthened. Finally, for effective natural resource management, learning processes and wider networks among forest user groups in the region need to be developed, and collaborative activities among them promoted.

Support received from RECOFTC, government agencies and civil society organizations is seen as important by villagers. Government officers have suggested that without an organising agency such as RECOFTC in the beginning to advise people and connect them to the government, they will have more difficulty making progress. RECOFTC has functioned like a bridge, connecting different groups together to strengthen the project. The role of RECOFTC as an organizer and a facilitator are seen as equally important roles that support each other.

3.3. Participatory Action Research: Self-Ecosystem Monitoring in Pred Nai

Since 1998, the Pred Nai Community Forestry Group and RECOFTC have worked together to conduct action research, a qualitative and participatory approach to studying and working with communities. It involves problem identification, the creation of the community-based mangrove management plan and an experiment on crab reproduction. Action research is an adaptive learning process for the researcher and the community to examine issues to generate local knowledge. Moreover the results from the research need to be reflected back to the community for the improving their situation (Figure 2).



Action Research: (I) Learning by doing and (II) Generating Local knowledge

The Role of RECOFTC:

- To provide technical support and motivate generating local knowledge,
- To facilitate consensus building process among villagers through sharing their ideas at village meeting and workshop,
- To create opportunities for exchange ideas with other stakeholders such as neighbouring villages, researchers, government offices and NGOs,
- To promote mutual understanding between villages and government offices.

(Source: RECOFTC 2002)

Figure 2: Chart of Action Research: RECOFTC Approach[4]

4 Building Local Capacity in Sustainable Forest and Natural Resources was a 3-year project (2000-2003) supported by TOYOTA Foundation, implemented by the Thailand Program under RECOFTC.

RECOFTC approaches the project from four perspectives: participation, networking, co-management and collaboration. First, the organization facilitates the community in the initial implantation of the project. Secondly, RECOFTC encourages maximum participation of all natural resource users and facilitates networking among concerned people in Thailand. Third, RECOFTC encourages various experts from around Thailand to support the process and share their knowledge. Finally, RECOFTC encourages assistance by government agencies.

From the beginning, RECOFTC has worked with the Pred Nai Community Forestry Group by stationing staff with different families in the village to better understand the community situation. In order to achieve the project objectives, RECOFTC identified issues and implemented management programs through the participatory approach. First, problems had to be identified by the villagers, a process often accomplished in collaboration with various experts. After identification of the problem, potential solutions are explored and selected; at this stage contributions from villagers are extremely important. Villagers explored various ideas and identified possible designs for mud crab reproduction, a crab bank and other such projects. After experimenting with different designs, and the process of testing and adapting technologies, further experimentation will be done to better adapt the technologies to the community and its resources. This process has also expanded to other activities in the community, helping to include poor and marginalized groups in local natural resource management.

4. Analysis

In the process of monitoring and assessment, the crab harvesters used several indicators to measure the success of the management plan for restoration of mangrove products and improving the access to resources. These indicators included: quantity of Grapsoil crabs, location of crabs, number of crab harvesters, income earned per crab, time period in crab catching, quantity of difference kinds of mangrove plants and trees and diversity of marine products such as fishes, shellfish, shrimps, birds, bees and other animals. The research found that in 2005, the number of crab harvesters actually doubled from 2003. Crab harvesters caught 49,800 kg in the first 7 months of 2005, allowing the community to earn more than 2 million Baht (approximately US $48,000) (see Table 3 and Figure 3). Since 2003, when crab products increased, the number of harvesters also increased, while the amount of time spent crabbing did not, meaning that there were more crabs available for harvesting. Additionally, villagers also reported that other marine resources were more abundant and readily harvested.

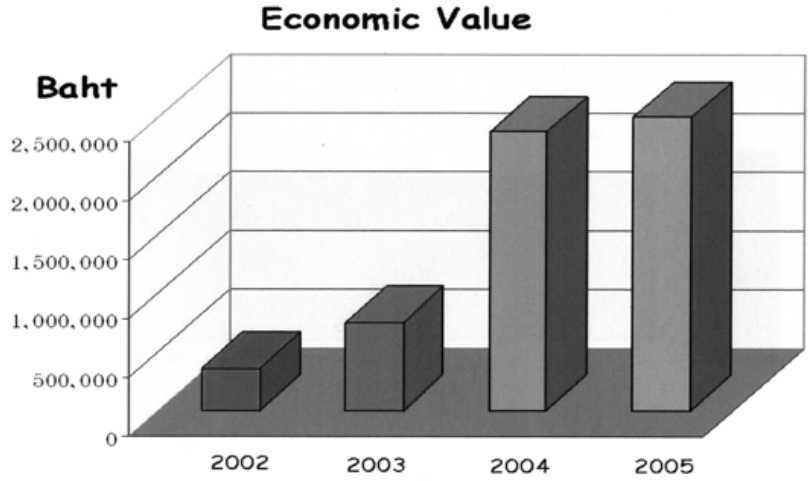
Table 3: Results of the Participatory Ecosystem Monitoring and Assessment

Indicators and Data in Mangrove Management Monitoring				
Resource/Indicators	**2002**	**2003**	**2004**	**2005**
Grapsoil Crabs				
1.Product/day/price per kg	8kg/day/ THB 50	15 kg/day/ THB 50	115kg/day/ THB 50	15 kg/day/ THB 50
2.Crabharvesters (permanent)	6 persons	20 persons 150days/year	20 persons 150days/year	40 persons 150days/year
3.Crabharvesters (seasonal)	-	- 30 days/year	10 persons 30 days/year	40-50 persons 30 days/year
4.Harvesting period time	2 kg/4-5 hrs	2kg/3-4 hrs	2kg/2-3 hrs	2kg/1 hrs
5. Total product	7,200 kg	15,000 kg	47,400 kg	49,800 kg
Mangrove ecosystem	_	_	_	_
Total forest area	12,000 Rai	12,000 Rai	12,000 Rai	12,000 Rai
Reforested area	50 Rai	150 Rai	2,150 Rai	None
Biodiversity	-	-	increasing birds, bees, monkeys	More quantity and variety of birds, bees, trees, plants

Source: Interviewing, discussion and survey in the process of Participatory Monitoring and Assessment (PM&A) 2003-2005, RECOFTC/PM&A seminar report, 2005.

Villagers have reported that numbers of shrimp, shellfish and fish have also increased. *Samae monkeys* (*Macaca fascicularis*) and several kinds of birds are returning to the area. *Hoy lod* (tube snail) is now reappearing after being unseen for almost 20 years. Bees are coming back to the mangrove area as the variety of trees has increased. Mangrove users collected more than 1,000 liters of honey, earning more than 100,000 Baht (US $2433) in the first six months of 2005. These events have motivated villagers to continue to monitor their mangrove forests. It is accepted that this process will improve their livelihoods through increased biodiversity.

As a result of the participatory Grapsoil Crab management, crab harvesters also take a role as mangrove conservationists and watchdogs because they have the experience and local knowledge to monitor their local mangrove ecosystem. They report to the council and discuss when they observe any change in the mangrove area. It is important that their information be discussed for improvement of mangrove management for further increases of mangrove products.



Source: RECOFTC, Participatory Ecosystem Monitoring and Assessment Report, Pred Nai, 2005

Figure 3: Grapsoil Crab Economic Value from 2002-2005

4.1. The Crab Bank

The community constitution, developed in the year 2002, later required that crab harvesting stop during the reproduction period in October, using the motto as "*Yoot jab rouy, khoy jab laan*" (Stop hundred catching, wait for million catching). Because of the economic value of mud crabs, villagers decided to increase production by starting a crab bank. In this program, those who have egg-bearing crabs are requested to put the mother crab in a crab pen in the canal. In the first year, 29 egg-bearing crabs produced millions of young crabs, which were then raised in a nursery pen until they are strong enough to survive in the mangrove area. Members constantly exchange ideas and contact fishery researchers to help with methods of monitoring and collecting relevant data. The data have been reflected in subsequent plans.

To increase Grapsoil Crab production the community members have agreed to follow these rules: All community members have the right to catch Grapsoil Crabs; all are able to catch crabs anywhere except the canals in the center of the mangrove area that are the origin of many marine products; no members are allowed to catch crabs during the crab egg-bearing season in October each year; members are not allowed to use pesticides; and they are not allowed to catch small crabs. Outsiders who want to catch crabs in Pred Nai must first ask permission from the committee and are required to follow these regulations.

After a few years of monitoring, the *phu samae* (Grapsoil Crab) has increased from 5 kg/harvest to 8-10 kg/harvest. Through this group learning process, the Pred Nai community has moved to additional projects, such as managing herbal products, honey collecting and collecting other local foods. Moreover, the Crab Bank also promotes community learning by involving members in self-action research through monitoring resources and conducting experiments. They observe the increase of mud crabs and Grapsoil crabs, while members also share their experiences and problems with other members.

As a result of the community mangrove management plan, the community has formed the Crab Bank Group to help continue conservation activities to continue increasing local incomes collected from the mangroves. Their conservation has helped alleviate poverty and facilitated local economic development. The restoration and conservation of mangrove forests also improves the long-term sustainability of the villager's economic activities as mangroves are important fish habitat and also provide many valuable ecological services (Rönnbäck 1999).

Members of the Crab Bank and Grapsoil Crab harvesters were categorized in the community as a poor group as they are landless and lack proper fishing equipment and sustainable daily earnings. Additionally, some members of the community became poor as a result of the collapse of shrimp farming. Some still have their land, but most are heavily in debt. Furthermore, few women are involved in the Grapsoil Crab harvesting group because they have to harvest at night time, though women do go crab harvesting with their husbands or children. Men harvest crabs, but the income mostly goes to the women for savings or expenditures. Because of this, women in Pred Nai should be further encouraged to participate in community economic planning through the process of community-based natural resource management.

The community of Pred Nai is internally varied in class and gender with regards to access and power. The research found, however, that even the marginalized members in the Crab Bank and the Grapsoil Crab harvesters have channels to participate in accessing natural resources through the community constitution and regulation in addition to the Crab Bank and Grapsoil Crab harvester group. The Community Forestry Group also initiated activities for opening social spaces for the poor to participate in the process of increasing their social and economic equity through participation in the mangrove herbal production group and the savings group. Both groups are also a channel for the poor and women in Pred Nai to become involved as members, and some women are able to be on committees of these activities.

Moreover, as the data from Table 4 illustrate, during the time of increased management by the Crab Bank, both the number of Grapsoil crabs and net income of villagers increased. In 2005, crab production reached 40-50 tons, valued at approximately 2-2.5 million Baht (US$48,000-$60,000). The case of Pim Uabol's family also illustrated that poor crab harvesters participated in accessing natural resources for their improvement of their livelihood (see Box 1).

Table 4: Grapsoil Crab Production and Value, 2002-2005

Year	Quantity of crabs	Economy value(Baht)	Income/person/year
1998	7,200	360,000	45,000
2003	15,000	750,000	37,500
2004	47,400	2,370,000	79,000
2005	49,800	2,490,000	62,250

Source: RECOFTC/Thailand Country Collaborative Support Program (ThCCSP) Report of Participatory Monitoring and Assessment in Pred Nai, 2005.

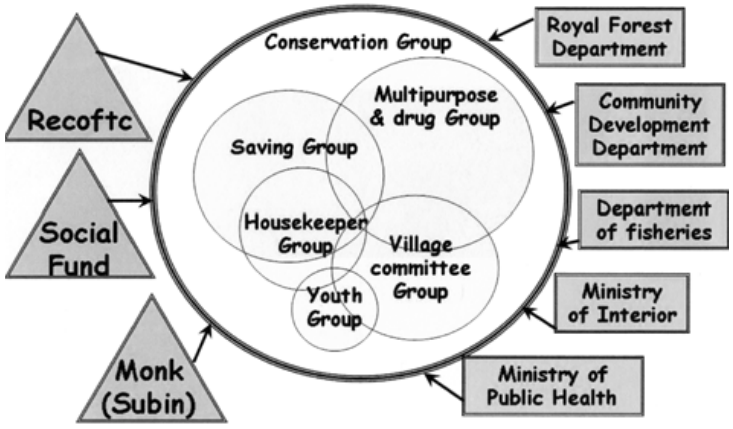
Box 1: Grapsoil Crab Harvester Family of Pim-Uabol

There are 4 members in the Pim-Uabol family. Formerly Videch, the head of the family, had a fruit orchard but now earns a living catching crabs. Three members of the family are crab harvesters, and because of this, they earn more money to increase their living standards. Videch and his wife Napa catch crabs at night, usually about 15 kg a night, to earn about 700 Baht (US $17) a day. Videch's son, Surapong, began catching crabs seven years ago after dropping out of school and has become one of the best harvesters in Pred Nai. He earned about 150,000 Baht (US $ 3,650) in 2004 by harvesting about 25 kg/night. The youngest daughter attends college from the earnings of the family's income from crabs. Napa stated that crab harvesting is a good occupation for her family. They have a better life since the condition of the mangrove has recovered. Crabs are more abundant and easier for them to harvest, resulting in the family's ability to earn more money. Napa is a member of the savings group and has been able to borrow money from them. Now she does not worry as constantly about their economic livelihood. She now has a small house with basic furniture and has also been able to start saving for the family's future.

4.2. Participation of the Poor

For the villagers, management of the mangrove swamp is a valuable source of income and even a way of life. The initiative has helped to ensure that this environmentally and economically important area is managed sustainably. The local management efforts have also provoked other community development activities.

The research found that managing the mangrove area is not a problem; it is all about managing the people who represent a diversity of stakeholders that has been the biggest obstacle. Figure 4 elaborates on the diverse stakeholders who are involved in the mangrove management in Pred Nai. Not only internal groups but also external partners from both the government and NGOs also are a part of the social interactions in the Pred Nai community.



Source: RECOFTC/Thailand Program (ThCCSP) Report 2002.

Figure 4: Relations and Interactions in Pred Nai

During the first stage of Pred Nai Community Forestry group, local leaders and fishermen were concerned after the concessions ended and a management group was set up. Local users who depended on the area were not allowed to harvest any products from the mangrove, causing hostility and conflict within the community. To address this, Pra Subin Pyuto was invited discuss the situation with the community. He told them that managing forests or resources is possible, but the first thing we have to do is manage people. Those who are hungry will become more so if they cannot have access to the wealth of the mangroves. Since this speech, the villagers have begun to discuss and accept this and have begun experimenting with more active management techniques.

Other community activity groups tried to encourage the poor and marginalized groups to get involved and participate in the process. However, it is often difficult for poor families to equally participate in the process as they have specific obstacles that are difficult to overcome. They often lack adequate means of production thus must spend more time in harvesting activities to make a daily living, and are limited at night by the crab harvest. Further, they often will not become involved if they do not perceive any benefit from the activities.

Despite the best efforts to include all stakeholders equally in the formation of community groups, some members of the community continue to be excluded from the participation process. According to Pretty's framework of participation, the poor are in the stage of passive participation, and have yet to move through to more active forms (1999). The poor do provide their labor, but with regards to active participation in decision-making, the poor pass their rights to the community leaders who represent them.

RECOFTC recognizes that these important people continue to remain marginalized, even as their livelihoods improve. The internal heterogeneity of power, economic standing and even personalities within the community situations presents a serious challenge to any community participation project. Facilitators are limited however, in the extent to which they can promote participation; some people choose not to participate and their decision must be respected. By showing them the advantages of full participation, and giving them the space in which to do so, it is hoped that eventually, they will be brought willingly into the process.

However, despite the limited participation by members of the poorer community in Pred Nai, most still are involved in other ways; through decision-making at lower levels, participating in internal discussions and spending time and labor to manage the mangroves. Regardless of their lack of participation in large-scale decision making, their actions have helped to improve their livelihoods and their political power. The distribution of access and power may not be equal, but it is more equitable.

The Pred Nai Community Forestry Group has been successful in improving poor livelihoods through participatory processes in mangrove management. However, the question arises of why other communities have not been as successful in increasing the equity of the poor through participatory CBNRM as in Pred Nai. The research showed that not only participatory processes but other internal and external factors

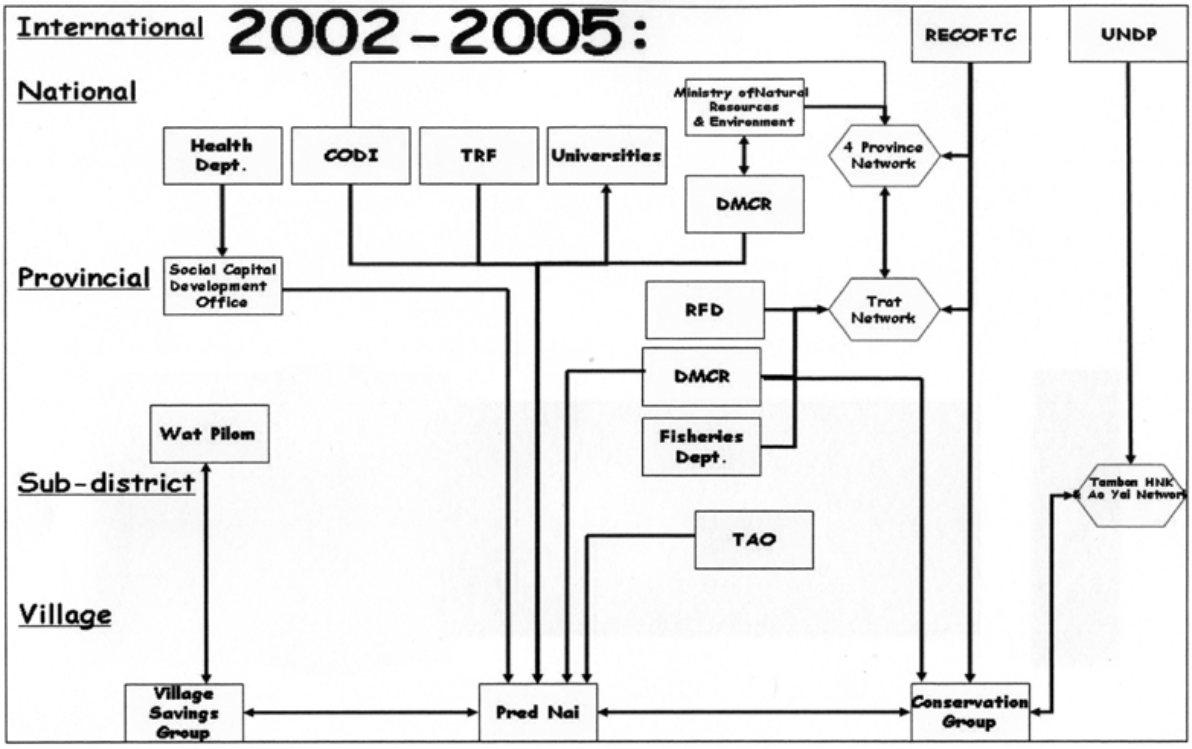
influence the ability to create equity on a larger scale. Pred Nai has been supported by various external actors such as governmental offices, educational institutes and funding agencies, and they have potential community leaders who are proactive and who know how to compromise with and negotiate between various actors in community. Thus, it is a challenge to practitioners to learn how to sustain the increasing equity in the communities by encouraging the marginalized to participate in natural resource management. As the experience from Pred Nai demonstrates, the practitioners have to clearly identify elite leaders early in the process and open channels for all to participate. Moreover, a clear picture of the internal heterogeneity of communities must be understood and respected. The inclusion of representative stakeholders in the participation process is essential for creating more economically and politically equitable conditions for the poor.

4.3. CBNRM: Strengthening Community Institutions

The community of Pred Nai has implemented conservation activities because they realized that their livelihoods depend on the health of the mangrove systems. The group has also succeeded in promoting collaboration between Pred Nai and neighboring villages through the founding of the Community Coastal Resource Management Network. In addition to stopping the loss of existing biodiversity, their efforts have resulted in the return of many formerly displaced native fauna, including species of wetland birds, bees, monkeys and marine products such as shells and fishes.

As Figure 5 illustrates, Pred Nai is interlinked at the community, provincial and national level. They are also connected with multiple supporters, partners and stakeholders. It is worth noting that the Community Forestry Group is strong enough to handle and manage these complex linkages and relationships. Furthermore they have also been developing their equity in political participation at the local, provincial and national levels.

After managing their forests for some time in 2003, with the initiation of the Pred Nai Community Forestry Group together with RECOFTC, a Mangrove Network has been developed involving a number of local villages. They have realized that the people of a single village could not successfully implement sustainable forest management, especially as there was no demarcation of boundaries and no regulations on forest utilization. The idea of networking was initiated and facilitated in the nearby villages who share boundaries with Pred Nai,and later the network was expanded to many other villages to become members of the Community Coastal Resource Management Network, Trat Province. Through the exchange of knowledge and experiences, the villagers have learned from their successes and failures. Collaboration strengthens people and helps initiate new ideas and practices that respond to the communities' needs. Further, in 2004 the network linked with four coastal province networks in the Eastern Coastal and Community Forestry Network –Thailand. They have also participated in the community forestry campaign and proposed a community forestry bill to parliament.



Source: Senyk presentation 2005.

Figure 5: Pred Nai Relationship in Community to National Level .

5. Conclusions

The Pred Nai Community Forestry Group had demonstrated that the participatory process in natural resource management is an appropriate way for them to manage their forests and their community. This approach can effectively integrate marginalized groups in the community, allowing them to participate in the process of managing their access and the resource to improve the mangrove ecosystem, ultimately increasing their equity. Disadvantaged groups must continue to be encouraged and supported to engage in higher levels of participation. Recognizing this, the Pred Nai Community Forestry Group is continuing to adopt measures that attempt to better incorporate the poor into the management of the mangroves.

RECOFTC has an important role as facilitator, but they must continue to recognize the diversity within the community to enhance and empower marginalized groups. This will encourage these groups to participate in the process of community-based natural resource management. Moreover, the facilitator should be able to reflect back to the community their progress in order to strengthen the community organization and open a social space for the poor to position themselves advantageously.

Since the Pred Nai Community Forestry Group was formed in 1986, the community has also developed and expanded their activities, supporting various sectors

of the community and receiving support in turn. When the community had successfully restored and replanted their mangrove coastal areas, several outsiders stepped in to support the Community Forestry Group. This group has gained valuable experience and learned many lessons to help strengthen themselves and continue to support and improve their natural resource and community livelihoods.

In addition, the Community Forestry Group and the Savings Group have provided opportunities to marginalized members of the community, increasing their equity through participatory natural resource management for their better livelihoods. Moreover, these activities also have built up a network of villages who use the mangrove area. Today other villages nearby have set up community forests to regain the wealth that they have previously lost.

Pred Nai has developed a strong village network, a strong sense of identity and a willingness to put in the effort required to successfully manage the magroves. This is considered a good base for grassroots action. The community has started networking with neighboring villages, with the intention of eventually expanding to the provincial and regional levels. The local efforts will hopefully be sustained as long as there are economic, environmental and cultural incentives. Further, with every new meeting, the villagers are able to organize more people. They have made tremendous progress and they have confidence that in a few years time, they will be able to manage the mangroves themselves. The greatest danger may be that intrusive national legislation restricts the rights of villagers or fails to recognize efforts of villagers to manage the local forests.

According to the community constitution and regulations on access for all people in mangrove production, the poor are in the process of achieving equitable access to coastal mangrove products. The implications for the poor are significant. These marginalized groups are gaining channels to increase their political presence and make decisions on resource management that directly affect them. Pred Nai has extensive experience in the participatory process that has spread to other communities. As equity continues to increase in Pred Nai, they become a valuable example for community-based resource management in other areas where marginalized groups continue to lack a voice to change their livelihoods. However, there are still questions and challenges of how practitioners can use the successful case of Pred Nai to create a framework for practitioners of participatory community-based natural resource management to provide equitable access rights to natural resources for the poor.

References

Agarwal, B. 2001. "Participatory Exclusions, Community Forestry, and Gender: An Analysis for South Asia and a Conceptual Framework." *World Development* 29(10): 1623-1648.

Charuppat, T. 1998. *The Forest Situation in the Past 37 years (1961-1998)*. Bangkok: Royal Forest Department: Bangkok (in Thai).

Fisher, R.J. 1999. “Poverty Alleviation and Forests: Experiences from Asia.” Regional Community Forestry Training Center for Asia and the Pacific (RECOFTC). Bangkok, Thailand.

Bruce, J. W. and L. Fortmann. 1992. "Property and Forestry." *Journal of Business Administration; Special Issues: Emerging Issues in Forest Policy.* 20(1-2): 471-496.

Hirsch, P. and A. B. Wyatt. 2004. “Negotiating Local Livelihoods: Scales of Conflict in the Se San River Basin.” *Asia Pacific Viewpoint*. 45(1): 51-68.

Pretty, J. N. 2005. “Participatory Learning for Sustainable Agriculture.” *World Development*. 23(8): 1247-1263.

RECOFTC. 2000. “Project Proposal: Building Local Capacity in Sustainable Forest and Natural Resources: Pred Nai Community Support Group.” RECOFTC: Bangkok.

RECOFTC. 2001. “Project Report: Building Local Capacity in Sustainable Forest and Natural Resources: Pred Nai Community Support Group.” RECOFTC: Bangkok.

RECOFTC. 2003. “Thailand Collaborative Country Support Program, Pred Nai Profile, Trat, Thailand.” RECOFTC: Bangkok.

RECOFTC. 2003. *Community Forestry.* Electonic News Letter. 18 December. RECOFTC: Bangkok.

Sukwong, S. 2004. Equator Prize 2004, Pred Nai Community Forestry Nomination File, UNDP.

Varughese. G. and E. Ostrom. 2001. “The Contested Role of Heterogeneity Collective Action: Some Evidence from Community Forestry in Nepal.” *World Development*. 29(5): 747-765.

Forest Devolution in Dak Lak, Vietnam: Improving Forest Management or Livelihoods of the Poor?

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Abstract

This paper looks at equity in the distribution of benefits from forest devolution in two villages in the Dak Lak province of Vietnam. It shows that patronage of state officials was present in many aspects of devolution, potentially undermining the efforts to improve the livelihoods of the local people, particularly those of the poor, through forest devolution. Findings suggest that political equity and economic equity related to forest devolution are interlinked at the local level. Forest devolution may contribute either to improve forest management or livelihoods of the poor or the achievements will be weak for both objectives.

1. Introduction

In Vietnam, forests have long been managed as state property. Deforestation and degradation of forest resources under state management along with the recognition of people's role in forest management stimulated an experimental devolution of forest management to local people. This initiative has been implemented in Dak Lak province of Vietnam since 1998. By involving local people in forest management, Dak Lak had the goal of improving the management of local forests and the livelihoods of local people, particularly the poor (Nguyen 2005). The question that has arisen is whether the state has been able to meet these objectives.

This paper looks at equity in the distribution of benefits from forest devolution. It argues that distribution of benefits from forest devolution in Dak Lak province of Vietnam has been largely influenced by local state patronage and local elites have dominated the devolution process. Such distribution may improve forest management but it is unlikely to help improve the livelihoods of the local poor people. I have showed elsewhere (Nguyen forthcoming) that devolution was able to provide benefits to local people and that household wealth and labor resources were influential in the acquisition of forest benefits. In this paper, I analyze the processes through which

the practice of state patronage influenced the distribution of two major types of benefits: forest endowments (i.e. rights to forests) and forest entitlements (i.e. economic benefits from forests), which in turn affected the achievement of sustainable forest management and livelihood improvement of the devolution program. Data for the analysis came from field research between March and September 2002 in two villages where devolution was completed around the end of 2000.

The paper proceeds as follows: section 2 presents a brief review of current literature on forest livelihoods and devolution. After this, section 3 discusses the methodological approach of the study. In section 4, background information about Dak Lak province, its forest devolution program and the study villages is presented. Then, section 5 analyzes the processes of distribution of forest benefits in two study villages. In section 6, I discuss the findings from the two study villages. Finally, section 7 concludes the paper and discusses the policy implications of the findings. In general, the paper hopes to shed light on the linkages between equity and sustainable forest management and livelihood improvement through forest devolution.

2. Forest Livelihoods and Forest Devolution

2.1. Forest Livelihoods

Forests can play an important role as a source of income and a basis for the livelihoods of forest-dependent people. The principal services and products from forests include timber, non-timber forest products (NTFPs), land and environmental services. Among them, perhaps NTFPs gain the most extensive attention in discussions of forest-people relationships. The contribution of NTFPs to the livelihoods and welfare of forest-dependent people has become increasingly recognized (Arnold and Pérez 2001, Gram 2001, Belcher 2005). NTFPs play a role in the household economy of not only the poor but also the rich. Poor people may rely on NTFPs as a means of subsistence while rich people are in better position to exploit NTFPs commercially (Cavendish 2000, Warner 2000, Arnold and Pérez 2001, Belcher and Kusters 2004):

> *"The poor may not have access to the skills, technology or capital necessary to be able to benefit from opportunities presented by growing markets for NTFPs. As a consequence, control over these opportunities, and over the resource, are often progressively captured by the wealthier and more powerful, and the households with the most labor, at the expense of the poorer within the community" (Arnold and Pérez 2001; 442).*

In commercial terms, timber generally remains the most important forest product (Angelsen and Wunder 2003). Its high commercial value makes timber an attractive forest product for state and commercial concessionaries. Unsurprisingly, poor people are generally excluded from the benefits generated by timber because they lack the

necessary power and capacity to benefit from timber products (Belcher 2005). In the end, benefits of timber most available to the poor are the most arduous work and servicing activities, such as waged labor in timber logging created by the logging industry (Peluso 1992).

From a farmer's perspective, forestland that can be used for cultivation purpose appears to be the most important resource (Goebel *et al.* 2000). Farmers' interest in forest pertains not only to the land's geography but also typically to the land itself. When the timber is economically valuable, people are interested in both the trees and the land. In other situations, it is the land that they are interested in (Peluso 1992). Improvement of rural infrastructure and expected land scarcity can accelerate the clearing of forest for cultivation (Angelsen 1995). Lacking the capability for crop intensification, the poor may go for extensive farming "until they run up against the end of the land frontier" (Reardon and Vosti 1995: 1501).

Finally, payment for environmental services (PES) can allow local communities to improve their livelihoods through direct funding for the conservation of forest resources (Arocena-Francisco 2003). So far, paying people for watershed protection appears to be the major form of PES. However, whether or not the poor can benefit from payment schemes depends on their bargaining power and property rights (Landell-Mills and Porras 2002). As the new values attached to forests could motivate powerful outsiders to expel local people, particularly women, from the forest or force their protection services by coercive means (Angelsen and Wunder 2003), benefits from PES may accrue to non-poor actors (Pagiola *et al.* 2005).

2.2. Forest Devolution and Equity

Devolution refers to the transfer of power, rights and responsibilities to user groups at the local level (Fisher 1999, Meinzen-Dick and Knox 1999). It is about the shift of property and power from the central government to local people. True devolution requires a transfer of benefits from the resource away from the government (Edmunds and Wollenberg 2001, Shackleton *et al* 2002, Edmunds *et al* 2003).

Forest devolution has taken place in over 60 countries as one of the measures to involve local people in the public decision-making and management of forest resources (Meinzen-Dick and Knox 1999, Edmunds and Wollenberg 2001, Edmunds *et al* 2003). Beside economic efficiency and sustainability in forest management and conservation, devolution is also expected to improve social and economic equity through a more equitable distribution of benefits (Agrawal and Ostrom 1999, Fisher 1999, Ngaido and Kirk 1999, Ribot 2002). For devolution to work in practice, it is important that discretionary powers are transferred to local people along with rights and responsibilities (Fisher 1999, Ribot 2002, 2003). In addition, downwardly accountable authorities and local participation in the decision making process are the major elements that lead to efficiency and equity in devolution (Ribot 2002, 2003).

Equity is important in natural resource management as a means to ensure the participation of the poorer groups (Jain 2002, Poteete 2004). Equity is about fairness and social justice across user groups (Fauconnier 1999, Smith and McDonough 2001,

Poteete 2004). Equity is not synonymous with equality – which is about sameness (Fisher 1989, Poteete 2004). The former may or may not mean the latter. Equity may have different foci and scales. Of concern to forest devolution are political and distributional (or economic) equities at the local level: political equity is about who gains influence in the decision-making and economic equity is about who gets what benefits (Poteete 2004: 13-20). Ideas of equity can differ according to situations and culture (Fisher 1989, Jain 2002).

In forest devolution, economic benefits are often captured by the local elite, who are not necessarily representative of local communities (Fisher 1999, Edmunds and Wollenberg 2001, Shackleton *et al* 2002, World Resource Institute (WRI) 2003). In addition, "local elites… are informal policy makers. They shape the outcome of devolution policies in every country, generally against the interest of the poor" (Edmunds and Wollenberg 2001: 194). The poor still have to bear the cost of conserving the forest (Edmunds and Wollenberg 2001). By contrast, natural resources can be successfully managed where significant inequities exist, even with the complete awareness of community members (Jain 2002). This can happen in the case of heterogeneous groups where resource users can "design institutions to cope effectively with heterogeneities" (Varughese and Ostrom 2001: 751).

In the end the question is whether a certain level of inequity may be sufficiently acceptable to achieve specific purposes (e.g. forest management and livelihood improvement)? In this paper, I analyze the distribution of different benefits from devolution in the study villages to understand the level of political and economic (in)equities in forest devolution and their impact on the achievement of the forest management and livelihood improvement objective of the Dak Lak province.

3. Methodology

3.1. The Conceptual Framework

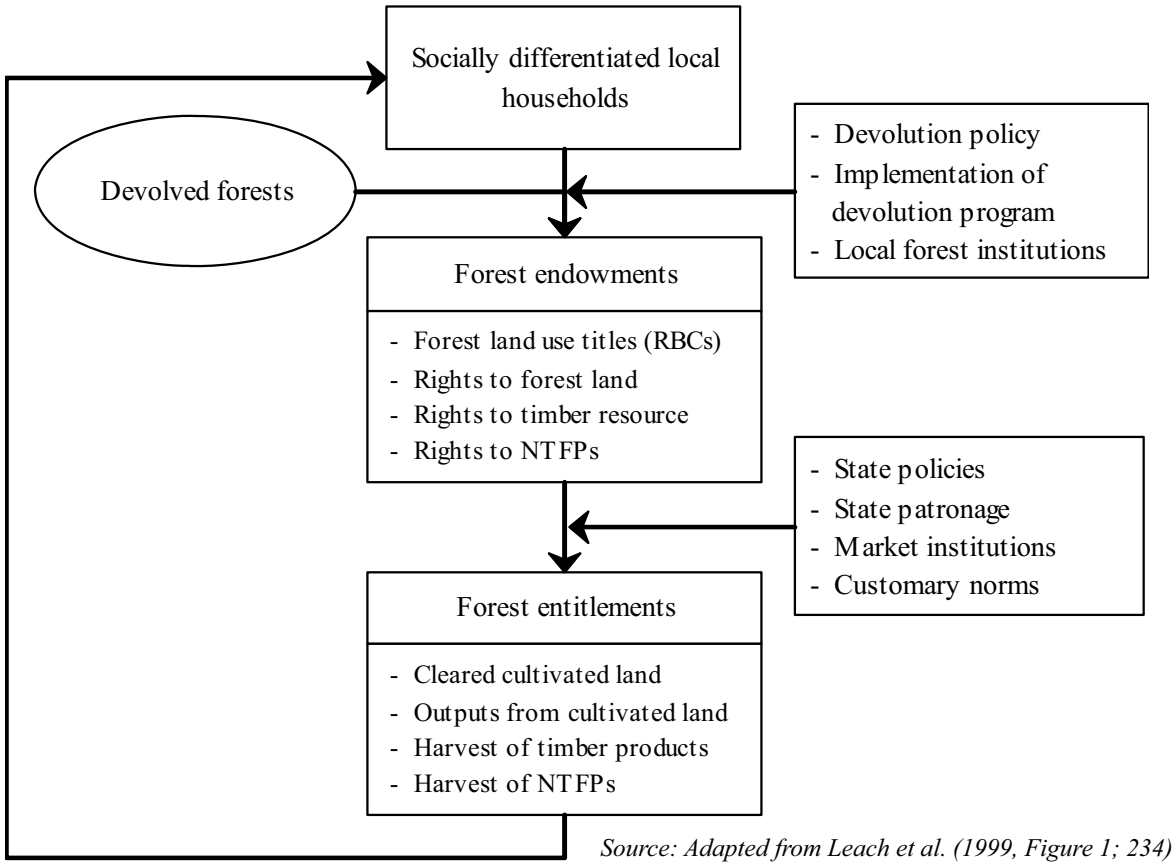
Since devolution is about a shift of property rights from the state to local communities, it is important to understand what property rights mean in resource management. 'Property' or 'property rights' refers to a right or a set of rights to things (MacPherson 1978, Bromley 1989, Bruce 1998). Property is important in the derivation of benefits from a resource. It is considered "a claim to a benefit stream" (Bromley 1992: 2). Besides property, access is essential in the derivation of benefits from the resources in question. Access is regarded as the ability to benefit from a thing (Ribot 1998, Ribot and Peluso 2003). Access analysis helps "understand why some people or institutions benefit from resources, whether or not they have rights to them" (Ribot and Peluso 2003: 154). Access is different from property:

> *"A key distinction between access and property lies in the difference between 'ability' and 'right' […] Access is about all possible means by which a person is able to benefit from things. Property generally evokes*

some kind of socially acknowledged and supported claims or rights - whether that acknowledgement is by law, custom, or convention" (Ribot and Peluso 2003: 155-156.

In entitlement literature, the concepts of endowment and entitlements are used to refer to the benefits from a resource. Entitlement literature began with Sen's entitlement approach to famine in which he uses the concept of entitlement failure to explain the cause of famine (Sen 1976, 1981). Later, Leach *et al.* (1999) develop Sen's original idea into an environmental entitlement framework (EEF) to explain how the consequences of environmental change are socially differentiated. In their point of view, endowments are "the rights and resources that social actors have", and environment entitlements "refer to alternative set of utilities derived from environmental goods and services" (Leach *et al.* 1999: 233).

The EEF is adapted as a conceptual framework for this study (Figure 1)[1] . Following Leach *et al.* (1999), benefits from devolved forest are defined as endowments



Source: Adapted from Leach et al. (1999, Figure 1; 234)

Figure 1: The Conceptual Framework

1 The conceptual framework for this research has two major differences from the original EEF (Leach *et al.* 1999). 1) I place local households at the center of the analysis to highlight their role and their differentiated capability in the acquisition of endowments and entitlements, and 2) I drop the attention to the distribution of entitlements within households, particularly among men and women, because it was discovered during the field work that gender did not appear to be a major issue in the study area.

and entitlements. Endowment refers to the rights to benefit while entitlement refers to the concrete benefits that people derive from the forests. The former may not necessarily lead to the latter. In other words, endowments may not be automatically transformed into entitlements. The transformation process from endowments to entitlements is influenced by the operation of a system of various institutions working at different levels and by the differences in the capability of social actors.

In the conceptual framework, devolved forests are considered the goods of concern. Acquisition of endowments to devolved forest is influenced by devolution policy, implementation of this policy in the local context, existing local forest institutions and the devolved forest itself. Endowments being considered in this paper are forestland use title (Red Book Certificate or RBC for short), and rights to forest land, timber and NTFP resources from the devolved forest. Entitlements from the devolved forest are the area of land cleared for cultivation, the outputs from this cultivated land, the harvest of timber products and the harvest of NTFPs[2] . The entitlements include both kind and cash returns but are calculated in cash equivalent value. Acquisition of forest entitlements is influenced by existing household resources, the forest endowments, market institutions (for labor, farm inputs and outputs), practice of state patronage and state policies. The acquired endowments and entitlements from devolved forest may have feedback effects on livelihoods and access to productive resources of local households. (In)equities that occurred in the distribution of forest benefits are reflected in the mapping of forest endowments and entitlements.

3.2. Data and Data Collection

This research focused on two villages in Dak Lak province. The villages were chosen from two separate districts with different local conditions and pressures on devolved forest resources. They roughly represented two extreme conditions in terms of resource extraction in the devolved forest: one on clearance of land for cultivation and the other on timber logging. The purpose was to gain insights into the connection between devolution and its benefits and to see how people in different positions reacted to devolution.

As presented in Figure 1, the study focused on four endowments and four entitlements. Selection of the forest endowments was based on the offer of Dak Lak's forest devolution policy in terms of benefits to forest recipients and the existing secondary data on the devolved forest. The selection of forest entitlements was based on the most important benefits from the devolved forest being harvested by local people. The four concrete entitlements reflected the most observable uses of the

2 Timber entitlement was defined by the total cash equivalence value of two to three of the most important timber products collected by the household in a year. NTFP entitlement was the cash equivalent value of two to three most important NTFPs collected. The selection of the timber and NTFP products was based on thorough discussion with villagers and was specific for each village. Once the selection was done, all households in the village were asked about the same products.

devolved forest resources. Other entitlements, including the use of forest RBCs as collateral for loan or harvests of game animals, are not discussed in this paper due to their uncommon occurrence. At the household level, I focus on the influence of household political position on the distribution of forest benefits.

Data for the study were collected through field study in two villages from March to September 2002. Different data collection strategies were applied, including unstructured interviews with villagers (individually and in groups) and local state officials (from local authorities and state forest enterprises - SFEs), direct observations and household census. Data were also collected from secondary sources, including local statistics, reports and legal documents. Pre-devolution data were collected either from secondary sources (existing reports and files) or directly from the farmers and local officials using recall technique. Data on forest resources were collected from secondary sources and updated through forest inventories conducted by local SFEs in mid 2002.

Households covered by the study included both groups of forest recipients (i.e. those who received forest through devolution program) and forest non-recipients (i.e. those who did not get forest). The difference between these two groups is the recognition of the rights to the forest by statutory (state) laws. People from both groups may live in the same village, yet the former was given the legal rights to the devolved forest while the latter was not. Nevertheless, both groups in practice had endowments to the forest, which were backed up by not only formal laws but also customary regulations.

4. Background to the Study

Dak Lak is located in the Central Highlands of Vietnam[3] (Figure 2). It is the largest province in Vietnam with total physical area of around 1.9 million hectares (ha), more than half of which is classified as forestland. Agricultural land accounts for about 26% of the total land size. Dak Lak is home to about two million people from more than 40 different ethnic groups, most of whom are migrants coming from other provinces. Indigenous ethnic groups (the major ones are Ede, Jarai, and M'nong) are minor in number (around 18% of the province total population) and mostly living in remote areas.

Like other provinces in Vietnam, state management of forest has been practiced in Dak Lak since the end of the American War[4]. For more than a decade after the war, forest exploitation was the major focus. State forest enterprises (SFEs) were set up as the state organizations in charge of forest exploitation and plantations at the

3 In January 2004, Dak Lak was split into two provinces: Dak Lak and Dak Nong. The name Dak Lak used in this paper, however, refers to Dak Lak as one province that existed before this division.

4 Known as Vietnam War in Western literature.

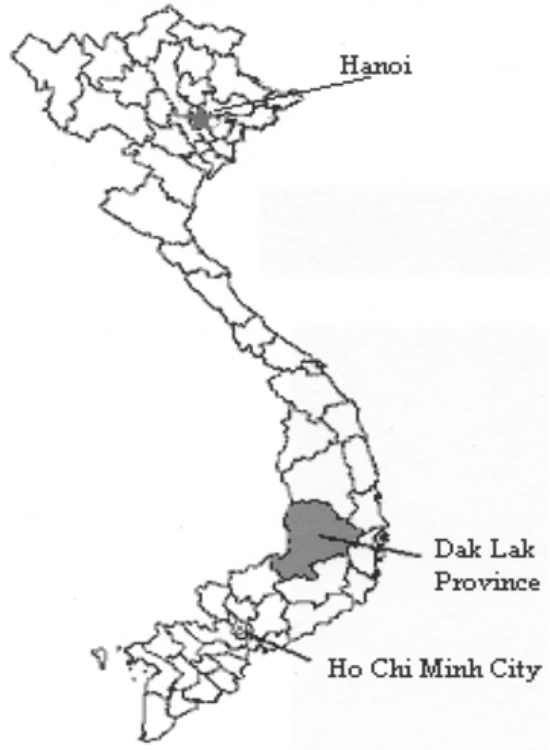


Figure 2: Location of Dak Lak

field level. Forest cover in Dak Lak declined rapidly during this period. Around 242,000 hectares (ha) of natural forests were lost between 1982 and 1999 (Nguyen 2005). In addition, forest quality also decreased. Area with rich quality forest declined from 73,000 ha in 1982 to 15,000 ha in 1999 and poor forest increased from 278,000 ha to 411,000 ha in the same period (Dak Lak Department of Agriculture and Rural Development (DARD) 2001b).

The forest devolution program in Dak Lak is the province's experimental initiative to respond to the decline in its forest resources. The program started in 1998 with these two objectives: 1) to maintain and improve the province's existent forest cover and 2) to improve the livelihoods of local people (Nguyen 2005). Dak Lak's devolution program devolved the rights to natural production forests that were managed by local SFEs to either individual households or groups of households. In the later stage (i.e. from 2001), the program also devolved forest management rights to communities. Long-term land use titles (RBCs) for forested land were granted to local people as evidence of the state's recognition of legal rights (to exchange, transfer, mortgage, lease and inherit land titles) stated in the land law. In addition to the RBCs, a contractual agreement among the state forestry representative, local authorities and local forest recipient household(s) was attached to each RBC. This contract specified the benefits from devolved forest that people were entitled to and the duties that they were expected to perform. By the end of 2000, forest devolution (in the field) was completed in 13 villages in five districts, with approximately 7100 ha of forest having been devolved to 339 individual households and 19 household groups consisting of 149 households (DARD 2001a).

The study villages are located in two different districts in Dak Lak: Cham B village in Krong Bong district and Buon Diet village in Ea Hleo district. Both villages are economically poor. At the time of the study (2002), Cham B had 42 households, 38 of whom were indigenous Ede and the remaining four were Kinh (the mainstream Vietnamese) migrants. Buon Diet had 53 households, 43 of whom were Jarai, one Ede and the remaining were Kinh migrants. Market conditions were different between the two villages. Cham B is located in a rather remote area, around 30 km from the district center. Access to the village was difficult during the rainy season. By contrast, Buon Diet was rather well integrated into the market. The village is situated on the

provincial road that connects the district center to the neighboring province and could be reached by automobile year-round.

Although there were various sources of livelihoods, the most important one was cropping. Rice (both paddy and upland rice) was cultivated for home consumption. Cash crops including short duration crops like hybrid maize and beans, and long duration crops like coffee were found in both villages. Pepper, however, was a new cash crop and was cultivated on significant scale in Buon Diet while hybrid maize was a new cash crop in Cham B. Forest products were also collected, mostly for home use and consumption. Off-farm income also played a role. The most popular off-farm sources were salary and allowances from the state (for the civil service work or contribution during the war), and returns from trading and servicing activities.

Forest devolution took place between 1998 and 2000 in Buon Diet and between 2000 and early 2001 in Cham B. Forest RBCs were handed over to forest recipients in 2000 in Buon Diet and mid 2001 in Cham B. People in Cham B village received forest in groups while people in Buon Diet received forest by individual household.

5. Distribution of Benefits from Forest Devolution in Dak Lak

5.1. Forest Tenure and State Patronage Before Devolution

Forest Tenure

Before devolution, Krong Bong and Ea Hleo SFEs were in charge of the state management of most local forests in Cham B and Buon Diet, respectively. The SFEs had branch offices in the vicinity of the villages with the task to perform state management of the local forest.

Under state management, all forests in the two villages were claimed by the state. Local people were expected to abide by forest laws and to practice sedentary agriculture in the designated areas. In both Cham B and Buon Diet, the local SFEs were responsible for keeping their forests from being converted into agricultural land. However, local people did not only cultivate in designated areas but also in the forests managed by SFEs.

Of all the forest resources, timber gained the most attention by the state forest organizations. In both villages, one of the SFEs' major activities was logging. In general, timber with high commercial value was the primary target of the state's logging activities. Claims on timber resources by local people were restricted to timber of less commercial value. Among local households, claims to timber trees were based on a 'first see, first own' basis (i.e. those who saw the tree first had the right to it). In Buon Diet village, the expansion of pepper cultivation in the late 1990s (as a result of the decline in coffee price) and the induced demand for timber poles for pepper plantations increased pressure on timber resources. As pepper planting increased in the year immediately before forest devolution, claims on timber by local people intensified.

By contrast to timber and land resources, the state did not place a strong claim on NTFPs. Local claims on NTFPs were also regulated on a 'first see, first own' basis. In both villages, NTFPs were used as communal property. Among local inhabitants, there was no specific distinction on who could claim NTFP resources in the forests. Local households, whether made up of indigenous ethnic people or migrants, could collect NTFPs as needed.

State Patronage

In Vietnam, the commune is the lowest administrative unit (Vietnamese National Assembly 1992). A Communal People's Committees (CPC) is a standing body in charge of state administration within the commune's territory. At the village level, there are state representatives to help the CPC administer the village.

Local officials were the 'dominant rural group' (Hart 1989: 33-36) and the clients of state patronage. In return for the services they rendered, local state officials received a monthly cash income. In addition, village officials were usually selected as beneficiaries for different development programs. Not only economic patronage, state political patronage was also present. In both study villages, close connections with state officials helped village officials improve their political status and influence within the village.

In forest management, there were mutual relationships between SFEs and local officials. Understaffing usually made it difficult for the local SFEs to keep forest resource extraction under control. They thus needed the allegiance of the communal and village officials for better forest protection. In return, SFE staff often made it easier for local officials to collect timber trees for housing. The connection with local SFE also helped improve the influence of local officials with their own community. A word from a local official could help a farmer get a logging permit from the local SFE for a new house.

5.2. Implementation of Forest Devolution in the Study Villages

In mid 1998, Buon Diet was selected along with three other villages in the same commune to start the provincial forest devolution program. By early 2000, fieldwork was completed with 327 ha of dipterocarps forest given to 20 individual Jarai households[5] (out of the totally 53 households in the village). Forest RBCs and a contract specifying rights and obligations were handed over to recipient households in March 2000.

In the devolution process in Buon Diet, Ea H'leo SFE and the local CPC played a key role. Ea H'leo SFE decided the area of forest to be devolved to the local people and the CPC made the selection of villages to be involved in the forest devolution. Ea H'leo SFE set the number of 20 households from Buon Diet to receive forest

5 At the same time, forest was also devolved to a group of ten officials from the communal administration. One of them was from Buon Diet. Thus there were a total of 21 households in Buon Diet having forest RBCs.

and required that at least two adult laborers be present in a household to be selected as a forest recipient[6]. However, as most of the households in the village had more than two adult laborers, the criterion left lots of room for selection. In the end, selection of specific households to receive forest was at the disposal of the village officials. Local people's participation in the process was nominal. Despite the fact that several meetings were held in the village, most of the talking was done by officials. The selection of households to receive forest was not clear to the villagers. In addition, not all households in the village were informed of forest devolution and its implementation in the village. Some households only learned about the program when it was almost finished and it was too late to apply.

In Cham B, forest devolution started at the beginning of 2000 when the forest devolution in Buon Diet was about to finish. Cham B and another village were jointly selected as targets of the devolution program in Krong Bong district. By early 2001, field allocation was completed and forest RBCs and contract papers were handed over to forest recipients in June 2001. A total of 569 ha of evergreen forest were allocated to five groups of 38 Ede households in Cham B[7].

Similar to the process in Buon Diet, there was strong presence of state officials in the implementation of forest devolution in Cham B. Krong Bong SFE decided the area of forest to be devolved to the local people and communal authorities influenced the selection of villages involved in the process. Cham B village officials were rather active in the process. They participated in meetings at district and communal levels and ran most parts of the meetings in the village. In addition, the distribution of forest for specific recipient groups was recommended by the village cadres. Nevertheless, Cham B villagers participated more actively in the devolution process than people in Buon Diet. All villagers were informed of the program and invited to participate in village meetings. At the same time, the criterion for selection of households was clearer to all villagers: all Ede households in the village would be given forest and all Kinh households would not.

In both villages, the distribution of forest plots among households receiving forest was based on the existing forest management system by the local SFEs. According to this system, a *Tiểu Khu* (forest district) was divided into several *Khoảnh* (sub-districts), and a *Khoảnh* into several *Lô* (plots). Plots in one forest district were similar in size. In Buon Diet, each forest recipient household got one plot. For Cham B, the size of a group's forest was based on the number of households in the group.

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6 The argument was that receiving forest implied additional requirement for labor (e.g. to patrol the forest). Households with less than two adult laborers may not have sufficient labor to meet this requirement.

7 At the time of forest devolution, 42 households were present in the village: 38 Ede and four Kinh

5.3. From Legal Rights to Rights in Practice and Actual Economic Benefits

With forest devolution, forest recipient households were entitled with forest RBCs and became the 'owners' of the devolved forest. In principle, each recipient household was entitled to a limited area of cultivated land in the devolved forest, subject to prior approval by concerned authorities. However, it was unclear how much land a forest recipient household was legally allowed to use for agriculture. As for timber, each forest recipient was entitled to a five-cubic-meter quota for housing every 20 years[8]. In addition, when forests were mature enough for commercial logging, forest recipients would be entitled to 6% of the after tax value of the logged timber for each year of protection. Forest recipients were also entitled to collect all NTFPs under the forest canopy without having to pay resource taxes. Besides rights, forest devolution implied duties for forest recipients. They were required to abide by state regulations on the use of forest resources, which included but were not limited to acquiring permission for timber logging and land conversion and regularly patrolling their forest to detect, stop and report unauthorized uses of the forest resources.

In contrast to forest recipients, households who were not included in the devolution program do not have any legal rights to forests. Forest devolution implied no change in the legal position in the use of devolved forest resources for the non-recipient households. Their use of the devolved forest remained illegal.

In reality, there was a big difference between what was legally endowed by devolution policy and what was happening in practice (see also Tran and Sikor forthcoming). Forest recipient households were not the sole users of the devolved forest resources (Table 1). Devolved forest in Cham B continued to be used by Ede and Kinh people from both within and outside of the village. Similar situations were found in Buon Diet. Devolved forest resources were not only used by the indigenous Jarai households with legal forest RBCs but also by other user groups, including indigenous Jarai and migrant people without forest RBCs from both within and outside Buon Diet.

The actual rights to specific forest resources also differed from the legal rights. In Cham B, forestland in the devolved forest was the primary resource claimed by local people, yet no approval from any state organization was available. Since the start of the forest devolution program, an increasing number of people from Cham B and the surrounding villages acquired and maintained their claims on the forestland. By 2002, 29 out of 42 households in Cham B had cleared new fields in the devolved forest (Table 2). Since no official land conversion approval from a state organization existed, some households with officials wishing to stay on good terms with the state did not want to clear the forestland. They feared that their occupation of the devolved forest land without permission would become known and their status jeopardized.

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8 The provincial authorities later increased the timber quota to 10 cubic meters but no amendment was made on the forest contracts with Cham B and Buon Diet people.

Table 1: Main Users and Their Actual Uses of Devolved Forest Resources

Forest resources	Cham B area			Buon Diet area		
	Ede from Cham B	Ede outside Cham B	Migrants†	Jarai with RBC	Jarai without RBC†	Migrants†
Forestland	√	√	√	√	√	
Timber	√	√	√	√	√	√
NTFPs	√	√	√	√	√	√

†: including those from outside of the study villages

In Buon Diet, nine Buon Diet households had cleared fields in the devolved forest by mid 2002. Six of them opened new fields as part of a state-assisted, post-devolution support program.

Among the 38 households in both villages with upland fields in the devolved forests by 2002, 23 had only one plot, 12 households had two plots, two had three plots and only one had four. No one had more than four plots. Field size varied among households, between 0.1 and 3 ha. Most households with fields in the devolved forest had up to 1.5 ha. As for harvest from fields in the devolved forests, the total harvested value in 2001[9] was estimated at 63.5 million Vietnamese Dong (VND) (US$4233)[10]. However, only 33 households enjoyed this income, leaving almost two-thirds of the villagers with no share of the harvest at all. Distribution of the crop harvest ranged from 0.15 to five million VND. Most households received no more than three million VND.

Table 2: Forest Entitlements from Devolved Forest

	Agricultural land (2002)	Agricultural harvest (2001)	Timber harvest (2001-2002)	NTFP harvest (2001-2002)
Total quantity	39.8 ha	63.5 mil VND	126 mil VND	2.6 mil VND
- Cham B	35.3 ha	56.8 mil VND	101 mil VND	1.5 mil VND
- Buon Diet	4.5 ha	6.7 mil VND	25 mil VND	1.1 mil VND
Households with benefits	38	33	42	38
- Cham B	29	24	9	13
- Buon Diet	9	9	33	25

In contrast to land clearing, logging of timber from the devolved forest was much more popular in Buon Diet than in Cham B. With pepper becoming a substitution crop for coffee, the demand for timber poles for pepper planting rose.

9 Since the fieldwork took place in mid 2002, complete data on crop harvest of 2002 was not available. Data of 2001 was collected instead.

10 The exchange rate at the time of the study was 1 USD~15,000 VND

Yet, none of the 33 households who collected timber from the devolved forest between January 2001 and August 2002 possessed the logging permit required by state regulation. In Cham B, timber was only collected for housing purposes. In 2002, one household (a village official) was able to acquire permission to collect timber for his new house. Another village official made several trips to the district center for a logging permit. Several other households also submitted letters of application to the communal chairman. Nevertheless, some Cham B households extracted timber without legal permission, including two households who built their houses during 2001 and 2002. The distribution of timber harvest varied significantly among local households. Only 42 households in the two villages harvested timber products, ranging from 0.1 to 16 million VND per household. Most households with timber entitlement had up to two million VND. One household had 16 million.

As for NTFPs, differences were observed between legal regulations and their actual use in both villages. Despite the fact that devolution policy legalized the use of NTFPs from the devolved forest solely for forest recipient households, NTFPs continued to be used as communal property in both villages. In fact, local people, regardless of ethnicity and legal position, continued to collect NTFPs from the devolved forest as needed. The value of NTFPs collected between January 2001 and mid 2002 was rather modest, at around 2.6 million VND, compared to that of timber. Although many local households generally use some kind of NTFPs, only 38 households collected considerable amounts of select NTFPs during this period.

Despite the continual use of forest resources after devolution, forest conditions had a tendency to improve after devolution. Forest inventories in the two villages in mid 2002 showed that standing timber stock increased 9.3% in Buon Diet (for the period of 1999-2002) and 8.1% in Cham B (2000-2002). Average standing timber stock went up from 52.6 to 57.5 cubic meters per ha in Buon Diet devolved forest and 74.5 to 80.5 cubic meters per ha in Cham B.

6. Discussion: State Patronage and Distribution of Benefits

In the previous section, I showed how the endowments and entitlements from forest devolution were distributed and demonstrated how the practice of state patronage prevailed in different aspects of devolution. This section analyzes the effects of state patronage on the distribution of benefits from devolved forest. I argue that political equity and economic equity are interlinked at the local level. Among other factors, a household's political position, mediated by different sets of institutions (defined as rules – see Leach *et al* 1999) working in the two villages, had an influence on the distribution of benefits from devolved forest. The rationale is that political position contributed to shape a household's endowments (both legal and actual) to the devolved forest. Differences in forest endowments could have effects on the differentiation in forest entitlements among local households. The poorer households would be able to gain the least (Nguyen forthcoming 2005). Consequently, the goal

of the devolution program, to improve livelihoods of local poor people and to achieve good management of the devolved forest would be difficult to reach. The province could achieve either of the two goals - to protect local forests or to improve local livelihoods (of the poor) - but not both.

It is important to note that the study took place only a short time after the completion of the devolution. The limit in time did not allow full effects of devolution policy to take shape. The discussion in this paper is based on what had happened in the villages until the time of the study.

In the study villages, state patronage continued to be present in different aspects of forest devolution and influenced the way local households acquired benefits from devolved forest. In the implementation of the devolution program at the local level, ownership of forest RBCs was positively connected with political position (Nguyen forthcoming 2005). The case of Buon Diet provided a vivid example. Communal officials obtained forest RBCs through a specific devolution program targeted to them. In addition, village officials dominated in the selection of households at the village level. As discussed earlier, 21 Jarai households were given forest RBCs during the forest devolution program and the selection of households to receive forest was significantly influenced by officials from Buon Diet participating in the devolution process. Though it was not clear what criteria were considered in the selection of households (beside the two laborer criterion set by Ea H'leo SFE), the political position and connection with it of the selected households was significant (Figure 3). All village and commune officials (both traditional and state elected) living in the village received forest RBCs and most of other forest recipients had some connection to the families of these officials[11].

Patronage of local state officials was also present in the derivation of economic benefits from devolved forests after completion of the program. In Buon Diet, a support program, which provided technical assistance for cashew plantations and access to soft loans for cashew seedlings and raising cattle, was implemented after devolution. The target group of the program was forest recipients in the village. The program covered six households, two of which were village officials. In Cham B, the earlier discussion showed that a village official was able to use his connection with the state to get a logging permit for his new house and became the first person who was able to legally collect 10 cubic meters of timber from the devolved forest.

While receiving patronage from the state, local officials also expressed their allegiance to the state through observation of the devolution policy with the aim to maintain a good relationship with the state for long term benefits. The most vivid example of this was the decision of some officials not to extract forest resources in a significant way when no legal permit was available: such as the conversion of devolved forest into agricultural land in Cham B and the collection of timber in Buon Diet.

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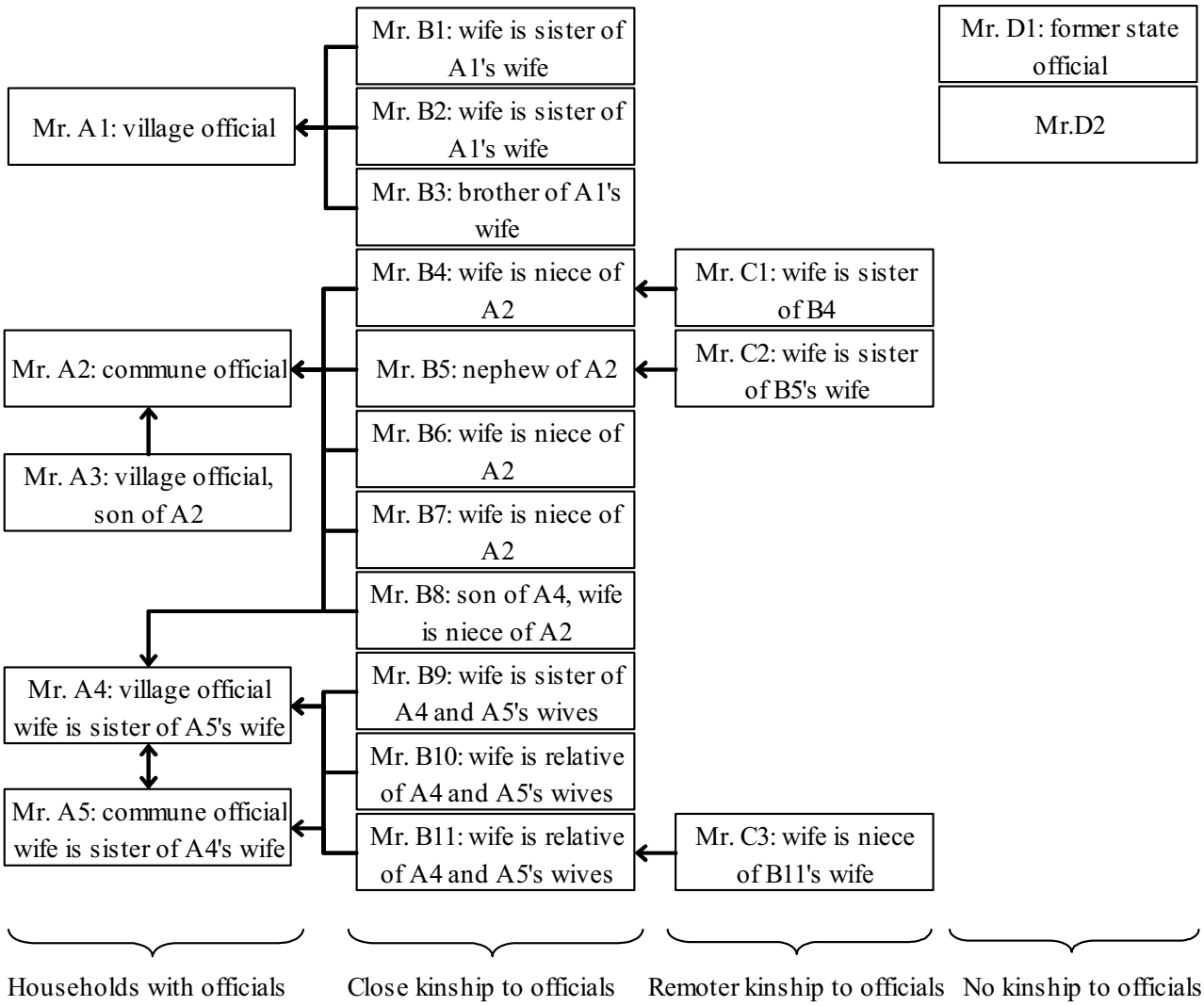
11 See Luu (1994) for a discussion on the strengths of family linkages in Central Highlander communities.

Though most households with available resources (i.e. wealthy and labor rich households) obtained a significantly large field in the devolved forest in Cham B (Nguyen forthcoming 2005), few local officials were among them. In Buon Diet, households with officials extracted an insignificantly larger quantity of timber than the others. The fact that households with local officials received an insignificant share of entitlements from devolved forest could be explained by their sacrifice of the immediate benefits for longer term relationship with the state, which would enable them to have better access to state support in the future. To establish and maintain such a relationship, local households may sacrifice their immediate benefits or invest in "unproductive investment" (Hart 1989: 34-36).



Note: All names are coded. I use the name of the household head, which appeared in the forest RBC, to refer to the household itself.

Figure 3: Familial Relationship with Local Officials Among All Households with Forest Title in Buon Diet

On the one hand, local officials were given priority to obtain forest RBCs because they were expected to demonstrate a "people's forest management regime". In other words, they could be used as an example for forest management of local people. This idea was openly expressed by the local SFE staff who directly implemented the devolution program at the local level. Local state officials were believed to have better knowledge and production skills than other farmers; they thus would be able to apply these skills and knowledge in managing the devolved forest. On the other hand and perhaps more importantly, the favor to (some) local officials may be regarded as a reimbursement for helping the state to manage forest in the local area. As households with political position had a share in the devolved forest, they would be encouraged to mobilize local households for forest management activities, which would ultimately help the state to achieve the goal of forest protection. Nevertheless, the fact that forest conditions tended to improve after devolution may or may not be attributed to the efforts of local officials.

Inequitable distribution of benefits from forest devolution in Dak Lak does not come as a surprise, considering the experiences from other countries around the world. Poteete points out that devolution has failed to improve equity in African and South Asian countries. "Shortcomings persist despite serious, on-going efforts to promote enhanced equity" (Poteete 2004: 20). In Thailand, the ability of a community to claim and benefit from community rights depends largely on its political influence. In addition, the state is strongly biased against certain forms of communities and the rights they would provide (Johnson and Forsyth 2002). As Nurse *et al.*(2003) indicate, equitable decision-making and benefit sharing have yet to be achieved.

Will the inequities in the distribution of benefits from forest devolution in Dak Lak be acceptable for the different actors involved? Experiences from the literature show that perfect equity rarely exists. Indeed, certain levels of inequity are accepted in many cases (Varughese and Ostrom 2001). For the sake of better forest management, state patronage and its induced inequities could be acceptable in the two study villages. The question remains, however, of what impacts such inequities have on achieving the objective of livelihood improvement, particularly with regard to the poor and the disadvantaged. Local officials in the study villages were expected to represent the villagers during the devolution process. However, there was a lack of downward accountability in their representation. Instead, the discussion shows a strong upward accountability of local officials to the state. Participation of local people in the devolution process was rather nominal, though the situation improved in Cham B compared to Buon Diet. Furthermore, the interests of most villagers were not well represented. What people got from devolution depended largely on their capability and there was little help for the poorer households to benefit from devolution.

To conclude, while potentials for win-win synergies exist (Wunder 2001, Sunderlin *et al.* 2005), it may be too optimistic to expect an achievement of both sustainable forest management and livelihood improvement goals in forest devolution in Dak Lak. The patronage of local state officials to achieve better forest management

was likely to result in disproportionate distribution of economic benefits from forests. As a result, the efforts to improve the livelihoods of the local people, particularly those of the poor, through forest devolution may be undermined. Forest devolution may help improve forest management but not the livelihoods of the rural poor. The province may need to choose either forest management or improvement of the poor's livelihoods, or the achievements may be weak for both goals.

7. Conclusions and Policy Implications

This paper tries to provide empirical evidence on the distribution of benefits from forest devolution in Dak Lak province of Vietnam. I have shown that although patronage of local state officials may serve the purpose of better management of the devolved forest, the dominance of state officials in all aspects of devolution was likely to have adverse impacts on the state efforts to improve the livelihoods of poor households.

From the policy point of view, findings from this study have various implications. First, forest devolution is able to provide real economic benefits for local people. Devolution policy can stimulate the interest of local people in the management of local forest. However, benefits from devolution are likely to be distributed inequitably among households. Variations in forest entitlements acquired by local households reflect the differences in their positions to make use of the devolved forest.

Second, attention of policy-makers should be given to not only the creation of (new) policies but also to the implementation of policies at the local level. Inappropriate policy implementation is likely to lead to failure in reaching the stated objectives, or worse, to have adverse impacts at the local level. As the practice of state patronage in forest devolution tends to give advantages to local state actors, increased political equity in policy implementation through better participation of local people may help alleviate this problem.

Third, the state should proactively help poor households gain from state policies. So far, households that gain the least from devolution are those with poor access to productive resources, i.e. the poor and disadvantaged households (Nguyen forthcoming 2005). As poor upland farmers are often dependent on forest resources, excluding them from forest devolution is likely to take away their access to forests, which may worsen their comparative economic status. In forest devolution policy, the goal of improving the livelihoods of the poor may be done at the costs of poor forest management. Improving the livelihoods of poor upland farmers needs to be associated with strengthening their access to productive resources and their ability to make use of these resources. As Nurse *et al.*(2003: 53) stated, these households "should be positively discriminated for."

In conclusion, forest devolution is likely to generate benefits for local inhabitants. A more concrete question is how these benefits are distributed. In other words, what

is important is not just what benefits can be derived from forest devolution but for whom these benefits are generated. Forest devolution is not just an issue of forest management; it is one that concerns local politics.

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References

Agrawal, A. and E. Ostrom. 1999. "Collective Action, Property Rights, and Devolution of Forest and Protection Area Management." In R. Meinzen-Dick, A. Knox and M. Di Gregorio (eds.) *Collective Action, Property Rights and Devolution of Natural Resource Management: Exchange of Knowledge and Implications for Policy*. DSE, Germany:75-110.

Angelsen, A. 1995. "Shifting Cultivation and Deforestation: A Study from Indonesia." *World Development. 23:* 1713-1729.

Angelsen, A. and S. Wunder. 2003. "Exploring the Forest-Poverty Link: Key Concepts, Issues and Research Implications." CIFOR Occasional Paper No 40. Center for International Forestry Research; Jakarta, Indonesia.

Arnold, J. E. M. and M. R. Pérez. 2001. "Analysis: Can Non-Timber Forest Products Match Tropical Forest Conservation and Development Objectives?" *Ecological Economics. (39)*: 437-447.

Arocena-Francisco, H. 2003. *Environmental Service "Payments": Experiences, Constraints, and Potential in the Philippines*. World Agroforestry Centre, Indonesia.

Belcher, B. M. 2005. "Forest Product Markets, Forest and Poverty Reduction." *International Forestry Review. 7*: 82-89.

Belcher, B. and Kusters, K. "Non-Timber Forest Product Commercialisations: Development and Conservation Lessons." In K. Kusters and B. Belcher. (eds.) *Forest Products, Livelihoods and Conservation: Case Studies of Non-Timber Forest Product Systems*. Center for International Forestry Research (CIFOR): Jakarta, Indonesia. 1-22.

Bromley, D. W. 1989. "Property Rights and Institutional Change." *Economic Interest and Institutions: The Conceptual foundations of Public Policy*. 185. Basil Blackwell Inc.L: New York.

Bromley, D. W. 1992. "The Commons, Common Property, and Environmental Policy." Environmental and Resource Economics. 2: 1-17.

Bruce, J. W. 1998. "Review of Tenure Terminology." *Tenure Brief.* 1: 1-8.

Cavendish, W. 2000. "Empirical Regularities in the Poverty-Environment Relationship of Rural Households: Evidence from Zimbabwe." *World Development.* 28: 1979-2003.

Dak Lak Department of Agriculture and Rural Development (DARD). 2001a. Bao Cao Ket Qua Buoc Dau Thuc Hien Thi Diem Giao Dat Lam Nghiep Tai Tinh Dak Lak Trong Hai Nam 1999-2000 (Report on the Initial Results of the Experimental Forest Land Allocation in Dak Lak in 1999-2000). 511/BC/NNPTNT. Dak Lak.

Dak Lak Department of Agriculture and Rural Development (DARD). 2001b. Chien Luoc Phat Trien Lam Nghiep Tinh Dak Lak Giai Doan 2001-2010 (Dak Lak Forestry Development Strategy for 2001-2010). Dak Lak.

Edmunds, D. and E. Wollenberg. 2001. "Historical Perspectives on Forest Policy Change in Asia: An Introduction." *Environmental History.* 6: 190-212.

Edmunds, D., E. Wollenberg, P. Contreras, L. Dachang, G. Kelka, D. Nathan, M. Sarin, and N. M. Singh. 2003. "Introduction." In D. Edmunds and E. Wollenberg (eds.) Local Forest Management: *The Impact of Devolution Policies.* Earthscan Publication Ltd.: London. 1-19.

Fauconnier, I. 1999. "The Privatization of Residential Water Supply and Sanitation Services: Social Equity Issues in the California and International Contexts." *Berkeley Planning Journal*. 13: 37-73.

Fisher, R. J.1989. "Indigenous Systems of Common Property Forest Management in Nepal." Working Paper No 18. Environmental and Policy Institute of East West Center: Honolulu, Hawaii.

Fisher, R. J. 1999. "Devolution and Decentralization of Forest Management in Asia and the Pacific." *Unasylva*. 50: 3-5.

Goebel, A., B. Campbell, B. Mukamuri, and M. Veeman. 2000. "In the Field: People, Value, and Woodlands: A Field Report of Emergent Themes in Interdisciplinary Research in Zimbabwe." *Agriculture and Human Values*. 17: 385-396.

Gram, S. 2001. "Analysis Economic Valuation of Special Forest Products: an Assessment of Methodological Shortcomings." *Ecological Economics*. (36):109-117.

Hart, G. 1989. "Agrarian Change in the Context of State Patronage." In G. Hardin, A. Turton, and B. White, (eds.) *Agrarian Transformations: Local Processes and the State in Southeast Asia.* University of California Press: Berkeley, CA. 31-49.

Jain, N. C. 2002. "Heterogeneity and Equity: Some Contradictions and Compromises in Collective Action." Paper Submitted for Presentation at the 9th Biennial Conference of the IASCP. 17-21 June 2002. Victoria Falls, Zimbabwe.

Johnson, C. and T. Forsyth. 2002. "In the Eyes of the State: Negotiating a 'Rights-Based Approach' to Forest Conservation in Thailand." *World Development.* 30: 1591-1605.

Landell-Mills, N. and I. T. Porras. 2002. Silver Bullet or Fools' Gold? *A Global Review of Markets for Environmental Services and Their Impacts on the Poor*. International Institute for Environment and Development: London.

Leach, M., R. Mearns, and I. Scoones. 1999. "Environmental Entitlements: Dynamics and Institutions in Community-Based Natural Resource Management." *World Development.* 27: 225-247.

Luu, H. 1994. *Buon Lang Co Truyen Xu Thuong (Traditional Villages of the Central Highlanders)*. Nha Xuat Ban Van Hoa Dan Toc: Hanoi.

MacPherson, C. B. 1978. "The Meaning of Property.In C. B. MacPherson, ed. "*Property: Mainstream and Critical Positions*. University of Toronto Press: Toronto. 1-13.

Meinzen-Dick, R. and A. Knox. 1999. "Collective Action, Property Rights, and Devolution of Natural Resource Management: A Conceptual Framework. In R. Meinzen-Dick, A. Knox and M. Di Gregorio (eds.) *"Collective Action, Property Rights and Devolution of Natural Resource Management: Exchange of Knowledge and Implications for Policy*. DSE: Germany. 41-74.

Ngaido, T. and M. Kirk. "Collective Action, Property Rights and Devolution of Rangeland Management: Selected Examples from Africa and Asia. In R. Meinzen-Dick, A. Knox and M. Di Gregorio (eds.) "*Collective Action, Property Rights and Devolution of Natural Resource Management: Exchange of Knowledge and Implications for Policy*. DSE; Germany. 41-74.

Nguyen, T. Q. (forthcoming) "Forest Devolution in Vietnam: Differentiation in Benefits from Forest among Local Households." *Forest Policy and Economic*s.

Nguyen, T. Q . 2005. In V. Beckmann and K. Hagedorn (eds). *"What Benefits and for Whom? Effects of Devolution of Forest Management in Dak Lak, Vietnam.*" Shaker Verlag: Aachen, Germany.

Nurse, M., P. Robinson, D. Paudel and B. K. Pokharel. 2003. "Towards Pro-Poor Community Forestry - Recent Experiences from Dolakha and Okhaldhunga Districts. In N. P. Timsina and H. R. Ojha, (eds.) "*Case Studies on Equity and Poverty in the Management of Common Property Resources in Nepal (Proceedings of the National Workshop on Management of Common Property Resources and Equity: Exploring the Lesson from Nepal). May 28 2003.* Forest Resources Studies and Action Team (ForestAction): Kathmandu, Nepal. 41-67.

Pagiola, S., A. Arcenas, and G. Platais. 2005. "Can Payments for Environmental Services Help Reduce Poverty? An Exploration of the Issues and the Evidence to Date from Latin America." *World Development.* 33: 237-253.

Peluso, N. L. 1992. *Rich Forests, Poor People: Resource Control and Resistance in Java*. University of California Press: Berkeley, CA.

Poteete, A. R. 2004. "Is Decentralization a Reliable Means of Increasing Equity? "Paper Submitted to the Tenth Biennial Conference of the International Association for the Study of Common Property (IASCP), 9-13 August 2004, Oaxaca, Mexico.

Reardon, T. and S. A. Vosti. 1995. "Links between Rural Poverty and the Environment in Development Countries: Asset Categories and Investment Poverty." *World Development.* 23: 1495-1506.

Ribot, J. C. 1998. "Theorizing Access: Forest Profits along Senegal's Charcoal Commodity Chain." *Development and Change*. 29: 307-341.

Ribot, J. C. 2002. *Democratic Decentralization of Natural Resources: Institutionalizing Popular Participation*. World Resource Institute: Washington D.C.

Ribot, J. C. 2003. "Democratic Decentralisation of Natural Resources: Institutional Choice and Discretionary Power Transfer in Sub-Saharan African." *Public Administration and Developmen*t. 23: 53-65.

Ribot, J. C. and N. Peluso. 2003. "A Theory of Access." *Rural Sociology.* 68: 153-181.

Sen, A. 1976. "Famines as Failures of Exchange Entitlements." *Economic and Political Weekly.* 11: 1273-1280.

Sen, A. 1981. *Poverty and Famine: An Essay on Entitlement and Deprivation.* Clarendon Press: Oxford.

Shackleton, S., B. Campbell, E. Wollenberg, and D. Edmunds. 2002. "Devolution and Community-Based Natural Resource Management: Creating Space for Local People to Participate and Benefit?" *Natural Resource Perspectives*. 76: 1-6.

Smith, P. D. and M. H. McDonough. 2001. "Beyond Public Participation: Fairness in Natural Resource Decision Making." S*ociety and Natural Resources*. 14: 239-249.

Sunderlin, W. D., B. Belcher, L. Santoso, A. Angelsen, P. Burgers, R. Nasi, and S. Wunder. 2005. "Livelihoods, Forests, and Conservation in Developing Countries: An Overview." *World Development*. 33: 1383-1402.

Tran, T. N. and T. Sikor. (Forthcoming). "From Legal Acts to Actual Powers: Devolution and Property Rights in the Central Highlands of Vietnam." *Forest Policy and Economics.*

Varughese, G. and E. Ostrom. 2001) "The Contested Role of Heterogeneity in Collective Action: Some Evidence from Community Forestry in Nepal." *World Development.* 29: 747-765.

Vietnamese National Assembly. 1992. Hien Phap Nuoc Cong Hoa Xa Hoi Chu Nghia Viet Nam (Constitution of the Socialist Republic of Vietnam).

Warner, K. 2000. “Forestry and Sustainable Livelihoods.” *Unasylva*. 51: 3-12.

World Resource Institute (WRI) 2003. “Decentralization: A Local Voice.” *World Resources 2002 - 2004: Decision for the Earth: Balance, Voice and Power.* World Resource Institute: Washington DC. 89-106.

Wunder, S. 2001. “Poverty Alleviation and Tropical Forests - What Scope for Synergies?” *World Development* . 29: 1817-1833.

Hanging in the Balance:
Equity in Community-Based Natural Resource Management in Asia

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Promoting Equity: A Challenge in the Implementation of Community-Based Forest Management Strategy in the Philippines

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Abstract

A decade ago, community-based forest management was declared as the national strategy to achieve sustainable forestry and social justice in the Philippines. The mandate was to take into account the needs and aspirations of local communities whose livelihoods depend on forestlands. This paper examines if community-based forest management promotes equitable forestland allocation and access to forest resources. A review of policies and operational guidelines suggests that the government has allocated considerable areas within forestlands for community management. Long-term security of tenure was granted to organized local communities through the issuance of the Community-Based Forest Management Agreement and other land tenure instruments under the various people-oriented forestry programs that were implemented in the past. This gives them the right to possess and develop forestlands. However, despite these achievements, there are still a number of improvements that could be made, especially in providing local communities access to forest resources. Currently, the government still has ultimate control and supervision over the utilization of forest resources, including those that are found in areas that are already being managed by local communities. The log ban policy is an unresolved issue that continues to affect the integrity of the community-based forest management strategy in the country.

1. Introduction

In the Philippines, involvement of local communities in forest management has evolved through time. Until the 1960s, forest management was primarily oriented towards the protection and preservation of the forest. Access to forestlands and resources during that period was mainly through license agreements or permits in favor of corporate groups (Asian Development Bank 1994). Upland farmers received little benefit from the use of forest resources and lesser incentives to protect the forests. The law also strictly prohibited slash and burn cultivation and occupancy within forestlands. It emphasized the prosecution and ejection of forest dwellers that were then perceived as destroyers of the forests. Despite such punitive measures, local people continued to move into forestlands for shifting cultivation and livelihood opportunities. Nowadays, most of the forestlands in the country are occupied and being cultivated by local communities, their livelihood and general well-being are intimately linked with the forest.

The Philippines has promulgated a number of policies favoring community-based management of the forest in the country. However, there are still inherent difficulties and insufficiencies in the implementation of these policies that limits equity of forestland allocation and access of local communities to forest resources. The paper will focus on the review of these policies as they continue to affect the expansion of the community-based forest management in the country. It will further explore the reasons for such limitations.

The paper is divided into four sections. The first section provides basic information about forestlands and resources and their potential for community-based management. It includes information on the system for recognition of the rights of forest communities and their access to forest resources. Section two explains the methodology adopted in the study. Section three presents the main arguments focusing on policy implementation of CBFM related to forestlands allocation and access of local communities, institutional support and limitations, and the equity outcomes. Finally, section four provides some conclusions.

2. Background

2.1. Forestlands and Resources

The Philippines covers a total land area of thirty million ha. Today, about 14.14 million ha (47%) are classified as Alienable and Disposable (A&D), 14.77 million ha (49%), which are generally above 18% in slope, are classified as forestlands while 1.09 million ha (4%) remain unclassified (Figure 1).

Land Classification
(30 million ha)

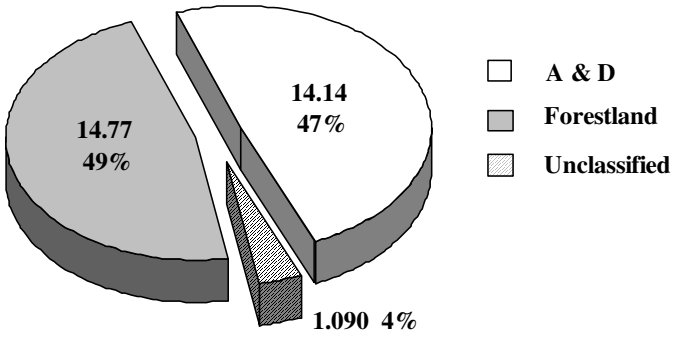

Figure 1: Land Classification in the Philippines

Of the country's 15.86 million ha of classified and unclassified forestlands, 6.52 million (41.11%) ha are under actual forest cover. The balance of 9.34 million ha (58.89%), which are open and cultivated, are the potential areas that can be allocated to forest communities for collective development projects. These include 2.6 million ha of cultivated lands, 2.4 million ha of shrublands, 2.4 million ha of wooded grasslands and 1.10 million ha of grasslands.

Under the Philippine law, forestlands are part of the public domain. At present these areas serve as home to roughly 24 million people, or one-third of the country's population, of whom 6 to 10 million are classified as indigenous (Li 2002).

2.2. Local Communities in Forest Management: A Brief Recount of the Past

A change of government policies and strategies during the 1970s heralded a more responsive and participatory approach to forest management in the Philippines. In 1971, the government passed the Kaingin Management and Land Settlement Regulations under Forestry Administrative Order No.62. This regulation required the government to conduct a complete census of all forest dwellers to identify potential beneficiaries and prepare a management plan to serve as a basis for the development of occupied areas in forestlands.

Similarly, the government promulgated Presidential Decree (PD)[1] No. 389, otherwise known as the Forestry Reform Code in 1974. It directed the forestry agency to develop and implement a continuing program for forest occupants. The decree was later amended when the Revised Forestry Code of the Philippines was issued in

1 Presidential Decrees (PD), Letter of Instructions (LOI) and Executive Orders (EO) are laws issued by virtue of power vested on the President and upon the recommendation of the Secretary of the Department concerned, in this case, the Department of Environment and Natural resources (DENR). They do not require legislative review or approval.

1975 under PD No. 705. It also required the government to define which lands may be the subject of occupancy and design an agroforestry development program for the forest occupants.

As a result of the policy changes, the Forestry Occupancy Management (FOM) Program, the Family Approach to Reforestation (FAR) and the Communal Tree Farm (CTF) Program were implemented. However, these programs did not give the local communities greater authority and land security, they were merely designed to rehabilitate open and cultivated areas and contain occupancy in forestlands. The recognition of the rights of local communities and the system of forestland allocation of areas they occupied and developed were merely through the provision of short-term tenure instruments.

For example, in the FOM (1975), a renewable two-year FOM permit was issued to every participating forest occupant. The main idea was to regulate their activities and stabilize their farming system by planting cash crops in combination with tree species of economic value. In the same way, the FAR (1979) was implemented on a short-term contractual scheme for local communities to hasten the reforestation efforts of the government. It was only the CTF (1979) that granted local communities a 25-year CTF Certificate to rehabilitate and develop open and denuded areas into agroforestry plantations.

On July 28, 1982, the Integrated Social Forestry (ISF) Program was launched under the Letter of Instructions (LOI) No. 1260 with the goals of alleviating poverty, promoting social justice and developing and protecting forest resources through proper stewardship of the areas that are part of the forestlands. The ISFP consolidated FOM, CTF and FAR to promote a more holistic approach in the development of open and occupied areas within forestlands. It was an attempt by the government to democratize the use of forestlands and promote more equitable access to forest resources. The program provided organized members of local communities a renewable 25-year Certificate of Community Forest Stewardship (CCFS) and individual participants with a Certificate of Stewardship (CS), also with a tenure of 25 years.

The implementation of the ISF Program strengthened the involvement of local people in forest management. This program recognized forest communities, including indigenous people, as partners of the government in the development of open and denuded forestlands, while at the same time undertaking activities aimed at improving their socio-economic condition. The change of regulations towards a more developmental and people-oriented forest policy also provided local communities a more active role in forest management and better access to forest resources.

2.3. CBFM in the Master Plan for Forestry Development

In 1990, the Master Plan for Forestry Development (MPFD) in the Philippines was prepared to ensure systematic and coordinated efforts for forest resource development and management. The Master Plan spells out the goals and objectives of the development programs and projects in the forestry sector. It includes a program on people-oriented forestry (POF) that serves as the primary vehicle to provide local

communities equal opportunities in forest management and access to forest resources. POF local communities, including indigenous communities, are actively involved in managing, conserving and using forestlands and resources.

2.4. CBFM: A National Strategy for Sustainable Forest Management

After more than two decades of implementing various people-oriented forestry programs, the Philippines government has developed a strategy believed to be more sustainable, equitable and holistic. Now, all efforts geared towards the development of forestlands adopt Community-Based Forest Management (CBFM) as a national strategy to ensure sustainable development of the country's forestland resources and achieve social justice in consonance with the provisions of Executive Order No. 263 issued by the government in 1995.

Briefly, CBFM as a strategy refers to all organized efforts of the government to work with local communities in and adjacent to public forestlands. It underscores the principles of social equity, sustainability and community participation in forest management and biodiversity conservation. Through the CBFM strategy, the government empowers and allocates to local communities portions of the forestlands for development, protection, management, conservation and further grants them access to utilize forest resources. Specifically, the CBFM strategy aims to protect Filipinos, right to a healthy environment; improve the socio-economic conditions of the participating communities; and promote social justice and equitable access to and benefits from forest resources. These objectives highlight the important role expected of local communities, not only in promoting forest development but also to help advance the overall socio-economic development in the Philippine uplands.

Even in the revision of the MPFD in 2003, the government recognized the need to further enhance the implementation of the CBFM strategy. It aimed to bridge the gap in providing support to sustain the interest among the participating members of the People's Organizations (PO)[2] . Specifically, the revised master plan intends to strengthen existing sites, identify and implement new sites, place open access areas under formal management systems and pursue development activities geared towards resource generation.

In June 2004, support for the community-based approach in forest management was further exemplified through the promulgation of Executive Order No. 318. It declared community-based conservation and development as among the guiding principles to promote sustainable forest management. It reiterated community-based forest management as the primary strategy in all forest conservation and development projects in the country.

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2 A People's Organization (PO) may be an association, cooperative, federation or other legal entity established by the community to undertake collective action to address community concerns and needs and mutually share the benefits from the endeavor.

2.5. Extent and Coverage of CBFM: How Far Has it Gone?

CBFM covers all areas classified as forestlands, including the allowable zones within the protected areas. In the strategic action plan for CBFM, the Department of Environment and Natural Resources (DENR)[3] has set as target of 9 million ha of forestlands to be managed following the CBFM strategy.

As of the middle of 2005, 5503 projects were already established. These encompass an aggregate area of 5.97 million ha involving 690,691 households. Of these areas 1577 sites with a total area of 1.57 million ha were allocated to organized communities through the issuance of long-term CBFM Agreements (Table 1). The rest of the project sites are covered by land tenure instruments under the various people-oriented forestry projects that the Philippine government has implemented in the past.

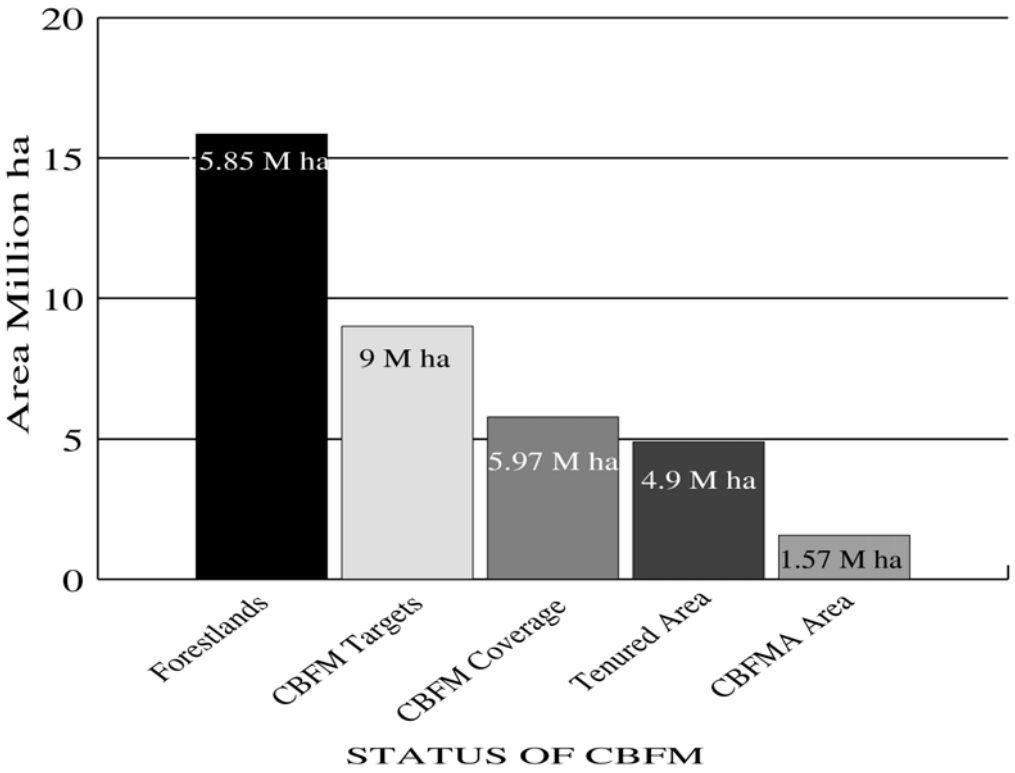
Table 1: Summary of CBFM Agreements Issuance

Region[4]	*No of Sites*	*Tenured area*	*No. of Households*	*No. POs*
ARMM	10	22,861.20	2,365	10
CAR	67	48,045.74	11,909	67
01	126	40,080.38	14,205	126
02	93	272,505.84	92,099	93
03	120	78,066.68	11,544	120
04A	31	16,707.30	2,920	31
04-B	79	96,602.27	10,122	79
05	52	41,703.80	10,542	52
06	104	42,656.70	16,978	104
07	133	45,476.60	11,901	133
08	111	107,557.63	12,693	111
09	121	66,298.01	12,030	121
10	295	214,209.05	30,376	295
11	92	195,396.30	25,895	92
12	48	88,645.49	10,197	48
13	95	197,233.97	28,115	95
TOTAL	**1,577**	**1,574,046.96**	**303,891**	**1,577**

3 The Department of Environment and Natural Resources (DENR) is the primary government agency in the Philippines responsible for the conservation, management, development and proper use of forest and other natural resources.

4 DENR is sub-divided into 16 Regional Offices which include the National Capital Region (NCR). Each region is headed by a Regional Director. NCR is not included in Table 1 because it does not cover any CBFM project while ARMM (Autonomous Region of Muslim Mindanao) operates as an autonomous region.

The 5.97 million ha (Figure 2) currently covered by CBFM already comprise about 66.3% of the total area targeted by the government. This is a concrete manifestation of the government's determination to carry out its policy of involving and allocating suitable portions of forestlands for the local communities to manage.



Though the Issuance of CBFMA

Figure 2: The Coverage and Status of Forestland Allocation

3. CBFM Assessments and Reflections of Implementations: A Working Framework

Several evaluations, consultations and studies have been undertaken to review and assess the implementation of the CBFM strategy. These were conducted to pursue a common goal of enhancing the implementation of the strategy throughout the country. The most important of these studies include:

1. National CBFM Multi-stakeholder Assessment and Reflection Workshop (*DENR 2003*)
2. Synthesis of In-depth Case Studies Conducted in CBFM Areas (Pulhin 2005)
3. Field Review of Forty Seven CBFM Sites (Miyakawa *et al.* 2005)

It is from these three studies that the majority of data is drawn to support the arguments presented in this paper and the observations that the *implementation of government policies on CBFM is limiting equity of forestlands allocation and access to forest resources.* It is also within this framework that I will explore the reasons for these inequities.

There are diverse views and opinions about equity. There are also a number of discussions about it, but no agreement so far has been reached as to what constitutes an equitable outcome. According to Fisher and Malla, it is not necessary to insist that equity requires precisely equal sharing of benefits; rather, it connotes "fairness" and "justice." They further emphasized that equity is a subjective issue, not a question that can be decided by objective definition (Fisher and Malla 1987).

Similarly, Fisher opined that community forestry can be used in two rather distinct ways. On one hand, it can be used as a convenient generic term or gloss to describe a range of different policies and forms of forest management which have in common some involvement of local people in forest management. The second one is the management of forests by communities for their own use (Fisher 2005). But as Agarwal stated, involvement or participation of local communities in forest management is determined especially by policies, acts or rules, norms and perceptions, in addition to the endowments and attributes of those affected (Agarwal 2001).

3.1. The National CBFM Multi-Stakeholder Workshop: Assessment and Reflection

The National CBFM Multi-stakeholder Assessment and Reflection Workshop was organized primarily to translate recommendations from previous consultations into concrete actions to support the implementation of the CBFM strategy. DENR officials and representatives of other government and non-government organizations that participated in the workshop recommended actions pertinent to CBFM implementation based on the results of previous assessments conducted by other stakeholders. One of the priority areas identified was the need to review CBFM policies and streamline operational guidelines to address the needs at the local level, especially on the criteria for the selection of participants, issuance of tenure instruments and utilization of forest resources.

In the same workshop, the need to further develop capacities of POs, CBFM Coordinators and Local Government Units (LGUs) and the institutionalization of multi-sectoral involvement in CBFM was discussed. The conduct of the workshop was timely and relevant. All the recommendations have since been translated into operational directives and some were incorporated in the formulation of guidelines to pursue the primary intent of enhancing the CBFM.

3.2. In-Department Case Studies: Exploring the Impediments and Opportunities for CBFM

In the early part of 2004, the DENR, with support from the National Forest Program (NFP) Facility and the Food and Agriculture Organization (FAO) of the United Nations and in collaboration with some non-government organizations, conducted in-department case studies of selected CBFM areas in the islands of Luzon, Visayas and Mindanao. The studies attempted to explore the current implementation impediments and opportunities for improvement in order to translate the result into practical recommendations that will serve as input in strengthening the CBFM strategy.

The case studies concluded that despite the continuous expansion of CBFM, a number of problems continue to beset its implementation. Policy and institutional support for CBFM was identified as major area of concern. Recommendations were made to help facilitate delivery of services at the project level and policy development at the program level.

3.3. DENR-JICA Field Review of Forty CBFM Sites

Similarly, DENR, through the Japan International Cooperation Agency (JICA) assisted the Project for the Enhancement of CBFM and conducted field reviews of forty seven projects in the Philippines. The report also confirmed that the numerous policies and guidelines issued on CBFM are difficult for the various stakeholders to fully understand. Many of the POs also raised the concern that while the law declared CBFM as a national strategy to promote sustainable forest management, the government's frequent change of rules and guidelines was not creating a stable environment to work within.

It is in this context that this paper further explores the policy aspects related to the recognition of rights of local communities over forestland areas they develop and occupy and the opportunities for them to access and utilize forest resources in accordance with the CBFM strategy.

4. CBFM Policies and Operational Guidelines: Implementation Issues and Concerns

4.1. Forestlands Allocation and Tenure Rights

In the Philippines, it appears that the government has already vigorously pursued the involvement and allocation of suitable portions of forestlands to local communities. This is supported in various policies and operational guidelines that have been promulgated (Table 2). However, the findings of the assessments, evaluations and studies indicate that the policy and institutional support for CBFM remains weak. Despite some initiatives, there is still much room for improvement in policy and institutional support for CBFM (Pulhin 2005). This was mainly attributed to: 1) complex procedures and many restrictions imposed on local communities who seek access to utilize forest resources; 2) the perceived institutional inefficiency to implement CBFM especially at the field level; 3) the absence of financial mechanisms to help finance CBFM; and 4) the policies for soliciting the participation of the LGUs, non-government organizations, and tacitly, the people's organizations, are insufficient.

Before exploring the above arguments, there is a need to review the processes involved in the implementation of CBFM, especially those relating to allocation of forestlands and access of local communities to forest resources in CBFM areas. These processes are stipulated in the Revised Rules and Regulations for the Implementation of CBFM under DENR Administrative Order (DAO) No. 2004-29.

Table 2 Summary of Major CBFM Policies Cited in the Paper

Year	Policy	Brief Description
1971	Forestry Administrative Order N0.62	Kaingin Management and Land Settlement Regulations
1974	Presidential Decree No. 389	Forestry Reform Code
1975	Presidential Decree No. 705	Revised Forestry Code of the Philippines
1982	Letter of Instructions No. 1260	Launching the Integrated Social Forestry Program for Forest Dwellers and Communities
1991	Republic Act No. 7160	Local Government Code of the Philippines
1995	Executive Order No. 263	Adopting CBFM as the National Strategy to Ensure Sustainable Development of Forestlands and Resources
1998	Joint Memorandum Circular No. 98-01	Manual of Procedures for DENR-DILG-LGU Partnership on Devolved and other Forest Management Functions
2003	Joint DENR-DILG-LGU Memorandum Circular No. 2003-01	Strengthening and Institutionalizing DENR-DILG-LGU Partnership on Devolved and other Forest Management Functions
2004	Executive Order No. 318	Promoting Sustainable Forest Management in the Philippines
2004	DENR Adm. Order No. 2004-29	Revised Rules and Regulations for the Implementation of Executive Order No. 263

The provisions of Executive Order No. 263 recognize and support the capacities and important roles of local communities to protect, develop, utilize and manage forestlands and resources. This is formalized through the granting of CBFM Agreements which provide access and incentives (Box 1) for the local communities to forestlands and resources.

Box 1: List of Incentives Under CBFM

The issuance of CBFM Agreement offers concomitant incentives that could be enjoyed by the PO in the development of their CBFM projects. Among these are:

1. The right to occupy, posses, utilize and develop the forestlands and its resources within a designated CBFM area and claim ownership of the introduced improvements;
2. To allocate to the members and enforce the rights to use and manage the allocated forestlands and resources within the CBFMA area;
3. To be exempted from payment of rental for use of the CBFM areas;
4. To be exempted from paying forest charges, as required by law, on timber and non-timber products harvested from plantations; and
5. To receive all income and proceeds from the utilization of forest resources in CBFM areas.

This agreement is a production sharing agreement entered into between a community, as represented by a People's Organization, and the government to protect, develop, utilize and manage specific portions of the forestland consistent with the principles of sustainable development and pursuant to a Community Resource Management Framework (CRMF).

However, participation in CBFM is not totally free. POs that hold CBFM Agreements are required to participate in site identification, selection, and project boundary delineation. They also have some important obligations and responsibilities to be performed. Among these are:

1. To protect the entire forestlands within the CBFMA area against illegal logging and the unauthorized extraction of forest products, slash and burn agriculture and other forms of forest destruction;
2. Designate areas according to their sustainable use and allocate and regulate resource-use rights in accordance with national laws, rules and regulations;
3. Prepare and implement CRMF and a 5-Year Work Plan (WP) with assistance from CBFM coordinators and LGU;
4. Formulate and implement equitable benefit sharing scheme among members; and
5. Recognize the rights of occupancy through the granting of individual certificate of stewardship based on the census of actual forest occupants, and provided the Certificate of Stewardship (CS) applicant is a regular member of the PO.

It should also be noted that not all local communities can be included as participants. Only the communities, as represented by their POs, that have the following qualifications are allowed to participate in CBFM:

1. Members shall be Filipino citizens;
2. Members may either be:
   a. Actually tilling portions of the area to be awarded;
   b. Traditionally using the resource for a substantial portion of their livelihood; or
   c. Actually residing within or adjacent to, and are dependent on and actually developing portions of the areas to be awarded.

All others that do not meet the qualifications are excluded. In many of the CBFM areas, PO membership is generally low. For example, in Cebu, a province on the Island of Visayas, the *Kapunongan sa Mag-uuma sa Yutang Lansangan sa Bulalacao* (KMYLB), an association of farmers within the forestlands of Bulalacao, was awarded a CBFM Agreement covering an area of 1651 ha in 1999 in the barangay of Nug-as, Alcoy Cebu. The barangay[5]has a total population of 2465, or 448 households; only 40 (or 8.9%) of the households in the barangay[5] are included as members of KMYLB.

5 The barangay is the second smallest political unit (next to Sitio) in the Philippines.

In Leyte, another province in the Visayas, another PO locally known as *Unyon sa Mag-uuma sa Capoocan* (UMACAP), a farmer's cooperative in Capoocan, was awarded a CBFMA covering 2387 ha in 2000. The project site is located in 3 barangays of Capoocan with a total population of 3536 with 683 households, but only 127, or 18.6%, of these households are the enlisted members of UMACAP. As a consequence, promotion of equal access to and benefits from forest resources has become a problem. The residents of the barangays that are not included as members of the POs complain that they are deprived of the same opportunities to utilize forest resources. There are also other members of the community that still carry with them a 'wait and see attitude'. Unless they see that there are substantial benefits that they can obtain, they remain hesitant to participate in the community projects.

5. Major Findings

5.1. Access to Forest Resources: Complexities of Procedures and Restrictions Imposed on Local Communities

A critical issue that has to be elucidated is the access of local communities to forest resources. As argued in the case studies and in a number of assessments conducted on CBFM, the procedures for harvesting timber resources in CBFM areas are complex (Pulhin 2005). There are many restrictions imposed on POs before they are allowed to utilize these resources. These include complex requirements associated with the issuance of transport permits and the preparation of CRMF and the Five-Year Work Plan, which is usually viewed as too technical and beyond the capability of the POs.

Preparation of CRMF and Five-Year Work Plan

To a great extent, I find merit in this argument. In the existing guidelines and procedures on CBFM, the POs are expected to prepare the CRMF within 30 days after the issuance of the CBFM Agreement. The CRMF serves as the strategic plan of the community on how to manage and benefit from the forest resources on a sustainable basis. It describes the long term vision of the community, commitments and strategies for the protection, development and utilization of forest resources. It further indicates the environmental impacts of and the mitigation and enhancement measures for the activities to be undertaken by the POs in CBFM areas.

In addition, the guidelines also require the POs to prepare a five-year Work Plan consistent with the CRMF. It should contain a projected five year plan for detailed strategies, activities and targets of the PO on protection, development, resource utilization and enterprise development, among others. While the DENR Officers and LGUs concerned are mandated to join and assist the POs to prepare the CRMF and 5 year Work Plan, both plans still need to be reviewed and affirmed by DENR.

It is understandable that government sees itself as having the responsibility to ensure that forests are properly managed and protected and forest officers are tasked

to carry out this mandate. It is the government's moral obligation to protect public interest and ensure that the future generations of Filipino people continue to have green forest to inherit, fresh air to breath and clean water to drink. However, complicated procedures and requirements can often be onerous and impractical.

Cognizant of such complexities being imposed on the POs, especially in harvesting and utilization of forest resources, DENR embarked on the streamlining and simplification of requirements and operating procedures on CBFM. As a result, POs are no longer required to undertake the tedious requirements and processes for them to be issued with Environmental Clearance Certificate (ECC) (DAO 2004-29). The affirmed CRMF itself already substituted the Initial Environmental Examination (IEE) as a requirement for the issuance of the ECC. Likewise, the simplified guidelines only require the POs to prepare work plans every five years, instead of having them prepared and affirmed by DENR every year. This made their work easier and convenient.

But POs must still follow all prescribed rules, regulations and guidelines for harvesting timber resources particularly the issuance of cutting permits and transport certificates. However, while it appears that these regulations provide strict requirements under which the POs must work, at least they are allowed to harvest and utilize forest resources within the CBFM areas as long as they comply with the requirements.

The Log Ban

A more pressing issue is the policy on logging ban now being pushed by some environmental advocates. In December 2004, as a reaction to the massive flooding and devastating effects of landslides in the provinces of Aurora and Quezon on the island of Luzon, the government (as represented by DENR) ordered the cancellation of all logging permits in the stated provinces and the suspension of all other logging permits in the rest of the country, including CBFM areas. This has severely reduced economic activities for many POs to manage large tracts of forestlands areas that were allocated to them under the CBFM Agreement.

Many of the CBFM areas include portions of the natural forest that are currently protected and managed by local communities. For example, in Isabela, a province in the Northern part of the Island of Luzon, a PO known as VIBANARA (taken from the names of barangays where the project is located), was awarded a CBFM Agreement covering 10,220 ha of forestland. Out of the total project area covered by the CBFM Agreement, 64% is residual forest (6585 ha) with less than one percent of old growth forest. In another case, in Compostela Valley, a province in the Island of Mindanao, the Ngan Panansalan, and Pagsabangan Forest Resources Development Cooperative (NPPFRDC) was also awarded a CBFM Agreement covering an area of 14,800 ha. Seventy five percent of the project site is composed of residual forests.

Harvesting of timber in CBFM areas provides great opportunities for the POs to generate financial capital to support livelihood projects, development activities like agroforestry and reforestation, and forest protection. In other words, local communities should also generate benefits to sufficient level to sustain economic

and development activities at the local level. For example, in the affirmed CRMF of the NPPFRDC[6] in Compostela Valley in Mindanao, the PO planned to utilize a total volume of 67,500 cubic meters of timber from their CBFM area for five years to support their livelihood and generate capital for forest protection activities, plantation and agroforestry development. The members of the PO hoped that after fifteen years, they would be more dependent on plantation forest, which consequently will reduce the pressure and allow the natural forest to regenerate. Unfortunately, because of some alleged violations of forest regulations, the DENR suspended the resource utilization permit of the PO. As a result, the livelihood, forest protection, plantation and agroforestry development activities of the PO were adversely affected (IPC 2004).

Currently, in only 2 regions in Mindanao Island, Regions 11 and 13 (see Table 1), are POs allowed to harvest and utilize forest resources. However, in these two regions, not all the POs can harvest forest resources in their CBFM areas. DENR requires a comprehensive evaluation of the performance of all the holders of tenure instruments issued in forestlands, including the CBFM Agreement. Under the regulations, only the POs that are religiously complying with the terms and conditions stipulated in the Agreement and those that have satisfactory performance in reforestation, agroforestry development, timber stand improvement and forest protection are allowed to undertake harvesting of forest resources. Except for the non-timber forest products (NTFP)[7], the suspension continues to be in force in other parts of the country.

The logging ban also includes the suspension of harvesting of planted trees. The database on CBFM also indicates a considerable area of forest plantations developed by POs. This is a significant investment by POs hoping to improve their livelihood. If the log ban continues, they lose the benefits that they had expected to generate from the harvest of what they have planted, making their lives even more difficult.

5.2. Institutional Insufficiencies Affecting CBFM Policy Implementation

Organizational Structure and Staff Support for CBFM

The limited number of DENR staff, particularly at the field level, who can provide technical assistance and conduct regular monitoring of the implementation of CBFM policies is often identified as a key factor that impede the implementation of CBFM (Miyakawa *et al.* 2005, Pulhin 2005). As an offshoot of the national assessment done by a multi-sectoral group in 2003, DENR conducted a survey of field personnel assigned to CBFM. The survey revealed that only 641, or an average

6 NPPFRDC is the first and only People's Organization in the Philippines that was granted an International Certification for its sustainable forest management practices.

7 Non-timber forest products include rattan, bamboos, vines, resins, palms, and other similar products taken from the forest, other than timbers.

of 43 personnel per region, usually designated as CBFM Coordinator, were implementing CBFM in the field. With the 5503 CBFM sites already established nationwide, one CBFM coordinator[8] is tasked to oversee an average of eight sites covering an aggregate area not less than 8000 ha.

This limitation was also highlighted by the result of the in-depth case study conducted by the DENR in collaboration with different non-government organizations with the assistance of the National Forestry Program (NFP) Facility. The study revealed that in one Community Environment and Natural Resources Office (CENRO), only 2 out of 38 staff were responsible for CBFM implementation. The issue was further confirmed by the field review (DENR-JICA Enhancement of CBFM Project) of 47 sites that indicate that a CBFM coordinator is responsible for an average of five or more projects. The study also found that the situation is further aggravated by the lack of capacity of some of these DENR staff supporting the CBFM. The study concluded that these situations make facilitation and the support of CBFM extremely difficult.

In addition, there are still many DENR staff or personnel assigned in CBFM that lack the necessary attitudes and capacity to work with local communities. The result of the DENR-JICA field review on forty seven CBFM sites also indicates that in most of the sites visited, DENR personnel assigned to support the POs generally lack training and efforts for self improvement (Miyakawa *et al.* 2005).

There are also perceptions that the DENR structure is not responsive to the needs and demands of CBFM. There is duplication of functions being performed by DENR offices at various levels that leads to inefficiencies and is a waste of resources in the implementation of CBFM. This is evident in Surigao del Sur, a province in Mindanao Island under the assistance of the National Forestry Program Facility. Apparently, the functions being performed by the Provincial Environment and Natural Resources Office (PENRO)[9] merely duplicates CBFM functions that are already being performed by the Community Environment and Natural Resources (CENRO)[10]. In such case, the PENRO is perceived as an unnecessary layer of authority that only delays implementation of CBFM activities.

5.3. Financial Support

While Executive Order No. 263 declared CBFM as the national strategy to ensure sustainable development of forestlands and resources in the country, only a

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8 CBFM Coordinators are DENR staff assigned to provide technical assistance and facilitate the activities of the POs. Many of them are foresters, agriculturists and graduates of social sciences with training related to community organizing, agroforestry, forest plantation development and protection and related fields.

9 PENRO is the office of DENR established at the provincial level.

10 CENRO is a DENR office at the community level which covers certain number of municipalities depending on the resources to be managed. It is directly responsible in the implementation and monitoring of all projects on environment and natural resources sector.

meager budget was provided for the program to be fully implemented. For the last five years (Year 2000-2004) CBFM has only received an annual average of 5.12% out of the total forestry sector budget (Table 3).

In addition, the CBFM Special Account intended to provide financial support for the development of CBFM projects has not been implemented. The General Appropriations Act (GAA) and the State Auditing Code of the Philippines require that all revenue collected by the government should be deposited with the National Treasury or a National Government repository. In these laws, it is prohibited to earmark funds for specific project like CBFM.

LGU Partnership and Multi-sectoral Participation

The implementation of CBFM requires strong partnerships with local governments and collaboration with other stakeholders. Under Republic Act No. 7160, otherwise known as the Local Government Code of 1991, the LGUs shall share with DENR the responsibility of the sustainable management and development of forestlands and resources. Toward this end, the DENR and LGUs shall endeavor to strengthen their collaboration and partnership in forest management. The law also requires all national government agencies to consult the LGUs before implementing local development projects.

Table 3: Budget Allocation for CBFM

Year	Forest Management Sector	CBFM Program	Percentage (%)
2000	1,514,805	97,361	6.43
2001	1,423,773	64,185	4.51
2002	1,529,112	73,288	4.79
2003	1,567,055	78,692	5.02
2004	1,536,879	74,602	4.85
Total	7,571,624	388,128	Avg. 5.12

Source: General Appropriations Act and National Program Expenditure

Pursuant to the provisions of the local government code, DENR and the Department of Interior and Local Governments (DILG) jointly issued Joint Memorandum Circulars (JMC) No. 98-01 and 2003-01, setting up the mechanisms for their collaboration and partnership in forest management. In such arrangement, DENR and DILG agree to work together to support POs, and to protect, develop, manage and ensure that all qualified be given equal opportunities to utilize and benefit from forest resources.

To ensure the support of other government agencies, especially the LGUs, and non-government organizations, DENR mandated all of its units to establish and consolidate partnerships among these groups and institutions as their highest priority. It is mandatory for DENR offices to submit any application for tenure instruments, including permits to utilize forest resources for comments by the LGUs (Department Administrative Order- DAO 2004-29). In turn, the legislative council of the concerned LGU endorses such documents to DENR if they find the applications relevant and consistent with local plans. However, in a number of case studies and field evaluation reports, it appears that these policies are still not fully implemented. The expected support from the different sectors for the implementation of CBFM remains insufficient. The reasons identified also include insufficient staff that can be assigned and funds on the LGUs side that could be utilized for CBFM implementation. The other sectors are also busy doing their own priority activities and have insufficient time for collaborative undertakings.

6. Conclusions

This paper has consistently illustrated the will of the government to involve local communities in forest management. This is exemplified in various policies and operational guidelines that have been issued on community-based management of forests. CBFM agreements and other forms of land tenure instruments have been granted by the government to transfer the rights and responsibilities to POs to access, manage and developed suitable areas in forestlands.

However, access of local communities to forest resources remains an issue. The government still has ultimate control and supervision over the utilization of forest resources, including those that are found in areas that are already being managed by local communities. The log ban policy is an unresolved issue that has been adversely affecting the interest of the local communities to participate and of other stakeholders to support the implementation of CBFM. Right now, harvesting and utilization of timber resources are limited to only two regions in the country. The ban has totally restricted all other members of local communities outside these regions to access timber resources. Unless the government promulgates definitive regulations, upon which the POs can be allowed to harvest their plantations and give them back the rights to access and utilize the natural resources that they have long cared for and protected, the integrity of CBFM will continue to be adversely affected.

For effective change, local communities need more formal involvement in rule making and increased bargaining power to ensure that policy changes will have positive impacts on their lives. Government must also not forget that policies that have been formulated with substantial involvement and inputs of local communities and other affected groups will have a long and lasting effect. But, how local communities influence those that make the policies will again depend on their strength and group cohesiveness. In many instances, their bargaining power to lobby the government for fair and just

policies is facilitated if they have the support from external agents like LGUs, NGOs and other groups.

The support of LGUs is important to ensure a higher level of community participation in CBFM. Aside from the LGUs, DENR should also establish mutual and lasting partnership with other stakeholders on the ground to achieve the CBFM objectives. These partnerships should provide creative space upon which each counterpart can seek harmonious relationship and refine the collaborative rules on CBFM through consensus and the consultative processes. In fact, good community forest governance should not only be focused at government organizational levels, but also civil society, forest users and private sector should also be recognized as equal partners.

Equity, as asserted by Fisher and Malla, exists in the Philippine CBFM. The government is just in allocating forestlands to be managed by local communities. The selection of beneficiaries is strictly based on established criteria and procedures, such that those that are qualified are included, and those that are not, are excluded. It is also fair. While it has prescribed some limitations on the access to forest resources, its intention is also to be fair with other Filipino citizens.

Overall, the paper concludes that CBFM as a strategy is a viable model to ensure sustainable forest management. But policies and operational guidelines should be made based on local situations and to the satisfaction of the needs of local communities. The government should develop effective mechanisms to fully harness the potential of community-based forest management to contribute to poverty alleviation at the community level. It would be even more effective if LGUs, non-government organizations and other stakeholders can be motivated to support local community-based forest management initiatives.

References

Asian Development Bank. 1994. "Forestry Sector Study of the Philippines." Agriculture Department, ADB; Manila, Philippines.

Agarwal, B. 2001. "Participatory Exclusions, Community Forestry and Gender: An Analysis of South Asia and a Conceptual Framework." *World Development*. 29(10): 1623-1648.

Aquino, R. M., R. A. Del Castillo and E. V. Payuan. (1987). "Mounting a National Social Forestry Program: Lessons Learned from the Philippines Experience." *Working Paper No. 87-9*. East West Center, Honolulu, HI.

Cornista, L. B., E. F. Escueta and F. A. Javier. 1986. *Land Tenure and Resource Use Among Upland Farmers*. Agrarian Reform Institute. University of the Philippines at Los Banos College: Laguna, Philippines.

Defiesta, G., P. Fernandez and M. Lopez. 2004. *KMYLB and Key Factors in CBF orM Resillence in Bgy*. Nug-as, Alcoy, Cebu. CAS, University of the Philippines: Iloilo, Philippines.

DENR. 2004. *Allocation and Tenure Instruments on Forestlands: A Source Book.* Philippine Environmental Governance Project: Manila, Philippines.

DENR. 1991. *Philippine Master Plan for Forestry Development*. Quezon City, Philippines.

DENR. 2003. *Primer on DENR-DILG-LGU Partnership in Forest Management*. Philippine Environmental Governance Project: Manila, Philippines.

Durst, P. B., T. Enters and M. Victor. 2000. "Decentralization and Devolution of Forest Management in Asia and the Pacific." *RECOFTC Report No. 18 and RAP Publication 2000/1*. Bangkok, Thailand.

Durst, P. B. *et al*. 2005. *In Search of Excellence: Exemplary Forest Management in the Asia and Pacific*. FAO Regional Office in the Asia and Pacific: Bangkok, Thailand.

Era, M. L., D. S. Erasga and H. A. Namay. 2004. I*n-depth Study of Community-Based Forest Management Project in Visayas: The Case of UMACAP*. Social Development Research Center, De la Salle University: Manila, Philippines.

Fisher, R. J. 2005. *Community Forestry in Selected Countries of Southeast Asia: Devolution or Persistence of State Control*. Australian Mekong Resource Center, University of Sydney, Australia.

Fisher, R. J. and Y. B. Malla. 1987. "Planting Trees on Private Farmland in Nepal: the Equity Aspect." Presented in Multipurpose Trees for Small Farm Use Workshop*,* 1-15 November 1987. Pattaya, Thailand.

Forest Management Bureau. 2003. *Philippine Forestry Statistic*s. Quezon City, Philippines.

Forest Management Bureau. 2004. *Highlights of the Year-end Assessment of CBFM and Systems Clean Up*. Quezon City, Philippines.

Hartanto, H. *et al*. 2003. *Learning Together: Responding to Change and Complexity to Improve Community Forest in the Philippines*. Center for International Forestry Research: Indonesia.

Institute of Philippine Culture (IPC). 2004. I*n-depth Study of a Community-Based Forest Management Project in Mindanao: the Case of the Ngan, Panansalan, Pagsabangan Forest Resources Development Cooperative*. Ateneo de Manila University: Quezon City Philippines.

International Institute for Rural Reconstruction. 2001. *Shifting Cultivation: Towards Sustainability and Resource Conservation in Asia*. IIRR: Cavite, Philippines.

Kanel, K. K., *et al*. 2004. "25 Years of Community Forestry: Contributing to Millennium Development." *Proceedings of Fourth National Workshop on Community Forestry, Community Forestry Division*. Department of Forest, Kathmandu, Nepal.

Li Muray, T. 2002. "Engaging Simplifications: Community-Based Resource Management, Market Processes and State Agendas in Upland Southeast Asia." *World Development. 30(20)*: 265-283.

Pulhin, J. M. 2005. *Enhancing the Philippines' Community-Based Forest Management Implementation Strategy: Synthesis of Six Case Studies*. College of Forestry and Natural Resources, University of the Philippines: Laguna, Philippines.

Miyakawa, H. *et al*. 2005. F*or the Better Future of CBFM: A Field Review of 47 CBFM Sites*. DENR: Quezon City, Philippines.

Tropical Resources for Environmental and Economic Systems, Inc. 2004. *In-depth Case Study of a Community-Based Forest Management Project in Villa Imelda, Batong Labang, Nanaguan and Rang-Ayan Multipurpose Cooperative*. Ilagan Isabela, Philippines.

Warner, K. and H. Wood. 1993. *Policy and Legislation in Community Forestry: Proceedings of a Workshop*. RECOFTC, Bangkok, Thailand.

Wunder, S. 2001. "Poverty Alleviation and Tropical Forests-What Scope for Synergies?" *World Development.* 29(11): 1817-1833.