

New rights for forest-based communities? Understanding processes of forest tenure reform

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SUMMARY

This article reports on findings from a research project, in more than 30 sites in 10 countries in Africa, Asia and Latin America, aimed at analyzing cases where changes in formal tenure rights for forest-based communities had recently occurred or were in process. Though by far largest proportion of the world's forests are owned by the state, over a quarter of forests in developing countries are now owned by or assigned to communities. This suggests, at least in some ways, a marked departure from the historic trend towards centralizing. The project, led by the Center for International Forestry Research in coordination with the Rights and Resources Initiative in 2006-2008, sought to identify issues and concerns from the perspective of socially and economically vulnerable groups that were seeking rights reforms. The objectives were to understand reform processes, particularly the extent to which community rights had improved in practice. This article reports on the analysis of three aspects of the reforms: the broad global trends shaping them, challenges in implementation and outcomes for livelihoods and forests.

Keywords: property rights, community forestry, conservation, livelihoods, deforestation, indigenous peoples

Des nouveaux droits pour les communautés basées sur la forêt? Comprendre les processus de réforme du droit de jouissance forestier

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Cet article est un rapport de nos découvertes puisées dans un projet d'action de recherche recouvrant plus de 30 sites dans 10 pays d'Afrique, d'Asie et d'Amérique Latine, visant à analyser les cas où les changements de droits de jouissance officiels pour les communautés forestières étaient en train d'être opérés, ou avaient été opérés récemment. Bien que la plus grande proportion des forêts du monde soit propriété d'état, plus d'un quart des forêts dans les pays en voie de développement sont propriété des communautés, ou leur sont assignées. Cela suggère, au moins en partie, un mouvement s'éloignant du courant historique vers la centralisation. Le projet, poursuivi par le Centre de recherche forestière internationale en coordination avec l'Initiative des droits et ressources de 2006 à 2008, chercha à identifier les questions et soucis du point de vue des groupes socialement et économiquement vulnérables, qui cherchaient une réforme dans le domaine des droits. Les objectifs étaient de comprendre les processus de réforme, particulièrement le degré auquel les droits de la communauté s'étaient améliorés en pratique, et pour identifier les différentes façons dont ces processus pouvaient résulter en de meilleures conditions pour la forêt et les moyens d'existence. Cet article offre nos analyses sur trois aspects de ces réformes: les larges courants globaux qui les modèlent, les défis pour leur mise en pratique et les résultats pour les moyens d'existence et pour les forêts.

¿Nuevos derechos para las comunidades que habitan los bosques? Hacia una concientización de los procesos de la reforma de tenencia de tierras forestales

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Este artículo informa sobre los descubrimientos de nuestro proyecto de investigación activa que se realizó en más de 30 lugares de diez países de África, Asia y Latinoamérica. El objetivo del proyecto fue de analizar casos en que los cambios de derechos formales de tenencia para comunidades forestales habían ocurrido recientemente o estaban ocurriendo en la actualidad. Aunque la enorme mayoría de los bosques mundiales es de propiedad estatal, más de una cuarta parte de los bosques de los países en vías de desarrollo ya es propiedad de la comunidad local, o ha sido asignada a esta comunidad. Este hecho sugiere, al menos en algunos aspectos, un cambio significativo en relación a la tendencia histórica hacia la centralización. El proyecto, administrado por el Centro de Investigación Forestal (CIFOR) en colaboración con la Iniciativa de Derechos y Recursos (RRI) entre 2006 y 2008, intentó identificar problemas y preocupaciones de la perspectiva de grupos vulnerables desde el punto de vista social o económico, que trabajaban para lograr reformas relacionadas con los derechos. El proyecto tuvo como objetivo comprender los procesos de la reforma, sobre todo hasta qué punto los derechos comunitarios habían mejorado en términos prácticos, e identificar formas en que estos procesos podrían funcionar mejor para los bosques y las vidas de sus habitantes. Este artículo describe nuestro análisis de tres aspectos de las reformas: las grandes tendencias globales que las determina, los desafíos que presentados por su implementación y los resultados para los bosques y las vidas de sus habitantes.

INTRODUCTION¹

Rural people have lived in and around forests for centuries, but state forest policies have often placed higher priority on national, colonial or private sector interests than on those of local communities. Centralized forest ownership and control has a long history that has been well described by Dixon and Sherman (1991), Fay and Michon (2003), Harrison (1992), Peluso (1992), Pyne (2009), Vandergeest and Peluso (1995), Westoby (1987, 1989), and others. According to this literature, the tendency for centralization has been based, simultaneously or at different moments, on the usurpation of lands for royal and elite hunting grounds, the economic value of trees, a commitment to professional, “rational” or “scientific” forestry, the need to maintain future timber supplies, protection of environmental services and entrenched bureaucracies.

In many cases, the rights of communities living in and often depending on those forests for their livelihoods have been restricted or denied (see, for example, Colchester 2007, Lynch *et al.* 1995, Peluso 1992). But this formal state claim to forests has not stopped local populations from using and managing forest resources or continuing to claim customary rights, and research suggests that governments may have begun to listen. In 2002, White and Martin (2002) made an initial attempt to document changes in forest ownership globally, finding that about 200 million hectares of forest had been transferred to communities since 1985, and in 2008, Sunderlin *et al.* (2008) documented a clear increase in community ownership and management² of forests since 2002. This increase is particularly apparent in developing countries where communities now officially manage 27% of forests, up from 22% just between 2002 and 2007 (Hatcher, pers. comm., based on data from Sunderlin *et al.* 2009).

In 2006, the Center for International Forestry Research (CIFOR), in coordination with the Rights and Resources Initiative, launched a research project in over 30 sites in 10 countries aimed at understanding the origins, nature and initial outcomes of this apparent trend toward forest tenure reform (Larson *et al.* forthcoming, Pacheco *et al.* 2008a). The countries included in this analysis are in Asia (India, Nepal and the Philippines), Africa (Burkina Faso, Cameroon and Ghana) and Latin America (Bolivia, Brazil, Guatemala and Nicaragua).

PROBLEM AND OBJECTIVES

Since the 1980s, some governments, such as Nepal (Fisher 1989, Gilmour 2003, Gilmour and Fisher 1991) and India (Saxena 1997), through community forestry initiatives, and Panama, with the formal recognition of indigenous territorial rights in the 1972 Constitution (Roldan 2004), began to extend important forest tenure rights to communities. Other nations followed. Since that time, hundreds of articles have been

written about the relationship of local peoples to forests. These have included case studies of social or community forestry (Bray *et al.* 2005, Colfer 2005a,b, Gibson *et al.* 2000, Klooster 1999, 2000, Menzies 2007, Oyono 2004, 2005, Peluso 1992, Poffenberger 1990, 1996), decentralization and devolution (Agrawal 2005, Agrawal and Ostrom 2008, Andersson 2006, Andersson and Gibson 2004, Edmunds and Wollenberg 2003, Ribot 2002, 2004, Ribot and Larson 2005), the effects of – or community participation in – protected areas and conservation initiatives (Brandon and Wells 1992, Brosius *et al.* 1998, Fisher *et al.* 2005, Ghimire and Pimbert 1997, Sayer *et al.* 2008, Stevens 1997, Wells and Brandon 1993), among many others.³ This vast and rich literature has clearly demonstrated that communities can be good forest managers but that community forestry and other forms of devolution are not a panacea for obtaining improvements in livelihoods and forest conservation.

Though in-depth comparative studies exist, most of these occur on a national or regional scale. Where broader attempts have been made at extensive comparative analyses across regions or globally, these are usually based on the analysis of existing literature rather than studies designed to be comparative (e.g. Charnley and Poe 2007, Hayes 2006, McDermott and Schrekenberg 2007, Pagdee *et al.* 2006), though important analyses are beginning to emerge from the dataset collected by the International Forestry Resources and Institutions (IFRI) research initiative (see Chhatre and Agrawal 2009). This research differs in two main ways: it is based on a fairly large set of coordinated, in-depth, multi-scale case studies from 10 developing countries, and it was designed as a policy-action research project, working from the perspective of communities demanding forest rights.

Attempts to draw broad-based conclusions regarding local people and forests have found that results are highly context specific, depending on local and national, ecological, social and economic context as well as history (Agrawal and Chhatre 2006, Charnley and Poe 2007, Pagdee *et al.* 2006). Local governance conditions are one central aspect of success. In this regard, two important currents of thought shaped the research presented here. First, Elinor Ostrom and others have clearly demonstrated that people are more likely to follow rules and monitor the behaviour of others, such as rules for forest management, when they are “genuinely engaged in decisions” regarding those rules, and when livelihoods are insured (Ostrom and Nagendra 2006). These findings place central emphasis on institutions and governance in forest communities. Improving tenure rights implies an improvement in the institutional basis for local decision-making; also, well-defined property rights have been clearly identified as a key variable for success (Pagdee *et al.* 2006).

Second, parallel to this, the idea of “rights-based approaches” has become increasingly prevalent in both development and conservation practice. Rights-based approaches, though still being defined on the ground (e.g. Campese *et al.* 2009), emphasize the importance of grounding

¹ The results of this research have also been published in Larson *et al.* (forthcoming b).

² This refers specifically to forests titled to community lands or areas of public lands formally assigned to communities (Sunderlin *et al.* 2008).

³ See for example the 26 paper collection from the Rural Development Forestry Network of the Overseas Development Institute (ODI) from 1993 to 2003, available from odi.org.uk.

practice in human rights, including international norms and laws; they are aimed at empowering people to make claims on government and demand accountability (Nyamu-Musembi and Cornwall 2004). In that regard, this research project took a rights-based approach.

Dozens of processes of devolution were selected and studied from the perspective of tenure rights, which allows the inclusion of cases that are highly disparate but which all include a rights dimension (see methods, below). Also, a rights-based emphasis on processes of reform permitted the research to take a dynamic approach to the study of property. It was specifically aimed at analyzing experiences where changes in formal tenure rights for communities had recently occurred or were about to occur and at identifying issues and concerns from the perspective of socially and economically vulnerable groups that were seeking tenure reforms. That is, the research focused on communities that had fought for or been granted new statutory rights. The central objective was to understand processes of reform, particularly the extent to which community rights had improved in practice, and to identify ways in which these processes could work better for both forest and livelihood outcomes.

The central issues studied were: the effect of tenure change on community rights to access and decision-making regarding forests, the effect of regulatory frameworks, markets and local organization on processes and outcomes, and the effects of reforms on livelihoods, forests and equity. This article focuses on three aspects: the broad global trends shaping reforms, issues in implementation and outcomes for livelihoods and forests.

METHODS, KEY CONCEPTS AND STUDY SITES

As mentioned above, the starting point for this research was statutory change in tenure rights. The central analysis took place in research sites that usually included multiple villages in a region or sub-region where legal reforms regarding forest tenure had occurred or were in process. Countries and sites were chosen not only to explore tenure changes but also based on the conclusion, through scoping activities with local partners organizations, that there was an opportunity to affect policy decisions. The specific choice of villages studied was made based on an assessment of those that would provide the best understanding of the reform process in each national context.

The combination of policy/ action and research goals provided both disadvantages and advantages for a global comparative study. On the one hand, sites were not chosen strictly on the grounds of comparability, hence highly contextualized qualitative assessments were prioritized over quantitative methods. Extensive effort was made to gather information at all relevant scales, from national to sub-national regions to communities. On the other, because of their interest in supporting policy outcomes, partners and communities were highly engaged in the research, and access to the ideas and perceptions of interested actors at various scales was more extensive, permitting a deeper understanding of the processes involved.

All of the research was carried out using the same set of central questions, key theoretical and background readings, hypotheses and definitions of key terms, though the specific methods used to obtain the information required varied. In almost all cases partner organizations and developing country nationals spearheaded the research, and lead researchers all had extensive experience in the regions studied.

The sites studied are presented in Table 1, with a very simplified description of the specific tenure model being implemented. The reforms range from tree planting agreements and benefit sharing arrangements from industrial logging, to a variety of community-based forest management schemes and full-blown titling of large territories. In all of the cases, there has been some kind of *de jure* change that presumably favours communities. A *de jure* right concerns a set of rules established and protected by the state (e.g. registered land titles, concession contracts, the forestry law and regulations). In most cases, communities lived previously in these same areas and held *de facto* rights – patterns of interaction established outside the formal realm of law – previously. These include *customary rights*, which contemplate a set of codified community rules and regulations, inherited from ancestors and accepted, reinterpreted and enforced by the community, and which may or may not be recognized by the state (e.g. ancestral titles, historic use of a particular land area, resource use rules established by the community). Given these previous rights, it should not be assumed that formalizing them will necessarily benefit communities (Cousins 2007, Meinzen Dick and Mwangi 2008, Sikor and Nguyen 2007).

Forest tenure determines who is allowed to use which resources, in what way, for how long and under what conditions, as well as who is entitled to transfer rights to others and how. This research used the concept of tenure as a bundle of rights, ranging from access and use rights to management, exclusion and alienation (see Schlager and Ostrom 1992), in order to examine changes in rights in greater detail. Access refers simply to the right to enter the forest area. Use, or withdrawal, rights refer to the right to obtain resources, such as timber, fuelwood or other forest products, and remove them from the forest. Management refers to “the right to regulate internal use patterns or transform the resource” (Agrawal and Ostrom 2001: 489), which could include tree planting, timber management or conversion to agriculture. Exclusion is the right to decide who can use the resource and who is prevented from doing so. Alienation is usually understood as the sale or lease of the land, which also includes the sale of these other rights. The latter three rights are seen as decision-making rights and are, therefore, particularly important for assessing reforms.⁴

In addition to an analysis of the processes shaping reforms

⁴ In order to assess the change in rights over time, researchers examined the change in distribution of the elements of this bundle among key stakeholders (e.g. the state, community and individuals) with reforms. Though for reasons of space these results are not reported here, they served as one important basis for the comparison of reforms (see, for example, Cronkleton *et al.* forthcoming). These results are reported in many of the published country studies, available at www.cifor.cgiar.org/tenure-reform; others are in unpublished site reports.

TABLE 1 *Research sites and tenure models studied*

Country	Region	Community	Tenure model
Bolivia	Guarayos	Santa María de Yotaú	Communities within indigenous territory being demarcated and titled
		Cururú	
	Northern Amazon (Pando)	Turi Carretera	Agroextractive communities being demarcated and titled
		San Jorge	
Brazil	Porto de Moz	Turu	Agroextractive communities bordering agroextractive reserve (RESEX)
		Taperu	
	Trans-Amazon	Dispensa I	Colonist communities
		Pontal	
Guatemala	Petén	Carmelita	25-year community forest concession (community living inside concession)
		Arbol Verde	25-year community forest concession (members from several communities living outside concession)
		Chancol	Highland communal forests (multiple community, single title, community owned)
	Highlands	Mogotillos	Highland communal forests (local government owned)
Nicaragua	RAAN	Tasba Raya Layasiksa	Indigenous territories being demarcated and titled
Burkina Faso		Nakambé	Concession: fuelwood management (classified forest, central government domain)
		To	Concession: fuelwood management (nonclassified forest, local government domain)
		Comoé-Léraba	Concession: forest and wildlife reserve
Cameroon	Lomie/Dja	AVILSO	Community forests (CF)
		Medjoh	
	Mount Cameroon	Bimbia–Bonadikombo	
	Northwest Cameroon	Oku	
	South Cameroon	UDEFCO	
	National		Benefit sharing from logging
Ghana	Afram Headwaters Forest Reserve	Asempanaye	Modified Taungya System (tree planting, community and individual farmers share future timber revenue)
		Ada Nkwanta	
		Kwapanin	
India	Ajmer, Rajasthan	Kumhariya	25-year renewable lease for tree grower cooperatives for fuel and fodder to recover wastelands (TGCS)
		Nathoothala	
		Khoda Ganesh	
Nepal	Nawalparasi, Terai (lowlands)	Sunderi CFUG	Community forests with approved operational plans (CBFM)
	Lalitpur (hills, periurban)	Patle CFUG	
	Baglung (hills, rural)	Sanghukhola Ratopahara CFUG	
	Dolakha (high-altitude hills)	Suspa CFUG	
Philippines	Nueva Vizcaya, Region 2	Kalahan Education Foundation	Certificate of ancestral domain with community based forest management
		Banila Community based Cooperative Project	Community-based forest management (CBFM)
	Compostela, Mindanao	Barobbob Ecological Socio-Economic Project	Comanagement with local government/ community-based forest management (CBFM)
		Nagan-Panansalan-Pagsabangan Forest Resource Development Cooperative	Community-based forest management (CBFM)

Source: Adapted from Larson *et al.* (forthcoming a)

and the challenges identified in implementation, this article presents a largely qualitative overview of forest condition and livelihoods. As it was not possible to obtain comparable quantitative data, it should be clearly noted that the purpose is only to identify general and interesting patterns. “Forest condition” was measured using three main indicators. These include changes in forest cover over time, discerned from digital maps at two points in time or, when these were not available, through a variety of interviews with communities, capturing descriptive data; changes in forest quality, through indicators of the increase or decrease in forest resource availability (e.g. specific plants or animals); and frequency of forest fires, also from official data or interviews. Again, the analysis here should be understood to be an informed qualitative assessment of outcomes for forests.

Similarly, simple qualitative parameters were used to assess livelihood outcomes, such as increased availability of forest resources for settlement, shelter, food and water as a result of the reform. Income was taken as one important element of livelihoods and measured in terms of relative shifts in income from forests over time, perceived shifts in total and relative forest income, and specific, new forest-related income at the time of the study (with some attempt to determine whether any income losses were also associated with the tenure change). This article primarily focuses on the generation of new income sources, measured at the community rather than the household level (other methods were used to identify some aspects of inter-household inequity, but they are not reported on here). In most cases, researchers used focus group discussions, key informant interviews and review of available documents to assess livelihoods and income changes at the community scale. In all the cases, researchers had extensive previous experience in the sites studied, which improved both the quality of information gathered and their ability to analyse it in context and over time.

THE EMERGENCE OF FOREST TENURE REFORMS

The literature on forests is replete with current and historical accounts of rural communities whose livelihoods have been affected by state policies or the intrusion of outsiders into “their” forests. These include state-authorized forest concessions (e.g. Anaya and Grossman 2002), forest classification schemes that prohibit community use (e.g. Peluso 1992), mining and petroleum concessions (e.g. Kimerling 1991, Lynch and Harwell 2001, Oyono *et al.* 2006), evictions from, or severe limitations on their livelihood activities in, parks or protected areas (e.g. Dowie 2005, Redford and Fearn 2008, Spierenburg *et al.* 2008), and colonization or invasions by farmers and ranchers (e.g. Baird and Shoemaker 2005, Colfer *et al.* 1997, Fulcher 1982, Schmink and Wood 1984).

Throughout developing countries, but particularly in colonial Asia and Africa, the centralization of forests has often been attributed to “scientific forestry” principles (see Dixon and Sherman 1991, Fay and Michon 2003, Peluso 1992, Scott 1998), though centralizing tendencies existed prior to this and appear almost universal. Two tendencies are apparent,

however, and still largely explain the centralization of forest ownership and control today. On the one hand, forests are seen as common, public goods and strategic resources that need both protection and “rational use” in order to provide goods, services and income for the future. On the other, forest exploitation and other uses consistently tend to favour elite or private interests over others, particularly those of communities (Adams 2004, Larson and Ribot 2007, Pulhin *et al.* forthcoming). The first of these is a common justification for centralization and can be seen as the result of reasonable concerns and debates about the best way to conserve forests, including maintaining timber supplies. The second, however, is based on more questionable motives. The problem is to separate out the theoretical debates and scientific evidence regarding the former from the use of one particular (centralist) perspective as a justification for the latter.

The current forest tenure reform has emerged, at least in part, from challenges to centralized control of forests. But these challenges, such as demands from communities for greater rights, have existed for decades, even centuries. Why are reforms happening now? Though there are many specific reasons behind each reform, several dynamics have come together in the late 20th century to favour greater community control of forests. One important factor was the assessment that numerous state forests, after decades of state control, were in poor condition (Poffenberger 2001). Centralized state management, of both protected areas (Hecht and Cockburn 1989, Rao and Geisler 1990) and logging (Brunner *et al.* 1999, Poffenberger 2006), had largely failed to control deforestation and forest degradation. Where traditional or indigenous systems had existed previously, states had failed to replace them with more effective institutions (Bromley and Cernea 1989). Numerous studies began to emerge, demonstrating that under the right institutional arrangements local communities and farmers were capable of protecting and effectively managing natural resources, including common pool resources like forests and irrigation systems (Ostrom 1990).

A number of important international forums and documents calling for new paradigms were a key part of changing approaches to people in forests. These included the 1987 Brundtland Commission Report calling for “sustainable development” and the 1992 Río Declaration on Environment and Development⁵, which declared that “human beings are at the centre of concerns for sustainable development”. From the 1980s to the mid 1990s, “conservation and development policy merged around theories of sustainable development, ... decentralization and local participation” (Roe 2008: 492).

This research identified three particular global forces shaping tenure reforms: indigenous peoples’ rights demands, democratic decentralization and conservation interests. Indigenous⁶ demands have emerged because people see

⁵ <http://www.unep.org/Documents.Multilingual/Default.asp?documentid=78&articleid=1163>

⁶ The connection between rights, territory and indigeneity has led to debates over who qualifies as indigenous and new claims to indigeneity by people who had not previously considered themselves indigenous (for a discussion, see Karlsson 2003, Mamdani 2001, Purcell 1998).

opportunities for claiming back rights to forests that were historically denied. This is particularly apparent in Latin America, where demands for ancestral land rights are driving reforms. When communities have customary but not statutory rights to forests, they have often chosen to fight for formal recognition when their forests are being invaded or threatened by outsiders – including by the state itself (see Anaya and Grossman 2002). That is, formal recognition increases the legitimacy of their land claim, and thus makes it more likely outsiders will respect it (Sikor and Lund 2009). However, legal reform does not guarantee the realization of those rights, of course, as will be seen below.

The demands of indigenous people, particularly in Latin America, have clearly resulted in the single largest transfers of forest to local people. For example, in Brazil, indigenous rights were recognized for about 100 million ha involving 500 000 people (Barr *et al.* 2002). The Bolivian government is in the process of titling nearly 24 million ha to benefit 200 000 indigenous people (Pacheco 2006). In Nicaragua, just under 2 million ha of forestland is in areas being claimed by and demarcated for indigenous territories (INAFOR 2009). These rights-based reforms have not been limited only to indigenous peoples but rather have opened up opportunities for other local claimants, particularly communities whose livelihoods depend on non-timber forest products and whose basis for claims is the traditional, *de facto* possession of forest resources (Cronkleton *et al.* 2008). This includes Afro and other ethnic communities, particularly in Colombia, where roughly 2 million hectares have been titled (Sánchez Gutierrez and Roldán Ortega 2002), as well as 20 million ha allocated to about 145 000 smallholders and extractivists in Brazil (CNS 2005).

The second global force shaping reforms is democratic decentralization. Decentralization has played a role in forest tenure reforms in some Asian and Latin American countries, but particularly in Africa. Democratic decentralization is defined as the transfer of power and resources from the central government “to authorities representative of and accountable to local populations” (Ribot 2004: 9). It is associated with the development and strengthening of local elected governments but may include aspects of devolution to community institutions such as forest user groups. Decentralization as a global policy trend has been promoted in the name of local democracy, often in combination with economic structural adjustment policies, by international organizations such as the World Bank, particularly since the late 1980s.

In Africa, the state formally owns virtually all forestland, but some 60% of the total forest estate is “off-reserve” or not formally “classified” by the state; in these areas, “customary and other unregistered forms of tenure dominate” (Alden Wily 2004). In practice, decentralization – or the policies implemented in its name – has often perpetuated or even deepened a colonial-type state role in local forest management, but a number of positive outcomes suggest its potential (Ribot 2004). It has also encountered significant challenges, and conflicting interests, at the interface of statutory and customary rights and institutions. For example, decentralization has brought to light complex issues of customary authority: some customary authorities are more legitimate or contribute to better forest management

practices, as in the case of Oku in Cameroon, discussed below, but others are autocratic and unaccountable and usurp benefits and decision making intended for communities, as in the case of revenue distribution from forestry in Ghana (Larson *et al.* forthcoming c, Marfo 2009).

The third global-scale factor influencing reforms are conservation interests, which have shaped the nature and extent of reforms in all three world regions studied. The convergence of development and conservation policies mentioned previously led to the promotion of local participation through a variety of integrated conservation and development projects (Roe 2008). Further, locals have sometimes won important tenure rights through alliances with conservation organizations, such as the granting of 450 000 ha through 13 forest concessions to local community groups in the Petén, Guatemala (Junkin 2007) and the official recognition of some 100 million ha of indigenous lands in Brazil (Schwartzman and Zimmerman 2005, see also Nepstad *et al.* 2002, Stevens 1997, Zimmerman *et al.* 2001).

Nevertheless, the effect of conservation interests on community tenure rights has been mixed. In fact, Roe (2008: 496) describes a backlash against community-based conservation and a return to “protectionism” based on the argument “that community participation is a noble goal but diverts funding away from conservation, and has minimal effect on biodiversity conservation” – a sentiment widely expressed at the 2004 World Conservation Congress in Bangkok. The declaration of protected areas has clearly affected community rights to use and access forest resources. A number of studies have documented “significant direct losses to livelihoods and agricultural incomes”, and “indirect losses because of the loss of access to areas set aside for conservation”, even if people are permitted to remain in the area (Agrawal and Redford 2007: 15, Ghimire and Pimbert 1997, Hulme and Murphree 2001, McLean and Straede 2003, Rao *et al.* 2002). Hence conservation interests have shaped reforms in a variety of ways, and many reforms are associated with rights restrictions, as will be seen below.

THE NATURE OF REFORMS AND THE CHALLENGE OF IMPLEMENTATION

Though the tenure reforms studied are highly varied, taken as a whole certain patterns emerge, particularly in relation to typical land or agrarian reforms. For example, rights are granted to collectives rather than individuals, and alienation rights, or the right to sell the land, are not granted. Rather than redistributing land, forest tenure reform most often involves formally recognizing the rights of people already occupying the land. Rights often include obligations to conserve forests, and in this regard, the state usually maintains an important management role. Finally, reforms are aimed not only at livelihoods or development concerns (and sometimes land rights), as in many past agrarian reforms, but also at responding to indigenous communities’ demands for ancestral rights (Barry *et al.* forthcoming, Larson *et al.* 2008, Pacheco *et al.* 2008a).

These characteristics appear to have emerged from the combination of dynamics discussed above: the global concern

for forests, and the fear that individual plots in forests and the granting of alienation rights are more likely to result in land clearing; the rights demands of communities or collectives already living in forests. The ongoing role for the state continues to be explained by the same reasons and motives that have been behind past centralized control over forests.

Given this context, what tenure rights have actually been granted? What problems have occurred with the implementation of reforms? In Table 2, the case studies are classified along two axes. The horizontal axis represents the security of the *de jure* rights granted. This includes the time frame of the rights (temporary or permanent) and the extent to which they are contested or enforced. The four categories on this axis range from relatively weak (temporary, easily abrogated) to relatively stronger (permanent and enforced) *de jure* rights, though it could be argued that, in practice, a strong temporary right may be more secure (at least during the time period granted) than a permanent right that is difficult to enforce.⁷

The vertical axis refers to legal rights to forest resources. Rights increase in descending order, and range from subsistence only, to subsistence as well as high value products, with different degrees of state control over decisions. With regard to the bundle of tenure rights, this axis principally refers to management rights. As a whole, the top left corner refers to cases with the weakest and most externally-controlled rights; the bottom right corner refers to those with the strongest, most permanent and autonomous decision-making rights.^{8,9}

In all countries and all sites, heavy state regulation overrides local decision-making rights for high value resources, while regulation of subsistence uses is far less common. Only in one case do local people make autonomous management decisions regarding a high-value resource: that is the case of Brazil nut extraction in Pando, Bolivia. Notably, this is also a case where previously existing customary rights were strong and

⁷ On the other hand, a permanent right that is difficult to enforce today has the potential of being enforceable at a future date, such as with legal support or a change of government.

⁸ This table compares the current state of legal reforms. For lack of space, it is not possible also to provide detailed information regarding the change in rights from past to present in each case as well. These changes were taken into account in the classification of cases in Table 3.

⁹ What is perhaps most interesting about this exercise is the degree of difficulty incurred in placing each of the cases. In particular, the table refers to *de jure* rights only (except with regard to the relative difficulty or ease of enforcing rights). Based on practice, however, at least a few of the cases could move to substantially different locations, but this analysis is far more subjective and difficult to standardize. For example, the rights granted to the highland Guatemala community of Mogotillos, through the very weak legal instrument of a municipal agreement, would be very difficult to reverse in practice due to the strength of the community organization (Elías pers. comm.). This right could thus be interpreted as permanent. Also, in this same case, though the subsistence use of all wood is highly controlled by the state (*de jure*) in the Guatemalan highlands, with permits required even for fuelwood collection, the state does not interfere in Mogotillos because the community itself has chosen not to allow any subsistence activities in the forest. Similarly, in a number of cases *de jure* controls are not effective, though they exist on paper.

relatively secure prior to the reform (Cronkleton *et al.* 2009). The management of logging in Pando, however, is subject to strong state regulations, hence with regard to timber, this case would also appear in the previous row.

One of the most important issues demonstrated by the table is the variation in security of the statutory change. The central question is whether the new rights are permanent or if they can be withdrawn, and under what circumstances. Property titles, such as those offered in some of the Latin American sites, or the guarantee of forest rights in perpetuity in Nepal (Paudel, pers. comm.), combined with constitutional provisions, appear to provide the greatest long-term legal basis for claims. At the other extreme, decrees or regulations without clear rules for compliance and subject to bureaucratic discretion can be highly tenuous. Even if statutory rights are granted through secure mechanisms, however, a number of additional challenges arise in their implementation.

The bundle of rights. With regard to the bundle of rights, this discussion refers to the decision-making rights as mentioned earlier: management, exclusion and alienation. Exclusion rights are granted in almost all cases; alienation rights are not, but this alone does not appear to have a detrimental affect on community decision making. Management rights are more problematic. As seen in the table, important management rights are often retained by the state (Cronkleton *et al.* forthcoming).

In the cases studied, management arrangements and regulations may recognize some existing resource uses embedded in local livelihoods and customary practice but also introduce new rules and standards and restrict certain previous behaviours.¹⁰ Such arrangements are mainly, at least ostensibly, intended to promote greater sustainability, but in many cases they also introduce disincentives and distortions and severely limit local decision-making power (Pulhin *et al.* forthcoming). This not only attenuates tenure rights but may also undermine previously effective local management institutions and reduce livelihood benefits (see also Leach and Fairhead 2001, Li 2002, Pokharel *et al.* 2007).

Competition for resources. Competing interests often interfere with the implementation of reforms. This problem overlaps to some extent with the previous set issues regarding management rights, when the state – or certain state bureaucrats – retains decision-making powers in competition for control over resources. It also refers to foot dragging on implementation, such as with the demarcation of indigenous territories in several cases (the first titles in Nicaragua were granted more than 20 years after the Constitutional rights were recognized), or the granting of rights to competing interests inside those territories in the process of settling claims (among other things, logging concessions were renewed in lands claimed by the Guarayos people in Bolivia).

Even after forests have been granted to communities, they are often subject to ongoing competing claims. These may

¹⁰ For a more detailed presentation of findings from the research specifically on regulations, see Larson *et al.* 2008, Pulhin *et al.* forthcoming.

TABLE 2 *De jure rights granted by tenure reforms.*

De jure rights to forest products	Security of de jure rights			
	Weak, temporary and/or easily abrogated (eg. weak legal instruments)	Temporary but relatively strong	Permanent but difficult to enforce (e.g. contested in practice, lands invaded, etc.)	Strong, permanent, enforceable (uncontested)
Subsistence only and highly controlled by state	-Guatemala highlands (Mogotillos)			
Subsistence only but with significant local autonomy		-India (all sites)		-Philippines (KEF)
Subsistence (with or without controls) and also high-value products but highly controlled by state	-Cameroon CF (all sites) -Ghana Modified Taungya System -Philippines (all CF sites)	-Guatemala Petén (both sites) -Burkina Faso (Comoé Leraba, Nakambe, To)	-Nicaragua RAAN (part of area unresolved)* -Bolivia Guarayos (both sites) -Brazil Transamazon (both sites)	-Ghana timber revenue-sharing** -Brazil Porto de Moz (RESEX) -Nepal (all sites) -Guatemala highlands (Chancol) -Nicaragua RAAN (both sites, large core areas)
All products, minimal state regulation, relatively autonomous decision making#				-Bolivia Pando (both sites)##

* By law the rights are permanent, but not all specific areas have been delimited. Some are subject to border conflicts between and among neighboring communities; others are affected by colonist land invasions.

**Constitutional right, but only for benefit sharing (not control of forests). Conflicts involve distribution of compensation but not the right as stated in the Constitution.

Almost all sites are subject to strong, external regulation for high value forest products (see Pulhin *et al.* forthcoming for more details).

Pando is subject to state regulation for timber, but the most important product extracted, Brazil nuts, is not currently controlled through regulation.

Notes: KEF = Kalahan Education Foundation, CF = Community forests, RAAN = North Atlantic Autonomous Region, RESEX = Extractive Reserve

Source: Elaborated by Larson based on consultations with Peter Cronkleton, Silvel Elías, Bocar Kante, Emmanuel Marfo, Iliana Monterroso, Phil René Oyono, Pablo Pacheco, Juan Pulhin, Sushil Saigal, Naya Sharma Paudel

involve land invasions by poor peasants, or by wealthy farmers and businesses interested in ranching, large-scale agriculture, biofuels or logging; mining or petroleum concessions; or protected area expansion in the interest of conservation or tourism. The state often fails to support communities in their efforts to defend their exclusion rights and may even encourage or support the competition. For example, in the Petén, Guatemala, the government initially provided official backing for a park expansion project that would have shut down several community forestry concessions; the Association of Forest Communities of Petén (ACOFOP) fought and won a three-year battle to reverse this decision, costing about US\$ 100 000 (Monterroso and Barry 2009).

Accompanying measures. The third set of issues refers to policies and programs accompanying reforms such that communities are able to act on and obtain greater benefits from their new rights. These include capacity building measures, the facilitation of market access and efforts to limit elite capture.

That is, communities and government need to work together. More often, however, state policies and bureaucrats impose cumbersome and costly regulations on the use or sale of forest resources (Larson *et al.* 2008, Pulhin *et al.* forthcoming, see also Colchester *et al.* 2006, Larson and Ribot 2007, Scherr *et al.* 2002). As will be seen below, measures to overcome these problems have been paramount in securing greater livelihood benefits from reforms but are not always forthcoming.

OUTCOMES OF REFORMS

Table 3 provides a qualitative summary of the outcomes of reforms. The cases are grouped according to those representing little, moderate and large increases in rights (see Dahal *et al.* forthcoming, for a full explanation of the methods used to categorize the cases). For each type of reform or group of cases, the overall direction of change is averaged and indicated in the table. This section describes

these outcomes in more detail and discusses and analyzes some of the patterns that have emerged.

Forest condition

The most obvious pattern in outcomes is that results were more often positive for forests in Asia, mixed in Africa and resulted in no change in Latin America (Table 4). Each region is examined in turn to identify the underlying variables behind these differences.

Indicators of forest condition clearly improved in almost all sites in Nepal, India and the Philippines. Under reformed tenure, forest cover has increased, natural regeneration has been protected, landslides have been reduced, and some of the endangered flora and fauna have been safeguarded. One important, and fairly obvious, reason is that most of these forests were highly degraded when handed over to communities. In the middle hills region of Nepal, the condition of forest cover dramatically improved, particularly in terms of increased canopy cover, species diversity and basal area. In the forests of Sundari community forest user group (CFUG) in Nawalparasi (in the high-value lowland *terai* forests), there was a significant increase in natural regeneration, even with relatively high levels of timber extraction. All sites in Nepal experienced increased availability of fodder, fuelwood, leaves, NTFPs and timber. For example, fuelwood biomass (kg) per ha in the Patle CFUG rose from 75 to 103 cubic meters from 2002 to 2007 (Paudel *et al.* 2009). These results concur with the findings of other researchers in Nepal (see, for example, Groenendijk 2008). As mentioned earlier, Nepal was also one of the first countries to develop progressive community forestry policies giving greater rights to local people, and thus its programmes have a longer history and greater maturity (see Acharya 2002, Arnold and Campbell 1985, Gilmour and Fisher 1991, Malla 2000).

In the Philippines, one factor leading to improved forest condition was the effort made both by the state and the communities to reforest denuded areas. For example, the Kalahan community in Northern Luzan reforested more than 400 ha in its own forest reserve, protecting the watershed and biodiversity and reducing wildfires. In the community-based forest management sites, the results have been more mixed, with two sites experiencing reforestation, control of wildfires and overall improvements, but one declining in overall condition despite reforestation, because of poaching and illegal logging. This site, Compostela, generated important income from its forest enterprise but also suffered from several national policy reversals suspending the community forestry program due to conservationist pressures; it is also subject to overlapping claims between indigenous communities and more recent migrants from the lowlands, illegal loggers and poachers. These factors affect the economic stability of the project and overall security of tenure rights (Pulhin *et al.* 2008).

In India, all three sites have seen a positive local ecological impact from tree growers' cooperative societies. Each cooperative has raised plantations on approximately 40 ha of leased state land that was previously highly degraded "wasteland". In all three cases, the cooperatives were able to control illegal encroachments before planting. Considerable

effort and funds (through project assistance) were invested in preparing the site, building soil and moisture conservation infrastructure, establishing the plantation, watering tree saplings with water tankers and protecting the site against illicit grazing and removal of tree products. Ten years after external support ended, plantations in all three sites were still present (Saigal *et al.* 2009).

Mixed outcomes seen across the African countries were also apparent across sites within countries. In Cameroon, deteriorating forest conditions in community forests may be partially a result of the reforms. Though degradation was already occurring, in the sites studied forest management tends to be dominated by a few people seeking profits and who fail to implement management plans appropriately (Oyono *et al.* 2008). Much of this is a result of the nature of the reform and its implementation, which has been highly problematic. The process, which requires extensive and expensive bureaucratic procedures for obtaining community forests and for the periodic approval of management plans, has been fraught with corruption and captured by the people who provide the funds. These include local and external elites, business people, top military officials and town-based politicians, whose primary goal after the long approval process is to recover their investment and make a profit (Oyono, pers. comm.). Interestingly, the only site in Cameroon that demonstrates improved forest condition (Oku) is the one with communities having more traditional and hierarchical organizations, where customary rules for conservation and resource use, as well as the "mystique of social order", have been maintained under the influence of powerful chiefs (Oyono *et al.* 2008).

In Burkina Faso, one concession site shows improvements and two are deteriorating. The former is a wildlife reserve that generates hunting (safari) royalties; conservation is a priority here because wildlife habitat represents income. The community is well organized, customary authorities are fully involved in implementation, and exclusion rights are exercised. The two cases with increased degradation involve concessions for fuelwood exploitation. Although forest management plans exist, the provisions protecting forest resources are not implemented. In addition, local customary authorities sometimes take actions to undermine the concessions, such as granting farmland to migrants inside the forest management area. This is in part due to complicated conflicts between the state's claims to own and manage land and forest resources and customary rights and practices, as the communities that have received forest rights through concessions have not always been granted the rights that they have customarily claimed (Kante 2008).

The Ghana site, which has demonstrated improvements in forest condition, is located in a protected area and involves planting trees in agricultural fields under the Modified Taungya System, whereby farmers have the right to a portion of the income generated from future sales of the wood produced. Planted areas in two of the past three years have exceeded goals, resulting in about 3,000 ha planted from 2006 to 2008, or about 12% more than planned (Marfo 2009).

The Latin American sites generally saw forest conditions maintained, in spite of an improvement in livelihood

TABLE 3 *Livelihood (L) and forest condition (F) outcomes, by changes in rights*

Change in rights	Case	Change in livelihoods		Change in forest condition	
Large increase	Pando, Bolivia	Improved income from Brazil nuts in titled lands	+L	Maintenance of forest areas with limited pressures for conversion	=F
	CBFM, Nepal	Consolidated access to timber and NTFPs	+L	Increased forest cover, species diversity, fire control	+F
	Kalahan, Philippines	Some improvements from NTFPs and projects, but also use rights restrictions	+L	400 ha reforested, control of fires, sanctuaries established, rich biodiversity	+F
	TGCS, India	Small contribution to fodder and fuelwood	=L	Tree planting on highly degraded land, improved condition and diversity	+F
	RAAN, Nicaragua	Growing income from commercial logging only in some cases	+L	Selective logging but no internal pressures for forest conversion*	=F
	Concession, Burkina Faso	Increased use of NTFPs, regulated use of fuelwood and fauna	+L	Deforestation due to market demand, population growth; other sites show recovery	=F
Moderate increase	Petén, Guatemala	Growing income from timber and NTFPs	+L	Selective logging but few pressures for forest conversion	=F
	CF, Cameroon	Growing community income derived from sale of forest products	+L	Degradation, deforestation and conversion to agriculture	-F
	Trans-Amazon, Brazil	More assets but little changes in cash income	=L	Converted and degraded because larger pressure from agriculture	-F
	CBFM, Philippines	Increased income from logging, agroforestry and coop enterprises, projects	+L	Reforestation, fire control, biodiversity improvements in most sites	+F
	Porto de Moz, Brazil	Consolidated access to NTFP but constraints to timber use	=L	Less logging, limited pressures for conversion but little change	=F
	Tree planting, Ghana	Promised future income from timber	=L	Increased tree cover	+F
Little to no increase	Highlands, Guatemala	No change	=L	No change	=F
	Benefit sharing, Ghana	Income to chiefs but not to communities	=L	n.d.	n,a
	Guarayos, Bolivia	Growing income from commercial logging	+L	Selective logging and pressures for forest conversion	-F

+ Improvement; – deterioration; = no change; += small changes (explained in text)

CBFM: community-based forest management

CF: community forests

RAAN: North Atlantic Autonomous Region

TGCS: tree grower cooperatives

* The RAAN forest was badly damaged by Hurricane Felix in September 2007; this decline in forest condition is not taken into account here.

Source: Adapted from Dahal *et al.* (forthcoming)

provisions. Compared with the Asia cases, the forests were in reasonably good condition when granted to communities. This is particularly true in Pando, Bolivia, where Brazil nut collection is the primary source of livelihoods, thus creating an economic incentive for forest conservation; forests there are at less risk from degradation. However, at the same time, given their higher commercial value, they are under substantial pressure from external competing interests – hence having maintained conditions is an important accomplishment.

Forest condition in the Petén, Guatemala sites is better than other sections of the Mayan Biosphere Reserve. Deforestation data from the buffer zone, the multiple-use zone and the national park nucleus zones show much lower rates every year for the multiple-use zone, where the community forest concessions are located, from the period 1990–1993 to 2004–2005 (Monterroso and Barry 2009). The other two areas are being invaded and converted to other uses. At the same time, four smaller concessions are located on the edge

TABLE 4 Outcomes for forests, by world region

Change in forest condition	Africa	Asia	Latin America
+F	Tree planting, Ghana	Nepal Kalahan, Philippines CBFM, Philippines India	
=F	Burkina Faso		Petén, Guatemala RAAN, Nicaragua Pando, Bolivia Porto de Moz, Brazil
-F	Cameroon		Trans-Amazon, Brazil

+ Improvement; – deterioration; = no change
 CBFM: Community-based forest management
 RAAN: North Atlantic Autonomous Region
 Source: Dahal *et al.* (forthcoming)

of colonization areas and demonstrate higher deforestation rates than the others.

Similarly, in many of the other sites – in Brazil; in Guarayos, Bolivia; in Nicaragua – pressures from logging are increasing and colonists are demanding land. Communities near roads and populated areas are more vulnerable and in general are suffering greater deforestation and degradation than more remote communities, which tend to have better-preserved forests and fewer people. In large parts of the North Atlantic Autonomous Region of Nicaragua, for example, forest conditions had changed little prior to hurricane Felix in September 2007, but more vulnerable areas subject to colonization have been systematically deforested (Intelsig 2008).

Though this qualitative review makes it difficult to be conclusive, the results are not particularly surprising. The Asia cases and tree planting areas in Ghana demonstrated improvements primarily because the starting condition of the forest was low, and because reforms specifically prioritized conservation or regeneration. Other cases, such as Pando, Bolivia, suggest that dependence on agroextractive activities generates an economic incentive to conserve the forest, while indigenous communities in the RAAN, Nicaragua and the communities studied in the Guatemalan highlands have little experience or history of forest conversion (Elías *et al.* 2009, Stocks *et al.* 2007). In contrast, the sites in Cameroon and Burkina Faso appear to be subject to more complex dynamics regarding elite capture and the clash between customary and statutory systems.¹¹ Finally, several sites suffer from proximity to colonization areas or other competing interests in forests that are beyond the control of communities. It is likely that secure tenure alone in these vulnerable areas – places where livelihoods depend on agriculture, and population growth rates and colonization pressures are high – will be insufficient.

Livelihoods and income

In many of the cases, tenure reform has opened up new sources of goods for subsistence or income. For example, in the Petén, Guatemala, and Cameroon, communities had no legal rights to timber or logging income prior to the creation of the community concessions or community forests (Monterroso and Barry 2009, Oyono *et al.* 2008). In India, communities were granted wasteland areas to grow trees for fuel and fodder (Saigal *et al.* 2009). In Ghana, the Modified Taungya System for tree planting, unlike previous taungya programmes, allows farmers a share of income from the trees they plant (Marfo 2009).

In other cases, the reforms involved new restrictions on the use of resources previously available to the community. At times, open-access dynamics governed prior resource use, as in the Nepal cases and Kalahan, in the Philippines (Paudel *et al.* 2009, Pulhin *et al.* 2008). But in the Petén, strong informal institutions – in this case coordinated networks of customary extractors of xate palm (*Chamaedorea sp.*) and chicle gum – governed access to some NTFPs (Monterroso and Barry 2009). The new legal rights, then, both expanded and restricted access in some ways, with prior practices being brought under greater state control, monitoring and regulation. The most common restrictions cover grazing, logging and the use of fuelwood and fodder.¹² It is not particularly surprising, however, that no cases present overall declines in livelihoods, for any of several of the following reasons: the restrictions (1) were eased or forgotten with the passage of time, (2) affected only some members of the community or only outsiders, (3) were counterbalanced or outweighed by other benefits, or (4) covered resources that the community had never used and had no interest in exploiting.¹³ Also, of course, people who were negatively affected may have left the community.

Given that a rigorous quantitative assessment of livelihoods changes is not possible, this section will focus on the nature of

¹¹ This is also true of the Ghana benefit-sharing scheme, in which customary authorities are usurping the benefits intended for communities (Larson *et al.* forthcoming c).

¹² See for example the site report from the Nepal high hills where mobile herders were excluded by communities (Banjade and Paudel 2008).

¹³ This last reason refers to the case of commercial timber, for example, in Kalahan, Philippines, and in many communal forests in the Guatemalan highlands (Elías *et al.* 2009).

the changes across the cases. The differences between them can be better understood by looking specifically at the magnitude of changes in income. For example, a few communities began receiving large new sources of income after the tenure reform. Though the cases represent a range of different situations, two principal models of reform stand out. One is the community forestry enterprise model, common to some Latin American cases, Cameroon and one site in the Philippines, whereby substantial external support, usually from donors and projects, helps establish a community-based logging operation.¹⁴ The other model, by far the more common¹⁵, is based primarily on support for subsistence needs or small-scale trade in NTFPs. What the communities with substantially higher incomes have in common is the establishment of community logging enterprises.

Table 5 summarizes the collective profits, ranging from \$10 000 to more than \$200 000, in several of the communities studied.¹⁶ These profits represent the collective net income to the enterprise after costs, which are often substantial, and can be spent in different ways, such as used for community projects or distributed as dividends among members. But these projects also provide employment and wage income. There is often a trade-off among these options. In the two Petén concessions, for example, Arbol Verde regularly distributed more than \$500 in annual dividends, but the community of Carmelita distributed only \$150 to \$250, investing the rest in creating jobs and hence increasing its operating costs (Monterosso and Barry 2009). A comparison of the four enterprises in the Latin American sites (Carmelita and Arbol Verde in the Petén, Layasiksa in Nicaragua, Cururú in Guarayos, Bolivia) demonstrates investments of \$22 000 to \$43 000 in wages, and \$6 000 to \$33 000 in the community – in school scholarships, community water systems, the construction of housing for the poorest members, and so on (Larson *et al.* 2008).

These enterprises, however, operate in only some of the communities in the sites or regions studied. The outcomes in terms of income generated¹⁷ for these communities were much more substantial than those of neighbouring communities under the same tenure reform but *without* enterprises. For example, the second site studied in the North Atlantic Autonomous Region of Nicaragua demonstrated no measurable livelihood or income improvements associated with the tenure reform; the

TABLE 5 Profits from community forestry enterprises

Site	Net community income US\$
Layasiksa, Nicaragua	30 264
Arbol Verde, Petén, Guatemala	226 315
Carmelita, Petén, Guatemala	27 745
Compostela, Philippines	23 400
Cururú, Guarayos, Bolivia	34 486
Lomié-Dja, Cameroon	10 002

Sources: 2006 or 2007 data from Pulhin and Ramirez (2008), Larson *et al.* (2008) and Oyono *et al.* (2008), reported in Dahal *et al.* (forthcoming).

same is true in other Philippines sites without this enterprise model. In both Guarayos and Cameroon, other communities had enterprises as well but with much more modest profits, of about \$3 200 in Guarayos (Larson *et al.* 2008) and from \$3 750 to \$6 040 in four other sites in Cameroon (Oyono *et al.* 2008).

Data demonstrating high incomes, however, does not mean that these models are necessarily better. Many enterprise models involve substantial donor or project support and outside investments; they may result in community upheaval and the transformation of local traditions and institutions, for better or worse; they may create permanent external dependency and are difficult to replicate (see Larson *et al.* 2008, Pacheco *et al.* 2008b). In Cameroon, funding often comes from members of the local elite, as mentioned earlier, who then assume all financial benefits as well (Oyono *et al.* 2008). The outcomes do suggest what can be achieved, however, in some cases – though this also of course depends on the quantity and quality of forests available, which will be discussed below.

The second model – a collective traditional model for domestic use or small-scale trade – has dominated reforms in Nepal and Burkina Faso and is similar to the tree grower's cooperatives in India. Though most of these have resulted in livelihood improvements, the magnitude tends to be much smaller and may not include income at all (Table 6). One factor, of course, is the dramatic difference in scale between the newly tenured forest areas in Asia and Africa, on the one hand, and Latin America on the other. Patle community forest user group in Nepal reported income of \$3 350 for the collective and a total household income contribution of \$2 960 (Banjade and Paudel 2008). This is considered relatively high among community forestry sites in Nepal.

Again, smaller income benefits do not mean the reform is necessarily less desirable. Strengthening and supporting appropriate and sustainable agriculture or small-scale NTFP trade can still improve livelihoods and may be particularly important for promoting women's opportunities and family health as well as cultural diversity (Colfer *et al.* 2008, Colfer and Byron 2001). Nevertheless, there is good reason to believe that, in some cases and when desired by the community, the traditional collective reform model has greater potential to contribute to people's livelihoods and incomes than it does now. For example, in Nepal, environmental concerns have been dominant because this model of community forestry was

¹⁴ For more on community forestry enterprises, see Antinori and Bray 2005, Bray *et al.* 2005, Donovan *et al.* 2008, MacQueen 2008, Molnar *et al.* 2007, Pokorny and Johnson 2008.

¹⁵ It should not be assumed, however, that this is always a small-scale endeavor. See for example Arnold and Ruiz Pérez 2001, Edwards 1996, Tewari and Campbell 1995.

¹⁶ These figures represent those reported by the enterprises; some have more rigorous accounting methods than others (such as including depreciation, etc.). Hence, the precise amounts may be debatable in some cases. The purpose here is to demonstrate the magnitude of difference between the two models.

¹⁷ Income is not the only livelihood outcome however. In the Layasiksa, Nicaragua case, many new jobs were created (though most only for a short time of the year), community members learned a variety of new skills, etc. The community has recently been selected by the Food and Agriculture Organization as an "exemplary case of sustainable forest management" (FAO 2010).

TABLE 6 *Changes in livelihoods, by management model*

Change in livelihoods	Collective traditional	Collective entrepreneurial
Relatively larger +L		Petén, Guatemala Cameroon CBFM, Philippines RAAN, Nicaragua* Guarayos, Bolivia*
Relatively smaller +L	Nepal Kalahan, Philippines Burkina Faso	
=L	India Highlands, Guatemala	

* Communities with entrepreneurial models only

+ Improvement; – deterioration; = no change

CBFM: community-based forest management

RAAN: North Atlantic Autonomous Region

Source: Adapted from Dahal *et al.* (forthcoming)

originally promoted to halt rapid deforestation and protect and conserve forests (Kanel 2004, Kanel *et al.* 2005, Sunderlin *et al.* 2005). Livelihood and poverty alleviation objectives emerged as second-generation issues over the years because of grassroots demands (Paudel *et al.* 2009).¹⁸

Fundamental to the alternatives available, however, is the quantity and quality of the forestland assigned to communities. Community forests are rarely located in high-value forests. Community forests in Cameroon are granted to the lower-quality forests of the nonpermanent estate, equivalent to the agroforestry zone near villages (Oyono *et al.* 2008). Very few high-quality and economically valuable *terai* forests have been granted to user groups in Nepal (see also Agrawal and Ribot 1999, Ojha *et al.* 2008). The cooperative forest management model studied in Rajasthan, India, which provided wastelands to communities for tree planting, has contributed almost nothing to the incomes of community members, though it has provided other benefits (Saigal *et al.* 2009). The community concessions of the Petén – though the quality varies – appear to be an exception. In addition, the size of the forests granted to communities in the Petén and many other Latin American sites is orders of magnitude larger than in Asia, in particular. In Nepal, for example, the sites range from 100 to 635 hectares, sometimes less than 1 ha per member, whereas in the Petén, one of the concessions studied covers 65 000 hectares, or 190 ha per member; titling in Pando granted 500 ha to each family to promote sustainable Brazil nut extraction.

In summary, three main variables affect outcomes for livelihoods and income: the quantity and quality of forest resources granted to communities; national regulations (including limitations established by the reform); and market conditions and forms of market engagement. Notably, in all but one of the cases demonstrating livelihood improvements in Table 3, the reform did not simply change tenure rights but also provided economic, technical and organizational

support. Though this is essential in all of the sites with logging enterprises, it also includes the community forest user groups in Nepal, the ancestral domain site in the Philippines and the concessions in Burkina Faso. Such support has proved important for building community capacity, navigating the national bureaucracy and accessing markets, all of which are central to outcomes.

None of these results is particularly surprising. What is striking is that the reforms, rather than providing the kind of support that is clearly needed, more often place obstacles in the way of communities, through laws, policies or sometimes the actions of individual bureaucrats or field officers.

LESSONS FOR THE FUTURE OF REFORMS

Policies to grant new rights to local communities have been operating now for more than three decades in some countries, under the name of devolution, decentralization, community forestry, social forestry, co-management and so on. These policies have been amply studied, and there is rich case study material as well as a few important comparative studies that cross the boundaries of world regions (e.g. Agrawal and Chhatre 2009, Menzies 2007). In 2008, Sunderlin *et al.* (2008) documented, for the first time, a clear and significant increase in the portion of the global forest estate under *de jure* community control, suggesting for the first time that these complex, perplexingly diverse and dynamic experiences may signify a new global trend.

In the last two decades of the twentieth century, the stage was set for change, with the recognition of serious degradation of many forests under state control, the call for “sustainable development”, and recognition of the importance of the participation of rural people in both conservation and development initiatives. Forest peoples themselves, particularly indigenous peoples’ movements, provided the pressure “from below” for a new paradigm. Key conservation organizations came on board. Decentralization took centre stage in World Bank policies for developing nations.

¹⁸ One reviewer of this article, however, reports that the concerns over deterioration grew in fact from livelihoods concerns, such as the shortage of firewood.

Colchester *et al.* (2003: 6) write that “Ideas that were inconceivable to mainstream foresters 30 years ago are become commonplace topics of discussion today,” with foresters asking questions like, “To what extent should forests be devolved to local control, and owned and managed by local communities?” With regard to community forestry specifically, they note a “gradual shift in emphasis” from top-down schemes “to the validation or revival of customary systems” and integrated natural forest management (Colchester *et al.* 2003: 6). In his article tracing this changing international paradigm and highlighting the Accord from the 2003 World Parks Congress in Durban, Colchester optimistically refers to “the shift from stakeholders back to rightsholders” (Colchester 2004).

This research took on the issue of local rights to forests from the perspective of those demanding rights. The assessment of reforms comparatively across global regions – through in-depth case study analyses at multiple, nested scales – permits analysis of the extent to which this apparent change in rights over forests in fact represents a paradigm shift in favour of communities. The study suggests that in some ways, the devolution of rights represents an important shift away from the centralizing tendencies of the past. More definitively, however, it presents a new *opportunity* for communities in the context of changing, more integral conceptions of forests, the call for democratic decentralization and the demand for local rights. For the communities in this study, which in most cases were fighting for those rights, the reforms often represent a first and vital step – an initial platform that better positions them – in the ongoing demand for greater and more secure rights, particularly with regard to state forest bureaucracies.

But beyond this first step it is apparent from the experiences so far that these opportunities will require ongoing vigilance, support and struggle. The granting of rights has been highly controlled, unevenly implemented and subject to competition from more powerful actors – all of which have worked to attenuate community gains. As is often true with such policies, the process of implementation has interfered with the recognition or transfer of rights in practice; new rights have been firmly granted legally but are difficult to realize; others have been attenuated by regulations, competing claims and the failure to follow through with necessary accompanying measures that would enable communities to benefit more from new rights. The results of the study suggest that there are numerous ways in which some sectors of the state may seek to control, limit or reverse reforms in rights, and in which other competing claimants may encourage such actions for their own benefit.

How could reforms work better for people and forests? Securing substantial and sustainable gains in both rights and livelihoods requires the full implementation of reforms, the effective defence of those rights and attention to accompanying support measures that enable communities to obtain benefits beyond the simple granting of rights. A community’s right and ability to exclude outsiders, especially logging companies, land grabbers and those who would convert the forest to other uses, are central to protecting forest condition, and state support for this may be required.

It appears that even once new, secure tenure rights are won,

the central battleground for control over forests lies in the realm of management rights (see also Alden Wily 2004). That is, formal property rights are being granted to communities, leading to the shift in ownership patterns of the global forest estate, but the management portion of the bundle of rights is being spliced in ways that guarantee that the state will continue to play a central role in decision making. Hence, even a “secure property right” does not necessarily imply that the central conditions for success – as identified by Ostrom and Nagendra (2006), of people “genuinely engaged in decisions” about rule making – will be fulfilled.

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