COMMUNITY FOREST MANAGEMENT

Background Paper for:

The United Nations Forum on Forests Secretariat

UNFF9: *"Forests for People, Livelihoods and Poverty Eradication"*

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Foreword

This paper is intended to provide a background overview of community-based forest management, to facilitate discussion at the ninth session of the United Nations Forum on Forests, *UNFF9: "Forests for people, livelihoods and poverty eradication,"* held at the United Nations headquarters in New York City, from 24 January to 4 February 2011. The forum, as a functional commission of the Economic and Social Council (ECOSOC), operates under a multi-year programme of work (MYPOW).

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Introduction

Community forestry refers to the management of forestlands and natural resources by local people, for commercial and non-commercial purposes (RECOFTC 2004, 11). It is characterized by (1) the *use* of forest resources by local people, on an individual or household basis, for consumption and sale; and (2) the *community management* of forests, which refers to a collaborative enterprise conducted by a group of local people who manage forest either independently or with outside support for the production of resources for consumption and sale.

Community forestry first became a part of the international development cooperation in the late 1970s to address deforestation, a fuelwood crisis, and the resultant negative impacts on livelihoods (Nurse and Malla 2005, 2). Initially focused on woodlots and on farm tree-planting, it slowly began also to include the management of existing forests and woodlands, especially in tropical dry forest areas such as parts of Sahelian and eastern and southern Africa and in the degraded forestlands of Nepal. It was discovered in many of these areas that rules for the communal management of natural resources already existed, and could be built on by donor-funded initiatives (Shepherd 1992; Shepherd and Messerschmidt, 1993). Communal woodlots were largely unsuccessful (Shepherd, 1990; Arnold, 2001) but individual on-farm tree-planting and the communal management of existing forests and woodlands were both successful.

The partnerships between local communities and governments led to a variety of shared arrangements. These include Joint Forest Management (first in India and then more widely), where benefits from protecting forest and encouraging natural regeneration are shared in various proportions between local communities and government. These also include 'co-management' of protected areas and national parks where local people are allowed some sharing of benefits (by being allowed to gather NTFPs inside the park or by being allocated some share of income from tourists). Although community forestry (or Community-Based Forest Management as it has tended to be called in Eastern and Southern Africa) programmes have become more aware of poverty issues, and some have attempted to tailor forest management practice so that more products for the poor are generated, general experience is still that community forestry has not delivered for the needs of the poor. Many programmes, especially those which emanate from conservation initiatives, allow the gathering for home consumption of forest products, but few allow local people to market products from protected forests.

Community forestry shifted in focus toward a sustainable livelihoods framework in the 1990s, a framework emerging from natural resource managers rather than social scientists, and spreading in forestry and agriculture programs as a result. It was initially seen as an attempt to bridge overly narrow disciplinary interests by taking a farmer rather than a sectoral viewpoint. It was followed by a change in the development paradigm emphasizing decentralization and community involvement in decision-making. However, decentralization has yet to be fully integrated in the conservation and natural

resource management sectors, where the national level has tended to retain strong interests (Barrow 2004, 15).

Some aspects of the livelihood values of forests have been recognised by UNFF for many years. For instance, traditional forest-related knowledge and public participation were mentioned by UNFF in 2001 (12). In 2002, socio-economic benefits derived from forests were mentioned (11). At the Sixth Session, the UNFF expressed (2006, 2):

> …concern about continued deforestation and forest degradation… and the resulting adverse impact on economies, the environment… and the livelihoods of at least one billion people and their cultural heritage, and emphasizing the need for more effective implementation of sustainable forest management at all levels to address these critical challenges.

However it was not until the multi-year programme of work of the Forum (2007-2015), adopted at the seventh session of the United Nations Forum on Forests, that community-based forest management as a major topic to be addressed at UNFF9 was identified, resulting in the theme, *"Forests for people, livelihoods and poverty eradication"*.

Addressing discussions on the benefits of community forestry in the light of UNFF's commitment to addressing Millennium Development Goals (MDGs) in tandem with forests is timely and valuable. As such, this paper will discuss the following topics relevant to community forestry, with connections made to the MDGs at the end of each section:

1. *Overview of Community forestry*. Providing a basic history of experiences and paradigms, this section highlights several case studies from developing countries. It also incorporates a discussion on security of tenure.

2. *Forest Dependence and Trends in Community Forestry.* This section addresses the dialogue on forest dependence among local communities. New trends and issues related to community forestry, such as forest landscape restoration, REDD+, community forestry certification and tourism/ecotourism will also be discussed with relevant case studies.

3. *Community forestry and Rural Development*. Building on the history, concepts and approaches detailed in the first two sections, this will delve into an analysis of the interplay between community forestry and rural development efforts. Focusing specifically on addressing the needs of the very poor and other highly marginalized members of communities, this section will address the benefits of community forestry efforts relative to the costs to marginalized groups. Also discussed are small and medium forest enterprises (SMFEs), producer associations, company-community partnerships, and social and economic development potentials.

4. *Opportunities and Challenges.* The twin-track approach of community forestry and rural development is gaining much attention in the development literature, and the mutual benefits to conservation, livelihood enhancement and infrastructure development are being documented. Also discussed is more recent work in connecting communities to domestic and international markets for forest products, as well as the possibility for private company-community partnerships to contribute to rural development. This section includes issues relevant to the discussion on community forestry, such as payments for environmental services (PES), benefit sharing, forest financing, and technology.

5. *Conclusions and Recommendations.* The overarching theme of this background paper is that community based forest management is appropriate in contexts where frameworks and institutions enable a more decentralized form of forest and natural resource governance. The needs of communities will vary based on location and context, and thus policies at all levels should take into consideration livelihood needs, as well as the value of resources and infrastructure. Recommendations, as related to climate change policy, the real value of forests to people, and the way in which forests support the poor, are included.

Overview of Community forestry

Summary of Experience

Formal, state-based forest management practices have generally been production or conservation-focused, with a strong emphasis on central management. It is argued that these policies have maintained state-defined land tenure institutions with little recognition of often long-standing local customary rights, and which have restricted forest use by local communities (Roe and Nelson, 2009, 6). However, a strong thrust towards decentralization and local empowerment (ibid., 7), combined with declining government budgets and the resultant inability to maintain staff in "preservationist, law-enforcement based approaches" (Barrow 2004, 15), has caused a shift in the way many governments and organizations approach natural resource management, particularly in the case of low commercial or conservation value forests.

In various parts of the world, community forestry and natural resource management have been practiced by local communities since time immemorial (see, for example, Roe *et al.* 2005), but emerged into the consciousness of many donors and national governments in the late 1970s (see, for example, Fisher *et al.* 2007, 3-4). As described in the previous section, the original concept (communal forest management, community forestry or participatory forest management) began to be applied in specific contexts, with specific limitations on its applicability. As a result there is joint forest management (JFM) in India and then elsewhere, community-based forest management (CBFM) in southern Africa with particular reference to the sharing of park-based wildlife revenues, and so on. Community forestry thus takes on a variety of forms depending on location, socio-political and biophysical context, and above all varying policy contexts (Roe and Nelson, Chapter 2: The Origins and Evolution of Community-Based Natural Resource Management in Africa 2009, 5). In this paper the term 'community forestry' will be used for situations where local communities fully control forest management, and 'co-management' for situations where management is shared with government, a national park, or some other official body.

Brief History of Community forestry

Some of the ideas behind community forestry first appeared in the international development dialogue in 1978 via a publication from the Food and Agriculture Organization (FAO), *Forestry for Local Community Development*, which was presented at the World Forestry Congress in Jakarta (Fisher, Prabhu and McDougall 2007, 3). This publication was able to draw on some pre-existing legislation: for example, legislation in South Africa, Zimbabwe and Namibia gave landowners use rights to wildlife on freehold lands (Roe and Nelson, Chapter 2: The Origins and Evolution of Community-Based Natural Resource Management in Africa 2009, 6). Likewise, Nepal's National Forestry Plan of 1976 had created a policy enabling community participation in the management of forests, with technical assistance from the Department of Forestry (Fox 1993, 91). However, implementation of much of this legislation was slow in coming.

In the 1970s the focus of much community forestry was on restoration of degraded areas; in practice community forestry was considered suitable only for such locations, with the few exceptions where customary rights were recognized (Rights and Resources Initiative 2008, 16). Stemming from the international concern in the 1990s over rural livelihoods and poverty, community forestry from an international perspective eventually evolved to include rationales for improving conservation, increasing biodiversity, and reducing rural poverty (Fisher, et al. 2005, 13). Beginning in the 1990s NGOs, bilateral agencies and the private sector also began to explore market-oriented approaches in community forestry, particularly with regard to non-timber forest products (McDougall *et al*. 2007, 57). More recently, market-based approaches such as payment for environmental services (PES) and REDD+ are being tested in various parts of the globe, though not always through community forestry mechanisms.

Policy and legislative reforms slowly created opportunities for local communities to participate legally in the management of forestlands and resources – which in many cases they had long been doing outside of legal frameworks. As an example, Jefferson Fox (1993) highlighted the case of one village in Nepal, whereby informal committees were created in the 1970s and 1980s to protect forestlands. By 1990, formal committees had arisen, each with different rules for the management and use of nearby forestlands and resources (ibid., 93-96). This example highlights two important aspects of community forestry: (1) the flexible nature of local organization and collective action (Lindsay 2000, 36), and (2) the ability of local communities to make contextually appropriate management decisions within a legal framework.

Theoretical Frameworks

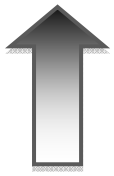
In short, community forestry attempts to give *de jure* authority of forest resource use and management to local users and communities, who may already have *de facto* rights to the forest. Set within a framework of decentralization and the right to market forest products, it is important to also consider elements of property rights that are most relevant to common-pool resources, which are ultimately what most community forests are. These five rights are as defined by Schlager and Ostrom (Agrawal and Ostrom 2001, 80-81):

1. *Access* – The right to enter a demarcated area and "enjoy non-subtractive benefits" (e.g. hiking, using the area as a short-cut to pass through).
2. *Withdrawal* – The right to extract resources and products (e.g. cutting wood, collecting leaves).
3. *Management* – The right to regulate resource withdrawal and beneficially alter the area (e.g. setting limitations on wood or leaf collection, planting trees or thinning the forest).
4. *Exclusion* – The right to determine who is allowed access and use of the forest, including how that right may be transferred.
5. *Alienation* – The right to transfer management and exclusion rights, through sale or lease.

The fundamental message one can draw from these five elements is that individuals and groups may possess well-defined property and resource-use rights that include any

combination of the above (ibid.). Once more, it is apparent that community forestry is context and content-specific. For example, a number of arrangements may permit *Access* and *Withdrawal* rights to selected users, and maintain centralized control over the other functions (ibid.). This is an example of how there can be varying levels of 'ownership' depending on content and context. Liz Alden-Wily classifies community forestry based on the level of community ownership, ranging from no consultation through to community-based forest management (see Figure 1).

Figure 1: Classification of Community forestry Based on Level of Community Ownership

More Community Ownership  **Less Community Ownership**	***Community*-Based Forest Management** – communities have full jurisdiction, which may or may not include ownership
	Contractual Partnership – communities have more substantial roles (e.g. JFM, co-management; CBFM, ICDPs)
	No Consultation – communities may actively use and even manage local forest, but these activities are not recognized by the State, and are routinely over-ridden

Adapted from: (Alden-Wily 2002, 31)

As outlined in the figure the figure, Alden-Wily utilizes a "community ownership" framework to place community forestry practices in a hierarchy. It is clear that Alden-Wily advocates *Community-Based Forest Management*, stating that, "…local participation becomes a great deal more meaningful and effective when local populations are involved not as cooperating forest users but forest managers and even owner-managers in their own right" (2002, 31). However, this classification scheme also gives us insight into property rights for community forests, especially when considered with Schlager and Ostrom's framework of rights.

Case Studies

Illustrating the above with an example is a case presented by Agrawal and Ostrom, from Kumaon, India. Within the boundaries of the Forest Council Rules of 1931 amended in 1976, the 3,000 councils managing approximately one-quarter of the forests are not allowed to clear-cut their managed lands (Agrawal and Ostrom 2001, 93). There are also other regulations, such as a cap on fines that councils can levy, as well as a specific set of guidelines for how councils can raise funds (ibid.). It may seem like a sub-optimal scenario for forest users, but Agrawal and Ostrom assert that residents "possess substantial powers" through the election of council members, the councils' relative autonomy in defining rules to encourage optimal forest use, and the councils' close working relationship with the forestry department for technical input (ibid.). This is but one style of decentralization and devolution of powers in community forestry.

Perhaps the best known example of the handing over of forest for community forestry from the State to local communities is that of Nepal. Forest user groups have been managing such forests now for close on twenty years and there is good evidence that not only are the forests themselves in a much better state than they were in the beginning, but that communities, after some initial problems, have on the whole benefited greatly from the increased biomass available, and additional income from sales of timber, fuelwood and other products. Forest user groups have strong institutional identity, and are represented at the national level by the umbrella organisation FECOFUN (Springate-Baginski and Blaikie, 2007, 366-381).

Intra-Community Dynamics

The discussion thus far has focused on citizen empowerment in decision-making processes, which is characteristic of changes in forest management. However, discussions on elements of property rights and community "ownership" over forestlands and resources primarily take into consideration the relationships between entire communities and other forest stakeholders, such as governmental bodies and private companies. Another matter of consideration is in the dynamics within the rural communities themselves, which are too often treated as homogeneous entities of poor villagers with similar goals and needs.

On the contrary, rural forest communities are ethnically, socially and economically diverse (Banerjee and Duflo 2007), comprising of residents "divided by factors such as caste, ethnicity, length of residence, gender, wealth, age, status and power" (McDougall, Prabhu and Fisher, Chapter 7: Discussions and Conclusions 2007, 209). Oftentimes, economically and socially marginalized groups such as women, the very poor, ethnic minorities and those within lower socioeconomic classes or castes are left out of the development and forest management dialogue entirely, though they are generally the groups most dependent on forestlands and resources, if not necessarily for direct income generation (McDougall, Ojha, et al. 2007, 56-59).

Jesse Ribot discusses some of the issues related to the local elite capture of forest resources resulting from newly created community-based forestry laws (Ribot 2002, 47). In some cases, local elites have fronted fictitious community forests or used other such administrative strategies to divert resources from their intended recipients (ibid.). These actions imply better knowledge of legal and administrative systems, as well as a greater capacity to utilize these systems, than most other local actors have.

Ribot recommends that democratic decentralization be based on "locally accountable representative bodies with powers over select local resources and decisions, and with local rights and systems of recourse" (2002, 9). Some such measures are in place, with, for example, quotas on the number of women elected to rural councils (though token women may sit silently in such meetings and only become vocal when in women-only meetings).

In community forestry, frameworks stressing local empowerment and equality within and among forest user groups and households should be highlighted, especially in consideration of UNFF9's theme of "forests for people, livelihoods and poverty eradication." They are also important when considering the resilience of these local institutions, as well as social justice concerns in any scenario (McDougall, Ojha, et al. 2007, 58). Many unsuccessful participatory forest projects have been implemented in top-down fashion contrary to the spirit of community forestry (Sarin 2001, 26).

Tenure

A common link made between livelihoods and forest resource management in the literature is tenure security (though that security need not reside only in legal tenure). In general, insecure tenure is correlated with weak forest management (McDermott and Schreckenberg 2009, 163), the rationale being that insecure tenure fails to provide local forest users with sufficient incentives to manage forest sustainably (Blaser 2010, 13). At the very least, the literature indicates that it is important to have explicit access and withdrawal rights if the phrase 'community forestry' is to have any meaning (Barrow and Karaba 2004, 6).

In cases where communities have successfully organized and maintained a reasonable level of control over decision-making, there has been a correlation between greater dependence on forests for local livelihoods and successful organization (Sarin 2001, 33). This dependence on forests includes both direct uses and income generation through the sale of forest products and services. Such commercial activities include the sale of non-timber forest products (NTFPs) and other such small-scale forest enterprises. It may sometimes – though so far rarely – include payments for ecosystem services (PES).

An alternative system is seen in Tanzania, where title for village lands is granted to village government, who may themselves decide how much land is retained and protected as village forest, and how much may be converted to farm-land or other uses. A hundred per cent of any benefits from these village forests accrue to the village owners. Under this system, villagers may have a strong incentive to protect their forests against outsiders, and to enhance its quality (Alden Wily and Mbaya 2001, 140-153), though the final choice is always dependent on the size relationship between the resource and the population who want to use it, and the competing benefits derived from retaining or felling the forest. Ostrom sets out the contexts that dictate these choices very clearly (Ostrom 1990).

There is a general acceptance that tenure security should lead to successful community forestry practices, especially in the areas of natural resource conservation, sustainable use and poverty reduction, which has led to broad-scale tenure reforms; today, communities manage approximately twenty-seven percent of forests in the Global South (Larson, Barry and Dahal 2010, 79). However, tenure security may not always be sufficient to ensure successful community forestry: outcomes remain "highly context-specific, depending on local and national, ecological, social and economic context as well as history" (ibid.).

Nor is 'legal tenure' always necessary to provide 'secure tenure'. A recent paper presented at the 2010 IUFRO conference (Fisher 2010) gives examples from China, Thailand and Uganda which show that where the authorities were prepared to undertake joint planning and management with local people, sometimes on a contractual basis, and to take their use needs into account, formal tenure change was not immediately necessary. Conversely, an example from Ghana showed that even where there were already formal legal on-farm tree tenure rights, farmers did not trust these rights until a tree registration process with government endorsed them. Fisher points out than in the case of Nepal, long years of 'policy experiments' were needed to build confidence in local capacities before enabling legislation was finally passed.

Community forestry and the MDGs

The eight Millennium Development Goals are: (1) eradicate extreme poverty and hunger; (2) achieve universal primary education; (3) promote gender equality and empower women; (4) reduce child mortality; (5) improve maternal health; (6) combat HIV/AIDS, malaria and other diseases; (7) ensure environmental sustainability, and (8) develop a global partnership for development.

The Food and Agriculture Organization of the United Nations (FAO) broadly sees a strong link between forests and two of the goals: (1) eradicating extreme poverty and hunger, and (7) ensuring environmental sustainability (FAO 2005). Primarily, forests provide food security for many of the world's rural poor while protecting biodiversity, contributing to carbon sequestration and maintaining and providing clean and reliable water sources for both urban and rural populations (ibid.).

Forests can serve as subsistence safety nets for the rural poor, essentially mitigating poverty for its users (Mayers 2007). Forests can also function "as a source of permanent increases in income, assets, services, civil and political rights, voice, and the rule of law" (ibid.), particularly in well-functioning community-managed forests. This includes contributions to local education, clean water infrastructure, provisions for health and nutrition programs, etc.

Community forestry projects tended initially to focus on justice (improving access to forest for traditional users) and on the hypothesis – well proven in the event – that it made sense to protect forest with, and not through conflict with, its users. Some people assumed that forests would usually be better protected by their users than by the State, and that hypothesis too is largely proven. It is much less clear that community forestry projects have been able to produce poverty reduction directly (McDermott and Schreckenberg 2009, 157-158), though it is true that forests are of special value to women, the elderly, and the very poor.

Forest Dependence and Trends in Community forestry

Forest Dependence

The value of forests is well recognised both in timber terms and in terms of the non-timber forest products sold in great quantities out of forests all over the world. This section looks at a third, and equally vital, value for forests: the non-cash value of forests. The focus here is on the daily support provided by forests to households living in or near to forest. Some researchers are aware of the importance of non-cash forest value (consumption value), but it is not as yet recorded in government statistics, and so remains invisible, with its value set effectively at zero. Income in typical Household Budget Surveys and Living Standards Surveys, conducted according to models established originally by the World Bank or the ILO, includes:

- Cash income from employment
- Cash income from sales of farm crops
- Cash income from sales of wood and non-wood forest products
- 'Non-cash' (consumption) income from household consumption of farm crops.

But it does not factor in 'non-cash' (consumption) income from forests. This income may be literally gathered and consumed in the case of forest fruits, nuts, vegetables, meat and medicinals, but consumption also refers to the use of wood and non-wood products in the household, such as fuelwood.

Non-cash forest values

If the total annual income of a developing country rural household is calculated, factoring in not only cash income but also non-cash income, it immediately becomes apparent that this officially completely invisible income source is extremely important in many cases.

Figure 2: Forest Use in the village of Tenkodogo, Burkina Faso

Category of Forest User	Cash income	Non-cash income	Total	Forest income as a % of all income
Wealthy and average men	42	58	100	
Of which forest	**7**	**31**		**38%**
Wealthy and average women	36	64	100	
Of which forest	**10**	**34**		**44%**
Poor and very poor men	38	62	100	
Of which forest	**9**	**36**		**45%**
Poor and very poor women	32	68	100	
Of which forest	**12**	**38**		**50%**
Average contribution of cash and non-cash income to total income	**37%**	**63%**	100	
Average contribution of forest income to total income	**9%**	**35%**		**44%**

Source:(IUCN Burkina Faso 2009)

Figure 2 shows that, in Tengkodogo, a Sahelian farming village about thee hours from Ouagadougou, non-cash income makes a much larger contribution annually to total income than does cash income. For wealthy and average men non-cash income contributes 58% of total income while for the poorest category – poor women - non-cash income contributes over two thirds of total income at 68%.

Forest income (cash and non-cash) averages 44% of total income, and it is clear for each of the wealth and gender categories that the value of the non-cash contribution of forests to household income is much higher than the value of cash income from forest. The same kinds of findings hold true for many other parts of the developing world.

It has been accepted for many years (Byron and Arnold 1997, Angelsen and Wunder 2003) that the *cash* contribution of forest products to household income may not be enormous. Here it averages only 9% of all income. But these realities put this cash value into context. Cash sales of forest products are a poor indicator of the total use people are making of forests and represent only the tip of the iceberg. One fifth of total forest income comes from cash sales of forest products, while *fourth fifths* of that income is composed of products that never enter the market.

Dimensions of forest dependence

All household income in rural areas comes partly from what can be grown on farm, and partly from non-farm income which will consist of a mix of cash income earned as wages, and income drawn from off-farm natural resources such as forests, rivers, and the sea. The remoter the location, the smaller the cash income from wages, and the greater the dependence on farm produce and off-farm natural resources. In all cases, the importance of forest co-varies with the importance of agriculture, and the two need to be understood together from the point of view of local people.

Forest dependence in spatial terms

Forest dependence varies in predictable ways over space – increasing in remoter areas where markets are far away and only sales of very high value forest products are of interest (spices such as nutmeg, for instance) and decreasing where there are roads and markets and where sales of agricultural crops are easy to organise, and wage labouring opportunities may present themselves. Sunderlin et al (2008) have shown how closely poverty levels and forests can correlate at the level of national analysis. These differences are seen over quite short distances, as well, linked to what constitutes a walkable distance to market and back. Dercon and Hoddinott (2005) have shown that those in Ethiopia within 8km of a market centre buy and sell more have better health and more access to education

Forest dependence and gender

Women in many societies turn to forests both to diversify and add flavour to the range of subsistence foods they offer their families, and also for cash. It is normal to find that women depend more on forests than men for off-farm income, while men may depend more on wage-labouring. For instance, among the Akan in Southern Ghana, while the profits from any on-farm activities go to the (male) household head, women may wish to

generate income which they control themselves, to safeguard their future. Wives may choose to make remittances to their natal families, for instance, as security in case of divorce (Milton 1998). In Cameroon and Benin women increase their collection and sale of non-timber forest products right before children's school-fees are due, at times of year when ill-health is more common, and during the hungry pre-harvest period (Schreckenberg, et al. 2002).

Forest dependence and wealth levels

Not only women, but poorer people in general are more dependent on forests for cash and non-cash incomes. This may be because they lack land or labour for more substantial farming activities or for migrant labouring. Though wealthier households may collect more forest products by volume, what is collected by poor households forms a far higher percentage of their total income (Abbott 1997). Chronic poverty (profound, hard-to-get-out-of, and intergenerationally inherited) is more common in remote forested areas than in less remote areas (Bird, et al. 2002).

Forest dependence and the farming system

Types of non-cash forest dependence vary in different parts of the world, in synergy with types of agriculture. While farm production is almost always primary, the forest is relied on by the farming household both directly (through inputs to diet, for instance) and indirectly (through inputs to the sustainability of the farming enterprise).

- *Pastoralism, agriculture and forests*: In many parts of the Africa, animals are fed in forests on forest browse for a considerable proportion of the year. The main non-cash value of forests for those with cattle, it that it keeps their chief household asset alive and in good health throughout the year when there is no grass.
- *Forests, cattle and soil fertility on terraces*: In the upland hill-farming systems in Nepal cattle are fed in forests or on cut browse from forests, and kept on terraces, so that their manure can supply crops with nutrients. The farming system demonstrates how close the symbiosis with forest can be.
- *Rotational fallowing*: In almost every part of the world in the past, before the arrival of purchased fertiliser, farmers made use of forest soil fertility in shifting cultivation systems. Poor soils, where accumulating weeds and soil toxicity begin to make farming all but impossible after two or three years, drove farmers to move on around their cycle of plots. In many systems, from West Africa to Indonesia, farmers enrich the plots they temporarily abandon with desired tree species, so that when they return after a few years, they have a more valuable forest than the one they left behind. The farmed parklands of the Sudanic zone in Africa, and the slow transition into the multi-storey agro-forests, found in Indonesia, Vietnam and elsewhere are examples of this.
- *Forests and protein*: In the rainforests of the Congo Basin, it is all but impossible to raise domestic livestock. Farming consists of the growing of carbohydrates and root vegetables, but protein (bushmeat, snails and fish for the most part), green leaves, vitamins and minerals must all come from the forest.

All these facts are indicative for the debates which have taken place in recent years about the capacity of forests to reduce poverty (e.g. Arnold, 2001; Cavendish, 2003). As many have suggested, straightforward poverty reduction based on the kinds of *cash* incomes which can be generated from sales of non-timber forest products is likely to be limited. On the other hand, since all cash income-earning opportunities are limited, the contribution of forest income is not negligible. In Box 1, forest cash income may represent only 9% of total income, but it does contribute 25% of all cash income. The real lesson, however, is that bedrock support to the poor in and near forests comes from non-cash income, and its invisibility makes it very easy to under-estimate how important it is.

Trends in Community forestry

Taking into consideration the history of community forestry, in tandem with local livelihood dependence on forests, recent trends and approaches from around the world can be discussed. As in the case of community forestry in general, the following approaches are content and context-specific to local conditions, dependent on a combination of factors ranging from domestic legislative and policy frameworks to local capacity and willingness to take on such projects.

A number of collaborative local-international market-based mechanisms have arisen in recent years to address co-management, conservation, sustainable development and rural forest livelihoods. As in the case of community forestry in general, any combination of the above approaches could be applicable to a specific local context given a (1) demand for the forest-related product or service; (2) the capacity of local communities to conform to international standards for project design, implementation and monitoring; and (3) networking and marketing efforts connecting local forest communities with national or international markets.

Forest Landscape Restoration

Stemming from international concern in the 1990s over rural livelihoods and poverty, together with increasing forest degradation in many areas, the concept of forest landscape restoration has eventually evolved to now include rationales for (1) improving conservation, (2) increasing biodiversity, and (3) reducing rural poverty (Fisher, et al. 2005, 13). Today, forest landscape restoration is utilized in many different contexts, many of which use community forestry as a means to this end.

In the Shinyanga region of Tanzania, for example, a conservation and restoration project known by the acronym HASHI (*Hifadhi ardhi Shinyanga*) began in the 1980s in response to local need for forest restoration to supply goods and services (Fisher, et al. 2005, 61). Highlighted by the project's recognition and use of the traditional land use practice *ngitili* (traditional forest reserves), HASHI improved community livelihoods while also restoring forestlands and increasing biodiversity. Monela et al estimated that approximately 64% of local households received benefits from *ngitili*, with each family earning an income of USD 1,000 per year (USD 14 per month, per person), while biodiversity increased in tandem (Fisher, et al. 2005, 68). Also noteworthy is the level of collaboration between rural communities and the State, in particular legislative and policy frameworks that are conducive to participatory management and decentralization (ibid.,

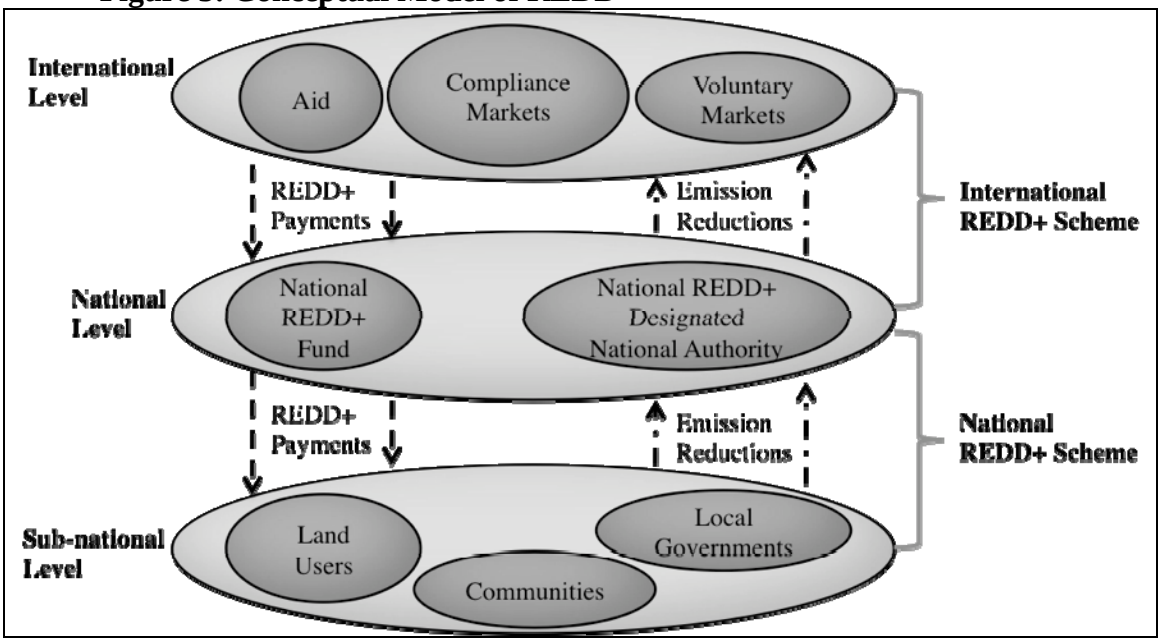
63). Key to the success of HASHI is also the recognition of local willingness and ability to restore forestlands and participate in community forestry with incentives and policies that are relevant to local conditions.

Community forestry and REDD+

REDD+ (Reducing Emissions from and Forest Degradation) is a proposed policy instrument aimed at mitigating emissions associated with climate change, whereby developing countries receive compensation for reduced forest emissions. Currently under negotiations at the United Nations Framework Convention on Climate Change (UNFCCC), REDD+ utilizes market mechanisms as a part of the overall strategy (Phelps, Webb and Agrawal 2010, 312). Because of the intensive planning, management and monitoring required for REDD+, as well as the potential to substantially increase the monetary value of forests, there are concerns that the approach could reverse trends in decentralization of forest management (ibid.). However, because REDD+ is continuing to evolve, more research will be needed in order to understand the impacts on rural livelihoods and poverty.

One of the main concerns about REDD+ lies in benefit sharing and its potential impacts on forest households, particularly the very poor. Conceptually, REDD+ is implemented on two levels: (1) the international level, whereby payments are made between countries or between the private sector and countries, and (2) the national level, whereby national governments function as intermediaries between payments and local levels (Bond *et al.* 2009, 5-6).

Figure 3: Conceptual Model of REDD+



Adapted from: (Bond et al. 2009, 6)

This model is indicative of overall policy objectives rather than "a clearly delimited set of actions or activities" (Angelsen and Wertz-Kanounnikoff 2008, 11), and REDD+ incorporates not only deforestation and forest degradation as did its earlier counterpart REDD, but also other activities such as the sustainable management of forests and enhancement of forest carbon stocks (REDDnet 2010).

The concern lies in the implementation of REDD+ activities at the sub-national level. Some accounts indicate that REDD+ programs have resulted in positive impacts on livelihoods at the household level, though the programs are small in scale, and the benefits accrued – in terms of income – have also been small (Bond *et al.* 2009, 32). However, transaction costs – both monetary and in terms of citizen participation – as well as effective monitoring have shown in many cases to significantly benefit large landowners while simultaneously creating barriers to participation for smallholders and households with insecure tenure (Huberman 2007, 24).

It remains to be seen whether REDD+ can benefit more marginalized members in a forest community, particularly in cases where tenure and other rights are in question. However, there is great optimism in the literature about the potential for REDD+ to reduce greenhouse gas emissions while simultaneously protecting human rights, improving governance, alleviating poverty, etc. (Angelsen and Atmadja 2008, 8). Many authors stress a pro-poor approach with REDD+ programs, particularly in implementation at local levels (Brown, Seymour and Peskett 2008, 109).

Community forestry Certification

Community forestry certification is a "market-based, non-regulatory forest conservation tool designed to recognize and promote environmentally responsible forestry and sustainability of forest resources" (Alemagi 2010, 933). The concept itself enjoys much

attention in Western markets – sometimes referred to as 'eco-labelling' – and can include the certification of entire forest patches and forest products. Certification and eco-labelling in many locations have the potential to increase local revenues from the sale of forest products, but the costs associated with the certification process and monitoring can be high, and may require a considerable amount of assistance of third parties (Carter and Gronow 2005, 30).

Despite the apparent hurdles involved with starting up and maintaining certification schemes, there have been successful cases. For example, the Forest Management and Product Certification Service (FORCERT) in Papua New Guinea acts as the broker between community producers and buyers in Australia and China (International Institute for Environment and Development May 2009). The organization collects membership fees and percentage fees on timber, and manages the certification for the Forest Stewardship Council. Additionally, FORCERT provides its members with microfinance loans (Macqueen, 2008, 38).

However, it is important to note that certification is dependent on demand for these niche products and services, and that the great proportion of timber traded in the world goes into markets (such as domestic markets or regional markets) with absolutely no interest in certified timber.

Tourism and Ecotourism

Community-based forest tourism and ecotourism have the potential for success in certain contexts, but are largely dependent on demand from outside consumers. However, as in the case of Cambodia, community-based ecotourism is being utilized to also achieve both conservation and livelihood diversification, especially in areas where logging, hunting or swidden farming have been banned (Ol, Williams and Baromey 2009, 471). Beginning in the late 1990s, by 2009 there were thirty such projects throughout Cambodia, with varying amounts of success.

Ol *et al.* have determined three challenges in ecotourism initiatives in Cambodia that could be relevant in other contexts as well: (1) the capacity of communities to develop and manage tourism initiatives; (2) the "uncoordinated" nature of structural development, including both external structures (such as the ability of communities to successfully lobby the government for support resulting in integration into the broader legal frameworks), and internal structures (such as infrastructure development for such facilities); and (3) the ability of communities to take part in networking and marketing (ibid., 472).

In two in-depth case studies, the authors found that both were successful in conservation efforts, as seen in decreased logging and hunting, as well as in the increased capacities of communities to deal with environmental issues (Ol, Williams and Baromey 2009, 486). However, the results for livelihood diversification were mixed, with one community exhibiting stronger coordination, organization and integration of tourism-related activities, while the other lacked strong governmental and NGO support, as well as coordination among the various local stakeholders (ibid., 487).

Forest Dependence, Trends in Community forestry and the MDGs

Many authors and organizations assert that conservation, poverty reduction and increasing biodiversity are inextricably linked, and could help countries in, for example, sub-Saharan Africa, where progress towards the MDGs has been difficult (Roe, Introduction n.d., 3). The 2010 Millennium Development Goals Report notes, for instance, that

> '*Biodiversity is vitally important for human well-being since it underpins a wide range of ecosystem services on which life depends. Billions of people, including many of the poorest, rely directly on diverse species of plants and animals for their livelihoods and often for their very survival. The irreparable loss of biodiversity will also hamper efforts to meet other MDGs, especially those related to poverty, hunger and health, by increasing the vulnerability of the poor and reducing their options for development* (The United Nations 2010, 52).

However much of this literature fails to describe the *way* in which poverty and biodiversity may be linked. Even the simplest community forestry activity, where governance arrangements are adequate, can make major contributions to most of the MDGs.

For instance, in Shinyanga, in Tanzania, small protected private and communal forests, known as *ngitilis*, were a traditional local institution until the 1960s. They were done away with by the Tanzanian State thereafter, but revived through project initiatives in the 1980s and 1990s, and formally legalized by the Tanzanian Village Government structure in 1999. Where governance arrangements allow it, such village forests can make many contributions to the Millennium Development Goals.

Figure 4: Shinyanga Tanzania The Millennium Development Goals and Targets, and the contribution of forests to them		
GOALS	**TARGETS**	**CONTRIBUTION OF FORESTS IN THE CASE OF BUSONGO, SHINYANGA, TANZANIA**
Goal 1 Eradicate extreme poverty and hunger	***Target 1:*** Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day	Villagers cite a forest contribution to livelihoods of 20-29% in Busongo, Tanzania. Charcoal, fuelwood, ghee and milk, livestock, gum, thatch and fodder grass contribute both directly (through use) and indirectly (through sale) to the meeting of targets 1 and 2, along with farm products. Forest products are particularly important for getting through the annual hungry period, and for reducing the impact of drought years. **Governance:** Communal forest protection ensures their availability.
	Target 2*:* Halve, between 1990 and 2015, the proportion of people who suffer from hunger	
Goal 2 Achieve universal primary education	***Target 3:*** Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling	Sales of livestock, charcoal, gum, fodder and thatch grass are all mentioned for accessing the cash needed for fees, uniforms and bus-fares for primary school children. **Governance:** Communal forest protection ensures their availability. Village forests are used, by village government decision, to construct staff houses for primary schools and extra classrooms.
Goal 3 Promote gender equality + empower women	***Target 4:*** Eliminate gender disparity in primary and secondary education preferably by 2005 and in all levels of education no later than 2015	Girls as well as boys are more likely to attend school where forest incomes help women to find cash for school fees and uniforms. As incomes rise overall, it is observed that girls are more likely to be sent to school as well as boys. Women mention goats and cattle as items sold to raise money for these expenses. **Governance:** Communal forest protection ensures their availability.
Goal 4 Reduce child mortality	***Target 5:*** Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate	Improvements in the access of mothers and children to good quality foods, to forest medicines and to the money to buy food and pay for medical attention come about as a result of using the forest. Sales of charcoal, fuelwood, ghee and milk, livestock, gum, thatch and fodder grass contribute directly and indirectly to the meeting of these targets. **Governance:** Communal forest protection ensures their availability.
Goal 5 Improve maternal health	***Target 6:*** Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio	

Box 1: Shinyanga Tanzania The Millennium Development Goals and Targets, and the contribution of forests to them		
GOALS	**TARGETS**	**CONTRIBUTION OF FORESTS IN THE CASE OF BUSONGO, SHINYANGA, TANZANIA**
Goal 6 Combat HIV/AIDS, malaria, and other diseases	***Target 7:*** Have halted by 2015 and begun to reverse the spread of HIV/AIDS	Sales of charcoal, fuelwood, ghee and milk, livestock, gum, thatch and fodder grass contribute indirectly to overall health status, and to the health improvements which arise as a result of using the forest for food, medicine, and to pay for medical attention. Resistence to both malaria and even AIDs is dependent in part on nutritional status. **Governance:** Communal forest protection ensures their availability.
	Target 8*:* Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases	
Goal 7 Ensure environmental sustainability	***Target 9:*** Integrate the principles of sustainable development into country policies and programs, and reverse the loss of environmental resources	Households invest in, and enrich, their small 'village forests' because in this location they own them, and the forests support them and their animals (their store of wealth). **Governance:** The Village Government protects the communal forests of especial importance to the poor, applies bylaws and encourages natural regeneration, so that a good flow of products continues to be available.
	Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water	**No data.** In this location no questions about improvements to water flow / water quality were asked. So no potential link between better protection of the forest and water quality could be made.
	Target 11: Have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers	**No data.** Better rural livelihoods do reduce migration to towns/cities. Incipient rural landlessness (as here in Busongo) risks increasing urban drift.

Source: Devised and adapted by G. Shepherd. One version found in 'PROFOR Poverty-Forests Linkages Toolkit', Tool 7. 2008.

Approaching community forestry in this manner at the planning, implementation and assessment phases of projects can make the MDG contributions that forests provide more explicit.

Community forestry and Rural Development

Community forestry is often regarded in the literature as a positive development strategy for rural forest communities to improve livelihoods while promoting environmental conservation and increasing biodiversity. This is because ample forest lands and chronically poor people are both found in areas remote from markets where few other alternatives exist, for reasons well set out by Sunderlin et al (2008).

Community forestry implies the existence of local, formalized organizations that take part in the management of forestlands and natural resources to varying degrees. These organizations not only make decisions affecting the use and/or management of the forest, but can also contribute significantly to community infrastructural development, as well as provide jobs through commercial activities. In Nepal, for example, some user groups are taking on governmental responsibilities by providing basic services such as road and school improvements, as well as credit and social security (McDermott and Schreckenberg 2009, 160). In one community in Mexico, its community forest enterprise provides approximately 250 full and part-time jobs to both community members and others (Bray, et al. 2003, 675).

William Sunderlin et al broadly categorize four different means of poverty reduction through forests (2005, 1386):

1. Converting forests to farmlands or other non-forest uses;
2. Ensuring local access to forestlands and resources for commercial or non-commercial uses;
3. Paying forest dwellers to protect forest environmental services;
4. Adding value to forest production through technologies that increase output.

Thus far this paper has discussed in greater detail the necessity of (2) access to forestlands and natural resources. This section deals with (4) adding value to forest production, particularly through CBFM and its potential to contribute to rural development and poverty reduction through market-based enterprises. Primarily, the concern is with better connecting forest dwellers, particularly organized groups, with markets and technologies.

The World Bank recognizes that limited land and market opportunities pose “a major constraint to poverty reduction” (Dewi, Belcher and Puntodewo 2005, 1420). Road infrastructure development is often considered a positive first step in connecting communities to markets, facilities and other such resources, resulting in a natural trickle-down economic effect in the communities themselves, i.e. benefits extending beyond those directly involved in forest enterprises to other members of the community. However, roads can also bring negative development and rapid deforestation, where clear-cut forest ownership is absent, or cannot be defended.

In the Mexican state of Oaxaca, for example, a forest co-management arrangement between the community and a private firm has resulted in substantial community-wide benefits. Jobs were created and sustained, and physical infrastructure – roads and public buildings – were built and improved (Klooster 2000, 5). However, development efforts were directed overwhelmingly at the central village, where – among other public works – streets, a community-owned sawmill, government buildings, and a health clinic were built. In stark contrast, the outlying settlements did not receive their requested funding for roads, schools, and infrastructure for electricity (ibid., 6). Furthermore, the highest-paying jobs generally went to workers from the central village, who consisted of one-third of the total community workforce, but received one-half of the total pay (ibid.). In the community forest in Oaxaca, there were the more powerful, affluent, or otherwise privileged community members residing in the central village, in contrast to the less powerfully connected members in the outlying settlements. Development projects, and indeed the more desirable, higher paying jobs, routinely favored those in the central village. It is depressing that these unthinking biases, written about by Chambers as long ago as 1983, are still being reinforced (Chambers 1983, republished 1995 and 2008).

It is important to be aware that while economic development is vital to rural poverty reduction, it may also increase inequities among various groups within forest communities. In particular, the most marginalized groups in more stratified communities – the very poor, women and the elderly, for example – may be "excluded, silenced or co-opted through processes that actually reinforce existing power relations and give the most benefits to those who already have the greatest influence" (Carson and Kalyn 2009, 36).

There are a plethora of management arrangement possibilities in community forestry. Thus when considering the benefits of rural development resulting from community forest enterprises, it is important to consider both aggregate benefits and benefits to all involved groups. It is not enough to rely solely on aggregate indicators, especially in consideration of Millennium Development Goals such as poverty eradication and gender equality.

Small and Medium Forest Enterprises (SMFEs) and Local Development

SMFEs comprise a special category of forest-related enterprises, and are defined as "business operations aimed at making a profit from forest-linked activity, employing 10-100 full-time employees, or with an annual turnover of US $10,000 – US $30 million, or with an annual round wood consumption of 3,000 – 20,000m^3" (Macqueen 2008, 2). In this modern era, large-scale industrial business models are often considered as more capable of competing in national and global markets through their economies of scale and abilities to aggregate technical skills. However, there is growing evidence that SMFEs have the potential to perform better in forest contexts given the local needs, as well as the multitude of policy and other institutional frameworks (Rights and Resources Initiative 2008, 22).

Furthermore, there is evidence that SMFEs contribute to more than 50% of forest employment in some countries, and also comprise 80%-90% of all forest-related

enterprises in many countries (Mayers 2007). Thus SFMEs have great potential to contribute to local development, though the set of challenges they face, as opposed to non-forest SMEs, are complex. Primarily, security of tenure is a large concern, especially when one SMFE cannot assert its rights to the forest and natural resources with competitors.

However, SMFEs – depending on national policies and local practice – can be in better positions than large forest enterprises to address local, forest-dependent poverty and development (Macqueen, 2008, 4). While there is debate in the literature between the benefits and drawbacks of large versus small enterprises (see, for example, Karsenty *et al.* 2008), it is argued that SMFEs accumulate wealth locally, support local entrepreneurship, and secure natural resource rights and access for the local communities (ibid.). Above all, SMFEs provide mainly local jobs. In Fujian Province in China, for instance, local labor is the main source of employment, totaling 55% of the total workforce of SMFEs (FAO 2009, 7). However, SMFEs have become "synonymous with unregulated logging and… illegal harvesting," due in large part to ill-fitting legal frameworks (Karsenty *et al.* 2008, 1507).

Marketing

Possibly the biggest challenge SMFEs face is in connecting to regional, domestic and possibly even international markets. SMFEs may also lack the physical infrastructure to do business, and in the past international funding of SMFEs focused heavily on building the capacity on the supply side. This approach has since changed, focusing now more on increasing the demand and supply of products and services (Macqueen, 2008, 11). This new approach is referred to as market system development, and focuses on improvements such as increasing production efficiency, qualitatively improving products to meet the demands of consumers, and adding-value to products through product diversification (ibid., 12).

Domestic markets for timber and non-timber forest products (NTFPs) are often flooded with cheaper, illegal products (Donovan, et al. 2006, 4), and SMFEs cannot compete due to the economies of scale. However, both local and domestic markets in developing countries are becoming recognized as important – and growing – potential markets for SMFEs, and international organizations such as the World Bank are advocating for policy reforms that favour the development and sustainability of SMFEs. Also vital to this scenario are organizations and NGOs with the capability to assist SMFEs in effectively marketing forest products to consumers, similar to the manner in which certified forest products and forest tourism/ecotourism are being marketed.

Policy Framework

As previously discussed, SMFEs face considerable difficulties in competing with illegal competitors in domestic and local markets. SMFEs targeting their products to international markets face similar challenges; however, the difficulties are primarily in connecting to the appropriate international organizations and markets. In light of recent research into the benefits of SMFEs, international development organizations stress the importance of policy reforms to support such enterprises.

In general, the literature stresses security of tenure as a key issue in sustaining SMFEs. Building upon frameworks discussed in the first section of this paper, it is possible to understand that tenure security will be both content and context-specific, and no two secure tenure arrangements will look alike. With regard to other SMFE-supportive policies, once more it is vital to understand that these will also be context and content-specific. The difficulty in specifying a 'good' policy approach for SMFEs is that "numerous factors influence the feasibility, appropriate structure, and suitable direction of an SMFE program" (The World Bank 2008, 20). No two policy approaches need to be alike, and will be highly dependent on national targets, potential export markets, product availability, etc.

There are, however, some abstract suggestions for supporting SMFE policies that focus on the SMFEs themselves. One is reversing existing forestry regulations that can discriminate against SMFEs and other such small-scale enterprises (small farmers are another example) (ibid., 21). Many existing regulations related to land and natural resource management tend to be complex and involve copious paperwork, which many small enterprises do not have the capacity to deal with.

Another general approach is to create policies that support the production, marketing and even physical infrastructure related to SMFE production and their access to outside markets (ibid.). As discussed previously, international donors and organizations had initially focused on 'supply side capacity building' when working with SMFEs, and with their efforts now shifted towards market system development, domestic policies can more appropriately fill in the gaps on the supply side.

Producer Associations

Good ways forward include the creation of producer associations, whereby community businesses will aggregate efforts in the marketing and/or processing end. Individual businesses may pay an association fee, as well as percentage fees on forest products, but the association enjoys greater bargaining power in negotiations with purchasers (Macqueen, 2009). For example, DIPANTARA in Indonesia is one such producer association, representing thirty-seven community forestry groups in fifteen villages, with a total of 2,698 registered members (TFT 2010). Creating more stable access to timber markets for its members, DIPANTARA also has guidelines for the sustainable growth and management of teak, designed to help ensure long-term community income generation. Since its creation in 2008, it has also been successful in partnering with furniture buyers for sale to international markets (ibid.).

Company-Community Partnerships

Company community partnerships have sometimes concerned the production of on-farm timber for pulp or light industry, and sometimes been focused on outgrower schemes for palm-oil or other tree crops such as cocoa. (Mayers and Vermeulen 2002). Here the

relationship is between a series of individual farmers and a company, and such arrangements scarcely go under the name of community forestry.

More rarely, deals have been struck between large timber concessions and arrangements for small-scale producers undertaking community logging. Such arrangements have been tentatively tried in Indonesian Papua, for instance (Kayoi, Wells and Shepherd, 2008).

The most common arrangement in the context of logging concessions is simply the payments per cubic metre and the provision of additional infrastructure which all logging concessions are supposed to provide to forest dwelling people in whose forest areas they conduct logging operations. These are mostly compensation agreements rather than arrangements to actually manage the forest (Singer 2008, 143-162).

Social and Economic Development Potential

Community forestry goals are sometimes deemed overly ambitious. Such goals include: (1) empowering otherwise marginalized community members through community-wide participation in forest management activities and use; (2) creating more horizontal power structures within communities and between communities and external forest stakeholders; (3) promoting community-wide equity and household self-sufficiency through profit-generating activities (Khan 2001, 3).

Social Development Potential

Indeed, little research has indicated broad-scale success in social development in these contexts. Much of this can be attributed to the very localized and specific nature of community forestry initiatives, and to the governance context in which they are found.

A review of social forestry (SF) communities in Bangladesh, for example, concluded that long-standing patronage relationships were so deeply ingrained in the social fabric that SF initiatives did little to change "the nature, patterns and implications of the patronage network" (ibid., 15). Furthermore, the patronage relationships only benefitted farmers that were previously better off, and even so the benefits were partial. Similar patronage patterns and relationships certainly exist in other parts of Bangladesh and the world, but it is difficult to say whether they would have as strong an impact as they did in the researched areas.

The other key variable which governs the success of community forestry is how far communities are still dependent on forests. The more their overall income comes from agriculture and off-farm labour, and the less from forest, the less time and effort will be invested in community forestry. This statement sounds very obvious, but it has been striking in the Nepal forestry programmes, for instance, how Community Forest User Groups near to roads and towns steadily become weaker as previous leadership figures turn to private enterprise and lose interest in time-consuming CFUG facilitation and management roles. Meanwhile, those in remoter areas may remain ready to invest considerable time, energy and social capital in forest activities, and may go to great

efforts to strengthen CFUG institutions and ensure participation by poorer community members (G. Shepherd personal communication).

Economic Development Potential

As discussed previously, SMFEs have significant economic development potential, particularly in terms of employment opportunities. SMFEs in China, for instance, are able to take advantage of low labour costs for forest-related trades such as woodworking, which is expected to create a substantial amount of jobs in rural areas (FAO 2009, iv). Furthermore, SMFEs are expected to play a large role in stimulating China's rural economic growth, particularly in areas where forestry already plays a large role in local economies (ibid., 33).

Community forestry and other related income-generating activities also have significant economic development potential. From 1995 to 2000, the Forest Management and Conservation Programme (FOMACOP) operated in Lao PDR (Ingles and Hicks 2002, 43). A pilot project for community forestry, village forests were co-managed by the government and local villagers. In the five-year pilot, fifteen villages sold in total US $400,000 worth of timber (ibid., 44). Of that amount, six percent of total earnings were kept by the villages (ibid.).

Social and Economic Development Potential of Marginalized Groups

In considering social and economic development potential, it is important to consider the distribution of benefits and power, especially to marginalized social groups. Indeed, the theme for UNFF9 is "forests for people, livelihoods and poverty eradication," and many of the MDGs focus on these marginalized groups – for example, women, the very poor, and those who are otherwise socially and economically marginalized. In terms of social development, the interest is in whether these groups are able to attain: (1) more secure resource rights; (2) political empowerment; and (3) strengthened capacity and learning (Mahanty and Nurse 2007, 5). In terms of economic (and also livelihood) development, it is possible use the following as indicators: (1) income from the sale of forest resources, or employment related to community forestry activities; and (2) subsistence resources (ibid., 5).

As an example, village eco-development committees (VCEs) in India have formalized structures that guarantee the representation of women, the poor, and other marginalized community members (Badola 2000); however, these representatives generally do not have the power or ability to influence decision-making processes (ibid.). These decisions about representation are necessary but not sufficient guarantees of social equity.

Too much social engineering has perhaps been expected of Community Forestry in some quarters, which in part accounts for the perceived failure of Community Based Forest Management in some areas, and it is essential to understand that such forestry activities take place in a broader social and economic landscape in which inequities in, for instance, access to farmland and employment cannot be somehow fully compensated for by Community Forestry. That said, women, and the very poor do often gain small sums from the sale of forest products, which they could raise in no other way.

Community forestry, Rural Development and the MDGs

Modern, broad-scale international efforts in and attention to forestry in developing countries began with a general focus on central, statist policies. Beginning in the 1980s and 1990s, community forestry began to receive more prominence in donor-funded forestry. Separately, and later, decentralisation and devolution came to the forefront in international development policy, and in due course some links developed between the two in some places – particularly in areas where forests were of low timber value. Most recently, the concept of community forestry has been used more explicitly in pursuit of other goals such as the marketing of NTFPs through small and medium forest enterprises, poverty reduction, tourism and ecosystem protection (Wilson, et al. 2009).

It is in these market-based approaches that there is the greatest potential in community forestry to contribute to MDGs by "functioning as a source of *permanent increases* in income, assets, services, civil and political rights, voice, and the rule of law" (Mayers 2007, emphasis added). As previously indicated, SMFEs are connecting timber and markets to the smaller and poorer actors in forests. Additionally, some see the potential for industrial-scale commercial forestry to reduce poverty and lead other sectors in sustainable development (ibid.).

It is also possible to consider Goal 8 of the MDGs, to "develop a global partnership for development," with Target 2 being to "develop further an open, rule-based, predictable non-discriminatory trading and financial system" (The United Nations n.d.). Furthermore, Target 2 encourages, "developing countries gain greater access to the markets of developed countries" (ibid.).

This is happening in new business models for private company-community partnerships, particularly in the cases where producer associations are connecting community forest enterprises with international markets. Even in cases where CFUGs (and their various counterparts) sell raw forest products to local manufacturers, these products can be exported to international markets, particularly if they have some sort of niche value. Furthermore, there is growing evidence that domestic markets are undergoing rapid changes in terms of product quality and pricing, and there is a call for more analysis focusing on the competitiveness of domestic in their own markets (Thompson 2003, 103).

Opportunities and Challenges

A recurring theme presented in this paper is that there are numerous options and opportunities available for community forestry and the various contexts under which it can be practiced. This section will highlight some potential opportunities in community forestry, and also discuss the challenges associated with them.

Payments for Environmental Services (PES)

PES is an exchange of monetary compensation for the provision of environmental services. PES can include activities such as carbon sequestration and storage, biodiversity protection, watershed protection, and landscape beauty (Wunder 2005, 2). PES need not necessarily take place in a forest setting, but for the aforementioned activities, forests are ideal candidates for this type of approach. Reactions to PES have been mixed; advocates promote the potential of PES to improve rural livelihoods, while critics are particularly concerned about the asymmetric power distributions between payers (conservation consortia or other organizations) and payees (communities or land owners) (ibid.).

It is important to note that PES is a voluntary transaction, and within the scope of this paper, may have characteristics similar to some of the other private company-community partnerships detailed above. PES also requires a well-defined environmental service, and in many cases, well-defined (if not formalized) security of tenure. This aspect, by nature, rules out the poorest of the poor in developing countries, because most do not own or control land (ibid., 17).

Another highlighted structural constraint to PES is in the high transaction costs associated with working with many small-scale landowners, as opposed to a fewer number of large landowners (ibid.). This once more marginalizes the very poor from PES projects, and even if the poor were included, payments may not encompass short-term opportunity costs, such as sacrificing more intensive logging (Gregerson and Contreras 2010, 12).

The largest concerns so far about advocating PES are that: (1) research has not indicated certainly if local people have actually benefited in developing countries (Wunder 2005, 1); (2) there may be local issues with such a top-down prescriptive program that benefits larger landowners and/or those with secure tenure, (3) there is currently little understanding about when and under what circumstances PES is best applied (Bond and Mayers 2010, 16), and (4) monitoring and evaluation involve high transaction costs and may therefore be prohibitive for the inclusion of smallholders (Gregerson and Arnoldo 2010, 12).

Benefit Sharing

As the name implies, benefit sharing is where profits or products are distributed either among community members, between communities and the private sector, or between

communities and the State. At times resulting in conflicts and stalemates in decision-making (Diaw, Prabhu and Aseh 2008, 446), benefit sharing is oftentimes thought to be a pro-poor mechanism. However, evidence from the field indicates it is not necessarily pro-poor in nature; in some forest communities in Vietnam, for example, more powerful actors tend to be given priority in benefits distribution (Tan, Thanh and Tuan 2009, 22).

There are various ways in which benefit sharing can take place. In one instance, many community forestry committees in Vietnam monitor the extraction of timber for primarily domestic use (and in some cases for commercial use), and the extraction of non-timber forest products (ibid.). Income is generated for the community through fines, and also through the sale of confiscated timber. It is then directed towards operating, patrolling and community infrastructure development costs, and finally as cash payments to community members. There are multiple opportunities for the more powerful actors to gain access to more resources, whether through direct payments or greater allotments of forest resources, and this is found to be the case (ibid.).

Benefit-sharing initiatives can also involve the collection of non-timber forest products (NTFPs). This was the case in Orissa, a state in India, whereby a joint forest management (JFM) initiative was proposed. The benefit-sharing component, mandating that 50% of total NTFPs collected would go towards the forest department, elicited negative responses from community members, who felt that a large portion of their work was free labour (Singh 2001, 266).

There are also issues related to benefit sharing schemes between communities and the State. In Tanzania, a joint forest management agreement could not be reached, with the various State agencies involved dissatisfied with the proposed schemes (The United Republic of Tanzania, Ministry of Natural Resources and Tourism, Forestry and Beekeeping Divisino 2008, 6). Certainly, as in the case of Orissa, imbalances can tip in favour of state agencies, and these types of scenarios will inevitably be difficult in many cases.

It is important to be aware of regional and community power dynamics in benefit-sharing arrangements, and to recognize that these programs often fall victim to elite capture (The World Bank 2009, xiv). However, there are many emerging opportunities for communities to benefit from market-based mechanisms, including payments for environmental services, forest concessions, and the rehabilitation of degraded forestlands (ibid.). Thus agencies are beginning to take a more sophisticated approach to analyzing benefit sharing by analyzing more than profits or products. Termed ‘benefit flows’, this includes, for example, “opportunities for obtaining loans from CFM funds, gaining wage labour, building ‘social and human capital’ and building forest based enterprises” (Carter and Gronow 2005, 29).

Forest Financing

In 2007, the UNFF adopted the “Non-Legally Binding Instrument on All Types of Forests,” calling “for greater international cooperation and national action to reduce

deforestation, reverse the loss of forest cover, prevent forest degradation, promote sustainable livelihoods, and reduce poverty for all forest-dependent peoples" (Hoogeveen, et al. 2008, 3). There is a strong recognition that forests are vital to livelihoods, and also to the environment, most notably climate change.

However, there is also the recognition that developing a sustainable means of financing forests and the entailed operations is a major challenge (Grieg-Gran, et al. 2008, 28), requiring a collaborative and cross-sectoral approach. Mobilizing financial resources to support sustainable forest management in developing countries has long been a part of international discussions, but total Official Development Assistance (ODA) has not supported forest-related activities since the 1980s (Hoogeveen, et al. 2008, 6).

Hoogeveen et al highlight a 'Portfolio Approach' to forest financing, predicated on the idea that rather than utilizing a small set of funding instruments, forest managers should use a portfolio of funding mechanisms: public sector funding, payments for environmental services, the private sector, and donors and philanthropists (15-20). It is important to note, however, the need for long-term investment horizons, especially as community forestry is oftentimes based on forest regeneration and results may not be evident in shorter funding cycles.

Technology

Timber is oftentimes the most valuable resource in forests, "but timber harvesting and processing are rarely considered at the forefront in strategies to alleviate rural poverty," primarily because the poor are often marginalized from these activities due to regulations, technologies and elite capture (Hansen, et al. 2007, 2). However, technologies and initiatives are emerging to assist the forest-dependent poor become involved in timber operations.

Dugan and Pulhin differentiate between "simple" and "complex" tools (Dugan and Pulhin 2007, 39). The former consists of handsaws and other simple equipment, while the latter includes "simple management guidelines, simple approvals, simple inventory techniques, simple management plans, and the like" (ibid.). As such it is possible to see that technology involves a discussion beyond physical implements, and such considerations are necessary when involving community forestry efforts with timber production.

Conclusions and Recommendations

Conclusions

The importance of the roles that forests play in rural livelihoods is by now universally recognized and the need to involve rural users in forestry is also widely accepted[1]. These shifts in emphasis and approach are becoming more important as the State reduces its involvement in forestry and adjusts to the presence of civil society and private-sector players. The main theme of this background paper is that community based forest management is appropriate in contexts where frameworks and institutions enable a more decentralized form of forest and natural resource governance. The needs of communities will vary based on location and context, and thus policies at all levels should take into consideration livelihood needs, as well as the value of resources and infrastructure.

While many countries are still at an early stage in the process of developing and introducing forms of community forestry, community forestry in others is by now a well-established and integral part of the framework for management and use of forest resources.

The experience of many of these longer-established community forestry initiatives has been encouraging. In the right circumstances, local or joint control does result in increased benefit flows to local users, and to an improvement in the condition of the resource. Tree-planting has often become an important component of rural household livelihood systems. At the same time, the experience has also highlighted problems and constraints.

Devolution to local levels has not always been accompanied by the political, legislative and regulatory measures needed to empower those to whom responsibility is being passed. People have sometimes been asked to take on more of the responsibilities and costs of managing forests without gaining increases in the security of their rights, for instance. Individual initiatives to participate in markets for forest products are, similarly, being impeded or undermined by lack of progress in removing inappropriate restrictions and regulations.

The evolution of more participatory forms of local forest management, attuned to the interests of different categories of stakeholder, has also often lagged. The local institutions to which responsibility for forests has been devolved, have often proved to need more support than was expected. Sometimes difficulties have arisen because of the speed and extent of the changes that are taking place, and changes have sometimes been promoted before the capacity to implement them has been built up. And this may not be solely at the level of villagers. Strong promotion of community management by donors has frequently imposed pressures on forestry bureaucracies that they have found difficult to respond to.

[1] The authors acknowledge in this conclusions section the debt owed to Arnold's document, '25 years of Community Forestry', 2001, Rome, FAO. Not enough has changed since that document was written.

One need is to better understand the circumstances under which local control is, and is not, likely to succeed, thereby avoiding initiatives in situations that are not conducive to collective management. Such understanding can lead to more situation specific and less formulaic approaches. Another is to address the difficulties that forest departments are encountering.

Market-based approaches have become more popular in recent years, in tandem with the emerging focus on livelihoods and sustainable development. These programmes are not yet well documented, but show promise to meeting the varying goals of multiple actors in forests and natural resources management. Particularly, market-based approaches have great potential to connect forest communities with outside markets and networks, and in the few cases highlighted in this background paper, have contributed to job creation and infrastructure development.

Finally, exaggerated expectations need to be avoided. There is a risk of overloading community forestry, and it is important to recognize the limits to how much change can be achieved within the framework of forest-oriented programmes, and to keep community forestry in perspective.

This paper's overarching conclusions are firstly that *rights* to use and manage forests among local people still lag far behind their *capacity* to do so in many places. Secondly they are that the value of forests to local people is still greatly under-estimated by Member States and by the International Community and that overall forest valuation should take far more account of this function..

Recommendations address these conclusions, for the sake both of the health of many forests and for the enhanced livelihood resilience they can bring.

Recommendations

1. Climate change policy and community forestry

Climate change mitigation. The ambiguous ownership state of many forests is thrown into sharper relief by REDD+. On the one hand, communities in poorer countries may be able to look after forests more effectively than government, and could monitor for REDD+ purposes more effectively, given appropriate and adequate incentives. However, on the other, cash-poor national and local governments understandably hope that they will be the chief beneficiaries from REDD+ payments. Further legal devolution to local people's ownership and management is unlikely in these circumstances.

Climate change adaptation. At the same time, forests are a very important part of the adaptation measures that local communities are already beginning to undertake, and they need to be able to use them and keep them in place. Forests are showing their importance as a complementary source of food when crops fail, as sources of income in the counter

season (e.g. in dryland Africa) when crops cannot be grown and local people can fall back on SMFEs such as carpentry, mat and basket weaving and the processing of honey, beeswax and preserved forest foods such as nuts and berries and oils. So there is an additionally strong argument for community ownership and management of forests from the climate change adaptation point of view, especially in the light of the needs of women and young people for incomes, as well as for men.

Recommendation *These competing issues need discussion at national, regional and international levels. The two must be better linked (the intention is that REDD+ should do this but modalities are not yet clear). They jointly provide a very strong argument for the identification of forest which is much needed for livelihood and livelihood adaptation purposes and for the devolution of at least these forests to local people and to community forestry.*

2. Accounting for the real value of forests to local people

Given the important level of livelihood components drawn from forests, especially in Africa and Asia where the majority of LDCs are found, and where 65-75% of citizens still live in rural areas and are still predominantly dependent on farming and forests, much more overt recognition of these contributions to livelihoods are now needed. Figure 2 gives an example of how, in many parts of the world *four fifths* of the products that local people draw from forests never enter the market and so are invisible in national accounting. It is essential that ways are found to get these contributions recognised and understood, since they profoundly affect poverty reduction potential, the application of REDD+ and many other things.

FAO has commissioned a study to suggest how such accounting might be done, which will be ready in June 2011, and there will be several results from this exercise. Firstly, using these calculations will put a much more realistic total dollar value on forests, making it possible to account not only for their timber and employment value, but also their value to the hundreds of millions of people dependent on them for a substantial proportion of their annual livelihoods. Secondly, having such figures to hand nationally will make it clearer where costs and benefits lie when government decisions need to be made about clearing low commercial value forest for oil-palm plantations or biofuels, or leasing it to foreign countries for food estates. At the moment, such forest land is often seen as virtually worthless.

Recommendation *In order to capture all the livelihood values of forests, small modifications to data collected in Household Budget surveys, Living Standards Surveys and possibly National Censuses will need to take place. Given the infrequency (and sometimes irregularity) of these large scale surveys, it will be necessary for Member States to be encouraged and supported to make the changes needed, and for the importance of doing so to be stressed.*

The members of the Collaborative Partnership on Forests are well-placed to urge that such action be taken, and can enormously enhance the likelihood that it will do so.

3. The ways in which forests support the poor

Forests support the poor in many ways which are not always realised, particularly in remoter areas. In fact the Millennium Development Goals provide a good opportunity for explaining how vital and diverse this support can be.

Goal 1 Eradicate extreme poverty and hunger

Target 1: Halve, between 1990 and 2015, the proportion of people whose income is less than $1 a day

Target 2: Halve, between 1990 and 2015, the proportion of people who suffer from hunger

Forest products account, depending on location, for 20-40% of the income of rural households counting both direct use (consumption) and indirect use (sale). They make minor contributions to the reduction of cash poverty, but much more major contributions to improved food security and livelihood resilience.

Goal 2 Achieve universal primary education

Target 3: Ensure that, by 2015, children everywhere, boys and girls alike, will be able to complete a full course of primary schooling.

Sales of forest products and agricultural products are frequently mentioned by women as their means of readily accessing the cash needed for fees, uniforms and bus-fares for primary school children.

Goal 3 Promote gender equality + empower women

Target 4: Eliminate gender disparity in primary and secondary education preferably by 2005 and in all levels of education no later than 2015

Girls as well as boys are more likely to attend school where forest incomes help women to find cash for school fees. As incomes rise overall, it is observed that girls are more likely to be sent to school as well as boys.

Goal 4 Reduce child mortality

Target 5: Reduce by two-thirds, between 1990 and 2015, the under-five mortality rate

Goal 5 Improve maternal health

Target 6: Reduce by three-quarters, between 1990 and 2015, the maternal mortality ratio

Goal 6 Combat HIV/AIDS, malaria, and other diseases

Target 7: Have halted by 2015 and begun to reverse the spread of HIV/AIDS

Target 8: Have halted by 2015 and begun to reverse the incidence of malaria and other major diseases.

Improvements in the access of mothers and children to good quality foods, to forest medicines and to the money to buy food and pay for medical attention come about in part as a result of using the forest. Resistance to and ability to recover from serious disease among both children and adults is dependent in part on good nutritional status. In rainforest areas, where domestic livestock do not thrive, forests provide the protein, vitamins and minerals which complement the carbohydrates grown on the farm. In drier forest areas, livestock are fed from forest tree and bush browse for most of the year, and much of the protein contribution of meat and milk that they provide is the direct result of the forest nutrients they consume.

Goal 7 Ensure environmental sustainability

Target 9: Integrate the principles of sustainable development into country policies and programs, and reverse the loss of environmental resources

When households and villages own and value their forests they are much more likely to look after them, and to have rules for their sustainable management, and sanctions to ensure compliance.

Target 10: Halve, by 2015, the proportion of people without sustainable access to safe drinking water

Target 11: Have achieved, by 2020, a significant improvement in the lives of at least 100 million slum dwellers

Villagers are highly aware of the contribution forests make to sustainable flows of potable water, and of the decline that follows upon too much deforestation. Where forests are owned there is often considerable interest in forest restoration to restore water flows, usually through the institution of new rules for spring and stream-side protection, and by additional planting.

Villagers may be much less aware of the value of water flowing from 'their' forests to cities which are far from where they live. But that awareness can be quite readily enhanced. In Tanzania, for instance, the whole country is now divided administratively into river basins, and upstream and downstream basin inhabitants have become more aware of each other, and more aware of the need to share water and to restore forest cover. In some Central American countries payments for environmental services have performed the same function.

Recommendation. *It is recommended that the contribution of forests to each of the MDGs (not Goal 8) is crafted as a message from the Forum to the MDG Summit, in order to clarify the capacity of forests to contribute to global political agendas. A similar message for Rio+20 is also essential.*

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