The role of community forest management in REDD+

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There is great potential for community-based REDD+ approaches in dry tropical forests.

REDD+ is the term used for a proposed multilateral policy aiming to incentivize developing countries to reduce greenhouse gas emissions and increase removals by limiting deforestation and forest degradation, conserving forest carbon stocks, sustainably managing forests and enhancing forest carbon stocks. It is being developed within the United Nations Framework Convention on Climate Change (UNFCCC) with the aim of providing developing countries with financial incentives to take action to mitigate climate change. In the so-called full implementation phase it may enable polluters to pay for their emissions offsets.

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Where will REDD+ lead? Foresters and community members map a community forest boundary with a mobile geographic information system, United Republic of Tanzania

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REDD+ is intended to be implemented as a national and results-based policy, in which payments would be related to actual carbon emissions reductions and paid in proportion to these at the end of an accounting period (the length of which is yet to be determined). Performance is to be measured taking into account the country's entire forest estate, in part to deal with internal leakage.[1] The reduction of emissions should be measured against a reference level representing the estimated level of emissions that would have occurred without the REDD+ intervention. It is not yet clear whether REDD+ payments for carbon will be provided through a market structure (with credits, as is done in the Clean Development Mechanism) or via a global fund, or through a combination of different financial instruments. The failure of the Conference of the Parties to the UNFCCC to agree on binding emissions reduction targets for industrialized countries, and the character of some activities (e.g. conservation), makes the use of market instruments – seen by some observers as the most efficient and effective approach – less likely to be the only instruments used, at least in the short term. Agrawal, Nepstad and Chhatre (2011) provide a good overview of the current state of negotiations on REDD+ and the issues under debate.

NATIONAL VERSUS PROJECT APPROACH

One reason why parties to the UNFCCC have favoured a national-level rather than a project approach to REDD+ is that it is evident that it will require national policies and measures that go far beyond the forest sector, since many of the drivers of deforestation and forest degradation are rooted in the wider economy. Globally, the strongest driver of deforestation is the expansion of large-scale agriculture and cattle-ranching; to be effective, therefore, most national REDD+ strategies will need to find ways to reduce such cross-sectoral drivers. Logging – legal or illegal – can be a contributing factor to deforestation if conducted unsustainably, and bringing about sustainable forest management requires the political will to strengthen forest laws and improve the ways in which they are enforced.

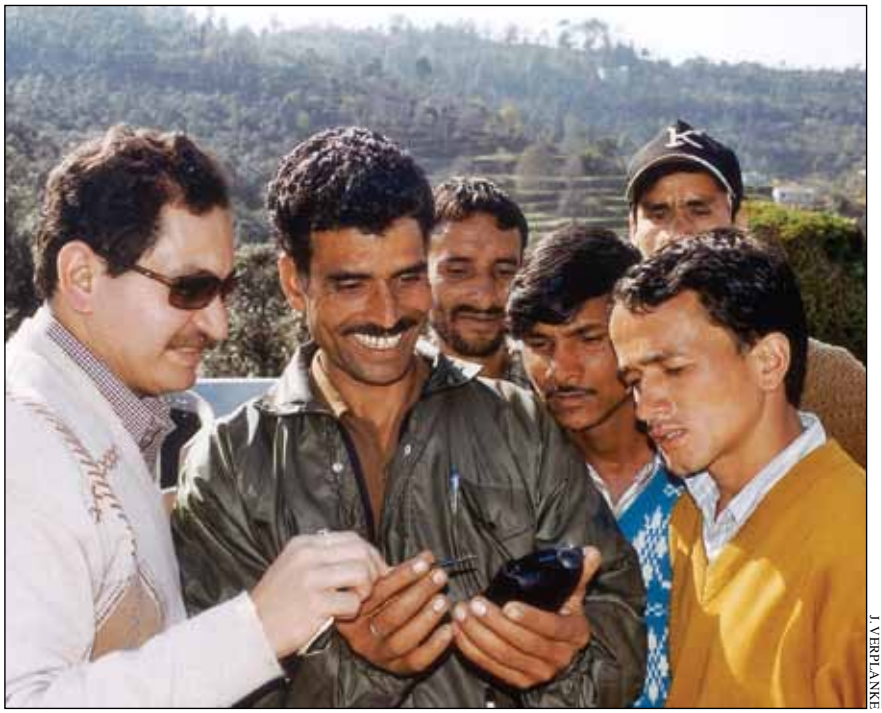
AN INSTRUMENT FOR COMMUNITIES?

Much of the literature sees REDD+ as an instrument directed at communities and other small-scale forest owners and managers, based on the idea of payments for ecosystem services (PES) and the experience of many small-scale forest carbon projects in the voluntary sector, such as those in Central America, for example Costa Rica (Kaimowitz, 2008; Agrawal and Angelsen, 2009; Engel, Wünscher and Wunder, 2009). Significantly, all 26 (as of May 2012) of the REDD+ readiness proposals presented to the World Bank's Forest Carbon Partnership Facility (FCPF), and most of those in the United Nations Collaborative Programme on Reducing Emissions from Deforestation and Forest Degradation in Developing Countries (UN-REDD), make reference to community forest management – even for countries like Argentina, where very little forest is in community hands. In some countries (e.g. Ethiopia, Madagascar, Nepal, the United Republic of Tanzania and many Andean and Central American countries), a nationally organized community management programme is central to the proposed national REDD+ approach, although how (and especially to whom) payments will be made is usually not specified.

Who will capture the benefits?

There is a danger that a national-level approach to REDD+ could reverse the gains that have been made in the last 20 years in the decentralization of forest management and the recognition of

In some countries there is concern that local communities will not receive economic rewards from REDD+, particularly where tenure is informal. Mapping and recording carbon stock growth may strengthen community claims



I. VERPLANKE

[1] Leakage occurs when emissions in one location are displaced to another as a result of intervention in the first location. In a national approach to REDD+, leakage within the country would not be an issue, because changes in emissions are aggregated at the national level.

TABLE 1. Estimated current contribution of community forest management to reducing greenhouse gas emissions due to deforestation and forest degradation and by enhancing carbon stocks, by type of community forestry or governance regime

Type of community forestry/governance regime	Typical area of forest under management: total/per household	Current estimated contribution to:			Notes
		reducing emissions from deforestation	reducing emissions from forest degradation	enhancement of forest carbon stock	
Community-based, collaborative and participatory forest management on state land; management plans ensure that the extraction of forest products is within sustainable limits in return for community rights to these products (e.g. Indonesia/Kenya/Nepal/United Republic of Tanzania/Viet Nam models)	50–500 ha/ 1–5 ha	Medium/ low	High to very high	High	Highly dependent on administration and allocation of rights to communities
Community management on land owned by communities, incentivized by subsidies from government for improved management and conservation; may involve sustainable extraction of wood and non-wood products, and conservation (e.g. PES model, Mexico/Costa Rica model)	50–500 ha/ 1–5 ha	Medium	High	Medium to high	Highly dependent on funding (PES) for sustainability
Indigenous peoples' reserves, typically involving large forest areas and low population densities, where rights to ancestral lands are formally recognized, deterring incursions by external loggers, etc. (e.g. Amazon model)	5 000– 50 000 ha/ 50–500 ha	High	Medium to high	Low	Needs strong support from government to overcome external pressures for resources

Source: Adapted from FCPF (2011).

community rights over forest products (Phelps, Webb and Agrawal, 2010). Doubts have been expressed about the effectiveness of REDD+ given the political and economic pressures involved and the poor track record that many countries have in forest governance (e.g. Corbera, Estrada and Brown, 2010). Concern has also been raised – particularly by non-governmental organizations (NGOs) and in the bilateral donor sector – about whether local communities will receive any economic rewards from REDD+, especially where tenure is informal (e.g. Dooley *et al*., 2008; Naughton-Treves and Day, 2012). In areas where the forest is formally owned by government, the risk arises that people who currently exercise customary rights may be alienated from the forest on the grounds that they are responsible for the degradation, and that even if they engage in activities which ensure the sustainability of carbon stocks, they may not be entitled to the financial benefits. Even in countries like Mexico, where most of the forest is legally held by agrarian communities, it is not clear what rights such communities may have over carbon (Robles, 2011). Women may be especially disadvantaged because in many societies they face tenure restrictions on land and forest resources (Setyowati, 2012). It is certainly possible that governments could capture all or most of the financial benefits, leaving very little to trickle down to the communities and small landowners who are practising the actual forest management.

Several NGOs have campaigned to ensure that the benefits of REDD+ reach local communities, although so far few have pursued the issue of direct ownership of carbon (Peskett and Brodnig, 2011; Costenbader, 2009). There has also been a movement towards what is called nested REDD+, which has been interpreted by some as a system in which credits would be allocated directly by the state to forest owners or managers at the local level and could then be sold or exchanged by them in the international market (Cortez *et al*., 2010). Most proponents acknowledge, however, that these credits would have to be reconciled with accounts at the national level and deducted from total national credits through jurisdictional accounting (Chargas *et al*., 2011). In practice this approach could create considerable difficulties, since under the UNFCCC such local carbon credits would only be available for sale to the extent that the country as a whole has reduced forest-related greenhouse gas emissions. Thus, overall, there is still much uncertainty as to how rewards for community forest management will fit within national REDD+ programmes.

WHAT CAN COMMUNITY FOREST MANAGEMENT ACHIEVE?

In resolving the issues identified above it is necessary to take a hard look at what community forest management can realistically achieve under REDD+. At an international workshop hosted by the FCPF on the role of community monitoring in REDD+ (FCPF, 2011), participants from 15 countries with many years of experience in community forestry carried out an exercise to estimate the extent to which different forms of community forest management are contributing to reducing deforestation and degradation and to the enhancement of carbon stocks.

The results of the exercise are summarized in Table 1, which distinguishes between active community management, usually on state-owned land (as, for example, in community-based forest management and joint forest management programmes), community management on a community's own land through PES, and large-scale community reserves designated primarily for conservation. The table shows that the first two forms of community management tend to reduce forest

Participatory mapping by the Cuzalapa Women's Group, Mexico. Including community mapping and monitoring as a management activity could be an important stimulus for REDD+

M. MCCALL

degradation through the improved management of the extraction process; they also often result in increases in carbon stocks but are less effective in reducing deforestation. The reason for this is that a great deal of degradation is a direct result of local subsistence use of wood and non-wood resources when extraction is unsustainably high.[2] Reducing such degradation is likely to have relatively low opportunity costs and the success of community forest management programmes in countries such as Mexico, Nepal and the United Republic of Tanzania demonstrate that those costs are not prohibitive under a well-functioning communal regime.

It is doubtful, however, that community management is a bulwark against deforestation, which to a large extent is driven by outside economic forces and for which the opportunity costs may be much higher. Community forest management regimes may be unable to withstand the market forces exerted when much higher rents can be earned by converting to, or selling forest for, other land uses such as logging, cattle-ranching, plantations and urban development. Moreover, these market incentives may often be reinforced by external political pressures or simply by brute force. Large-scale indigenous peoples' reserves such as those in the Amazon, on the other hand, are usually not subject to significant locally caused degradation, given the nature of livelihood strategies and very low population densities in many such areas. Formalizing and publicizing a community's ownership of its ancestral lands strengthens its rights over the forest and should help to discourage outside agents from attempting to deforest or to harvest the forest for their own benefit.

A NICHE FOR COMMUNITY FOREST MANAGEMENT

Strikingly, national plans for REDD+ have not clearly distinguished between deforestation, forest degradation and forest enhancement. Degradation is often implicitly understood to be just a step on the way to full deforestation, but this does not always reflect reality because degradation and deforestation are in most cases the result of different processes. Where degradation has been addressed in the REDD+ literature as an independent phenomenon, this has mostly been in the context of selective logging in rainforests, such as in Amazonia (e.g. Souza, Roberts and Cochrane, 2005; Asner *et al*., 2005). It has not been in the broader context of the small but persistent pressures exerted on forests by local communities, which are both widespread – particularly in the more densely populated dry tropical forests and savannahs — and growing, in line with high local population growth.

Reducing degradation and stimulating stock enhancement in community forests

The most effective sites for community forest management in REDD+ may well be in moderately to heavily populated areas – especially in the broad belts of

[2] In addition to the overharvesting of timber, poles, woodfuel and non-wood forest products, degradation can be caused by the grazing of privately owned animals in communal forests, escaped fire from agriculture, and charcoal production.

tropical dry forest and savannahs – where forest degradation is primarily the result of inefficient use by local communities. For example, community forest management in savannah woodlands in East and West Africa has been shown to achieve sequestration of 1–20 tonnes of carbon dioxide per hectare per year, in addition to reductions in emissions from degradation, which may be in the order of 2 tonnes per hectare per year (Skutsch and Solis, 2011; Skutsch and Ba, 2009).

It is not that the final consumption of the forest products needs to be, or can be, decreased – these are an essential part of the livelihoods of many communities – but that significant improvements in forest-based carbon storage can be achieved by improving the overall management of the forest. Communities can be encouraged to adopt more sustainable harvesting practices to reduce degradation, with either direct carbon payments within REDD+ or other incentives. The latter need not be financial and could include more secure legal recognition of land rights, guaranteed rights to an agreed level of harvesting, the protection of cultural areas, technological improvements, and support in finding new products or markets for wood and non-wood forest products (Hecht, 2009).

Any scheme for payments to a community for carbon is likely to have more impact and be more acceptable where complementary PES programmes are operating in the same community, for example in Mexico (Larrazabal *et al*., 2012; Benneker and McCall, 2009). The returns from carbon payments are expected to be low, but where the payments are adding to existing PES programmes, for example biodiversity conservation or hydrological or pollination services, the overall financial benefits for the community of improved management may be sufficient to support improved forest management. In many cases, such an approach will not only reduce degradation, it will reverse it, leading to increases in carbon stock ("enhancement") over time.

Including community mapping and monitoring as a management activity may be an important stimulus for REDD+ (McCall, 2011; Knowles *et al*., 2010; Coleman and Steed, 2009). It has been shown that communities are able to measure carbon stock increases and monitor other environmental variables with considerable accuracy and at low cost (Larrazabal *et al*., 2012; Danielsen *et al*., 2010; Skutsch *et al*., 2009). Significantly, at least 10 of the 26 REDD readiness proposals at the FCPF specifically mention community monitoring as part of community approaches to REDD+.

Deforestation has to be tackled at a much higher level, using economic and political instruments to influence the direct (usually non-community) agents and indirect drivers. Deforestation should be distinguished clearly in national strategies from community-level efforts to reduce degradation. Dividing national policy in this way could also result in a more transparent and equitable system for allocating carbon credits, in which achievements in reducing deforestation would be attributed to government at the national or state level and reductions in degradation and increases in carbon stock in specific forest areas would be attributed to local actors (Balderas and Skutsch, 2012).

Community conservation

Communities might be involved in reducing deforestation through, for example, the creation of large-scale community-owned reserves in areas where there is low population density. In such cases, the primary REDD+ approach would be conservation rather than sustainable use, and the major political instrument would be the formalization of indigenous or other traditional rights to land. There is always the danger that a reduction in deforestation in such reserves would simply be offset by an increase elsewhere (i.e. leakage). Thus, such approaches to forest carbon conservation can only ever be part of a more comprehensive approach to reducing deforestation and forest degradation, which has to face up to the twin drivers of unsustainable over-consumption and human demographics (Skutsch and McCall, 2010).

CONCLUSION

In sum, community forest management can play a major role in REDD+, especially when programmes for its stimulation are focused in areas where it can be most effective. We suggest that community forest management may be more effective in addressing emissions from forest degradation than from deforestation, and that it may be particularly efficient in dry tropical forests and savannahs, where generally population densities are much higher and the use of tree resources more widespread than in rainforests. ◆

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