

**Submission by International Centre for Integrated Mountain Development  
(ICIMOD), Kathmandu, NEPAL**

**As an Observer to the UNFCCC - IGO**

**Suggestions for submissions in response to Draft SBSTA 29 agenda item 5: Reducing emissions from deforestation in developing countries: approaches to stimulate action on issues related to indigenous people and local communities (Paragraph 11).**

**Role of community-based forest management in addressing degradation**

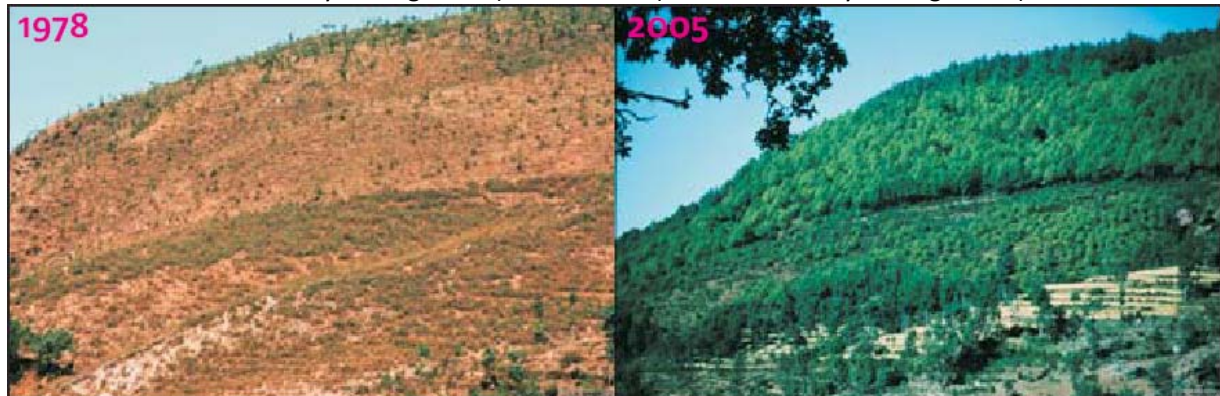
**Introduction and rationale**

Concerns have been expressed in the debate on REDD as regards the rights of indigenous people and communities dependent on forests and the impact of REDD programmes on such groups. The overwhelming need as regards communities and people in the forest is to ensure that they are involved in a positive and mutually beneficial way in management, since this is one of the very few effective means of controlling degradation over very large areas.

Community Forest Management (CFM), in which rights and responsibilities for forest management are devolved to recognized communities, is carried out on a small scale in a large number of tropical countries. Nepal is the front runner with 1.22 million hectares (25% of its total forest area) successfully and sustainably managed by over 14,000 Community Forest User Groups (CFUGs) reaching out to 1.87 million households or nearly one-third of the nation's population. CFM was developed in response to the failure of earlier government approaches to halting degradation. It recognizes that communities are dependent on forest products and that this demand cannot be eliminated. Conservation of forest resources cannot be done in isolation without the direct involvement of people that rely on forest resources. By giving rights to communities to extract *sustainable* levels of forest products, provided they carry out basic forest management activities, CFM moves forest from being in an open access situation to being a true common property resource with community enforced rules to ensure that it is not overexploited. Degrading and degraded forests regenerate naturally and their output increases as they move to a more productive point on the natural growth curve, which benefits communities while also creating an increased carbon stock. Hence CFM is strongly to be supported in national REDD programmes by recognizing the roles of indigenous people and local communities in sustainable forest management.

Nepal already has an enabling national policy relating to community rights over forest and the roles and responsibilities of the Forest Department in this regard. Lessons can certainly be learned from Nepal which stands at the forefront in this respect. This response is jointly drafted by ICIMOD, University of Twente and KTGAL partners and endorses the submissions made by RECOFTC and ITC.

Photograph of a community managed forest in Namdu, Dolakha district of Nepal in 1978 (before community management) and in 2005 (after community management)



Source: Nepal Swiss Community Forestry project

### **REDD issues pertaining to indigenous people and local communities**

If carbon payments under REDD are in part to be used to stimulate and encourage more and better CFM, a number of issues arise, which are listed here and need to be dealt with explicitly in REDD policy.

- Countries receiving payments for carbon credits derived from CFM must be able to present to the international community a transparent benefits sharing mechanism which indicates not just in general, but very precisely in which way communities will benefit and how much. This does not mean that the funds from the sale of credits must necessarily be handed over, in whole or part, to the communities in proportion to the carbon savings they have generated. Various other models are also possible. For example, for reasons of equity, countries may decide to distribute benefits internally on the basis of effort or input, rather than output (of carbon savings). Communities might be paid for their work in measuring the carbon stock, rather than for the increases of stock as such. Benefits might also be distributed in kind rather than in financial forms. However what is important is that each country describes in a clear and accountable way what the plans for distribution of benefits resulting from carbon revenue under CFM are. It must be made possible for the transactions in this system to be counterchecked by stakeholders or their representatives.
- A corollary of this is that the benefits sharing mechanism should be designed in a consultative way with representatives of stakeholders such that wide agreement on it is reached before any crediting actually takes place.
- Since CFM involves a very large number of small stakeholder groups it is probable that non-state umbrella organizations will be needed to bundle their interests, for example, in providing support and training in forest inventories and in registering carbon stock changes in the national database. Support may be needed to get such organizations up and running.

### **Nature of forest degradation**

Degradation is not necessarily a forerunner of deforestation. Degraded forest usually remains degraded and is rarely fully deforested. Degradation is caused by quite different processes and actors from deforestation, and these processes and actors need to be targeted and addressed if degradation is to be combated. Moreover, data on degradation is of a quite different quality and type than data on deforestation. For these reasons, it is recognized that degradation needs to be treated independently from deforestation under REDD. Additionally, in different situations the nature of forest degradation is different, depending on the ecological type of the forest and on the local drivers of degradation. Hence different approaches to intervention and monitoring need to be applied depending on those local or regional conditions.

It must be noted that forest degradation is of two types. Firstly, in the industrial forestry sector, degradation is caused primarily by selective logging (legal and illegal) mainly in the humid tropical regions. Its location is controlled primarily by accessibility and conditions of the terrain (e.g. steep hillsides, waterlogged soils). Secondly, degradation may be caused by overexploitation of a range of forest products including locally used timber, secondary or minor woody products (e.g. bamboo and rattan) and non-timber products such as foliage, fodder and forest litter by local communities. This tends to take place on the fringes of the forest as very few people are living inside intact forest areas. This is the type of forest degradation found in the Himalaya region. Such unsustainable removal of biomass from forest may not result in immediate loss in forest area, but from a climatic perspective they do result in release of carbon from terrestrial ecosystem to the atmosphere.

It is important to recognize that emissions from degradation have almost certainly been greatly underestimated, among others in IPCC documentation, because of the invisibility of degradation. The area of forest affected by selective logging can to some extent be estimated from remote sensing, since selective logging tends to be episodic and occurs in discrete areas, but this is not the case with degradation, which is much more gradual and widespread. Moreover, remote sensing is not capable of assessing the quantity of biomass and carbon stock lost. For this, repeated ground level forest inventory is required, but very few developing countries have had the institutional capacity to carry out such surveys in the past. As a result, in the FAO Forest Resources Assessment of 2005, all but two developing countries reported no changes in the density of their forests between 1990 and 2005, although it is well known that forest degradation is rampant in most of the developing countries. Statistics on extraction are limited to logging by the formal sector.

These realities have important implications for

1. how degradation can be combated in practice,
2. how accounting for reduced emissions from degradation can be operationalised, and an reference emission level for degradation be established and
3. what institutional structures and capacities would be needed in this regard.

## **1. How degradation can be combated in practice under CFM**

Commercial and non-commercial demand for forest products (fuelwood, fodder, timber, etc.), is what primarily drives degradation and this demand cannot easily be reduced. As opposed to deforestation, which is primarily driven by the demand for land for other productive uses, such as cultivation and grazing, in most cases, the processes that leads to degradation never cause full deforestation.

The solution to degradation therefore lies in making the extractive activities more productive and sustainable by involving the local communities through the promotion of sustainable forest management practices. Many Parties are in agreement that unplanned or badly planned logging may be substituted by Sustainable Forest Management (SFM), through development of appropriate forest policy and laws and stricter enforcement of these (implementation of reduced impact logging rules, increased patrols and higher punishments for offenders etc). Although forests under SFM may have slightly lower carbon stocks than intact forest, overall the loss in carbon stock may be brought to a halt through such management. Hence it is widely accepted that organized and registered SFM should be subject to carbon crediting in principle, against a reference level which represents the BAU scenario.

For the case of degradation resulting from informal community uses of forest, there has been little discussion on how it could be combated or on how accounting could be arranged. What is clear is that any interventions to reduce degradation rates must involve the communities concerned, not just from the point of view of rights, but more importantly from a practical point of view. Community Forest Management (CFM) was in fact a concept developed and formalized to involve communities in forest management, precisely because other methods (particularly state-centred approaches), were found to be ineffective in forests used by local people by tradition. CFM (known under different names and models such as community based forest management, collaborative forest management, joint forest management etc) involves partial devolvement of responsibility for forest management to lower levels of authority (municipalities, villages etc) and has been demonstrated in many countries (Nepal, India, Tanzania, Philippines) to be a cheap and rather effective means of combating degradation. It usually involves a contract between the communities which use the forest and the ministry which is formally responsible for forest (usually Forest Department). In most schemes, a maximum rate of off-take (timber, firewood, fodder, NTFPs) is set, based on an assessment of the regeneration potential of the forest, and the communities' right to this off-take is formalized. In return, the community provides basic forest management services such as fire-watching. The outcome of most CFM is not just that degradation is reduced, but that forest stock and productivity are steadily enhanced or restored through natural regeneration. Heavily degraded forest is restored not to its pristine state but to a level on the asymptotic growth curve at which its productivity is greatly increased. The community benefits from the increased supplies of subsistence products and the health of the forest (and the carbon stock) steadily improves. However it does not usually reach the climax state or its theoretical maximum carbon level because of the constant, but sustainable, harvesting that takes place. From a GHG emissions point of view, such a situation is actually preferable to a climax forest as the forest is now providing for a steady supply of renewable resources that would otherwise have to be sourced from elsewhere (e.g. kerosene stove instead of wood-burning stove, corrugated iron roofing instead of thatch) and it can thus support a sustainable local economy.

There may also be opportunities for interventions outside the forest, for example in the dissemination of more efficient woodstoves, or by providing more employment opportunities locally which either do not depend on forest resources or which are more sustainable in this regard.

Conclusion: community forest management is the primary instrument that can be used to combat the kinds of degradation that result from over-exploitation of forest by communities and indigenous people. This kind of degradation is very widespread and emissions have been underestimated. A major result of such community forest management is forest enhancement (increased carbon stock) in addition to the reduction of emissions due to degradation.

## **2. How accounting for reduced emissions from degradation can be operationalised at community level**

The first step is to designate which parts of the national forest estate have been degraded or are in the process of being degraded. This can be done by interpretation of remotely sensed images combined with probability modeling based on population densities and accessibility. Assessment of REDD degradation reductions would be limited to these areas.

As noted already, it is not possible to quantify changes in biomass content of forests from remote sensing at present. Since there is very little data on change in forest stocks within forests over the last 15 years in most countries, a historical trend as regards degradation using gain-loss methods can only be established in limited areas (in contrast with the case of deforestation). Modeling the variables relating to off-take versus natural growth rates is also very complicated since it would require combining different intensities of off-take rates in different places in a given time frame with different speeds of forest growth in these areas over the same period, which is hardly practicable and probably impossible. This implies that a national reference emission level for degradation based on historical data is virtually impossible, and that a rather different system for carbon accounting therefore needs to be applied. Given the focus on SBSTA29 Agenda point 5 on reference levels, this is a major concern.

For the case of community forest management the simplest approach is to credit not the degradation avoided, since this is an unknown quantity, but instead the increased stock levels over a given accounting period. In the few cases where stock impacts of CFM have been measured and documented (for example, under the Kyoto: Think Global, Act Local projects, [www.communitycarbonforestry.org](http://www.communitycarbonforestry.org)), results indicated that rates of forest carbon stock enhancement in dry and temperate forests were between 1.5 and 11 tons CO<sub>2</sub> per hectare per year, depending mainly on the rainfall levels, while estimated rates of degradation in unmanaged forest (in control sites) were on the order of 1.5 to 3.5 tons CO<sub>2</sub> per ha/yr, depending upon population density and types of extraction. On average therefore forest enhancement provides more carbon saving than the degradation avoided. If credits were to be issued just for forest enhancement, this could provide a considerable incentive for participation by communities (more than for reducing degradation) and accounting would be much easier than for reducing degradation. Instead of trying to establish a reference emission level based on speculations about what level of degradation would have occurred in the absence of management, crediting would be simply based on the actual stock level changes over the accounting period, measured in situ. Moreover, crediting forest enhancement rather than avoided degradation would provide a conservative approach, since the uncredited avoided degradation would form a 'buffer' on any credits issued.

This type of crediting would require forest inventory in all CFM managed forests at least at the beginning and the end of the accounting period and preferably also in between so that a reliable trend line can be demonstrated. While this may seem a daunting task, it is in fact one that can be carried out by communities themselves, using standard IPCC methodology, with some technical support e.g. from local NGOs. This has been demonstrated by among other the Kyoto: Think Global Act Local project and the Scolel Te project, and procedures for this are described in the GOF-C-GOLD Source Book on REDD

(chapter 3.5) and given in detail in a K:TGAL Manual, a draft version of which may be downloaded from [www.communitycarbonforestry.org](http://www.communitycarbonforestry.org) from 15 January 2009.

It would also require forest inventory in any areas which are likely to be subject to leakage from the managed areas, since stock losses in such areas would have to be deducted from gains in the managed areas. However, for the case of community uses, these areas would be found on the margins of the managed forest and it would be relatively easy for communities to carry out forest inventory in these areas.

Areas for which there is local historical data which permits a verifiable reference level for degradation to be constructed, could be accounting using this reference level instead of the stock at time zero approach.

Conclusion: rates of degradation have not in general been measured; historical records of changing carbon stocks are absent. Hence no historical baseline can be established. Forest management interventions carried out by communities should be rewarded instead with credits reflecting stock enhancement (stock change) over the accounting period. IPPC recommended methodology for accounting emissions from forest management activities, as currently used by Annex 1 countries which have elected to report on Forest Management under Kyoto article 3.4 would be suitable for this in community managed areas and in adjacent unmanaged areas where leakage is suspected.

### **3. Institutional structures and capacities required for crediting forest management as a means of crediting avoided degradation**

If forest management is to be rewarded on the basis of stock change over the accounting period then measurements of stock are required at least at the beginning and the end of the period and preferably also in between.

This requires the following elements to be in place:

- The entire forest estate subject to degradation would have to be divided up, allocated and registered to identified stakeholders for the purposes of management and crediting (possibly using temporary 'carbon management contracts'). Stakeholders would be responsible for reporting on management activities and on carbon stock at given intervals, if they choose to participate (unlikely to be compulsory). Stakeholders would include private owners, communities, government bodies (municipalities, forest department etc) depending on type and function of forest. Each forest area would be outlined with GPS and mapped in a digital database. Unmanaged areas and managed areas in which the stakeholders do not wish to participate form potential areas for leakage and depending on their geographical proximity to areas claiming carbon credits, would need to be monitored by participating stakeholders or an independent body.
- This also implies that tenure issues as regards rights and responsibilities for management of forest have been resolved at national level and allocated among competing stakeholders, which would require considerable political effort in many countries. Community tenure is not formally recognized in every country, with customary law operating in the shadow of modern law in some places.

- In many countries creation of carbon management contracts would require legal frameworks not currently in place. There would be an associated need for dispute resolution mechanism.
- Stakeholders would need to be provided with means for making forest inventories (guidelines, manuals, training, or the option to hire in a consultant at own cost). Evidence shows that communities can be trained at low cost to make reliable forest surveys themselves, although a technical support service is required (see GOF-C-GOLD Sourcebook chapter 3.5).
- An on-line database for uploading data: safeguards to prevent tampering with data.
- A system for verification e.g. statistical analysis of submitted data and random spot checks, probably based on use of high resolution imagery to identify areas in which forest conditions appear to be different from that indicated by the uploaded data, followed by ground checks

It is evident that many countries will require support in developing these capacities at national and local levels where CFM is implemented. International NGOs interested in supporting communities under REDD could play a major role in promoting this approach and in monitoring its progress globally by involving the local communities in recognition of their contribution through sustainable forest management practices.

This submission has been prepared by ICIMOD with inputs from the Kyoto: Think Global, Act Local (KTGAL) Project ([www.communitycarbonforestry.org](http://www.communitycarbonforestry.org)).