

# Can Nepal Benefit from Forest Carbon Financing?



## An Assessment of Opportunities, Challenges and Possible Actions

Livelihoods and Forestry Programme

December 2008



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# Abbreviation

BAP	Bali Action Plan
BR&D	Bio-Climate Research and Development
CBD	Convention on Biological Diversity
CBFM	Community Based Forest Management
CCB	Climate, Community and Biodiversity
CCBA	Climate, Community and Biodiversity Alliance
CCBS	Climate, Community and Biodiversity Standards
CCX	Chicago Climate Exchange
CDM	Clean Development Mechanism
CF	Community Forest/forestry
CFUG	Community Forest User Group
CIFOR	Centre for International Forestry Research
CoP	Conference of the Parties
DAF	Development Adjustment Factor
DFID	Department for International Development
DoF	Department of Forests
FCPF	Forest Carbon Partnership Facility
GHG	Greenhouse Gas
IPCC	Intergovernmental Panel on Climate Change
LFP	Livelihoods and Forestry Programme
MFSC	Ministry of Forests and Soil Conservation
MoEST	Ministry of Environment, Science and Technology
MRV	Monitoring, Reporting and Verification
NFI	National Forest Inventory
ODA	Official Development Assistance
PES	Payment of Environmental Services
PNG	Papua New Guinea
RECOFTC	Regional Community Forestry Training Centre for Asia and the Pacific
REDD	Reducing Emissions from Deforestation and Forest Degradation
R-PLAN	Readiness Plan
RRI	Right and Resources Institute
SBSTA	Subsidiary Body on Scientific and Technological Advice
SFM	Sustainable Forest Management
UNFCC	United Nations Framework Convention on Climate Change
VER	Verified Emission Reductions
WB	World Bank

## 1. Executive Summary

Carbon financing has emerged as a possible regulatory or voluntary market instrument to reward reforestation. Reducing Emissions from Deforestation and Forest Degradation (REDD) is now being proposed as an instrument for this. Likewise, a substantial section of the voluntary market has shown a willingness to buy forest carbon. This report analyses whether Nepal's forest sector can benefit from these opportunities, how, and under what conditions.

A number of REDD design issues are yet to be settled, and the architecture of REDD financing depends on these: should REDD be based in a compliance market or be fund-based or mixed? What should be covered within creditable mitigation activities? What approach to payments should be adopted: inputs, emissions or stock-based approaches? What scale (national, sub-national, local or nested) should be used in crediting? How should REDD be implemented – baseline, monitoring and verification, leakage and non-permanence? How it be ensured that REDD does not create undesirable social and ecological trade-offs and that it creates equitable co-benefits?

Carbon financing is likely to operate, and is already operating to a certain extent, through the compliance market, through voluntary markets with formal or informal mechanisms, and through fund-based mechanisms. All of these are being considered as possible ways of channelling funds to reward developing countries in checking deforestation and forest degradation. REDD principles acknowledge creating a compliance market for carbon, and it is likely to credit national level emissions reductions against a baseline reflecting the past and projected deforestation and degradation. There is also a strong argument in favour of fund-based mechanisms to support policies, institutions and methodologies for carbon offsets. REDD benefit to Nepal also depends on how the baseline is defined and what is included within the scope of creditable activities.

A major chunk of Nepal's forest is still under government control, and deforestation is continuing in this. By contrast, the 20% of the forest area now under community management has already shown signs of revival and restoration. This variation in deforestation rates presents some challenges for Nepal in taking a unified national stance on selecting the baseline. If community forestry is to be rewarded for its early action on sustainable forest management, deforestation in the low-lying Terai has to be addressed in parallel. In this context, Nepal may propose to opt for, or participate in, multiple modes of REDD instruments (and to advocate for them internationally) to match the situations in the hills, the Terai and the high hills. This has potential to benefit community forestry, but overall national revenues may be lower than using the national crediting approach.

The characteristics of community forestry have both promising and weak aspects. Carbon offset by community forestry is fragmented across many small forests, locked into overall biodiversity and livelihood systems which often favour low carbon-yielding species and forest compositions. Also, Nepal's carbon offset level is small compared with high deforestation countries like Brazil, Indonesia and others which may attract more international buyers. The unique opportunity for Nepal's community forestry is found in marketing the performance of credible and resilient community based institutions for forest management and their roles in adaptation and poverty reduction, for which a fund based mechanism may be better suited. There are also voluntary markets which value small-scale carbon forestry with livelihoods and biodiversity co-benefits (such as Plan Vivo and Community, Climate Change and Biodiversity Standards).

There are a number of policy issues and gaps that need to be addressed to enable communities to receive benefits from carbon financing. While pilot initiatives are required to develop models of REDD at sub-national and local levels, several policy issues have to be addressed before a carbon financing mechanism can be initiated: clarifying carbon tenure and benefit

sharing, creating or defining state agencies for regulating carbon financing mechanisms, recognizing and monitoring intermediaries (to verify, assess, quantify carbon stocks and offsets), and mechanisms for checking fraud and corruption. There are also likely to be implications for fiscal, tax and trade related policies, which need to be addressed.

Looking at these issues at home, and recognizing the specific REDD proposals being debated internationally, Nepal should develop its specific proposals which should guide participation in the REDD debate until COP 15 in Copenhagen in late 2009. Nepal should not just rely on carbon focused financing but advocate a comprehensive reward package that supports policy, institutions, procedures and sustainable management of forests. Also, it is worthwhile to institute systems for the payment of environmental services instead of carbon services alone. Nepal has a real opportunity to lead other countries with strong community forestry and to advance such an agenda in the international negotiations.

Given the on-going negotiations and limited ground level experience and data, there is a need to be better prepared on the ground for possible REDD and carbon financing mechanisms. These preparations include: piloting and testing institutional, technical and marketing methodologies; facilitating multi-stakeholder dialogues from local to national levels; research and analysis on ecological, institutional, policy and marketing aspects of carbon financing; and developing a national forestry, climate change, and payment of environmental services (PES) strategy. Based on these, five strategic actions are recommended:

### **Action line 1: Accelerate National REDD Readiness Processes**

While Nepal's Ministry of Forests and Soil Conservation (MFSC) has already started the REDD readiness process through forest carbon partnership facilities (FCPF) funding support, there are signs of slow action, lack of

coordination and lack of technical backstopping. Also, the process seems to be dominated by professionals and technical experts with weak representation from marginalized sections of Nepal's civil society. **The readiness process should be supported and strengthened by donors and independent policy research groups during 2009-2012. Such support should include ensuring inclusive processes, adequate analysis of local and global scenarios, capacity development, and development of an appropriate national strategy.**

### **Action line 2: Strengthen Preparation for International REDD Negotiations**

Given that Bonn SBSTA meeting in June 2009 is planning to draft the potential REDD agreement, it is now time for Nepal to intensify its homework on its positions and perspectives. **Throughout the year of 2009 until Copenhagen, MFSC and Nepali stakeholders should work collectively, and in collaboration with the Ministry of Environment, Science and Technology (MoEST), to develop a position, generate the evidence needed and to undertake lobbying with common interest groups and countries. These activities should start in January 2009 if Nepal is to complete some meaningful groundwork for the ongoing international REDD negotiations.**

### **Action line 3: Develop PES Methodologies Through Piloting at Sub-national and Community Levels**

While the carbon sequestration services of forest ecosystems has come to the forefront due to the climate change crisis, there are indeed multiple environmental services which forests generate. There is a need to bundle diverse environmental services and institute mechanisms for rewarding the providers of such services. To date, there is hardly any experience to translate this concept into practice, although there are some spontaneous mechanisms

which look like PES in Nepal <sup>1</sup> – so there is a need to pilot, experiment and innovate PES methodologies and institutions that help market carbon and other environmental services, as well as distributing the revenues equitably. These actions should be undertaken immediately so that there will be enough lessons to inform REDD readiness, international REDD negotiations, and implementation of the post-2012 climate regime.

#### **Action line 4: Undertake Resource Analysis, Data Generation and Monitoring**

It is widely accepted that ecosystem data are limited and out of date in Nepal. In order to maximize benefits from the marketing of environmental services, credible baselines and mechanisms for monitoring and verification have to be established. Currently, Nepal lacks such capacity, and there is a need to strengthen this in the government, non-government and private sectors.

#### **Action line 5: Promote Community Forestry in The Voluntary Markets**

Given that REDD will take a few years to come into effect, and recognizing that the voluntary market is already proliferating, it is recommended that Nepal forestry stakeholders undertake experimental marketing of forest carbon in the voluntary market. This will enable stakeholders to learn what it takes to sell carbon in the market, and most aspects of methodology practiced in the voluntary market will also be useful in REDD process. Besides, by 2012, there will already be some concrete insights into whether, how and to what extent voluntary markets should be pursued when some form of REDD begins to be operational. These activities should be initiated as soon possible so that some concrete lessons can be learned by 2012.

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<sup>1</sup> Such as Annapurna Conservation Area community groups receiving part of the revenue from eco-tourism, and Kulekhani watershed groups which received some financial benefits from the hydropower royalty paid to the government.

## 2. Introduction

Forests have now come back to the centre-stage of the global climate change mitigation debate. The UN-led global climate negotiation processes have now recognized the need to reward the contributions of forests in sequestering carbon. REDD is now being proposed as a potential climate change mitigation option in the international climate negotiations. In addition, a number of voluntary carbon market windows have also emerged, with some specifically promoting the sale of community based forestry carbon.

By reviewing the current debate and proposals around REDD and the trends of rapidly emerging voluntary markets, this paper identifies key opportunities and challenges which Nepal is facing in realising forest carbon revenues. The focus is on exploring the possibility of local communities benefiting from carbon financing. We also identify a set of priority actions that should be taken by government, donors and civil society to this end.

## 3. The Global Context of Carbon Financing and Questions for the Review

Opportunities for forest carbon finance were triggered when it was shown that about 20% of Green House Gas (GHG) emissions come from deforestation and degradation<sup>2</sup>. This fact is now being recognized in global climate policy negotiation. Most notably, REDD was recognized as a potential climate change mitigation option at the 13<sup>th</sup> Conference of the Parties (COP) to the United Nations Framework Convention on Climate Change (UNFCCC) in Bali in 2007<sup>3</sup>. Since then, there have been intense debates regarding whether, how and to what extent REDD can serve as a post-Kyoto international instrument (after 2012) to cut Greenhouse Gas (GHG) emissions from the forest sector that accounts for about 20-25%<sup>4</sup>

<sup>2</sup> The Stern Review, The Economics of Climate Change, 2006.

<sup>3</sup> See "Report of the Conference of the Parties on its thirteenth session, held in Bali from 3 to 15 December 2007" <http://unfccc.int/resource/docs/2007/cop13/eng/06a01.pdf#page=8>

<sup>4</sup> In its fourth assessment report, IPCC calculation shows that about 20% of anthropogenic CO<sub>2</sub> emissions during 1990s resulted from land use change, primarily deforestation.

of the total GHG emissions into the atmosphere. REDD was one of the agenda items in the recently completed COP 15 in Poznan, where intense debates took place around this potential global policy instrument for climate change mitigation. Nepal signed UNFCCC on June 12, 1992, ratified it on May 2, 1994, and it was made effective from July 31, 1994. As member of COP, it has been participating in the REDD negotiations.

COP 13 mandated UNFCCC's Subsidiary Body on Scientific and Technological Advice (SBSTA) to explore possible policy approaches and methodologies for REDD<sup>5</sup>. In addition to SBSTA deliberations, there has been a wide array of analyses and debates facilitated by international civil society, NGOs and expert groups deliberations<sup>6</sup>. Responding to the Bali Action Plan<sup>7</sup> (BAP) call to undertake "demonstrable actions", international agencies have begun to support capacity building, action research and readiness towards REDD. The World Bank's Forest Carbon Partnership Facility (FCPF), UN-REDD and a scheme floated by the Australian Government are some of the key initiatives to explore and strengthen the REDD process. In addition to these REDD related initiatives, a number of voluntary carbon market promotion mechanisms have also emerged in recent years.

Given these processes, there is now a growing optimism in Nepal that sustainable management and conservation of forests through carbon revenues, especially under the community forestry system, which has successfully reversed the past trends of deforestation and forest degradation, will be rewarded. Since the Bali meeting, the MFSC has been working with civil society and donors to explore REDD opportunities, mainly as part of The World Bank's FCPF grant. This carbon trade optimism has also been amplified by the Nepali media which has projected a very optimistic carbon financing scenario for Nepal with some exaggeration. By contrast, there are some organizations and groups that see REDD and

<sup>5</sup> SBATA held two meetings after Bali – one in June Such as SBSTA workshop on Methodological Issues related to REDD, 25-27 June, Tokyo, Japan; and the other was held on 4-13 June 2008 in Bonn.

<sup>6</sup> These mostly include workshops and meetings conducted by international organizations such as CIFOR (24 June 2008, Forest day side event in Poznan on 6th December 2008).

<sup>7</sup> [unfccc.int/files/meetings/cop\\_13/application/pdf/cp\\_bali\\_action.pdf](http://unfccc.int/files/meetings/cop_13/application/pdf/cp_bali_action.pdf)

carbon financing agenda as being unsuitable for Nepal<sup>8</sup>, arguing that Nepal has a very small area of deforestation and forest degradation that can be rewarded by REDD, compared with other high-deforestation countries (such as those in the Amazon Basin, Congo Basin and East Asia).

Looking at the existence and potential growth of both compliance (under REDD) and voluntary markets, and the recognition by COP 13 and 14 that local and indigenous rights are also key elements of future REDD strategy, the question is not whether Nepal's forestry has a potential for carbon financing, but to what extent and under what conditions. This requires closer analysis of the possible REDD and voluntary markets scenario as well as preparing better for this at home. Such analysis is especially relevant at this time when the whole REDD concept is evolving internationally, and whilst there still exists some space for influencing the Copenhagen meeting. At this stage, there is an urgent need to make a judgement of what can potentially be achieved, and what courses of action should be taken to do this.

Against this backdrop, this paper critically reviews potentials and opportunities of carbon financing for community forestry in Nepal, especially through the possible REDD mechanisms as well as voluntary carbon markets. By reviewing the plethora of grey literature that has emerged around REDD and carbon financing, we sequentially address the following five questions:

- 1) What kinds of carbon financing opportunity are arising? What are the likely **mechanisms for REDD (likely to take effect after 2012)** and opportunities for voluntary carbon markets (which already exist and are evolving)?
- 2) To what extent is **Nepal's forestry sector (institutions, forest management models etc) compatible** with emerging carbon financing opportunities?

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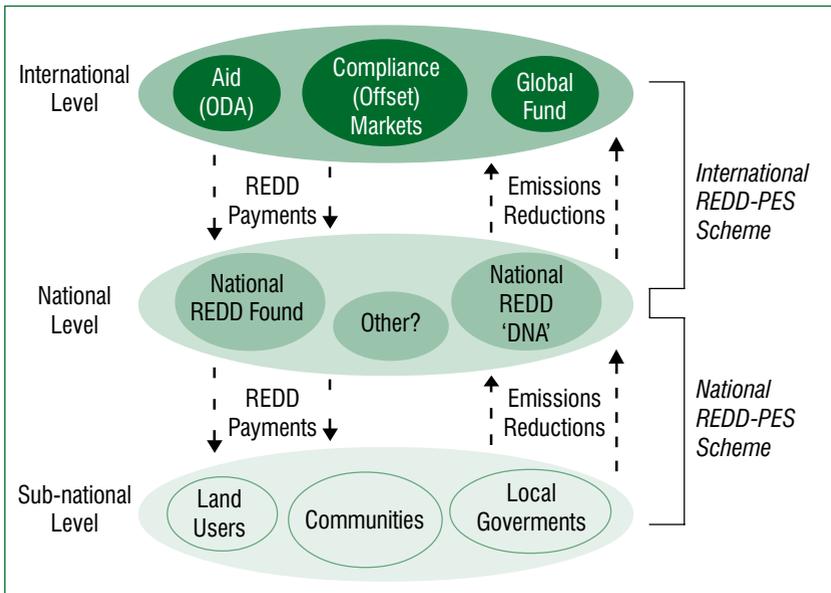
<sup>8</sup> Personal communication with Arvind Khare of RRI, Nov 8

- 3) What are the key national **policy issues in relation to realising and equitably distributing carbon revenues?**
- 4) What should be Nepal's **position in relation to REDD debates?**  
What opportunities exist to influence international REDD policy?
- 5) What **actions** should be taken immediately to benefit from REDD and voluntary carbon markets?

## 4. Emerging Carbon Financing Opportunities

In this section we review REDD and voluntary carbon financing opportunities. The common essence of both these is the transfer of payments to countries and communities that reduce emissions of GHGs. In a way, it is a form of 'Payment for Environmental Services (PES)<sup>9</sup>'. Figure 1 presents how carbon financing works as a PES mechanism.

FIGURE 1. Conceptual model of a multi-level REDD payment (source: Angelsen and Wertz-Kanounnikoff, 2008)



<sup>9</sup> See Sven Wunder (2005), "Payments for environmental services: Some nuts and bolts", CIFOR Occasional paper no 42.

## REDD: the scope, strategies and methodologies of payment

Though the REDD principles formally emerged after an agreement in the Bali Conference on inclusion of forest protection measures as an eligible option for meeting emission reduction targets in the post-2012 commitment period (a similar concept was also debated and dropped inconclusively for the first commitment period [2008–2012]<sup>10</sup>). Credit for the present concept of REDD goes to the proposal of Papua New Guinea (PNG) and Costa Rica submitted in COP 11 (2005) on behalf of the Coalition of Rainforest Nations<sup>11</sup>. This proposal was then debated over the two years until Bali, where it was accepted as a potential instrument for mitigation. The proposal seeks future agreement on the proposal that payments should be made to reward emissions reduction through avoided deforestation<sup>12</sup>. So it is fair to say that REDD is still evolving, and one can only anticipate different possible ways of implementation.

The flow of money to reward forest-carbon services will depend on the level and time range (short term or long term) of emissions cuts that are likely to be agreed in Copenhagen in December 2009. There is a proposal to cut emissions from 25–40% compared to 1990 by 2020, although base year is still contested. In any case, REDD is likely to be cheaper and faster means of emissions cut, with a likely flooding of market, compared to other reductions options, especially if REDD credits are made fungible with other types of carbon credits<sup>13</sup>.

<sup>10</sup> According to Sikkema, R. and Mc Kenzie, (2001), Having been unable to reach agreement on some of the key outstanding issues, the Climate Conference in The Hague formally concluded with a decision by Parties to suspend COP-6 and reconvene in May/June 2001 in Bonn. The President of COP-6 distributed, on the final day, a Note to all the delegates (International Institute for Sustainable Development 2000). The Note, which was then relevant for LWLUCF, states that it addresses key unresolved issues of COP-6. The Note proposes:

1. Article 3.3 Parties apply the FAO definition for "forest" and apply the IPCC definition for afforestation, reforestation and deforestation;
2. Article 3.4 In terms of additional activities under 3.4 in the first commitment period, the note suggests that Annex 1 Parties be allowed to include grazing and cropland management, forest management and re-vegetation. To address problem of scale, an upper limit of credits amounting to 3% of a Party's base year's emissions would be set. This item is especially relevant for the National carbon budget of Parties with a big area of forest and agricultural land, such as the USA, Canada, Japan and Australia.
3. CDM Parties allow afforestation and reforestation projects. Forest protection projects would not be allowed, but would be prioritised under the adaptation fund.

<sup>11</sup> IDDRI Policy Brief, Climate Change, N 12, 2007.

<sup>12</sup> The proposal pointed out that Kyoto protocol did not include mechanisms to reward developing countries to curtail deforestation. It also suggested for a carbon market to give monetary value to environmental services and to create funds for sustainable development. See "From Green Ideals to REDD Money, Briefing Note 2, November 2008, FERN.

<sup>13</sup> "The Role of REDD in Stabilising Greenhouse gas concentrations: Lessons from economic models", by Ruben N Lubowski, CIFOR infobrief 18, November 2008.

A number of REDD design issues are yet to be settled, and the architecture of REDD financing depends on these.

1. Should REDD be based on a compliance market, be fund-based or mixed?
2. What should be covered within creditable mitigation activities?
3. What approach to payment should be adopted: inputs, emissions or stock-based approaches?
4. What scale (national, sub national or local or nested) is used in crediting?
5. How should REDD be implemented – baseline, monitoring and verification, leakage and non-permanence?
6. How can it be ensured that REDD does not create undesirable social and ecological tradeoffs and that it creates equitable co-benefits?

### **REDD regime – market or funds based?**

It is estimated that halving emissions from deforestation would cost US\$ 7-28 billion per year<sup>14</sup>. A sustainable financial flow is needed to address the causes of deforestation, including getting policies and institutions right as well as building capacity. A variety of financing options are being explored<sup>15</sup>. The current climate negotiation focuses on creating regulated carbon markets<sup>16</sup> through which an opportunity is created for industrialized countries and their companies to buy carbon offsets from developing countries in order to meet their national emissions reduction targets. Some estimates of market-based approaches say that this is possible if carbon is traded at US\$ 10 per tCO<sub>2</sub><sup>17</sup>.

<sup>14</sup> Lubowski, 2008.

<sup>15</sup> "Financing REDD: Linking country needs and financing sources", CIFOR Infor Brief No 16, November 2008

<sup>16</sup> Carbon markets operate in a similar way to those for any other traded commodity, the main differences being the extremely important role that public regulation has played in creating the markets and in driving demand for carbon credits (as per the provisions made in the Kyoto Protocol that came into force in 2005), and the technical procedures needed to define the traded product (measured in tons of CO<sub>2</sub>-equivalent) and to measure and track carbon emission reductions. Carbon market exists under compliance schemes and voluntary programmes. Currently, credits from reducing emissions from deforestation and degradation (REDD) are eligible only in voluntary carbon markets and not under the CDM (which only allows forestry credits from afforestation and reforestation).

<sup>17</sup> EcoSecurities, 2007. Policy brief – REDD policy scenarios and carbon markets. Oxford\_www.ecosecurities.com

There is a concern that selling carbon credits alone would not generate sufficient funding to undertake the activities needed to combat deforestation and degradation. Carbon metrics alone cannot enable developing countries to put necessary policies and institutions into practice. A recent UK Government review<sup>18</sup> analysed financing possibilities for global forests, and recommended that any financing deal should “not only reduce carbon emissions significantly, but also benefit developing countries, support poverty reduction, and help preserve biodiversity and other forest services”. In view of this, there is an argument that REDD should take a fund-based approach. Under fund – based mechanisms, payments come from a dedicated international fund rather than from carbon markets. This payment could be made directly to central government or sub-national entities, and the payments may be used to leverage more indirect activities like policy reform, institutional re-designing and cooperative action between developing and developed countries to combat deforestation<sup>19</sup>. A key benefit is that there is scope for upfront funding to design and implement policy and measures to address deforestation.

Potential disadvantages of this approach include - lower financial flows unless consensus can be built in the UNFCCC system, fear of lower standards, and potential for a lesser degree of commitment owing to more or less secured findings<sup>20</sup>. Furthermore, critics say that a fund-based approach does not guarantee the delivery of emission reductions and may prolong the weakness of traditional Official Development Assistance (ODA).

## Scale of Crediting

For implementing REDD<sup>21</sup>, three scales of crediting are now being discussed: national, sub-national or project, and nested. Looking at the SBSTA meeting outcomes, it seems that the most likely scenario is – REDD at national level<sup>22</sup>. The project crediting, however, could be used in connection with a national-level monitoring system, under a “nested approach<sup>23</sup>”.

<sup>18</sup> Eliasch Review, Climate Change: Financing Global Forests, 2008.

<sup>19</sup> See Beyond Carbon financing, by WRI, 2008.

<sup>20</sup> Ecoscurities 2007

<sup>21</sup> For an overview of concept and methodological options of REDD, please see Moving Ahead with REDD: Issues, Options and Implications, 2008, CIFOR.

<sup>22</sup> WRI has compiled the proposals of several countries and international organizations with a conclusion that many of them support national level REDD. REDD Flags:

What we Need to Know About Options, December 2007.

<sup>23</sup> See CIFOR REDD workshop proceeding, June 24, 2008, p 6.

TABLE 1. **Scale of REDD Crediting**

Crediting Approach	Advantages	Disadvantages
1. National crediting under UNFCCC agreement: <ul style="list-style-type: none"> <li>• Requires a national baseline scenario (a verifiable emission reduction below this is entitled to REDD carbon credits).</li> <li>• The current verifiable emission reduction gets fungible (exchangeable) with carbon market of successor protocol post 2012</li> <li>• Transaction is done with central government</li> </ul>	<ul style="list-style-type: none"> <li>• Large financial flow provision</li> <li>• Better accounting for leakage</li> <li>• Better economy of scale owing to national baseline and national verification system</li> </ul>	<ul style="list-style-type: none"> <li>• Poor governance is a strong risk</li> <li>• Low potential for private sector engagement owing to potential risk</li> <li>• Possible delays for disbursement owing to low level of national preparedness</li> </ul>
2. Project crediting under UNFCCC agreement: <ul style="list-style-type: none"> <li>• Project or sub-national credit provision (in line with the prevailing CDM)</li> <li>• Measuring emission reduction could use project-specific or national baseline</li> <li>• Projects themselves could be seller of REDD credit</li> </ul>	<ul style="list-style-type: none"> <li>• Advantage in terms of availability of large amount of potential carbon finance</li> <li>• Good flexibility and decentralised system</li> </ul>	<ul style="list-style-type: none"> <li>• Increased leakage risk</li> <li>• Greater demand for permanence of emission reduction</li> <li>• Greater relative transaction costs</li> </ul>
3. Nested approach <ul style="list-style-type: none"> <li>• Simultaneously at project and state level, but projects leading up to national crediting</li> </ul>	<ul style="list-style-type: none"> <li>• Flexible</li> <li>• Innovative projects can receive financing even when national credit is not ready</li> </ul>	<ul style="list-style-type: none"> <li>• Challenge of harmonization between levels</li> <li>• High transaction costs</li> </ul>

**Source:** Ecoscurities (2007) and CIFOR 2008<sup>24</sup>

<sup>24</sup> CIFOR info brief 16, November 2008

## Scope of Creditable Activities

Another critical issue is related to the exact nature of the rewards offered. From the beginning of the REDD debate, the idea was to reward the “avoided bad” rather than the “committed good<sup>25</sup>”. The Accra meeting considered REDD for rewarding “doing good” as well (some regard this as REDD+)<sup>26</sup>. There is almost a consensus among developing countries that sustainable forest management (covering “enhanced positive change” in Table 2) should be rewarded in addition to reductions in emissions through deforestation and degradation (see Box 3).

TABLE 2. **Possible Scope for Creditable Activities**

Changes in	Reduced Negative Change	Enhanced Positive Change
Forest area (ha)	Avoided deforestation	Afforestation and reforestation
Carbon density (carbon per ha)	Avoided degradation	Forest restoration and rehabilitation (carbon stock enhancement)

**Source:** Angelsen and Wertz-Kanounnikoff, 2008

Overall, the proposals within the comprehensive rewards package under REDD include<sup>27</sup> a) upfront investments in REDD infrastructure, forest monitoring systems, capacity building and other preparatory and demonstration activities, b) on-going costs of implementing national policies and measures, b) and compensation payments to forest owners for foregone profits (opportunity costs).

<sup>25</sup> IGES climate change and REDD paper in Asia.

<sup>26</sup> Dahal and Banskota (2008): Nepal's Community Forestry and REDD: Issues and challenges. In Journal of Forest and Livelihood, Vol. XX. Forest Action, Kathmandu.

<sup>27</sup> Dutschke et al 2008

### **BOX 1. View of Some Developing Countries on the REDD Compensation Package<sup>28</sup>**

**India** proposes a comprehensive REDD mechanism that supports all policy approaches which enhance emissions reductions or save carbon. It identifies this as the “compensated conservation” to reward not only reducing deforestation and forest degradation but also conservation and sustainable forest management.

**Indonesia** proposes that REDD should enhance policy approaches for conservation, SFM, and enhancement of forest carbon stocks. It also proposes to have a single definition of deforestation to ensure equity among developing countries.

**China** seeks to provide equal emphasis to reducing deforestation and increasing carbon stocks through conservation.

**Brazil** proposes the establishment of a voluntary fund into which developed countries provide additional financial resources. Developing countries are entitled to ex-post financial incentives from the arrangement after they demonstrate that they have reduced emissions.

**Malaysia** proposes that in addition to deforestation, sustainable forest management should be included in REDD. It states that both protection and sustainable forest management practices should be considered for REDD incentives.

**Congo** Basin countries have suggested a Stabilization Fund to compensate countries with high levels of forest cover and historically low levels of deforestation. It is also proposed to use a Development Adjustment Factor (DAF) to allow less developed countries to undertake logging to meet “growth lag”, along with receiving REDD payments.

**Tuvalu** has proposed the creation of a global trust fund which communities could draw to fund forest protection measures. It has proposed a “Forest Retention Scheme” through which communities could be rewarded to retain and sustainably manage forest areas.

<sup>28</sup> For details, please see: An Overview of Selected REDD proposals, FERN, 2008; CIFOR REDD book, 2008; Accra News Update, Third World Network, 25 August 2008.

## Methodological Issues

After Bali, two SBSTA meetings have deliberated over this, and there are still a number of unsettled and often stumbling-block methodological issues in the REDD negotiations<sup>29</sup>.

The first issue is setting the **baseline for crediting**<sup>30</sup>. Crediting baselines need to be based on historical rates of deforestation, as well as projected business-as-usual scenarios. Many of the submitted proposals consider historical references of deforestation as REDD crediting baseline<sup>31</sup>. But there are concerns that historical baselines do not provide accurate projections of future deforestation for countries that have low deforestation pressures<sup>32</sup>. Nepal has proposed nested baselines for different sub-regions.

The second issue is about the **permanence of carbon offset**. From the perspective of investors, forestry carbon projects can be risky investments because of the frequently complex social and economic drivers of land-use and land-use conversion in a given area, which can make project implementation challenging. In addition, carbon stocks may be threatened by natural causes (e.g. fires and disease outbreaks), as well as human activities (e.g. illegal logging). Broader governance factors, including the clarity and security of tenure and use rights as well as transparent judicial processes, can become very important in determining the risk profiles of forestry projects in specific countries. Investors will generally be most interested in low-risk projects that are characterized by existing transparent financial reporting, secure tenure, and generally good governance and predictable investment frameworks in host countries. In the current REDD negotiations, a number of proposals have been forwarded to address the issue of non-permanence: use of reserve accounts and protected areas, taking away future carbon credits, using a discount factor to account for non-

<sup>29</sup> The main REDD methodological issues which SBSTA is reporting to COP 14 are – establishing reference emission levels, addressing displacement, non-permanence and definitional issues and the implications for indigenous peoples and local communities. FERN briefing note 2, November 2008.

<sup>30</sup> See CIFOR REDD Book, 2008, chapter 6 for a conceptual overview of baseline.

<sup>31</sup> Costa Rica, FAO, UNDP, UNEP, Brazil, Indonesia, New Zealand, PNG, EU, Norway and several others. See CIFOR REDD book for details.

<sup>32</sup> Norway proposal, September 2008.

permanence, use of temporary renewable credits, setting up insurance mechanisms, and no penalty for non-permanence caused by natural disasters<sup>33</sup>.

Third, **leakage** of carbon benefits (emission increases outside a project boundary due to project activities) is another risk for REDD. National-level REDD schemes may better address intra-national leakage than the sub-national or project level crediting<sup>34</sup>. Nevertheless, in order to ensure that actual emission reductions through REDD can be achieved and in order to reduce risks of international leakage, effective measures to tackle leakage are essential. Different options are being considered in the REDD negotiation to address this issue: discounting attainable REDD credits in proportion to the estimated leakage, routine monitoring for leakage, developing a mechanism to address international leakage, creating special arrangements for insurance, reserve accounts and ‘leakage belt’.

Fourth, there are methodological issues regarding **monitoring, reporting and verification** (MRV). It is not only an issue of transaction costs, but also technical capacity and institutional mechanisms. IPCC identifies five carbon pools that should be monitored to estimate emissions – aboveground biomass, belowground biomass, litter, deadwood and soil organic carbon<sup>35</sup>. Transaction costs for MRV include the costs of quantifying existing carbon stocks, measuring and monitoring changes in carbon stocks (including the monitoring of leakage), external verification of monitoring results, and the preparation of project documentation and its external validation, and potential registration fees. In some cases, the development of project-specific baseline or monitoring methodologies may be necessary. Proposals in the REDD negotiation include – use of remote sensing, estimating carbon according to biomes, development of inventory tools and methods,

<sup>33</sup> See CIFOR REDD book, p 126-7.

<sup>34</sup> Sven Wunder, CIFOR REDD book, 2008, “how should we deal with leakage?”.

<sup>35</sup> CIFOR REDD book, chapter 9.

development of ecosystem specific models, and upfront funding for developing MRV capacity<sup>36</sup>.

Fifth, the issue of dealing with degradation is even more critical than deforestation. Forest degradation is a major source of forest related emissions. In Indonesia, forest degradation accounts for two-thirds of emissions, while deforestation is responsible for only one-third<sup>37</sup>. In Nepal, a study showed that during the period 1979–1994, while forest area decreased by 24%, the area under shrub increased by 126%, which indicates a high level of forest degradation<sup>38</sup>. This means that forest based emission reductions and carbon financing efforts in Nepal should focus on forest degradation. Addressing deforestation will have additional benefits – forests will have higher capacity to adapt to climate change. While remote sensing technology enables monitoring of deforestation, it is difficult to monitor forest degradation. IPCC’s methodological work is considered to provide some guidance but data and national capacity is limited. Since simple, and hence less accurate, methods are used, carbon credits are likely to be discounted<sup>39</sup>. This again leads to capacity issues for undertaking credible analysis and monitoring at the national level.

## Tradeoffs and Co-benefits

The REDD proposals can be divided into two main categories<sup>40</sup>. The first takes ‘do no harm’ approach, emphasizing carbon and avoiding active linkage with poverty reduction. The other takes more pro-poor approach, recognizing that addressing poverty is essential to achieve carbon benefits in a sustainable way. As developed countries are more concerned with carbon benefits rather than the co-benefits to local livelihoods and biodiversity,

<sup>36</sup> See Wertz-Kanounnikoff et al., 2008, “How can we monitor, report and verify carbon emissions from forests?”, CIFOR REDD Book

<sup>37</sup> See Muryarso et al., 2008, “How do we measure and monitor forest degradation?”, CIFOR REDD book

<sup>38</sup> Land Resource Mapping Project (LRMP 1984) and RPN 2008, MFSC.

<sup>39</sup> Muryarso et al., 2008, CIFOR REDD Book.

<sup>40</sup> Brown et al., 2008, CIFOR REDD book, “How do we achieve REDD co-benefits and avoid doing harm?”

concerns are growing about REDD's potential to undermine the rights of local, indigenous people<sup>41</sup>. But the premise of REDD is on strong co-benefit foundations, which need to be effectively articulated in the negotiations. Article two of the UNFCCC states that climate stabilisation has to be achieved without compromising development. COP 13 decisions (2/CP.13) also state the possibility of "co-benefits" and the need to address the needs of local and indigenous people while implementing REDD. Moreover, the Bali Action Plan stipulates that "demonstration activities" for developing REDD mechanisms should be undertaken in line with various UN conventions, including Convention on Biological Diversity (CBD) and non-legally binding instruments on forests, both of which asserts poverty reduction and local rights as the priority. There are proposals to package REDD payments with poverty reduction and adaptation funds. REDD co-benefits also apply in hydrological systems and biodiversity.

## Voluntary Market

Voluntary carbon markets operate outside international agreements. Companies, individuals, and other organisations without mandatory emissions targets, driven by concerns about corporate social responsibility and climate change, may choose to offset some or all of their emissions in these markets. In a carbon market, by paying someone else to reduce GHG emissions elsewhere, the buyers of carbon offset compensate for and hence offset their own emissions. As a recent report by Ecosystems marketplace states, "voluntary markets represent consumer demand for action on climate change and have the potential to be an immediate resource as the international community struggles to implement a fully effective climate change framework<sup>42</sup>". The voluntary market may become dominant if international REDD agreements fail to make any headway in the upcoming COP 15 in Copenhagen.

<sup>41</sup> In Poznan, local communities and indigenous people were critical of the dominant REDD proposal that emphasised carbon payment without duly acknowledging the rights of local and indigenous people.

<sup>42</sup> Forging a Frontier: State of the Voluntary Carbon Markets 2008. Ecosystem Marketplace.

Two main types of voluntary carbon market are identifiable. First, markets like Chicago Climate Exchange (CCX) which is a structured and closely monitored ‘cap-and-trade’ system which organizations join voluntarily. Under this system, an emitter operates under a cap or limit to emission levels, creating markets for emissions reduction beyond the cap<sup>43</sup>. Second, there is a wide array of transactions not driven by cap-and-trade but operating informally<sup>44</sup>. Some of these explicitly recognise community and biodiversity co-benefits along with climate benefits. These include: **Plan Vivo**<sup>45</sup>; **Climate, Community and Biodiversity Standards (CCBS)**<sup>46</sup> and **Envirotrade**<sup>47</sup>.

The voluntary market prefers crediting against project-specific baselines, and hence may entail lower transaction costs at the project level but not necessarily at the state level of aggregation. They may have lower bureaucratic hurdles to implementation with a greater possibility of capturing social and environmental benefits. Potential disadvantages are - much smaller financial flows, the possibility of lower standards (particularly in forestry carbon terms), and less national process ownership.

According to an Ecosystem Marketplace report<sup>48</sup>, voluntary carbon markets transactions were at US\$ 97m in 2006, and went up to US\$ 331m in 2007. But the proportion of the voluntary market devoted to forestry fell from 37% in 2006 to 18% in 2007, although with an increase in the average value of Verified Emissions Reductions (VER) from Forestry<sup>49</sup>. The same report showed that in 2007 the price of 1 tCO<sub>2</sub>e ranged from US\$ 1.62 to 6.1, with most transactions taking place at US\$ 3.15. The relative prices of forest carbon compared to non-forest carbon (if the two are not fungible) also affects the revenues available to forestry carbon sellers.

<sup>43</sup> Please see Cap-And-Trade fact sheet of WRI, Issue 6, June 2008 for more on how this works.

<sup>44</sup> The ecosystem marketplace report regards this as “over-the-counter (OTC)” voluntary carbon market.

<sup>45</sup> [www.planvivo.org](http://www.planvivo.org)

<sup>46</sup> [www.climate-standards.org](http://www.climate-standards.org)

<sup>47</sup> <http://www.envirotrade.co.uk/>

<sup>48</sup> Forging a frontier, 2008

<sup>49</sup> Carbonpositive, cited by Ben Vickers, RECOFTC, Financing REDD: A Matter of Compliance?

Sometimes there is confusion between the carbon market and market standards. The common sense use of market works for the carbon market as well – where buyers and sellers engage in transactions. But unlike many commodities of day to day use, the carbon market cannot operate without some credible standards verifying emissions reductions. Below is a brief analysis of some of the voluntary carbon standards, which enable carbon transactions.

### **Climate, Community and Biodiversity Standards (CCBS)**

Created in 2003, the Climate, Community and Biodiversity Alliance (CCBA) is a global partnership of leading companies, NGOs and research institutes. It seeks to “leverage policies and markets” to promote forest protection/restoration and agro-forestry projects through multiple-benefit land-based forest carbon projects. To achieve this goal, the CCBA has developed voluntary standards to help design and identify land management projects that simultaneously minimize climate change, support sustainable development and conserve biodiversity<sup>50</sup>. Since CCBS takes an integrated approach – combining carbon, biodiversity and local livelihoods, this can be very relevant for Nepal’s community forestry.

The first edition of the CCB standards was developed in 2005 with inputs from communities and other stakeholders, and was then tested in projects in Asia, Africa, Europe and the Americas, along with peer review by international organizations such as CIFOR. As of November 2008, six projects had completed the “validation process” and ten projects were in the “public comment phase”. The 16 CCB projects aim to reduce GHGs by over 4.4 million tons of CO<sub>2</sub>e per year and cover 1,385,190 ha. The CCB report also claims that “a number of investors have declared their intention to give preference to, give a premium to, or exclusively purchase

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<sup>50</sup> CCB standards, second edition, 2008.

## BOX 2. CCBS Project Checklist

### General Section

- G1. Original conditions in the project area
- G2. Baseline projections
- G3. Project design goals
- G4. Management practices and best practices
- G5. Legal status and property rights

### Climate Section

- CL1. Net positive climate impacts
- CL2. Offsite climate impacts (leakage)
- CL3. Climate impact monitoring

### Community Section

- CM1. Net positive community impacts
- CM2. Of site stakeholder impact
- CM3. Community impact monitoring

### Biodiversity Section

- B1. Net positive biodiversity impact
- B2. Offsite biodiversity impact
- B3. Biodiversity impact monitoring

### Gold Level Section

- GL1. Climate change adaptation benefits
- GL2. Exceptional community benefits
- GL3. Exceptional biodiversity benefit

land-based carbon offsets derived from CCB projects”, but it also admits that “much remains to be done to further stimulate the multiple-benefit forest-carbon market and bring these multiple-benefit projects to scale”<sup>51</sup>.

The proponents of the CCB Standards claim that project developers (including communities, NGOs, government agencies) can use the Standards to demonstrate a project’s high quality and multiple benefits to potential investors. Likewise, it can also be useful to investors to screen projects for buying. It is also claimed that the standards are useful for accounting and validating both emissions reductions and enhancement of carbon offsets.

CCB standards provide rules and guidance to encourage effective project design. They can be applied to “validate” the project early on

during design phase which can attract funding. CCB standards help to verify both carbon as well as social and environmental impacts. They can be employed regardless of a project’s geographical location, start date or size. They do not issue quantified emission reductions certificates. Application of CCBS requires that independent, accredited auditors

<sup>51</sup> Preface to the second edition, CCB standards, second edition.

determine conformance with the CCB standards at two stages - validation and verification.

- A CCB **Validation** is an assessment of the design of a land-based carbon project against each of the CCB criteria
- A CCB **Verification** is an evaluation of a project's delivery of net climate, community and biodiversity benefits.

## Plan Vivo

The Plan Vivo system is managed by Bio-Climate Research and Development (BR&D), which is a Scottish non-profit company for low carbon research and development. The objective statement reads, "The aim of the Plan Vivo System is to provide a framework for the management of the supply of verifiable emission reductions from rural communities in a way that promotes sustainable livelihoods<sup>52</sup>". This system provides information to purchasers of carbon credits about the status of projects, while also providing formal sets of procedures to projects to improve performance.

The system operates with the following procedures.

- **Project registration:** projects will be registered online. Projects with only concept, pilot projects and operational projects can be registered. Registration decision is made on the basis of a desk review of the information provided. All registered projects must adhere to the Plan Vivo Registration Standards.
- **Technical specification approval:** BR&D reviews the technical specification of the submitted projects as per its Technical Specification Standards and if found suitable, the project is formally approved.
- **Annual reporting:** all pilot and operational projects should send annual report at the end of the year.

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<sup>52</sup> Plan Vivo system Manual, version 1.2

- Issuance of certificates: BR&D reviews the project carbon accounting against the criteria set out in the Plan Vivo certificate issuance standard, and if found appropriate, will issue certificates for appropriate quantities of carbon for projects that meet these criteria. Plan Vivo does not take any liability for any carbon credits sold, but confirms that the issued credits have been delivered with Plan Vivo standards, as per the information provided.
- Suspension: if corrected measures suggested by the Plan Vivo Committee are not applied, the project registry may be suspended
- Appeals: projects may appeal against any decisions of BR&D but its decisions will be final.

## **Envirotrade**

Envirotrade, a UK company, has developed a business model for the sale of carbon offsets to businesses and individuals to support the conservation and management of existing forests and the planting of new ones. Its approach seeks to address poverty alleviation, sustainable development and biodiversity conservation, while also tackling carbon emissions in conservation areas recovering from protracted conflict in a few African countries (see Box 3 for an example).

Under the Envirotrade model, local farmers and forest communities, who have largely been excluded from the complex mechanisms developed to deal with climate change, manage the planting and growth of trees in return for proceeds from the sale of CO<sub>2</sub> offsets to customers in the developed world. Individuals and companies effectively invest in new forests and agro-forestry that will absorb the carbon dioxide generated by their business activities through a voluntary mechanism or partnership. They also work with forest farmers to change the way their land is used and help them to boost their crop yields by the cultivation of nitrogen-fixing trees and plants, which enrich the soil and slow down deforestation.

### BOX 3. Nhambita Community Carbon Project – Mozambique

The fighting that took place around Gorongosa National Park in central Mozambique during the country's 16 year civil war took a terrible toll on both the forests and the communities that had taken refuge in the forests. After the war ended in 1992, those communities continued to suffer. The agriculture had virtually collapsed; there was little or no access to medical help, education, employment, capital or markets. Food shortages accelerated the spread of disease and malnutrition.

Envirotrade joined up with the European Commission, the University of Edinburgh and the Edinburgh Centre for Carbon Management to help rebuild the local economy by establishing environmentally responsible farming and food production in a pilot 35,000 hectare area in the buffer zone around the park. Land-use change in the buffer zone of the protected area takes pressure of threatened natural resources and assists the rehabilitation of the park. The project works with communities to rehabilitate the forests on their land and introduce new, sustainable farming practices, such as planting new crops alongside nitrogen-fixing trees. These new practices have had a dramatic effect on the yields of cash crops such as cashews and fruits, and now provide healthy livelihoods for around 1000 families. Hundreds of other farmers have become the contracted guardians of new forests using the Plan Vivo system and receiving an income from the sale of carbon offsets by Envirotrade.

Carbon finance has brought food security and economic development on an unprecedented scale. The reforestation of communal lands has helped to raise money for community projects such as schools and other businesses, such as honey production, poultry farming and furniture-making, have established themselves with the support of carbon sales and grant aid from the European Commission. Lives and land have been transformed. Now, having brought about the rehabilitation and management of 35,000 hectares of community forest, the Envirotrade model is being adopted by communities in three other parts of the Gorongosa buffer zone.

(Source: [envirotrade website, http://www.envirotrade.co.uk/Pages/mozambique\\_sustdevel.htm](http://www.envirotrade.co.uk/Pages/mozambique_sustdevel.htm))

TABLE 3. Status of Carbon by Legal Classification of Forests in Nepal

Category	Sub Category	% of total forest area	Area in million ha	Above ground biomass in m tonnes	Below ground biomass in m tonnes	Dead wood biomass in m tonnes	Total biomass in m tonnes	Carbon in m tonnes
National Forest	Government-managed forest*	66.93	3.9 <sup>e</sup>	767.832	268.741	155.486	1192.059	596.0296
	Community Forest**	20.59	1.2	236.256	82.689	47.841	366.7874	183.3937
	Leasehold Forest***	0.24	0.014	2.75632	0.9647	0.558	4.279187	2.139593
	Religious Forest+	0.01	0.000543	0.106906	0.0374	0.0216	0.165971	0.082986
	Protected Forest@	12.19	0.71	139.7848	48.924	28.306	217.0159	108.508
Private Forest	Private Forest#	0.04	0.0023	0.0115	0.00402	0.002329	0.017854	0.008927
<b>Total</b>		<b>100</b>	<b>5.826</b>	<b>1146.748</b>	<b>401.361</b>	<b>232.216</b>	<b>1780.326</b>	<b>890.162</b>

Source: adapted from Oli and Shrestha (2008)

Among Envirotrade customers who have entered into this unique partnership with forest communities are the Creative Artists Agency Foundation in Hollywood, The MAN Group, the IIED, U&W, Carbon Neutral Company, Trans Global Aviation and personalities like the Rolling Stones' Ronnie Wood. In Mozambique the original project in Gorongosa has been expanded to the Zambezi Delta Complex and the Quirimbas National Park. New projects are being developed in sub-Saharan countries such as Senegal and the Sudan.

## 5. Nepal's Forestry Sector Potential to Access Carbon Financing

The latest data about Nepal's forest comes from National Forest Inventory (NFI) conducted during 1987-1998. It shows that Nepal has total 4.2 million ha (29%) of forest area plus 1.6 million ha (10.6%) shrubland, with a 1.6% annual rate of deforestation<sup>53</sup>. Total stem volume (over bark) of forests in Nepal is 759 m m<sup>3</sup> and the total air dry biomass of stems, branches and leaves is 873 m tonnes, which contain 897 m tonnes of carbon in the year 2005<sup>54</sup>.

National forest areas are under different regimes of governance. The protected area system covers about 19.7% of the total area of the country.

Applying a national average baseline appears quite complicated for Nepal. Drivers of deforestation and degradation as well as policies and institutions for forest management vary greatly in three geographic regions – low lying plains (Terai), mid-hills and high mountains. Different regimes of forest governance also vary in terms of both levels of efforts mobilized for sustainable forest management, and the outcomes on deforestation and degradation. Regimes where local communities have been given management rights have been already successful in checking deforestation (mainly community forestry), while the government managed forests still

<sup>53</sup> There is in fact no agreement over the rate of deforestation in Nepal. See Nepal MFSC RPIN submitted to FCPF, World Bank for a recent review of forest and deforestation data.

<sup>54</sup> Oli and Shrestha, Journal of forest and livelihood 8(1), 2008.

continue to degrade and deplete. This means that one approach to crediting may benefit one region whilst another region may lose. For example, if the REDD mechanism stipulates that only the net reduction in deforestation is rewarded, then the increasing forest cover under community forestry will be balanced out by the continued deforestation in the Terai. In this case, Nepal stands to receive little or no benefit from REDD.

More analysis is needed to ascertain whether Nepal would benefit through national only or nested approaches to carbon crediting. While in the long run, it would be in the interests of Nepal to follow a national crediting approach, in the short run, sub-national crediting may be employed to provide immediate benefits to communities that have already controlled deforestation and indeed enhanced the quality of forest. The potential of community forestry to benefit from any sub-national REDD strategy or voluntary markets depend on:

- 1) Its institutional ability to conserve forests along with livelihood co-benefits,
- 2) The extent of carbon offsets realised,
- 3) A clear national policy framework regarding carbon tenure, benefit sharing and methodological aspects,
- 4) Collaboration among community forestry stakeholders to work together to develop methodologies and policy approaches and
- 5) Technical assistance in monitoring and market linkage development

The current community forest area is about 1.2 m hectares, with an estimated carbon stock of 188 m tons<sup>55</sup>. With a preliminary estimate of 1.5-3.0 tCO<sub>2</sub> per ha per year in Nepal's community forests<sup>56</sup>, the total amount of carbon offsets realised is 1.8-3.6 m tonnes. Using a conservative rate of US\$ 2 per tCO<sub>2</sub>e, Nepal's CF can potentially earn US\$ 3.6 – 7.2 m per year. The actual revenues that CF can earn, however, depend on how the baseline is defined, as well as the scope and the level of crediting.

<sup>55</sup> Oli and Shrestha (2008), *Journal of Forest and Livelihood*, 8(1).

<sup>56</sup> (Banskota et al, 2007, Paudel, 2008, Dahal, 2008)

Nepal's community forests differ, in major ways, from the tropical rain forests towards which the REDD principles have been primarily targeted. The dominant proposals around REDD aim at rewarding reducing the emissions from deforestation while there are fewer on forest degradation. Without due recognition of forest degradation, the possibility of getting good compensation for Nepal's forest in general and community managed forests in particular is weak. If REDD relies on a baseline on or after 1990, and if the reward entails the reduction in deforestation<sup>57</sup>, then community forestry is less likely to benefit. This is because Nepal's community forests which, far from being 'degrading and deforesting', are in fact regenerating already. But if the scope of benefits include enhancement of carbon stocks, then community forestry would certainly benefit. Again, if only national level crediting is adopted, then community forestry would not benefit until deforestation is reduced at the national level. Some of these issues are also in part to be addressed at the national level. The national policy framework has yet to address carbon financing issues but the on-going multi-stakeholder processes, which have gained new momentum after the popular election of the new government and the constituent assembly, have the potential to define the regulatory framework in a way that rewards local communities.

Irrespective of the approach which REDD will take, Nepal's forest carbon is only a small fraction of the world carbon market. REDD credit buyers may prefer to go to carbon credit wholesalers such as Congo Basin, Indonesia and Latin American countries. Besides, the fragmented forest areas and highly decentralised system of governance may also enhance transaction costs in carbon transactions. This implies increased handover of forests to community management if Nepal wants to sell its community based carbon forestry<sup>58</sup>.

<sup>57</sup> There are several analyses from this perspective – 1) "Broadening the horizon – Assessing REDD from an integrated perspective: How to merge overall climate change mitigation, biodiversity conservation and equity considerations", A Discussion Paper by Lars Schmidt, German Development Institute; 2) The Architecture of proposed REDD schemes after Bali: facing critical choices" by A Karsenty, IFR Vol 10 (3).

<sup>58</sup> A research by Arun Agrawal, presented in the Rights and Climate Change Conference in Oslo in October 2008, suggests that community's carbon finance potential increases with the increase in forest area.

TABLE 4. **Opportunities and Challenges of Nepal Forestry in Relation to Carbon Financing**

	Opportunities	Challenges
<b>Overall Forestry Sector</b>	<ul style="list-style-type: none"> <li>• Possibility of mobilizing financial and technical assistance to address deforestation and degradation in the terai</li> <li>• Piloting nested REDD mechanisms for different regions and forest governance regimes</li> <li>• Functional multi-stakeholder processes and significant degree of trust among stakeholders</li> <li>• Enhanced technical research and policy analysis capacity nationally</li> </ul>	<ul style="list-style-type: none"> <li>• Relatively small supply of carbon credits</li> <li>• Lack of robust data and information on forest, deforestation and degradation</li> <li>• Lack of credible verification and certification mechanisms</li> <li>• Limited attention paid by political actors and other stakeholders on climate change and carbon financing issues and opportunities</li> </ul>
<b>Community Forestry</b>	<ul style="list-style-type: none"> <li>• Use rights are legally conferred to the community forest user groups through formal handover.</li> <li>• Indigenous use rights/ management system generally prevails.</li> <li>• CFUGs tend to use the resource in a conservative fashion.</li> <li>• Environmental role of forests is greatly practiced and acknowledged particularly with the CFUGs</li> <li>• CFUG federations and networks have emerged and are strong to deal with the issues of rights and economies of scale.</li> <li>• Availability database on national and local forests;</li> <li>• Good practices of forest management based on five yearly operational plans provide a strong basis to CF for a good payment to Nepal's forest by marketing proven track record of CF.</li> </ul>	<ul style="list-style-type: none"> <li>• Small patches of forests scattered all over the hills.</li> <li>• Reconciling DFO requirements and carbon buyer preferences.</li> <li>• Complex and diverse livelihoods objectives may distract buyers of carbon.</li> <li>• Elite domination CFUG decision making and benefit sharing.</li> <li>• Leakages prevail (some CFUGs protect their forests and use other adjoining government forest).</li> <li>• Limited number of CFUGs in the Terai and high hills<sup>59</sup></li> <li>• If national level crediting is applied, CF carbon offsets may be balanced out by deforestation in the Terai.</li> <li>• Because REDD strategy is mainly to reduce deforestation and forest degradation, government may compel to allocate more fund to the problem which is outside CF, thus, CF may not get adequate compensation for the good performance.</li> </ul>

<sup>59</sup> Master Plan for the Forestry Sector (MPFS, 1989) provisions to handover all forests in the hills as community forests to the extent people are capable and willing to manage them. Forest Act 1992 and Forest by-law 1995 revoke the policy provision in a way that the handover does not have any geographical restrictions.

Whilst REDD is evolving, forestry stakeholders may start immediate actions towards exploring voluntary carbon markets (especially Plan VIVO and Community, Climate change and Biodiversity) for pilot projects. Any pilot activity would generate lessons on a number of methodological issues surrounding REDD. Community forest user groups may like to work with other organizations to establish credible estimates of carbon offsets as well as to demonstrate the socio-ecological resilience of their approaches which can potentially be attractive to at least some existing voluntary market segments. Also, the strong existing networks of CFUGs can advocate for funding based approaches that recognize the efforts of local CFUGs in conserving forests and poverty reduction.

All actions should be taken with caution as carbon financing is not free from risks. As the country moves with this new window of opportunity, tendencies to control forest and finance centrally may increase. Increased technological sophistication in monitoring forest may disadvantage local users in making informed decisions. Long term carbon contracts may leave local communities with limited freedom to opt out of carbon forestry to resort to other land use options. Carbon and livelihoods may not always go together, and the financial interests of the local elites may drive ‘carbonisation’ of forestry even when there are no real gains in equity and incomes at local levels.

## 6. National Level Policy Issues and Gaps

Certainly, carbon financing is as new to forestry stakeholders in Nepal, as elsewhere. There is no documented evidence yet of Nepal’s forestry projects getting linked to voluntary markets. Since REDD is likely to emerge around rewarding carbon offsets and related processes of forest management, a number of national level policy issues will emerge that need to be addressed:

1. **Carbon tenure.** There are two issues. First, the conflict over carbon between the state and local communities, including sub-national and local government. Until now forest land is owned by the

government, while the rights over standing biomass are transferred to communities as per the agreed management plan. Carbon is not included in the plan and this needs to be sorted out at the regulatory level. Second, even within the communities, the issue of equity has remained critical. Is it enough to say that community has such and such rights or should there be special provisions to guarantee the rights of the poor, indigenous and excluded groups?

2. **Defining state agencies for carbon and their responsibilities.** In order to enable Nepal CF to participate in REDD or voluntary carbon markets, a clearly mandated government unit has to be established with clear responsibility to provide the needed services related to registration, and monitoring. It should also develop a strategy for service provisioning through other intermediaries. The unit should also be able to coordinate with different line departments in relation to facilitating easy trade and transfer of funds from international buyer or funders.
3. **Policy instruments.** There is a need to formulate a policy that addresses forest conservation, carbon trade, local livelihoods, and environmental services. This could be done by developing a forestry and climate change strategy, and then reorienting and adjusting the existing forestry policies. There is also a need to combine watershed approaches with carbon related services through policy change. The national policy framework should also spell out mechanisms for dispute resolution – legal, institutional, mediation based approaches. There is indeed a need for developing policy that helps the regulation of environmental services of forest. Policy approach should also consider addressing drivers beyond forestry and beyond the national borders.
4. **Stakeholder roles and capacity.** Multiple groups of stakeholders can help overcome certain challenges. It is important for Nepal's MFSC to institutionalise multi-stakeholders REDD groups at the national level and sub-national levels. One specific task of this group

- is to devise transparent and equitable mechanisms for sharing of carbon benefits among local communities and governments. Likewise, there have to be accredited agencies for assessment, monitoring and verification of carbon offsets.
5. **Fiscal instruments.** Should carbon business be treated like other ordinary business or do they deserve tax and other fiscal incentives? Should such instruments be explicit in channelling carbon revenues to local livelihoods and biodiversity conservation activities?
  6. **Trade related regulations.** The following legal instruments may need to be reviewed from the carbon trade perspective: contract law, removal of perverse incentives, forest industry policy and regulations, and forest product supply.
  7. Creating mechanisms for addressing leakage, additionality, duplications, and externalities – who, when, how, using what methodologies etc.

These issues may be considered in ongoing R-PLAN process being led by Nepal's MFSC with support from the World Bank's FCPF grant. A national forest carbon financing and PES strategy has to be formulated considering the above-mentioned issues as well as the vision of sustainable forest management in Nepal.

## **7. Nepal's Position and Opportunities for Influencing REDD**

Nepal has a unique advantage in promoting its community based and participatory approaches to forest management, most notably community forestry. Given the low position on human development index, Nepal can link carbon marketing initiatives with poverty reduction funding. Community forestry can win by promoting climate resilient and equitable forest governance systems as a co-benefit to carbon sequestration. This implies a preference for the comprehensive funding package that helps address complex drivers of deforestation.

Carbon financing should also be seen as a case of Payment of Ecosystem Services (PES). Sustainable management of forest generates a range of environmental services apart from carbon, such as hydrological regulation and biodiversity conservation. Since there are no ground-testing of ideas and methodologies yet, it is also critical to generate field-based insights into how community forestry can maximize diverse forms of environmental services, and hence enhance revenues for local communities. Specifically, piloting regulation and payment mechanisms for environmental services of forest, by bundling carbon with watershed, biodiversity and eco-tourism services would help develop better national policies and stronger position to influence international REDD mechanisms.

To influence REDD internationally, Nepal should identify allies on various dimensions. Nepal shares common interests with countries having moderate rates of deforestation, mountainous terrain (other Hindu-Kush countries and Alpine countries), landlocked position, and strong participatory forest management regimes (such as India, Philippines). Since it is one of the highly climate-vulnerable countries, it can also ally with similar countries to advocate linking adaptation funding with carbon financing.

#### **BOX 4. REDD and Carbon Financing Debates and the Suggested Position of Nepal**

**1. Link Carbon with livelihoods.** While carbon offsets should be accounted for, for financial rewards, climate change funding should also reflect the concerns for addressing the problems of poverty and forests together. Forests cannot be conserved without addressing the basic livelihoods concerns of the local, indigenous, poor and marginalized groups.

**2. Address drivers of deforestation.** Deforestation and forest degradation should not be misunderstood as a finance problem. They may be a result of various factors combined such as denial of local rights over forests, lack of enabling policy,

irresponsible private sector, corruption within government forestry agency, and many non-forestry drivers such as fuel price rises.

**3. Reward communities.** Any future REDD should prioritise channelling funds from industrialised countries to reward, upscale and promote community based and participatory forest management in developing countries.

**4. Provide funds as compensation.** The fund should be not be just a payment for the amount of carbon offsets created; it should be a part of the responsibility of the industrialised countries towards the poor and forest dependent people who have conserved forests.

**5. Link with adaptation.** Any REDD financing should also include an amount needed to help the local people to cope with risks and vulnerabilities induced by global warming for which they have little contributions.

**6. Ensure equity between developing nations.** REDD should not privilege high forest and high deforestation countries; funding priority should be based on both the urgency of human problem as well as the extent of carbon offsets realised.

**7. Use participatory processes.** While there is a need for research, analysis, monitoring and verification processes in relation to REDD funding for sustainable forest management, these processes should not be “hijacked”<sup>60</sup> by the carbon experts, state agencies and international organizations. Local people and civil society organizations should be fully informed of and be provided opportunity to participate in these processes. Locally based intermediaries should be capacitated and provided opportunities to implement local level REDD processes.

**8. Apply nested crediting levels.** REDD schemes should not be limited to national level; sub-national innovations in forest conservation should be rewarded. At national and sub-national level, REDD should be implemented by multi-stakeholder groups and committees in a transparent and participatory manner.

**9. Go beyond the market.** REDD should not be relegated completely to the principle of market that undermines value of other environmental services of forests and sources of local livelihoods among others. Nepal should advocate for a package of funding that includes poverty reduction, forest conservation and adaptation.

<sup>60</sup> This term was used in a civil society side event in Accra meeting.

Nepal's community forestry groups and their supporting stakeholders have several opportunities (see Box 6) to advance the above mentioned agendas in the in the REDD debate. It is important for them to work more intensively on these as the global climate negotiations are taking a concluding mode over the entire year of 2009 till the COP 15 in December.

### **BOX 5. Opportunities for Nepali CF stakeholders to influence global REDD and carbon financing mechanisms**

**1. Community networks.** National and international networks of forest dependent communities can work more pro-actively to develop their positions, lobby with international organizations, and voice their concerns at United Nations Forum on Forests. Through such linkage between international organizations and civil society movement, global position of CBFM and REDD may be communicated to the parties to COP and negotiators of REDD.

**2. Multi-stakeholder base.** Participatory forestry has wider base of supporting stakeholders in Nepal as well as outside. These include NGOs, research groups, donor projects, international organizations like RRI and RECOFTC. Nepal government and networks of forest users have the opportunity to work with these institutions to advance Nepal's interests and concerns. Nepal based CF stakeholders can also generate needed evidence fairly quickly as they have wider reach through the local communities in the country.

**3. Evidence.** There are some specific areas where more evidence/literature needs to be generated to support negotiating position in the table, such as carbon offsets through CF, Contributions to poverty (case studies). Such evidence will enhance the credibility of integrated funding approach (funding for both carbon and poverty reduction) that can better benefit Nepal.

**4. Piloting and field testing.** Nepali forestry stakeholders are in a position to undertake pilot actions and share in Copenhagen. The piloting should focus on developing mechanisms and lessons in relation to pro-poor adaptation, voluntary marketing, environmental campaigns for generating corporate environmental responsibility, and sustainable forest management

**5. Sensitising Nepal delegates.** A more specific action that could be taken is to orient and sensitise Nepali delegates to COP 15, SBSTA meetings, and other related forums. The government and non-governmental delegates should internalise key elements of Nepal's position in relation to forest carbon financing, such as emphasis on community based carbon forestry, as well as wider environmental services, and REDD to reward community groups

**6. Sensitization of political leaders.** Despite intense global negotiations and generation of knowledge about the science and policy of climate change, Nepali politicians are yet to fully understand and appreciate the issue. – development and local governance vehicles,

**7. Mobilising donor networks and MDGs.** Nepal' forestry and livelihoods sector is supported by a wide array of donors, including the big international players such as the World Bank, USAID and DFID. Nepali government and civil society may lobby with these donors to advance their positions on carbon financing. This will include regular updating, lobbying and influencing country strategies.

Currently, the level of REDD awareness among CF actors is still low, and REDD is not still in their priority. Over the past one year or so, there have been some discussions and forums but these have been limited to talking clubs, with very limited practical commitment to do serious homework and field actions. As a result the process is losing the initial momentum, and it depends on MFSC's ability and commitment to work collaboratively with a number of stakeholders on the issue. Yet, the positive aspect is that multiple stakeholders have a deep commitment to work together on REDD, but this approach is still not sufficiently backed by the high level authority in the Ministry of Forests and Soil Conservation (MFSC).

## BOX 6. Some Views of Forestry Stakeholders on REDD

**FECOFUN central leader:** I am sceptical of REDD as it is still unclear whether it ensures community rights, national sovereignty, and user inclusive process.

**Donor representative:** There is so much of REDD talk, and neither government and civil society has done concrete homework how it should be implemented for the benefit of Nepal.

**MFSC Official (1):** The Ministry is yet to fully own the REDD readiness process. Without enough commitment and mandate from the high level, we cannot move this process further.

**MoEST Official :** We need to be clear on whether it is a good idea for the government to be directly involved in carbon trade or that it simply plays its role as a facilitator for supporting the agencies like FECOFUN etc for the actual trade to take place.

**MoEST Official (2):** Climate change cell with multi-stakeholder involvement within the MFSC is required. The Ministry should provide a clear TOR and the work plan to the working body.

**DoF Official:** R-PLAN is more than plan writing. We have to focus on readiness than simply on plan writing

**MFSC Official (3):** In order to prepare for REDD, capacity building both at the central level as well as in all the regional training centers should go side by side.

**International NGO staff:** The REDD process is developed in such a way that government personnel, experts, civil society, Indigenous communities and private sector can have a good interface.

**A forest user of Lamatar, Lalitpur:** I am glad to know today (November 11, 2008) that community forestry offers an additional benefit called carbon.

**A National NGO person:** Same issues and ideas are discovered in successive meetings, and I have decided to avoid such unproductive meetings.

**Source:** Based on the authors' interactions with forestry stakeholders in different REDD related meetings and workshops.

## 8. Conclusions and Recommendations

### Concluding Remark

Forests have now become a promising candidate for emissions reductions rewards, and industrialised countries are convinced about rewarding or compensating deforestation and degradation. However, the actual forms and package of rewards are still being debated. The initial thoughts of carbon-only financing have been tempered with the need to accommodate forest management co-benefits issues – including the rights of local people. Besides, there is also a growing appreciation of the complexity of deforestation and degradation, which require early actions to be funded.

An analysis of the carbon bottom line of payment justifies actions towards getting ready for this payment. If co-benefits to livelihoods and biodiversity are also considered in the REDD, then this creates opportunities for Nepal's community forestry which has been considered as a resilient socio-ecological systems not only to offset carbon by curbing deforestation, but also through providing local level institutional base to enable local communities and the poor to better adapt to growing climate risks. Some voluntary market windows and standards have already begun initiatives that link carbon with such co-benefits.

But there is still limited effort being made to explore this opportunity. At a time when UNFCCC negotiations are being intensified to get a final agreement by December 2009, Nepal community forestry stakeholders urgently need to undertake serious homework on preparing their position as well as generating field data and experience. Nepal's community forestry stakeholders also have an opportunity to lead a process to develop common international REDD position of countries emphasizing community based forest management. Organised and timely inputs have the potential to influence the Copenhagen process in favour of local communities and the poor dependent on forests.

Besides, there is now a need to test the ideas and policy approaches on the ground – such as the amount of carbon offsets by CF in different locations, methodologies for community based carbon monitoring, policy frameworks to enable community based carbon forestry, and voluntary carbon markets for community forestry. With these preparations, it is likely that community forestry systems in Nepal have the potential to benefit tremendously through a mixture of market and funding mechanisms of REDD, as well as growing voluntary markets.

## Recommendations

Based on the above review and concluding remark, five strategic action lines are suggested to enhance Nepal's forest carbon revenues.

### **Action line 1: Accelerate national REDD readiness processes**

While Nepal MFSC has already started REDD readiness process through FCPF funding support, there are signs of slow action, lack of coordination and lack of technical backstopping. Also the process seems to be dominated by professionals and technical experts with weak representation from marginalized sections of Nepal's civil society. The readiness process should be supported and strengthened by donors and independent policy research groups.

- 1.1 MFSC should constitute a multi-stakeholder working group with clear mandate from the MFSC (ministerial level). This should be done immediately (within January 2009).
- 1.2 The REDD group should work towards resolving carbon ownership issue through multi-stakeholder deliberations and technical review. This should be done when pilot actions towards voluntary market are initiated (around November 2009).
- 1.3 MFSC, REDD group, and professional organizations should work to sensitise community, general public, civil society groups, politicians

and forest managers of government, and other agencies on marketing of forest carbon issues, benefit sharing, risks and responsibilities, and the preparations needed over the next one year (till Copenhagen) and beyond. Donors should provide funding support for this. This should be done immediately (January to June, 2009).

- 1.4 REDD group should draft REDD strategies for Nepal – addressing levels of crediting, baseline, mechanisms for monitoring and verification, benefit sharing, and institutional mechanisms, addressing deforestation drivers. This should be informed by the outcomes of action line 3. This should be developed in such a way that Nepal gets ready for carbon financing activities in 2012. The earlier the strategies is endorsed, the earlier it can be implemented, with the better chances of Nepal becoming ready.
- 1.5 MFSC and stakeholders should agree and enforce forest management strategies for Terai and High altitudes and address critical policy and regulatory gaps. This is possible building on the recent rounds of negotiations (such as the Terai task force). A broad agreement should be reached by March 2009 so that there will be enough time to create necessary institutions for forest management, and then to prepare for carbon financing.
- 1.6 Department of Forests should work with other stakeholders and local communities to experiment carbon monitoring and PES, and based on the lessons, should take a lead to revise CF guidelines. Field actions should be started immediately (January 2009) and guidelines revision should be done in 2011.

### **Action line 2: Strengthen preparation for International REDD negotiations**

Given that Bonn SBSTA meeting in June is planning to draft the potential REDD agreement, it is high time for Nepal to intensify its homework on its positions and perspectives. Throughout the year 2009 until Copenhagen, MFSC and Nepali stakeholders should work collectively, and in

collaboration with MoEST, to develop position, generate needed evidence and undertake lobbying with common interest groups and countries. These activities should start in January 2009 if Nepal is to complete some meaningful groundwork for ongoing international REDD negotiations.

- 2.1 Develop national position paper for Copenhagen on REDD through multi-stakeholder consultation. This should demonstrate, among others, socio-ecological resilience of local CFUGs, estimating carbon offsets realised, benefits generated for the poor, and the potential for sustained management of forest over the long term. National research organizations groups should identify and distil evidence, insights and lessons from action lines 3 and 4 to develop the position paper.
- 2.2 Enhance national capacity to lobby for Nepal friendly international REDD policy and mechanisms as well as promote community forestry carbon of Nepal in the international voluntary markets. Donors and international organizations should bring external technical expertise to capacitate national government and non-governmental organizations. Stakeholders may work together to organize an international community forestry conference to formulate common REDD and climate change position to be shared in Copenhagen. Donors should provide financial assistance for this. Lobbying should be done with countries that prioritize community based forest management and develop a common position, both at intergovernmental and civil society levels.

### **Action line 3: Develop PES methodologies through piloting at sub-national and community levels**

While carbon sequestration services of forest ecosystems have come to the forefront due to the climate change crisis, there are indeed multiple environmental services which forests generate. There is a need to bundle diverse environmental services and institute mechanisms for rewarding the providers of such services. To date, there is hardly any experience to translate

this concept into practice, although there are some spontaneous mechanisms which look like PES in Nepal<sup>61</sup> – so there is a need to pilot, experiment and innovate PES methodologies and institutions that help market carbon and other environmental services, as well as equitably distribute the revenues. These actions should be undertaken immediately so that there will be enough lessons to inform REDD readiness, international REDD negotiations, and implementation of post-2012 climate regime.

- 3.1 Undertake collaborative pilot/action research to develop technical methods and institutional processes for carbon and other environmental services. Undertake this in at least 20 sites in different socio-economic and ecological contexts. Department of Forests, Department of Watershed and Soil Conservation, bilateral projects, NGOs and forest user groups should undertake pilots with support from donors and international organizations.
- 3.2 Agencies should be identified and/or developed accredited for developing methodologies for measuring and monitoring emission reductions (including accounting for leakage and any non-permanence risks). Looking at the lessons from other countries such as Costa Rica and Mexico, it would be useful to think of some semi-autonomous institutions to regulate and facilitate environmental services marketing in Nepal.

#### **Action line 4: Undertake resource analysis, data generation and monitoring**

It is widely accepted that ecosystem data are limited and not up to date in Nepal. In order to maximize benefits from the marketing of environmental services, strong analytical based, including modelling of socio-ecological dynamics is necessary not only to convince the buyers but also convince the policy makers.

- 4.1 Forestry research agencies should undertake analysis of carbon offsets by forest types in different physiographic regions. Non-governmental

<sup>61</sup> Such as Annapurna Conservation Area community groups receiving part of the revenue from eco-tourism, and Kulekhani watershed groups which received some financial benefits from the hydropower royalty paid to the government.

and governmental research organizations should develop collaborative projects to do this.

- 4.2 Develop national level carbon and environmental services database. This can be generated through the actions above and a national level government or non-governmental organization may host the data base in easily accessible way. Funding is needed to organize this database.
- 4.3 Analyze data and undertake modelling of climate, ecosystems and the production of environmental services. Academic institutions may work with other stakeholders to identify issues for modelling and develop prioritised models for practical and policy applications.

#### **Action line 5: Promote community based forestry in the voluntary markets**

Given that REDD will take still a few years to come into effect, and also recognizing that the voluntary market is already proliferating, it is recommended that Nepal's forestry stakeholders undertake experimental marketing of forest carbon in the voluntary market. This will enable stakeholders to learn what it takes to sell carbon in the market, and most aspects of methodology practiced in the voluntary market will also be useful in the REDD process. Besides, by 2012, there will have already some concrete insights into whether, how and to what extent voluntary markets should be pursued when some form of REDD begins to be operational. These activities should be initiated as soon possible so that some concrete lessons can be gained by 2012.

- 5.1 Carry out adequate research on international market to identify credible buyers and standards. Donors should assist national service providing organizations to undertake marketing assessment.
- 5.2 Support community forestry groups to develop carbon offset enterprises targeting voluntary carbon markets. Explore both national and international markets. Donors, government and service providing organizations should work together on this.





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