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**Government of Nepal**  
**Ministry of Forests and Soil Conservation**



**Nepal's Readiness Preparation Proposal**  
**REDD**  
**2010 - 2013**

**April 19, 2010**

# Introduction

## ***Vision for REDD***

Our vision for Nepal's REDD strategy is that by 2013 and beyond, our greenhouse gas emissions resulting from deforestation and forest degradation will be significantly reduced by forest conservation and enhancement, by addressing the livelihoods concerns of poor and socially marginalized forest dependent people, and by establishing effective policy, regulatory and institutional structures for sustainable development of Nepal's forests under the forthcoming new constitutional framework.

## ***Underlying Principles***

To achieve this vision our R-PP will provide Nepal's roadmap for developing and implementing the REDD strategy, based on certain underlying principles agreed by representatives of all stakeholder groups in Nepal's forest sector. These include:

- Aligning the National REDD Strategy with Nepal's overall development strategy, and with the new priorities being established by the upcoming Constitution.
- Enhancing coordination between different sectors and government agencies responsible for these sectors to ensure sustainability and avoid conflicts between national and sectoral policies and programs.
- Ensuring multi-stakeholder involvement in aspects of REDD that reflects the diversity of actors in Nepal's forestry sector from both government and civil society and including those stakeholders from other sectors such as agriculture, local development, energy and infrastructure.
- Utilising and building the capacity of existing multi-stakeholder institutions at national, sub-national levels for designing and delivering the REDD strategy and for sharing benefits from REDD
- Linking Nepal's REDD Strategy with national priorities for addressing poverty and enhancing the livelihoods of people who are dependent on forest resources. This means that implementation of REDD has potential co-benefits for Nepal's poverty reduction strategy.
- Using the REDD Strategy to capture and fully value the wide range of ecosystem benefits coming from forests including maintenance of biodiversity, soil and water conservation, sustainable development and economic growth as well as the value of timber and non-timber forest products.
- Establishing a clear link between carbon ownership rights and land tenure and by clarifying issues of rights to forests as a priority during the preparation of REDD.
- Recognising the important role that forests play in adaptation to climate change as well as their role in climate change mitigation through REDD
- Building and expanding on Nepal's internationally recognized successful experiences with reducing deforestation and forest degradation and forest conservation and enhancement

through participatory approaches to forest management and benefit sharing and by encouraging further piloting and sharing from during the REDD preparation phase

- Seeking and coordinating international funding support from Nepal's development partners to ensure consistency of approach and greater cost effectiveness of REDD

### ***Approach***

The approach to REDD that we have followed so far and that we will continue to be adopt during the preparation period is outlined in detail in this document. We recognize the important contribution that the REDD process had already made in bringing together a diverse range of government, civil society and community stakeholders in Nepal's forestry sector to discuss and reach consensus on the strategic options for REDD and on Nepal's priorities for action. We realize that a continuation of this consensual and participatory approach will be required for REDD to be successful. We fully recognize the difficulties that lie ahead in tackling some of the critical drivers for deforestation and forest degradation however we are fully committed to working through this multi-stakeholder approach to addressing them.

We also recognize that our approach to REDD and preparation of this R-PP has already significantly contributed to building greater awareness and capacity across a range of stakeholder groups and forest sector institutions. Again, a continuation of this approach to capacity building and greater awareness across all stakeholder groups from national to community level will be needed for Nepal to reach 'readiness' in 2013.

# Forest Carbon Partnership Facility (FCPF)

## *Readiness Preparation Proposal (R-PP)*

Country Submitting the Proposal: NEPAL

Date submitted: 19 April 2010

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### 3. Executive Summary

Nepal's landscape and forest endowment reflects its topographic, physiographic and cultural diversity and results in a complex mosaic of agriculture and forests. The area of the country is 14.78 million ha, of which forest covers about 5.8 million ha i.e. 39.6% of this. With population growth and forest product and land demands, deforestation and degradation of the forest could be aggravated in the years to come, affecting the livelihoods of a large number of forest-dependent people and Nepal's environmental sustainability. The Government of Nepal is committed to REDD through reversing deforestation and forest degradation, conservation of existing forest and enhancing forest carbon stocks, while addressing livelihoods concerns at the same time.

Nepal's Government has established a three-tiered institutional mechanism for implementing REDD, consisting of the REDD Multi-sectoral, Multi-stakeholder Coordinating and Monitoring Committee as the apex body; the REDD Working Group at the operational level (RWG); and the REDD-Forestry and Climate Change Cell as the coordinating entity. All three bodies have been working together to prepare the REDD National Strategy and implementation plan. In addition, a Stakeholder Forum has been established to engage wide range of stakeholders in the entire REDD process. Since the state is under a restructuring process, these institutional arrangements will be adjusted in line with the new constitution.

The consultation process for the development of RPP began with a national-level awareness workshop on May 5, 2009. All together 3,180 individuals were consulted through workshops and meetings. 57 workshops were held at national (17), regional/district (13) and community level (27) with participation from a range of stakeholders such as indigenous peoples and local communities, forest dependent people, *Dalits*, women, civil society organizations, government departments, political parties, the media, universities, international organizations, constitutional assembly members, projects, international development partners, and the private sector. Separate workshops were held targeting to indigenous peoples (4), women (3) and *Dalits* (1). A variety of outreach materials were developed and used to develop understanding on REDD. As a result of the consultations, this RPP has been developed. This document includes a comprehensive consultation and participation plan to be implemented during the readiness phase between 2010 and 2013. The main components of the plan include capacity building, awareness, and consultation.

The preliminary analysis indicated that the drivers of deforestation and forest degradation are diverse, complex and different in the various physiographic regions. Nine direct drivers and several indirect drivers have been identified. Many underlying causes are a result of a combination of internal and external factors to the forestry sector. Underlying causes include socio-economic factors such as population increase and its distribution, poverty, land scarcity and the status of Nepal's level of economic growth and commercial development. Governance and cultural factors are both cross-cutting and are also related to a number of the direct drivers. Information and data for the analysis were not always readily available and need to be further explored or generated. Such further information and analysis is crucial for the identification of REDD strategic options. Supplemental analysis will therefore be conducted to better define the causes of deforestation and forest degradation and to cover various physiographic regions in more detail.

The consultation process resulted in preliminary identification of strategic options for REDD. Major options include improvement in policies/regulations; enhanced forest sector governance; improved management practices and technical skills; investment in forestry and non forestry employment generation; demand based land-use planning; transfer of forest management and tenure rights to communities; sensitization of various actors in the sector;

and investment in wood efficient and alternative energy technologies. In addition, the development of synergy between the forestry and other sectors, including infrastructure, agriculture, and energy is also critical as a cross-cutting strategy. Over the next few years, Nepal will prepare its REDD Strategy. This will be closely aligned with the preparation of a new National Forest Sector Strategy that has already been identified as a priority action for the next interim plan period (up to 2012/3). The REDD strategy will also be aligned with Nepal's strategy for climate change adaptation, especially considering the forest sector's proven contribution to poverty reduction. During the preparation process, the proposed strategic options will be screened and prioritized based on key analytical assessments and consultations with multi-sectoral stakeholders from community to national level.

Nepal has demonstrated that community involvement in forest management can significantly contribute to reducing deforestation and forest degradation especially in the Mid-Hills and that this significantly contributes to forest conservation and enhancement of carbon stocks. Management rights in most of the community management models are transferred to communities whereas land tenure rests with the government. A key principle is that carbon rights should be tied to land and forest tenure rights. In the next few years carbon ownership for all types of forest need to be resolved as a priority during RPP implementation. Similarly, clear and legally defined benefit sharing mechanisms that can deliver benefits to grassroots level communities, will be an important factor for REDD success. To clarify institutional arrangements, further studies and consultations with stakeholders from local level to national levels will be carried out. A hybrid approach to REDD implementation at both national and sub-national levels is proposed although details of these arrangements still need to be finalized through pilots and further consultation and studies. In addition, Nepal is proposing to use a trust fund model for financial transaction from which payments are made on the basis of a public carbon registry maintained by the REDD cell. Although there are a couple of pilot projects that are already being implemented in Nepal, their findings will not be sufficient to develop the implementing framework. Therefore the process of finalizing the institutional arrangements includes conducting and synthesizing studies, policy development, and designing and piloting the institutional framework.

The REDD strategic options aim to contribute to reducing GHG emissions, conservation of existing forests and enhancing forest carbon stocks. Strategic Environmental and Social Assessment (SESA) is essential both for avoiding negative impacts and ensuring positive or additional REDD benefits, especially in terms of securing livelihoods improvements and the rights of indigenous peoples and local forest-dependent communities including women and *Dalits*; promoting the conservation of biodiversity; and maintaining cultural heritage, gender equity, capacity development and good governance.

The analysis of the existing forest datasets has concluded that the Land Resource Mapping Project is the most comprehensive forest assessment available for Nepal. A new Forest Resource Assessment (FRA) project has recently started funded by the Government of Finland. This will run for five years (2010-2014) and will conduct forest resource assessment for the whole country and is planning to generate national-level baseline data. The LRMP data hold the potential for creating a provisional biomass surface for Nepal that can be used as a first reference for determining changes in forest cover and degradation. To accurately capture the trends between LRMP and the new assessment, it is envisioned that some interpolation will be required. A separate study will identify the best dataset to be used and it is expected that some reclassification of historic remote sensing data will be required for this.

Nepal is planning to develop a country wide spatial regression model that is imbedded in a

CGE (Computable General Equilibrium) model. The spatial regression model will enable linking GIS based information from the LRMP and FRA projects to economic variables and parameters and use this to make projections of carbon stock changes under different scenarios.

An integrated monitoring and reporting system to integrate national, regional/district and management unit level will be developed to account for the contributions of all levels and to allow for fair sharing of the benefits based on actual performance. Nepal is proposing to adopt tier II for MRV. The data collection will be based on a combined method using remote sensing data and periodic ground inventory measurement throughout all major forest types and physiographic regions of Nepal coordinated with the methodology to be used in the upcoming FRA. The design and implementation of MRV will involve government and non-government organizations including indigenous peoples and local communities, and other institutions with each having clearly defined roles and responsibilities.

As part of the proposed monitoring, data management and reporting system, a National Forest Information Management System (NAFIMS) will be established which includes a Central Forest Geo-Database. The Department of Forest Research and Survey will oversee the collection, storage, sharing and management of nationwide forest related spatial data.

Monitoring and evaluation of the implementation of R-PP will be coordinated through REDD-Forestry and Climate Change Cell. The timeframe for implementing activities in most of the components are included under the same components. A skeleton for M&E has been developed and is planned to be finalized by the end of June 2010.

The total estimate for RPP implementation is US\$ 7.654 million which is expected be covered by the Nepal Government and various donors as in the following table.

Government of Nepal	335,000 US\$
FCPF	3,595,400 US\$
DFID/SDC through funds already committed for Nepal National Forest Programme	1,447,500 US\$
Government of Finland (through funds already committed to FRA project)	780,000 US\$
JICA (TBC)	360,000 US\$
USAID (TBC)	1,136,600 US\$
Total	7,654,500 US\$

## Abbreviation and Acronyms

ACOFUN	Association of Collaborative Forest Users, Nepal
ANSAB	Asia Network for Sustainable Agriculture and Bioresources
BISEP-ST	Biodiversity Sector Programme for Siwalik and Terai
CBOs	Community Based Organizations
CBS	Centre Bureau of Statistics
CCBA	The Climate, Community and Biodiversity Alliance
CF	Community Forest
cft	Cubic Feet
CFUG	Community Forest Users Group
CGE	Computable General Equilibrium
COP	Conference of Parties
CPP	Consultation and Participation Plan
DANAR	<i>Dalit</i> Alliance for Natural Resources
DAO	District Agriculture Office
DDC	District Development Committee
DFCC	District Forest Coordination Committee
DFOs	District Forest Offices
DFRS	Department of Forest Research and Survey
DFSP	District Forest Sector Planning
DISCOs	District Soil Conservation Officers
DNPWC	Department of National Park and Wildlife Conservation
DoF	Department of Forests
EIA	Environmental Impact Assessment
ESMP	Environmental and Social Management Plan
FAO	Food and Agriculture Organization of United Nations
FCPF	Forest Carbon Partnership Facility
FECOFUN	Federation of Community Forest Users, Nepal
FIS	Forest Information System
FM	Frequency Modular
FPIC	Free Prior and Informed Consent
FRA	Forest Resource Assessment
FSCC	Forestry Sector Coordination Committee
GDP	Gross Domestic Product

GHGs	Green House Gases
GIS	Geographical Information System
GLCN	Global Land Cover Network
GO	Governmental Organization
GPS	Geographical Positioning System
HDI	Human Development Index
HIMAWANTI	Himalayan Grassroots Women's Natural Resources Management Association Nepal
HR	Human Resource
HRI	High Resolution Imagery
ICIMOD	International Center for Integrated Mountain Development
IEE	Initial Environmental Examination
ILO	International Labor Organization
INGO	International Non-governmental Organization
IoF	Institute of Forestry
JICA	Japanese International Cooperation Agency
K:TGAL	Kyoto: Think Global, Act Local
KAFCOL	Kathmandu Forestry College
LFP	Livelihoods and Forestry Programme
LRMP	Land Resource Mapping Project
LSGA	Local Self Governance Act
M&E	Monitoring and Evaluation
MoA	Ministry of Agriculture
MoE	Ministry of Environment
MoFSC	Ministry of Forests and Soil Conservation
MRV	Monitoring Reporting and Verification
NAFIMS	National Forest Information Management System
NAMA	Nationally Appropriate Mitigation Action
NAPA	National Adaptation Program for Action
NEFIN	Nepal Federation of Indigenous Nationalities
NFA	Nepal Foresters' Association
NFI	National Forest Inventory
NGOs	Non-governmental Organizations
NORAD	Norwegian Agency for Development Cooperation

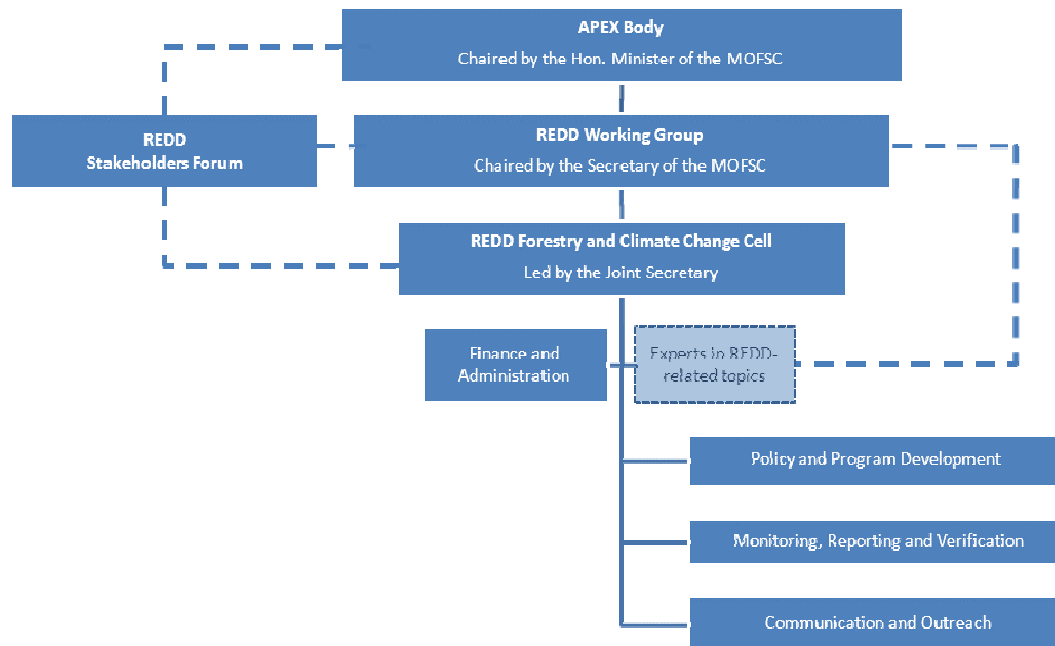
NPC	National Planning Commission
NPR	Nepali Rupees
NRM	Natural Resource Management
NSCFP	Nepal Swiss Community Forestry Project
NTFPs	Non-Timber Forest Products
OP	Operational Plan
PES	Payment for Environmental Services
PSPs	Permanent Sample Plots
RECOFTC	Regional Community Forestry Training Centre
REDD	Reducing Emissions from Deforestation and Forest Degradation
R-PP	Readiness Preparation Proposal
RS	Remote Sensing
RWG	REDD Working Group
SDC	Swiss Development Cooperation
SESA	Strategic Environmental and Social Assessment
SNV	Netherlands Development Organization
SP	Service Provider
TAL	Terai Arc Landscape
TCN	Timber Corporation of Nepal
ToF	Tree Outside Forests
ToR	Terms of Reference
ToT	Training of Trainers
UNFCCC	United Nations Framework Convention on Climate Change
UN-REDD	United Nations REDD
USAID	United States Assistance for International Development
USD	United States Dollar
VAT	Value-Added Tax
VDC	Village Development Committee
VFCC	Village Forest Coordination Committee
WB	The World Bank
WDO	Women Development Office
WWF	World Wildlife Fund

## Component 1: Organize and Consult

### 1a. National Readiness Management Arrangements

On January 26, 2009 the Ministry of Forests and Soil Conservation (MoFSC) established by Ministerial Decree, a three-tiered institutional mechanism (figure 1a. 1) for implementing REDD, consisting of the REDD Multi-sectoral, Multi-stakeholder Coordinating and Monitoring Committee as the apex body; the REDD Working Group (RWG) at the operational level; and the REDD-Forestry and Climate Change Cell as the coordinating entity. All three bodies are working together to prepare the REDD National Strategy and implementation plan.

Figure 1: Institutional Structure of REDD Governance



The apex body is an inter-ministerial institution for REDD that ensures inclusiveness from private sector, public sector and civil society organizations. It is chaired by the Minister, MoFSC, who is responsible for the overall coordination of REDD activities. The apex body includes National Planning Commission, which is in charge of strengthening the coordination and streamlining of periodic development plans, development partners and sectors. It includes members from the Ministry of Finance, Ministry of Environment, MoFSC, Ministry of Tourism and Civil Aviation, Ministry of Energy, Ministry of Agriculture and Cooperative, Ministry of Land Reform and Management, and Ministry of Industries. According to the national policy framework, sectoral ministries are in charge of sharing sectoral plans and strategies and coordinate their implementation with the other sectors.

By decision of the apex body on March 5th 2010, three additional member ministries namely Ministry of Local Development, the Ministry of Physical Planning and Works, and the Ministry of Science and Technology were included. With this recent change, the apex body is composed of three additional representatives from each of the member, one each from the private sector, civil society and government organizations totaling to 49 members.

The main role of the body is multi-sectoral coordination and cooperation for the planning and implementation of REDD activities at the highest level. It endorses plans related to REDD and forestry and climate change. In addition, it provides advice, oversees and monitors the planning process and the implementation of activities on REDD. Normally, it meets in every six months.

A REDD Working Group (RWG) under the leadership of the Secretary, MoFSC is functional. It ensures the institutional representation of different forestry stakeholders during the process. The members were nominated by the MoFSC, considering their degree of involvement during their professional and institutional career on forestry and climate change related issues. Currently, the RWG includes nine members representing government, indigenous peoples groups, community forest user groups, private sector, and development partners. During the last year, the main responsibilities of the RWG has been technical and institutional support, advise REDD Cell on the preparation of the R-PP and also by providing financial and institutional support when necessary.

In the next phase, the RWG will be a multi-sectoral body, including one public-sector representative from each of the key REDD-related sectors, including environment, agriculture, energy, and local development; two representatives from the forestry sector; two representatives from civil society; and one representative from the donor community. To ensure the effectiveness and efficiency of the REDD implementation process; the RWG will have a maximum of 12 members. The RWG is expected to proactively provide innovative ideas, monitor program activities, and prepare a comprehensive REDD Strategy. In addition, the members of the RWG will advocate and lobby at the political level to guarantee that other stakeholders in their constituencies are aware of and support the REDD readiness plan. Each member will devote fifty days per year to RWG. The RWG reports its activities to the Apex body and REDD Forum. Disclosure of its activities and achievements will be made through publication in web site, production and distribution of extension materials and discussion in REDD forum and other consultative workshops.

The REDD-Forestry and Climate Change Cell, under the MoFSC is the lead institution to undertake REDD readiness activities in Nepal. The REDD Cell is responsible for coordinating the readiness process at the national and sub-national levels among diverse stakeholders. The REDD Cell is comprised of three sections:

- The Policy and Program Development Section is responsible for developing REDD-related forestry policies and monitoring their implementation. This section will design programs related to REDD and monitor the results including the development of capacity-building programs and activities. This section also provides technical support to the MoFSC on the negotiation process, carbon markets, and other forestry and climate change related issues.
- The Monitoring, Reporting and Verification Section is responsible for the technical aspects of the REDD Cell. A Senior Forest inventory specialist from the Department of Forest Research and Survey (DFRS) will be appointed soon. Once the REDD process moves forward, this section will be responsible for establishing and implementing the deforestation and forest degradation reference scenario, the monitoring and verification system and carbon accounting system.
- The Communication and Outreach Section is responsible in designing and disseminating REDD information, including REDD-related pilot projects outcomes. This section designs and implements extension and capacity-building activities for different stakeholders, including the



government, civil society, and private sector. In addition, it will provide feedback to the REDD Cell and various stakeholders, to ensure that their concerns are properly addressed during the REDD implementation process.

- A REDD Stakeholders' Forum will serve as the principal outreach and communication platform and is already operational. It was created by decision of the RWG for consultation and enhancing ownership of the REDD process. It is coordinated by the REDD Cell, and includes representatives from the private sector, civil society, media, government organizations, community-based organizations, local and international NGOs, donors, academia, research organizations, and all stakeholders interested in the Climate Change and the REDD process. The Forum increased access to information of stakeholders and enhanced their role in the decision-making process. The involvement of different stakeholders ensures the transparency and accountability during the readiness and implementation process. The Forum has provided feedback to the REDD Cell regarding the R-PP preparation process and its content. In the future, it is expected to continue to provide feedback throughout the process.

The Administration and Finance Unit takes care of the management of the budget and logistics of the REDD Cell. This unit ensures the legitimacy of financial plans, as established by the REDD Cell. An Advisory Section also supports the REDD Cell's work. Technical advisors include national and international experts on REDD-related issues, who are invited to support the Cell as needed.

From January 26, 2009 to April, 2010, the three bodies of the REDD structure have undertaken several activities. A summary of key activities is described in Table 1a.1. Note that the consultation activities carried out during the R-PP process are not included under this section. These activities are detailed in Component 1b.

Since Nepal is currently drafting a new constitution, there are many uncertainties in terms of future governance and institutional structures for forests. It is expected that the new constitution, which is anticipated by the end of May 2010, will give clear ideas but restructuring based on this new constitution will take time. Hence, the structure proposed in the RPP may need adjustment accordingly.

Table 1a.1. Key decisions by the three bodies of the REDD Structure in Nepal

Dates	Key events	Decision/implications
26 Jan. 2009	Ministerial decision on REDD institution formation	Three tiers of REDD institutions formed (Apex body, RWG, REDD cell)
15 May 09	Formal inauguration of REDD Cell	REDD Cell established
28 May 09	Prepare Readiness Preparation Process	Procurement plan submitted to FCPF
14 July 09	Preparation for COP 15	Discussion with different stakeholders in cooperation with Ministry of Environment
23 Jul 09	R-PP TOR preparation	REDD Cell to facilitate the TOR preparation in consultation with experts.
10 Aug. 09	Letter of Interest notification	Call for Letters of Interest for sub-components 1 (b) & 2 (a)
22 Sept 09	Consultative Workshop on REDD Negotiation, Pre- Bangkok/	Discussions on REDD negotiation process; carbon finance: opportunities and challenges

	Barcelona climate change talks	
7 Oct. 09	Procurement plan revised	Revised procurement plan submitted to FCPF
12 Oct 09	Climate change and <i>Dalits</i> communities in Nepal	Sharing on REDD initiatives and climate change in Nepal
14 Oct 09	Consultative workshop on REDD: Sharing outcomes of Bangkok and Barcelona	Nepal's proposed position in CoP 15/CMP5
20 Nov. 09	Sharing R-PP progress status to wider stakeholders	Update of R-PP progress, and plan for apex body meeting and pilot mainstreaming
25 Nov 09	National REDD dialogue	Process and progress of R-PP in Nepal
26 Nov 09	National REDD Workshop	Sharing on R-PP preparation in Nepal
4 Feb. 10	R-PP progress update	Agenda finalized for apex body meeting
1 March 10	R-PP process dissemination to wider stakeholders	Sharing of REDD mechanisms and R-PP update
05 March 10	Formalize the apex body	Complete structure of apex body defined and NPC facilitates mainstreaming REDD.
07 April 10	RWG finalizing RPP	Stakeholders agreed in draft R-PP
12 April 2010	Apex body meeting	Endorsed R-PP draft and mandated REDD Cell to submit to FCPF

Table 1a.2: Summary of National Readiness Management Arrangements Activities and Budget						
Main Activity	Sub-Activity	Estimated Cost (in thousands US\$)				
		2010	2011	2012	2013	Total
Meeting	Apex body meeting (twice a year)	1	3	3	3	10
	Stakeholder Consultation Forum meeting (4 times /year)	1	3	3	4	11
	RWG Meeting (6 times/ year)	2	8	8	8	26
Office materials	Stationary and office management cost	7	14	16	18	55
Equipments	GPS, computers, software	10	15	5	5	35
Vehicle Purchasing & maintenance	4W Jeep -1, Mo-bike- 3		67	3	3	73
	Furniture & Fixture		2	3	2	7
Human resources	Staff salary	16	28	29	29	102
	Capacity building	13	37	40	42	132

Total	50	177	110	114	451
Government	17.4	30.8	32.2	32.6	113
FCPF		86.2	77.8	81.4	245.4
DFID/SDC through funds already committed for Nepal National Forest Programme					
Government of Finland (through funds already committed to FRA project)					
JICA (TBC)		60			60
USAID (TBC)	32.6				32.6

## 1b. Stakeholder Consultation and Participation

### Consultations in the development of the R-PP:

Each component of the R-PP development process included various consultation and outreach activities designed to gather feedback from policy-makers, technical experts, other relevant stakeholders, indigenous peoples and local communities, forest users groups, women, *Dalits*<sup>1</sup>, forest dwellers, and vulnerable communities, about the design of REDD. This component summarizes the consultation and outreach activities conducted for various aspects of the R-PP and presents the Consultation and Participation Plan for the REDD readiness phase.

It is divided into four parts: (1b.1) Consultation and Participation; (1b.2) Outcomes, Lessons and Next Steps; (1b.3) the Consultation and Participation Plan; and (1b.4) Budget.

#### 1b.1: Consultation and Participation

##### 1b.1.1 Overall Consultation and Participation

The consultation process began with a national-level awareness workshop on May 5, 2009. From the beginning of the R-PP process, a number of consultation meetings and workshops were held at different levels with a range of stakeholders on various issues and components of the R-PP. Thirteen institutions, including community federations, civil society organizations, national associations, academic institutions, private consulting firms and the REDD-Forestry and Climate Change Cell were involved in carrying out the consultation process.

<sup>1</sup> <sup>1</sup> Dalits: socially marginalized groups under the caste system

In total, 57 workshops (17, 13 and 27 at the local, regional and national level respectively) were conducted targeting a range of stakeholders. Four of these workshops were held with Indigenous Peoples, three with women and one with *Dalit* communities. A total of 3,075 individuals participated in these workshops, including various stakeholders identified through different consultation meetings and workshops. Expert consultations were another important activity conducted to capture valuable insights from individuals working in various fields. In all, 105 individuals were consulted during these expert consultations, including forestry experts, government officials, indigenous people, media representatives, journalists, project staff, forest users' federations, *Dalits*, training and extension specialists, academics and researchers. In addition to these events, a number of activities were organized by various REDD-related pilot projects, which helped in the creation of awareness and provided inputs into several REDD-related issues. The summary of consultation activities carried out under various aspects and the participants in each are presented in Annex 1b.1.2

#### 1b.1.2 Consultation and Participation Plan Development Process

The consultation and participation plan development process was facilitated by an inclusive consortium of seven civil society organizations: Association of Collaborative Forest Users, Nepal (ACOFUN); *Dalit* Alliance for Natural Resources (DANAR); Federation of Community Forest Users, Nepal (FECOFUN); ForestAction Nepal; Himalayan Grassroots Women's Natural Resources Management Association (HIMAWANTI) Nepal; Nepal Federation of Indigenous Nationalities (NEFIN); and Nepal Foresters' Association (NFA). The main aspects of the plan development included:

- Identification of stakeholders, their interests, roles and responsibilities in the REDD process;
- Development and piloting of specific outreach activities; and
- Development of a consultation and participation plan for REDD policy development and implementation

A detailed summary of the events conducted is presented in Annex 1b-1.2 and a description of the various types of activities conducted during the design process is included below. A description of the specific events and activities follows, including workshops, expert consultations; resource centre assessments and media outreach efforts, such as radio and television programs.

#### Awareness, Consultation and Validation Workshops

A total of 16 awareness and consultation workshops were conducted at three different levels—national (1), regional/district (3) and community (9)—covering all five development regions and the three main ecological zones of Nepal (Terai, Middle Hills and Mountains). Three community level workshops were also held, targeting women, *Dalits* and Indigenous People. The primary objectives of these workshops were to:

- Develop an understanding among different stakeholder groups about climate change, forests and REDD;
- Identify various groups of stakeholders with an interest in forests and REDD, and the potential role and socioeconomic implications for each of engagement in

REDD;

- Analyze existing outreach practices and explore appropriate media channels and outreach strategies for REDD; and
- List out issues related to REDD implementation.

A total of 803 participants from various stakeholder groups attended these workshops. These participants included 488 people from forest-dependent communities and Indigenous Peoples (out of which 375 were women), 193 representatives from civil society organizations, 55 from government agencies, 11 from various political parties, 13 from the private sector, 12 from academic institutions, and 31 from the media. In total, 186 and 146 participants were from indigenous people and *Dalit* communities, respectively.

After synthesizing the findings from the above workshops and writing the initial draft report, sharing workshops were conducted at the local, regional/district and national levels. Of these six workshops, one was organized in a vulnerable indigenous community and one in a Madhesi community. A total of 237 participants attended the sharing workshops. These participants included 25 representatives from government agencies (including the District and Village Development Committees), 5 from political parties, 88 from forest-dependent communities, 87 from civil society organizations, 10 from the private sector, 11 from the media, and 11 from academia. Among the participants, 73 and 12 participants attended from indigenous and *Dalits* communities, respectively. The purpose of these follow-up events was to share the main findings of the initial consultation and outreach workshops, as well as the basic elements of the proposed plan, with various stakeholders at the local and district levels to solicit their reaction and input in order to inform further development and refinement of the plan.

#### *Expert consultations*

Expert consultations were another important source of information for the overall design of the Consultation and Participation Plan. A total of 25 experts, including government officials, civil society leaders, journalists, media specialists, indigenous peoples, and project administrators were consulted on various aspects of the Consultation and Participation Plan. The list of individuals consulted is presented in the detailed report.

#### *Resource centre assessments*

An assessment of two resource centers was carried out to evaluate the extent to which they serve as a reliable and accessible source of information on issues related to climate change, forests and REDD. Two resource centers were assessed—the Central Forest Library of the Department of Forest Research and Survey under the MoFSC in Kathmandu (a government entity), and the Lamatar Community Resource Center in Lalitpur District (a community-based resource center established with donor support). The assessments revealed a need for better management and accessibility of resource materials in general, and an updating of materials relevant to REDD in particular.

#### **Specific Consultation and Outreach Materials Employed**

A range of consultation and outreach materials were developed to facilitate the consultation and outreach activities. Some of these materials were used during the workshops, while others were tested via other channels. The materials were tested for their effectiveness in delivering concepts and messages, and in promoting broader understanding among participants; as well as to estimate the associated costs, quantity,

timing and other logistical considerations. The main materials and media used include leaflets (1), brochures (1), flip charts (1), posters (1), newspaper articles (4, including one in a regional language), FM radio program (5, including one in a regional language), documentary films (1), and agendas for the various workshops conducted. Printed and media materials such as leaflets, brochures, posters and the documentary were in high demand among various stakeholders and were also used extensively by other REDD projects implemented in Nepal.

## 1b.2: Outcomes, Lessons and Next Steps

### 1b.2.1 Outcomes

The consultation and outreach activities produced several important outcomes, which are listed below.

- A range of stakeholders relevant to REDD were identified, along with their interests, roles, responsibilities and impacts with respect to forests and REDD. A list of stakeholders is presented in Annex 1b-1.2.
- A prioritized list of media and outreach channels and materials was produced. This list, and accompanying information, was used in the development of a set of broad-based outreach activities.
- Specific outreach materials were prepared and tested during the workshops. Insights were thus gained on how to revise them to be more effective. In addition, consultations with media experts provided basic information about the outreach methods and strategies. Similarly, consultations with heads of the extension unit of the Department of Forests (DoF) has given insights about their existing outreach system.
- As a direct result of the workshops, the awareness, ownership and commitment of stakeholders was expressed and increased.
- Climate change and REDD was mainstreamed among the consortium member organizations.
- The consultation and outreach piloting activities enhanced both collaboration and capacity building among team members of the consortium and their respective organizations, and hence enhanced ownership of the REDD mechanism. Trainers and participants developed important trainings, skills and conceptual knowledge about climate change and REDD at the national, district and community levels.
- During the consultation process, various capacity building needs were identified.

### 1b.2.2 Key issues to be address during the readiness period

The consultation workshops conducted at different levels have raised the following issues:

- Indigenous peoples have expressed concern that initiatives like REDD should respect and recognize the rights of indigenous peoples over traditional knowledge, skills, customs, customary legal systems while formulating, implementing and evaluating policies, plans, and programs related to climate change and REDD. Women are concerned that the adoption of REDD should not affect their current practices of collection and use of forest products to sustain

their livelihoods. Similarly, some *Dalits* communities are concerned about whether they can maintain their traditional occupations, particularly the *Bishwokarma* (blacksmith) who burn charcoal for iron workshops. Communities mentioned various other issues, like ensuring the participation of women in the decision-making process and an equitable benefit-sharing mechanism.

- The government agencies and their representatives, particularly the DoF and the District Forest Offices (DFOs) are concerned about whether existing institutional structures and human resources are sufficient—both in terms of their number and capacity—to implement REDD. They have also pointed to the need for mechanisms to combat against specific drivers of deforestation and forest degradation, and for appropriate methodologies for resource assessment and management.
- Civil society organizations, including Nepal Federation of Indigenous Nationalities (NEFIN) and Federations of Forest User Groups have stated that the REDD mechanisms should ensure the rights of indigenous peoples and local communities over the sustainable management and use of forests, as well as the right to exercise customary practices and laws with their full and effective participation. They have also advocated for an equitable benefit-sharing mechanism. Finally, private sector representatives have serious concerns about whether there will be alternative source of raw materials and energy for forest-dependent enterprises.

In addition to these specific issues, the workshops also raised some broader issues. First, there is a perceived need to understand the broader political economy of climate change and REDD. Second, some stakeholders voiced their concern that we should not compromise the national sovereignty. Similarly, some of the experts have raised the issue that we need to think holistically in terms of the bundling of different environmental services like carbon, biodiversity, watershed services and natural beauty, rather than concentrating only on REDD.

#### 1b.2.3 Key Lessons

- The level of understanding on climate changes and REDD among all the stakeholders is diverse and low.
- The capacity of various stakeholders to facilitate different components of awareness raising and consultation is limited to a few individuals at the national level.
- Promoting an inclusive consortium for REDD implementation can enhance ownership and commitment to the program, and thus increase the chances of its success.
- Non-forestry ministries and government bodies have limited interest in REDD.
- Community members feel that scientific forest management is essential for their future, whether they benefit from REDD or not, and they also see potential benefits from other PES mechanisms.
- Indigenous peoples demanded to secure for Free Prior and Informed Consent (FPIC) over any policy and program that on climate change and REDD process that would affect their sustainable livelihood and fundamental rights.
- Experts feel that a stand-alone approach like REDD may not be beneficial enough

due to high transaction costs. Therefore, there is a need to bundle REDD with other environment services, especially biodiversity and watershed services.

- Experts have clearly expressed that adaptation and mitigation activities on climate change should occur simultaneously and there is a great role of forest in adapting poor and marginalized people in Nepal.

#### 1b.2.4: Next steps

Through the workshops and other consultation and outreach activities, three main components of the Consultation and Participation Plan emerged.

- *Awareness raising and outreach*, including the production and dissemination of a wide range of written, audio, video and other materials, media and activities.
- *Capacity building*, aimed at enhancing the ability of key stakeholders to understand, use and share information about climate change, forests and REDD.
- *Consultation* with stakeholders at various levels, through workshops, roundtable discussions, and expert consultations.

These three components are closely integrated. For instance, the awareness-raising and outreach activities also set the stage for building capacities and promoting collaboration at the sub-national level. Trainers are also able to gain local experience, knowledge and perceptions of climate change and REDD. Similarly, the capacity building activities equip the facilitators with the necessary knowledge and skills to facilitate various consultation workshops. These components are elaborated on in more detail, including a discussion of specific activities proposed under each, in the following section, which presents the Consultation and Participation Plan.

### Consultation and Participation Plan

This consultation and participation plan has been developed considering the diverse socio-economic circumstances and unique political situation in Nepal. It aims to promote a transparent and inclusive REDD mechanism to help combat the adverse effects of climate change, while benefitting forest-dependent communities and protecting biodiversity.

This plan strongly reflects on the consultation and outreach activities that were carried out. Different outreach tools had been developed and tested. This was able to generate valuable insight for the design and method of the plan. In addition, the plan has incorporated suggestions made by a wide range of stakeholders, such as indigenous peoples, *Dalits*, women and other forest-dependent people on how they can be made more aware of their rights and responsibilities; develop their capacity to share their concerns; and participate in various decision-making forums.

The Consultation and Participation Plan is presented below, stating the purpose and specific objectives, the general approach, and underlying principles of the plan, and its general strategy for outreach and consultation. Then, specific activities proposed to carry out these strategies are presented.



### 1b.3.2 Overall Purpose and objectives

The main purpose of the Consultation and Participation Plan (CPP) is to promote the transparent, inclusive, accountable, equitable and ecologically sustainable implementation of REDD in Nepal. This will be accomplished through the realization of specific objectives, as listed below.

### 1b.3.3 Specific objectives

- Establish a channel through which beneficiaries can access information and participate in the design and implementation of REDD activities.
- Improve the quality of decision-making processes by giving voice to and capturing the experiences of civil society organizations, indigenous peoples and local communities.
- Encourage the development of regulatory frameworks that are socially inclusive and transparent.
- Strive towards equitable outcomes of REDD policies and activities, and ensure that indigenous peoples and other forest-dependent people will benefit from the revenues from REDD.
- Support improvements in forest governance.

### 1b.3.4 Approach

Building on the main purpose and objectives described above, the main principles that guide the development and implementation of the Consultation and Participation Plan are as follows:

**A participatory and inclusive process:** The CPP envisions participation of all concerned stakeholders groups to ensure an inclusive process based on socioeconomic and geographic equity. In Nepal's context, the participation of government and civil society organizations, as well as different interest groups—including indigenous peoples and local communities, Women, *Dalits* and other forest-dependent people—in the REDD readiness preparation process is crucial. To ensure this, the process will follow bottom-up planning principles.

**Mainstreaming gender and equity concerns at all levels:** Special attention will be paid to ensure the full and effective participation of women and other marginalized groups in the REDD readiness process and to make their voices heard. For this, women and representatives of different marginalized groups like indigenous peoples, *Dalit*, *Sukhumbasi* (landless), and poor forest-dependent communities will be invited to participate in all decision-making forums during the REDD readiness preparation process.

**Multi-stakeholder collaboration:** The REDD readiness process will follow a model of multi-stakeholder and multi-sectoral coordination and collaboration.

**Integration with safeguard measures:** The plan takes into consideration various safeguard measures to prevent the potential adverse impacts of REDD activities on all stakeholders. The second section—The World Bank's Strategic Environmental and Social Assessment (SESA)—sets out a specific process to avoid negative impacts and enhance positive or "additional" REDD benefits in Nepal. The consultation process will ensure that this process is followed.

**Rights-based approach:** This plan has adopted a right-based approach, which will fully respect the rights of local communities and indigenous peoples' (e.g., Free Prior and Informed Consent, ILO 169).

**Capacity building:** Recognizing the gap in knowledge about climate change, REDD and associated issues among different stakeholders at different levels, the readiness process has given priority to building capacity at different levels, ranging from local communities to policy makers.

#### 1b.3.5 Overall Strategy of Consultation and Participation

The Consultation and Participation Plan is intended to promote meaningful participation of all stakeholders and interest groups in the REDD readiness activities to enhance the potential positive benefits and reduce the risks or adverse effects. To achieve these general objectives, this consultation and participation plan was developed with the following broader strategies:

**Awareness raising and outreach:** It is crucial that all stakeholders and interest groups understand what REDD is and what implications it will have for them. In other words, they should comprehend what they would have to do differently under REDD, how they could benefit from it, and what the associated risks or challenges are.

**Capacity Development:** It has become clear from the consultations during the preparation of this plan that even very important stakeholders, such as policy makers, government organizations and key civil society representatives, have very limited knowledge about REDD. Since this is a new topic, there is a great need for developing the capacity of stakeholders at all levels. This will not only help to create the institutional and technical infrastructure necessary for REDD readiness, but also enable rights-holders to voice their concerns in decision-making forums.

**Consultation:** Consultation with a broad range of different stakeholders and rights-holders is a vital aspect of REDD readiness. This will not only inform the policy makers about the concerns of different stakeholders, but also develop long-term ownership among all stakeholders about the decisions that are made. Moreover, it will help to minimize the risk of overlooking the rights of local communities, indigenous peoples, marginalized groups (e.g., women and *Dalits*) and forest-dependent communities. Stakeholders will be consulted on the following aspects of REDD readiness:

- Strategy options (proposed forestry policy)
- Implementation framework including benefit-sharing and governance mechanisms
- Assessment of social and environmental impacts (development of plan, TOR)
- Reference scenario and baseline
- Developing of a monitoring, reporting and verification (MRV) system
- Program implementation monitoring and evaluation

#### 1b.3.6 Plan Activities

According to the three broader strategies mentioned above, the proposed activities for the Plan fall under three components: *awareness and outreach*, *capacity development* and *consultation*. This section provides a brief description of the activities under each of these components. A detailed summary of the proposed activities, target groups and number of events is presented in Annex 1b-2.1, and a timeline for their implementation is presented in Annex 1b-2.2.

#### *1b.3.6.1 Awareness and Outreach*

**Radio programs:** Radio dramas, interviews with experts and interviews with the public will be aired for approximately 24 weeks. Such programs will be broadcasted from 25 different FM radio stations in different development regions. Furthermore, the radio programs will be broadcasted in at least five different regional languages on local-level FM stations. Programs such as radio dramas will be translated into broadly spoken local languages

**TV Programs:** Documentaries and interactive discussion programs will be developed and broadcasted on at least three TV stations and local cable channels. The program will also be dubbed in at least five different local languages for broadcasting on local channels, especially via cable TV channel suppliers. The documentary and/or docudramas will also be produced in DVD format to distribute to various organizations nationwide. They will be used during the consultation workshops to develop understanding on relevant concepts and issues.

**Newspaper articles:** Journalists and development professionals will be supported to write various newspaper articles. Issue-based articles will be published in national newspapers and at least 75 local papers, including translations into regional languages. Feature articles will also be published in newspapers as a regular column. Fellowships will be provided to journalists throughout Nepal to enhance their capacity and encourage them to develop and publish various issue-based comprehensive reports and articles.

**Extension materials:** Extension materials like posters, pamphlets, leaflets, flipcharts and calendars will be developed and disseminated widely.

**Journal and newspaper articles:** Researchers and development professionals will be provided with support to write articles on issues related to REDD and sustainable forest management. These articles will be published in local journals as a special issue on REDD.

**Awareness workshops:** Consultation workshops will have two complementary purposes: development of broader understanding about climate change, forests and REDD; and collection of the perspectives and opinions of different stakeholders with respect to specific issues and the implementation of REDD. All of the consultation workshops planned at various levels for different stakeholders will include a session that enhances the understanding of stakeholders on key concepts and issues.

**Website update:** At least three popular national (governmental and non-governmental) websites will be selected and supported to publish regular information and news pertaining to REDD in Nepal and internationally.

#### *1b.3.6.2 Capacity Development*

Capacity building has emerged as a foundation for consultation and outreach activities. The project will start with capacity-building trainings for implementing institutions to enable them to be more effective and efficient facilitators of ongoing consultation and outreach activities. Some initiatives for capacity building are already in place. Examples of these initiatives include the RECOFTC/FECOFUN-REDD capacity building project and the NEFIN-REDD awareness-raising program. The following capacity building components will build on such existing initiatives.

**Formation of a team of master trainers/facilitators:** This group will comprise experts from both the government and the non-governmental sector. This group will be responsible for facilitating training to develop lead facilitators/trainers at the national level. The selection of experts will be carried out as follows: 1) listing of potential facilitators, (2)

meetings/discussions with candidates, (3) list finalization, (4) orientation, (5) preparation for training of trainers' workshops.

**Training of Trainers (ToT):** ToT activities will be organized to develop knowledge and training capacities at different levels.

- **ToT for lead trainers/facilitators.** A master ToT will be provided to lead trainers at the national level with participants from different geographical regions. These lead trainers will then facilitate ToT at the regional level for district-level participants/trainers. The lead trainers/facilitators will be selected through a competitive process based on the following criteria:
  - Training and facilitation experience
  - Demonstrated (observed performance on training facilitation) conceptual understanding of forestry, climate change and REDD
  - Readily available socioeconomic inclusiveness (representation of different groups)
- **ToT for district-level trainers/facilitators.** Altogether 14 ToT events will be provided for participants from both government and civil society organizations at the regional level. Trainees from different districts will then deliver trainings and conduct workshops at the sub-district and community level.
- **Thematic ToT.** Trainings will be conducted in thematic areas such as carbon measurement, equitable benefit-sharing, and MRV. These training will be organised at the regional level for participants from each district.

**District level training:** Orientation trainings will be organized in each district for staff from local government offices, representatives of local NGOs, and leaders of community-based organizations, including forest user groups, women's groups, *Dalits* representatives, Indigenous Peoples leaders, and schoolteachers. Participants will be encouraged to organize events in their own organizations to discuss issues related to climate change and REDD. These training will be facilitated by the district-level facilitators trained at the regional level ToT.

**Orientation workshops for journalists:** Orientation workshops will be organized for journalists at the district and national levels to develop conceptual understandings on climate change and REDD. These workshops will develop the capacity of journalists to engage in critical discussion, reflection and writing on REDD issues.

**Capacity development support for forestry and other academic institutions:** A package program of the following activities will be offered to forest-related academic and research institutions:

- Revise existing curricula at the B.Sc. and M.Sc. levels to incorporate current issues like climate change adaptation and mitigation, and payments for environmental services, including REDD. This will include both workshops and technical support.
- **Short-term training package:** Institute of Forestry (IOF) and other academic institutions will offer short-term trainings on different climate change and REDD themes. To facilitate this, TOT will be provided to faculty members.
- Provision of research grants for B.Sc. and M.Sc. students to conduct thesis work on PES and REDD issues.
- IOF and KAFCOL will offer special non-credit course for current students to provide orientation on PES and REDD. Such courses will be offered until students have the opportunity to study accredited courses on such issues.

- Provision of research grants for faculty members for independent researchers to conduct research and develop articles on relevant issues.

Development of training curricula and manuals: Several curricula for various capacity development programs are proposed. These curricula will be used by facilitators/trainer during ToT, trainings and workshops. These curricula include:

- Master ToT curriculum
- Thematic ToT curricula
- Orientation and consultation workshops, including material development

The NORAD funded capacity development project, implemented jointly by RECOFTC/FECOFUN and NEFIN, have been developing ToT curricula for master trainers and community-level trainers. These curricula will be further reviewed and updated. The curriculum development activities will be outsourced to individuals or organizations having expertise in curriculum development and training delivery. Such experts will also need to have a good understanding of issues related to climate change, forestry and REDD.

#### *1b.3.6.3 Consultation*

Consultation workshops: Consultation workshops will be organized at different levels, for diverse stakeholders and interest groups. At the national level, there will be two different types of workshops: workshops for policy makers and drafters, and workshops for other national level stakeholders.

First, national level workshops will be held with government organizations, civil society organizations representing forest user groups, women, *Dalits*, Indigenous Peoples, NGOs, projects and donors working in the forestry sector, and representatives of the private sector, to discuss various issues related to REDD and specific policy recommendations. Then, another workshop will be held with policy makers to facilitate the policy process. The participants of this second workshop will be representatives from the National Planning Commission, parliamentarians, ministers and officials from the concerned ministries, and representatives from national and international civil society organizations.

At the district level, workshops will be held for participants from multiple sectors and stakeholder groups, including governmental and non-governmental organizations, as well as for representatives of *Dalits*, Women's and Indigenous Peoples Organizations, Forest User Groups and other relevant stakeholders. There will also be a series of community-level workshops targeting forest-dependent communities, *Dalits*, women, indigenous peoples, forest user groups and other relevant stakeholders. The list of stakeholder to be consulted on various issues of REDD is listed in annex 1b-2.3.

Public hearings: Public hearings will be organized at the local level to hear participants' opinions, issues and grievances concerning the REDD mechanism and the policy development process. The selection criteria of location for public hearing will be geographic region, ethnicity, accessibility, forest types and area, and forest management regimes.

Public notice and feedback collection: Public notice will be given in printed media on various REDD issues such as a benefit-sharing mechanism, implementation mechanisms, and strategy options to address deforestation and forest degradation. These solicitations will seek suggestions from the public. The public will be notified and given a specific time frame to send their comments to the concerned organizations through various channels. Range Posts under the Department of Forests will be used to collect the feedback. Notice

of public hearings and feedback collection will also be announced through local and national TV, radio and newspapers. A toll-free feedback receiving mechanism will be arranged from the central level via telephone and internet.

**Round-table meeting:** The experience from the Consultation and Participation Plan development process revealed that there is a low interest in REDD among stakeholders outside of the forestry sector, especially among government ministries at the central level. Therefore, a series of roundtable meetings will be conducted with experts, policy drafters (senior government officials from different ministries) and policy makers (Constituent Assembly Members). Such meetings will help to promote cross-sector collaboration and coordination, to inform policy makers and drafters on important issues surrounding REDD, and to identify specific gaps in the existing legal and policy framework.

**Individual consultations with experts:** Experts will also be consulted on an individual basis on some specific issues, including REDD strategy options, the implementation framework, reference scenarios, and MRV.

**Reflection/validation workshops:** Reflection or validation workshops will be organized at different levels to seek feedback and affirmation from different stakeholders and interest groups for proposed policies, plans and activities. These workshops will also help to build participation and ownership among diverse stakeholders and interest groups in decisions made through the REDD readiness process.

**Monitoring and evaluation:** Regular monitoring, review and evaluation will be an integral part of this consultation and outreach plan. A mid-term evaluation and final evaluation will be conducted around the end of 2011 and beginning of 2012 respectively.

#### 1b.3.7 Institutional mechanisms for implementation

New institutional structure for REDD implementation—such as a high level multi-sectoral and multi-stakeholder monitoring body, the REDD Working Group, the REDD Stakeholders Forum, and the REDD-Forestry and Climate Change Cell—have been discussed in the previous component. At the district level, the District Forest Coordination Committee (DFCC) can be expanded to the remaining districts. The concept of a Village Forest Coordination Committee (VFCC) has also been piloted by a few projects in a couple of districts. Both the DFCCs and VFCCs can play an important role in facilitating and organizing consultation and outreach activities.

Nepal is a pioneer in promoting community-based forest management systems, such as Community Forestry, Collaborative Forestry, and Leasehold Forestry. Nearly 15 thousand Forest Users Groups have been engaged in forest management. These groups will be a very big asset for implementation of a REDD mechanism.

A number of federations of forest user groups and other forest-dependent communities, such as indigenous peoples, *Dalits*, and women groups have been formed and are actively engaged in realizing their rights and responsibilities in Forest Management. These federations represent a large portion of the rural population.

A consortium has also been formed among the seven institutions representing community based forest management groups, indigenous peoples, *Dalits*, women, an association of forestry professionals and researchers, and various experts, to work together on forestry and climate change issues. There is significant scope for expanding the size of the consortium and interest from other institutions is also high. During the process of preparing the Consultation and Participation Plan, a number of experts have been trained who can facilitate the REDD readiness and implementation process. In addition to this, key REDD

concepts and considerations have been mainstreamed in each of the consortium-member institutions.

The Human Resource Development Division of the MoFSC is responsible for the capacity building of the government staff and is equipped with the necessary infrastructure at the national level and in the five development regions. This institutional structure could be a valuable asset for implementing REDD outreach and capacity building activities. The training centre at the national level is already overloaded, while the regional-level centers are under-utilized. The availability of trained facilitators for national and regional level training activities has been a major problem for the division.

The Extension Unit of the Department of Forests has been conducting various outreach activities. Radio programs, publication of bulletins, issue-based leaflets, calendars and posters are some key activities of the extension unit. The radio program is aired every week for 25 minutes on a government-owned radio channel (Radio Nepal). A mechanism has also been developed among various departments of the MoFSC and other relevant ministries to develop radio program related to forestry.

The implementation mechanism for consultation and outreach activities should duly consider the current socio-political scenario of the country. As with the REDD Working Group, inclusive implementation teams can be formed at the national, regional and district levels, so that current institutional structures and facilities can be fully utilized. Implementation will also be tailored to specific circumstances, considering time and quality concerns. This means that some activities will be completely outsourced and that some will be implemented jointly.

#### 1b.4. Budget

The total estimated budget for this plan is US \$2,405,500.00, based on an estimated NPR/USD conversion rate of 73.00 to one.

Table 1b: Summary of Stakeholder Consultation and Participation Activities and Budget						
Main Activity	Sub-Activity	Estimated Cost (in thousands US\$)				
		2010	2011	2012	2013	Total
Consultation	Workshops, including reflection (national, regional and local)	200	200	150		550
	Public Hearing		400	290		690
	Round Table Meeting	2	3	2.5		7.5
	Expert Consultation	2	2.5	1		5.5
Capacity Building	Curricula and Training Materials Development	4	7			11
	Support to forestry-related and other institutions	3	7	7		17
	National-level Trainer/facilitator ToT		13.5			13.5

	District-level Lead Trainer/facilitator ToT		96			96
	Thematic District Level Training		39	30		69
	Local Level Training		52			52
	Orientation to Journalists		52			52
Awareness Raising and Outreach	FM Radio Programs	100	200	36		336
	Television Programs	15	20	5		40
	Newspaper Articles	20	30	12		62
	Bulletins and Journals		1	1		2
	Web Sites	0.5	0.5	0.5	0.5	2
	Leaflets, Posters and Brochures	20	40	8		68
	Calendars		19	17		36
Program Management	Outsourcing Human Resources	30	60	60	30	180
	Travels and Accommodations	6	30	30	3	69
	Equipments	10	10	8		28
	Administrative Overhead	3	6	6	4	19
Total		415.5	1,288.5	664	37.5	2,406
Government						
FCPF						
DFID/SDC through funds already committed for Nepal National Forest Programme			600	664	37.5	1,301.5
Government of Finland (through funds already committed to FRA project)						
JICA (TBC)						
USAID (TBC)		415.5	688.5			1,104



## Component 2: Prepare the REDD Strategy

### 2a. Assessment of Land Use, Forest Policy and Governance

#### **2a.1. Methodological Approach**

The assessment consisted of an information review and consultations with key experts and stakeholders at national level. Over 33 documents were reviewed and 25 individuals were consulted (listed in Annex 2a.2) representing 15 stakeholder groups. A half-day national-level reflection workshop was held on November 13, 2009 attended by 32 participants from various stakeholder groups. The workshop reviewed: (a) drivers of deforestation and forest degradation, (b) policies that induce and reduce deforestation and forest degradation, (c) governance components which reduce or promote deforestation and forest degradation in different eco-regions of Nepal and (d) major gaps in information and knowledge. The report has also been made available for public consultation on Nepal's REDD Cell website ([www.mofsc-redd.gov.np](http://www.mofsc-redd.gov.np)) .

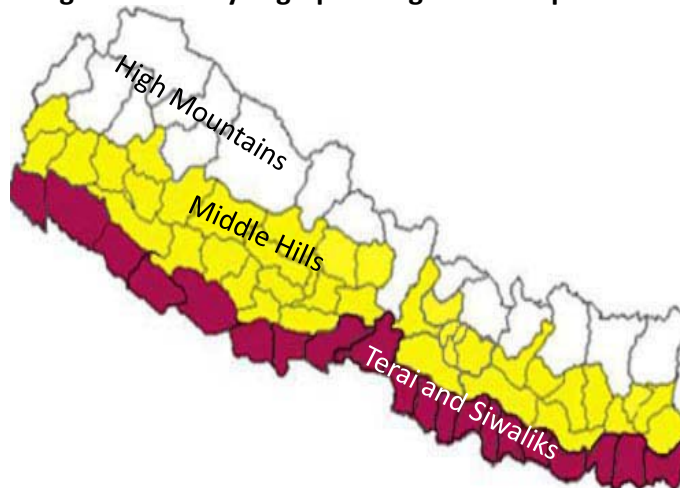
#### **2a.2. Analysis of Land Use, Deforestation and Forest Degradation**

Nepal can be divided into three physiographic regions: (i) High mountains, (ii) Mid-hills and (iii) Terai and Siwaliks (Fig 2a.1). The latest National Forest Inventory (1999) classified land-use into 5 categories and estimated their coverage.

Forest covers about 29.0% of Nepal's area and shrub-land (mainly located in the hills and the Terai) about 10.6% giving a total of 39.6% forest cover for Nepal. Total coverage of agricultural land is 21 % and about 7 % is public land. Rest is rocks and permanent snow cover areas. Forests are defined as 'all land with forest cover, i.e. with trees whose crowns cover more than 10% of the area, and not used primarily for purposes other than forestry. Temporarily clear-cut areas that will be planted are also forest'. Similarly, shrub-land is defined as 'same as forest but where well-defined stems cannot be found' and such areas are assumed to be degraded forests.

Like most countries, forests in Nepal inevitably compete with other land uses. Historically, hill forests of Nepal were significantly cleared during the unification of the nation (1767 AD). Whatever forests now remain in the hills are the residual area after the most productive land had been brought under agriculture. Forests of the Terai were also

**Figure 2a.1: Physiographic Regions of Nepal**



gradually converted to agriculture - initially through government-led initiatives to resettle migrants from India and hills of Nepal. Subsequently, these forests are still treated as frontier areas and continue to be a target for conversion to farms and for infrastructure development.

A summary of data on land use change from 1991-2001 is shown in Table 2a.1. This table was adapted from the Centre Bureau Statistics of Nepal (2008) and contains contradictory data. This is partially because the analysis used to construct the table was based on different methodologies in the two time periods. Also because recent, accurate information on land use and forest cover is not available and available data is scanty, old and frequently contradictory. This indicates a major information gap and the need for better information on forest cover and land-use changes in future.

Table 2a.1. Land-Use Change 1991-2001 ('000 ha)

Land-use	Year	Ecological Region				Change	Annual Change %
		Himal	Hills	Terai	All		
Cultivated	1991/1992	208	1,722	1,039	2,969	123	0.4%
	2001/2002	211	1,798	1,082	3,091		
Non Cultivated	1991/1992	495	436	56	987	44	0.4%
	2001/2002	517	449	65	1,031		
Forested	1991/1992	233	4,436	1,159	5,828	-1,560	-2.7%
	2001/2002	228	2,891	1,149	4,268		
Shrub	1991/1992	138	512	39	689	872	12.7%
	2001/2002	168	1,254	138	1,560		
Grassland	1991/1992	133	1,589	35	1,757	9	0.1%
	2001/2002	138	1,592	36	1,766		
Other	1991/1992	797	1,668	25	2,490	513	2.1%
	2001/2002	946	2,025	31	3,002		
Total	1991/1992	2,004	10,363	2351	14,718	0	0
	2001/2002	2,208	10,009	2,501	14,718		

Source: Adapted from CBS, 2008, *Environment Statistics of Nepal*

The table shows that forest land has been converted to other land use categories, especially shrub-land, agriculture land and other land uses. The change from forest to shrub-land indicates forest degradation over the 10-year time period covered by the study. It is estimated that about 84,000 hectare of forest land becomes deforested annually. The annual deforestation rate in the Terai is estimated to be 2.7 %. Dhakal (2000) notes that quality of the growing stock of timber has fallen from an average of 150 m<sup>3</sup>/ha to less than 90 m<sup>3</sup>/ha. In the past 30 years, Nepal has lost forest cover at rate of nearly 2% per annum.

### *2a.3. Drivers of Deforestation and Forest Degradation*

In Nepal, drivers of deforestation and degradation are diverse, complex and different in the physiographic regions. The preliminary analysis identified a total of nine drivers: High dependency on forest and forest products (timber, firewood and other NTFPs), Illegal harvest of forest products, Unsustainable harvesting practices, Forest fire, Encroachment, Overgrazing, Infrastructure development, Resettlement, and Expansion of invasive species. Detailed underlying causes under each of the driver and area affected are presented in annex 2b.1.

Forests of the Terai and Siwaliks are declining both in area and quality, due to inappropriate policies, weak governance, weak forest law enforcement, limited technical capacity and high demand for timber and firewood both within the country and across the Indian border. Although the government owns a major part of the forest estate to protect and manage it, in reality such forests are highly prone to deforestation and forest degradation due to illegal harvesting and forest encroachment. Furthermore, recurrent fires and unregulated grazing further retard regeneration and growth and encourage invasive species. The opportunity cost of retaining these areas as forests in the Terai is high as the land is potentially highly productive for agriculture and because household reliance on agriculture is high whereas commercial productivity of forests is low.

Forests in the Mid-hills are better managed and deforestation and forest degradation have been largely reversed mainly due to the community based forestry program, where local communities are directly involved in management and utilization of their local forests. However, unplanned and unregulated infrastructure (especially rural roads) still contributes to forest loss in these areas.

In the High mountains, little information is available about the forests, except that illegal timber export to Tibet is frequently reported in the media. Acharya (2003) reports that forest degradation exceeds deforestation with the major driver being excessive use of timber for house shingles or hut (*goth*) construction, fuelwood consumption and smuggling of timber to Tibet as well as heavy lopping of trees for livestock fodder, and firing to induce a flush of green grass for livestock. This was also confirmed at the national level workshop.

A summary of the drivers, their underlying causes, affected regions and the extent to which they lie within the forestry sector is shown in Annex 2a.1. Nine drivers have been identified and these form the basis for the strategic options presented in component 2b.

#### **Underlying causes**

Among the many underlying causes of deforestation and forest degradation many are not due to the internal factors directly under the control of the MoFSC. Many are a result of a combination of internal factors and those beyond the jurisdiction of the MoFSC. Some of the underlying causes are very broad and include factors such as population increase and its distribution, poverty, land scarcity and the status of Nepal's level of economic growth and commercial development. Governance and cultural factors are both cross-cutting and also underlie a number of the direct drivers for deforestation and forest degradation. This indicates that strong coordination and collaboration across sectors and with multiple stakeholders is needed for the development and implementation of programs to combat deforestation and forest degradation. Unclear land tenure, use rights, and policy and

planning are an important contributor to deforestation and forest degradation in Nepal. 63% of all forests and shrub-land, although officially government-managed are *de-facto* open access resources with limited control over their use.

Most of the protected areas are strictly maintained for biodiversity conservation and local people have limited use rights. Conflicts between the parks and people are reported, where there is high local dependency on forests; as a result illegal harvesting and unsustainable use are both drivers of forest degradation.

Existing mechanisms for forest product marketing lead to market failure. The government fixes administrative rates (royalties) for the sale of forest products that do not reflect market prices. Various government and quasi-government organizations e.g. Timber Corporation of Nepal as well as forest products supply committee, forest product development board are involved in timber and forest product harvesting and trade whilst the private sector is not encouraged. As a result, formal and informal taxes proliferate in the timber trade and in transportation of forest products. An illustration of this market failure is the price difference between the stumpage and end user prices for timber, which were US\$ 4 and 30 per cubic foot, respectively, in 2009.

Insufficient technical inputs for sustainable management of forests have created an imbalance in the supply of forest products. Most of the government managed forests are not optimally managed thus contributing to widening gap between forest products demand and supply. Forest handed over under participatory mechanisms such as community forestry are primarily managed for the subsistence needs of the community, although these forests too have high potential to provide surplus products for the market if managed scientifically and if markets are deregulated, thus contributing to demands in other areas where there are shortages of forest products - especially timber.

A proxy indicator for weak forest sector governance is the allocation of financial resources to the sector. Although absolute allocation of funds appears to be increasing, the relative share of the total budget has shrunk to 1.2% from 1.4% within the last 4 years. Moreover, the capital or development budget for the forestry sector has steadily declined over the last 6 years.

The estimated contribution to Nepal's Gross Domestic Product (GDP) of the forestry sector is inaccurate resulting in an undervalued contribution of the forest sector to the national economy. For example, there is no mechanism to incorporate the value of forest products used directly by communities - especially from community managed forests, nor are the large funds generated by such community groups accounted for in the system whilst the estimated mean annual contribution to GDP of the forestry sector is about 9% (not including environmental services) only 1.2 % of the national development budget is allocated to sector.

There are conflicts over jurisdiction and authority over forests in various parts of the legislation e.g. The Forest Act, 1993 states that all products including timber, firewood, sand, stone, gravel, water, wildlife etc. extracted from forests are under the jurisdiction of MoFSC but other acts contradict this. For example, the Local Self Governance Act (LSGA), 1998 gives rights to use forest resources and their respective duties to local bodies e.g. VDCs, Municipalities and DDCs. This leads to conflicts in forest resource use and a 'governance vacuum'. Similarly, the Nepal Mines Act 1966 and the Mines and Minerals Act

1985, give authority for extracting and licensing of minerals from below the ground to the Department of Mines and Geology. However, the Forest Act mentions that soil and land under the forests should be used or conserved as per the Forest Act. In another example, the Public Roads Act, 1974 gives the Department of Roads authority to build roads in the forests whilst this conflict with the provisions of the Forest Act and the Water Resources Act, 1992 empowers the state to use water without affecting the environment whilst the Forest Act define forest products as anything, including water, lying within the forest area. Finally, the Nepal Petroleum Act 1983 has similar provisions to the Nepal Mines Act and the Mines and Minerals Act.

Poor coordination in policy development, planning and implementation among various ministries and departments (DoF; DNPWC; Departments under the Ministry of Land Reform and Management especially Land Administration and Management, and Survey; Ministry of Local Development and Ministry of Energy) is a driver for accelerated deforestation and forest degradation. Weak coordination is visible especially in infrastructure development programs such as road construction, hydro-electricity projects, extraction of forest products, quarrying and resettlement programs. The negative impacts on forests of unplanned rural road construction, extraction of forest products especially sand, gravel and stone and urban expansion are highly visible in many places.

#### *2a.4. Efforts to Address Deforestation and Forest Degradation*

##### *2a.4.1. Past Policies and Programs*

There is a close relationship between the nature of the political regime and the formulation of forest policies and programs in Nepal. Nepal's forest policy can be categorized into four periods: pre-1957; from 1957-1976; from 1977-1990; and from 1991 to the present.

Before 1951 the Rana aristocracy ruled Nepal for 207 years. The objective of the regime was to extract revenue and to maintain law and order. The focus of the then government was on conversion of forest to farmland, and extraction of timber for export to India for revenue generation. During this period, private individuals owned vast areas of forests. After the overthrow of the Rana regime in 1951 all private forests were nationalized in 1957 (Private Forests Nationalization Act, 1957) and central government management was institutionalized. The multi-party system of governance lasted until 1961, after which there was royal rule in Nepal until 1990. Between 1957 and 1976, policy-making efforts were oriented towards central control of forests through stringent laws (Forest Act 1961, Forest Protection Special Act, 1967) and expansion of the forest bureaucracy. This approach failed to control widespread deforestation and forest degradation.

Early efforts were made by the government with donor support to control accelerated deforestation and forest degradation and its associated effects on soil erosion/flooding and fuelwood shortage. This led to a massive program of reforestation and afforestation in the hills of Nepal with the objectives of addressing soil erosion (perceived affecting downstream flooding in India and Bangladesh) and fuel wood shortages. These programs during the 1970s and 1980s emphasized a technocratic solution to the problems of deforestation and forest degradation and were largely unsuccessful. Nevertheless they did pave the way for the subsequent initiation of participatory forest management starting in the late 1970s. The National Forestry Plan 1976, the *Panchayat* Forest and *Panchayat* Protected Forest Rules 1978, and the Master Plan for Forestry Sector (1988) all promoted community based forest management which eventually became a major community forestry program especially in the Mid-hills.

The re-establishment of multiparty democracy in 1991 led to further developments in forest policy and legislation. The Forest Act 1993, Forest Regulations 1995, Forest Policy 2000 all enhanced participation of local forest dependent communities especially women, *Dalits* and indigenous peoples in decision-making and implementation of community forestry and recognized multi-stakeholder and multi-actor participation in governance and management of national forest (Forest Policy 2000). The different policies have led to 5 different management modalities for Nepal's forests. Areas under each are shown in Table 2a.3.

Table 2a.3. Forest and shrub land under different Institutional and management regimes

Management Regimes/infms.	Community Forests	Leasehold Forests	Collaborative Forests	Protected Areas	Government Managed Forests
Area in ha	1,229,681	26,900	10,676	887,000	3,673,981
% of total forest	21.10	0.46	0.18	15.22	63.04

Source: Poudyal (2009), CF and other databases from DoF (up to November, 2009)

There are now more than 15,000 groups (covering about 40% of Nepal's households) managing almost 1.3 million ha of forest. Various studies have demonstrated that a significant increase in forest condition under community forestry showing that it is a proven model for controlling deforestation and forest degradation although in some situations pressure has simply been transferred elsewhere. Branney and Yadav (1998) recorded a 29% increase in basal area for degraded community forests over 4 years, whilst LFP (2009) records a mean 21% biomass increase across community forests of all types and conditions measured over a 14 year period (1.5% per year). Community forestry has also had co-benefits of reducing poverty, addressing social exclusion and creating rural employment. A major study of the impacts of community forestry is underway at present funded by DFID and SDC.

Community forestry is a success story in the Mid-hills but is still contentious in the Terai and Siwaliks where an accepted modality to address the needs of distant forest users has still to be developed. Unless these distant users can also benefit from forest management and use-rights in Terai and Siwaliks degradation and pressure on forest resources will continue. Collaborative forest management has recently been piloted in eight Terai districts to enhance participation of distant forest users and local government bodies and to reduce conflicts between adjacent and distant users.

Leasehold forestry was promoted by the Forest Act 1993 to improve livelihoods of poor people through management of degraded forestlands, especially through agro-forestry and fodder production. The coverage of leasehold forestry is small (0.5% of the total forest area) and no information is available to show its effects on forest condition. Expansion and promotion of private forestry (especially in the Terai) was a major component of the Master Plan 1988, but due to poor planning and implementation and an unfavorable investment climate this has not been successful and no good data is available on the extent of private forest.

In the case of protected areas, the concept of participatory management of buffer zones has been relatively successful compared with a strict protection system. The National Parks

and Wildlife Conservation Act 1973 made provision for 30-50% of park and reserve revenues to go to local communities through Buffer Zone Councils and gave use rights for certain forest products (timber, firewood, leaf litter and fodder) for subsistence use to communities in buffer zones. This provision has encouraged communities in their management of buffer zone areas but there are still issues of decision-making and governance to be addressed.

There are a number of ongoing initiatives/projects being piloted in Nepal more directly related to Climate Change and REDD. The results of these will give valuable experience for the readiness period as well as implementation of the REDD mechanism. The scope and coverage of these initiatives varies - none covers the entire country. A summary of the ongoing project is presented in the table 2a.4

**Table 2a.4. Summary of pilot projects and activities on Climate Change and REDD**

Project/activity	Funded by	Coverage	Major objectives
Kyoto: Think Global, Act Local (K:TGAL)	Netherlands Development Cooperation	3 districts	To conduct research into REDD plus implementation through community forest management and to have this activity accepted internationally as a valid REDD strategy.
Design and establishment of a Governance and Payment System for Community Forest Management under REDD	Norwegian Agency for Development Cooperation (NORAD)	3 watersheds	To build capacity of civil society on REDD To facilitate establishment of a Forest Carbon Fund To contribute to carbon measurement, monitoring and verification
Grass roots level capacity building on REDD in Asia and the Pacific	NORAD	9 districts	To develop extension materials on REDD to build local capacity on REDD
Reducing Poverty through REDD: early action	WWF, Finland; WWF, USA	13 districts	To develop a methodology for carbon assessment, To assess the benefit from carbon financing for livelihoods To support for to develop the national REDD Strategy
Livelihoods and Forestry Programme (LFP) - actions on climate change and REDD	UK Government (DFID)	Centre and 15+ districts	To build capacity and awareness of different stakeholders at different levels; to support the most vulnerable households and communities to adapt to climate change through community based adaptation planning; to set up a pilot to build experience and capacity on PES of different local stakeholders and to support the national REDD strategy development
Nepal Swiss Community Forestry Project - actions on climate change and REDD	Swiss Development Cooperation	Centre level and 4 districts	To assess the impact of climate change To explore adaptation activities To create awareness to local level about the climate change, adaptation and mitigation

#### 2a.4.2. Lessons Learned

Experience in Nepal so far has shown that a top down approach to policy and planning has had little success. A decentralization/localization approach to forest governance has been the key to controlling forest degradation and deforestation by creating more downwardly and horizontally accountable structures which empower local stakeholders who have better 'time and space' knowledge of local conditions to resolve their collective problems in the forestry sector through consensus. However, no single solution or model fits all physiographic regions with the example already given of community forestry being a success story in the Mid-hills but still being contested in the Terai. An effective participatory forest management modality for high altitudes with sparse populations has yet to be developed.

Learning has also shown that cross-sectoral solutions must be sought and negotiated - for example those relating to land-use and the desired extent of forests and protected areas alongside other pressures for land allocation to landless people and agricultural production. There have been positive experiences with multi-stakeholder bodies at district and community levels as a means for addressing local issues and resource conflicts. These bodies have provided synergy and increased effectiveness by increasing collaboration between and among government and non-governmental organizations, grass-root institutions, and private sector as well as ensuring democratic and transparent decision-making. Forestry programs need to contribute to all aspects people's wider livelihoods including food security. This allows local people to own the programs and feel committed to them. Many poor and excluded groups are highly forest dependent and must be properly represented in forest management and forest resource utilization decision-making at all levels. Forestry programs must be consistent with the national strategy on poverty reduction, contributing to peace and security and Nepal's inclusive economic growth.

#### 2a.4.3 Challenges and ways forward to address them

Nepal faces huge challenges to combat deforestation and forest degradation. These and the proposed ways forward are summarized here:

- (i) Nepal ranks 57<sup>th</sup> out of 88 countries on the global hunger index (Dhital, 2010). The government has predicted that food shortage will amount to 400,000 tons in 2010. Food security is a major issue in Nepal due to low agricultural productivity. Thus land reform is essential to bring about technological innovations in agriculture (Basnet, 2010). Although farms are legally under private ownership much land in the Terai is owned by absentee landlords and cultivated by tenants. This creates a principal agent problem and provides disincentives for both the principal (landlord) and the agent (tenant) to invest in productivity enhancement. Land reform alongside consolidation of smallholdings would enhance agricultural productivity and employment. Otherwise pressure on forests for land in the Terai and Siwaliks will continue. Policies must be harmonized so that food security, forest and water conservation, and climate change are all considered together. The government of Nepal is politically committed to a process of land reform hence this will be a timely opportunity to address the issue of deforestation due to settlement and encroachment.
- (ii) The budget allocated to the forestry sector has been declining for many years and most forestry projects are funded by bilateral donors. To make this more sustainable and cost-effective, a program mode of forestry development support needs to be promoted rather than a project modality. Under this most funds need to come through government



(at different levels) and both government and civil society organizations need to take partnership roles for program design and implementation. The effectiveness of this approach is highly dependent on forest sector institutional reforms although the increasing interest and capacity of civil society organizations in the forestry sector will significantly contribute to this.

- iii) Protected area management regimes need revisiting considering the mutual interface between protected areas and indigenous people and local communities. It needs to ensure successful forest resource conservation especially in the Terai and Siwaliks. This will be a huge challenge for Nepal, although the other models of conservation as practiced in the hills and mountains can be centers of learning for such alternative conservation models.
- iv) Multiple macro-political and economic factors and forestry related regulatory and fiscal policies drive deforestation and forest degradation. Prominent among these are prevalence of weak sector governance at all levels followed by weak institutional arrangements to manage the 63% of forest land under government control. Political interference in the transfer of forestry staff reduces trust among grass-roots stakeholders and lessens horizontal and downward accountability and transparency.
- v) The real challenge to reducing deforestation and forest degradation is in the Terai due to the multiple complex factors operating there such as high demand across the open border, high population pressure, political instability, lawlessness and insecurity, poverty, weak governance and landlessness. A range of strategic options will be needed including sensitization of political parties, enhanced forest law enforcement and governance and a conducive environment for alternative income generation activities for poor people including ways of attractive private sector investment. Coordination mechanisms among various line agencies necessary can best be facilitated at local government level. The new constitution is likely give forest management responsibilities to the proposed federal government. If so, this will require empowered local multi-stakeholder structures to address local complexities.
- vi) This assessment of Land Use, Policy and Governance was done in a short time span and was basically a desk review exercise with detailed reports available for reference. An analysis of underlying causes and possible strategic options to address them is presented in component 2b. This quick assessment did not include a detailed evidence-based analysis. Hence it is not possible to offer firm recommendations for the all various issues and challenges identified. However, a range of in-depth studies, analyses and pilot activities is proposed in the next section.

#### *2a.5. Activity Plan*

The study of Land Use, Forest Policy and Governance was conducted quickly and needs to be further explored or generated. Such information and analysis is crucial a fuller identification of strategic options for addressing the complex and diverse drivers deforestation and forest degradation. In this context, the following further in-depth studies will be conducted during 2010. Detailed terms of reference (ToRs) for each study are given in Annex 2a.3.

1. An in-depth analytical study to identify the causal factors for weak forest sector governance, law enforcement and policy implementation and possible actions to

address these.

2. A study on the drivers of deforestation and forest degradation in Churia and in the High Mountain physiographic regions.
3. A study on the value-chain of forest products (timber and a few key NTFPs) and the effects and consequences of weak governance, administrative controls on pricing and marketing e.g. involvement of parastatals; royalties; administrative hurdles etc.
4. A study on the existing and potential supply and demand situation for forest products in different regions
5. A study on the effect of climate change and invasive species on forest degradation.

#### *2a.6. Summary Budget*

The budget is estimated for preparation for studies, conducting studies, report writing and dissemination. A summary table of the activities and budget for this component is provided below in Table 2a.5. The estimates for consultation for strategic options are included in the budget under component 1b.

Table 2a: Summary of Assessment of Land Use, Forest Policy and Governance Activities and Budget (Follow-up Activities Needed)						
Main Activity	Sub-Activity	Estimated Cost (in thousands US\$)				
		2010	2011	2012	2013	Total
Follow up Studies	Review and Finalize ToR	4				4
	Factors of Weak Governance, policy implementation and law enforcement	20				20
	Drivers of Deforestation in High Mountain and Churia	20				20
	Value Chain of Forest Products	12				12
	Demand and Supply of Forest Products	25				25
	Effect of climate change and invasive species on forest degradation	15				15
Produce synthesis of findings of the study and disseminate them	Development		5			5
	Dissemination		5			5
Total		96	10	0	0	106
Government						
FCPF			10			10
DFID/SDC through funds already committed for Nepal National Forest Programme		96				96
Government of Finland (through funds already committed to FRA project)						
JICA (TBC)						
USAID (TBC)						

## 2b. REDD Strategy Options

The National REDD Strategy of Nepal is under preparation. Through its development, Nepal has identified nine direct and indirect drivers of carbon emissions from deforestation and the degradation of forests. The preliminary assessment indicates that the major underlying causes are domestic in nature. Most drivers of deforestation and degradation are associated with underlying governance issues, such as weak natural resources management and administration, market failure response, rent seeking attitude, and structural socio-economic factors like poverty and limited livelihood options for forest-dependent populations.

Nepal has undertaken a wide consultation process with key stakeholders who are involved mainly in forest-related matters at the national and sub-national levels. Those stakeholders consulted include government officials, private sector leaders, and representatives of civil society. This consultation process has resulted in the preliminary identification of strategic options for addressing the underlying causes of emissions from deforestation and forest degradation. The options comprise a combination of improved policies, regulations, management practices, and technical skills at the national and sub-national level for different stakeholders. In addition, these strategic options include the identification and development of synergies between forestry and other sectors, including infrastructure development, agriculture, and energy. A detail list of strategic options for each driver and underlying cause is available in Annex 2b-1.

In the next few years, Nepal will prepare a detailed REDD Strategy. During this preparation process, the proposed strategic options will be screened and prioritized based on analytical assessments and consultation with a wide audience of key stakeholders from diverse sectors, including forestry, agriculture, local development, environmental management, and energy. The section below explains the REDD Strategy preparation process.

The Government of Nepal is in the process of designing a National Interim Plan. The three Year Interim draft Plan for 2010/11- 2012/13 has prioritized the implementation forest policies that will directly address the drivers of deforestation and degradation. Among different actions, the plan intends to expand participatory forest management practices throughout the country as these practices have significantly reduced forest loss. The need to value environmental services, and in particular, the contribution of forests to the national GDP and HDI is highly recognized. The Interim Plan includes the preparation of a New National Forestry Sector Strategy that will be developed through the investment of forestry sector stakeholders aligning with National Adaptation Plan of Actions, Climate Change Policy (including the implementation of NAPA); REDD Strategy; Poverty Reduction Strategy Paper; and Millennium Development Goals. These are policy opportunities that the Government of Nepal has already identified and will pursue, ensuring implementation synergies between the REDD Strategy and national multi-sectoral development strategies.

### ***2b.1. Developing a REDD Strategy***

The preparation of a National REDD Strategy preparation is at an early stage. There are important institutional and analytical gaps that need to be addressed in the next two years. Nepal faces insufficient information about the causes and extent of deforestation and forest degradation in its different physiographic regions, especially in the Mountains and parts of the Terai. The magnitude of the effects of specific drivers of deforestation and forest degradation

and their corresponding root causes are uncertain. In the next three years, Nepal will bridge these knowledge gaps by strengthening the analytical work on REDD-related matters and promoting REDD-related consultations from the economic, social, political, and environmental perspectives. This process will provide the basis for establishing a more informed and solid REDD strategy. In addition, a robust institutional structure for managing the implementation of the REDD process will be established based on the current REDD governance structure under the R-PP. To support the process of integration of institutions and organizations, the REDD strategy includes the implementation of a comprehensive communication and outreach strategy. This strategy will help ensure broad ownership, inclusion, and understanding of the entire REDD process throughout the country.

## **2b.2. REDD Strategy preparation process**

The formulation of the REDD strategy will require a three-year preparation plan which will be developed through the implementation of activities clustered around five stages:

### **2b.2.1. Conducting of analytical studies**

The development of analytical studies will provide a scientific foundation for the National REDD Strategy. Studies will help fill the knowledge gaps about land use, the forestry sector, and the drivers of deforestation and forest degradation. Research will collect relevant information to facilitate the identification of the magnitude of the potential impacts of REDD in the country. These studies will be communicated to key stakeholders through a consultation process in the next stage of the REDD preparation process. The ToRs for the proposed studies are presented in annex 2b-2. Three broad analytical studies will be conducted:

*Assessing the value of the forest at the national level:* Through comprehensive economic valuation, this study will provide an overview of the value of the forest, not only in the gross domestic product, but also in the economy and livelihoods, including ecosystem services. Forest value will be considered for both direct and indirect users, including poor populations and timber extracting and trading companies; and indirect users such as the government and all stakeholders that demand forest products and services. These studies also have the objective of elevating forestry and REDD issues to a higher political audience, and to ensure that, with scientific evidence, the forest sector is recognized at the policy level as one of the most valued assets for the country's economy and livelihoods.

*Evaluating the political economy of land use at the national level:* This study intends to improve the land planning system by providing alternatives for effective land uses in the country. This study has a two-fold outcome. First, the study will estimate the net economic value of land in terms of products and environmental services. The calculation of the net economic value will include the computation of the opportunity cost of land for alternative land use options, such as infrastructure development, agriculture, grazing, protected areas, timber production, etc. Secondly, this study will identify effective policy instruments and institutional arrangements that would facilitate the implementation of effective land use planning.

*Assessing carbon emissions from drivers of deforestation and forest degradation:* Past analytical studies and pilot projects will be used to assess the contribution of the nine identified deforestation and forest degradation drivers in Nepal to global greenhouse gas emissions. This analysis will include a geographical assessment to identify the impact of drivers in each of the physiographic regions on carbon emissions. The purpose of this study is to identify the three or four major causes of deforestation and forest degradation in order to focus efforts on addressing them during the National REDD Strategy Implementation process.

This study will employ consultations during the first screening of REDD strategic options. This consultation process will include analysis of the political, financial, technical, and social feasibility as described in the next stage, under step 2.2.

### 2b.2.2. Consultation for strategic options prioritization

To help ensure ownership of the process and the success of REDD implementation, the strategy will include national and sub-national multi-sectoral and multi-stakeholder consultations, including the participation of representatives from the private sector, non-governmental organizations, academia, government officials, indigenous peoples, local communities, Women, *Dalits*, Political parties and civil society. This activity is included in the Consultation process described in Component 1b. This theme comprises a couple of different activities:

*Outreach of policies and studies:* During the preparation of the final REDD Strategy, several consultation and information sessions will be conducted to communicate and obtain feedback from key stakeholders involved in the REDD process. Outreach will include awareness raising, consultation workshops, dissemination of findings from analytical studies, and other capacity-building activities for policy makers, the private sector and civil society representatives. During this step, studies elaborated during Stage 1 will be disseminated and their outcomes widely consulted on.

*Strategic options assessment (first screening):* The participatory assessment will consider the costs, risks, constraints and the stream of benefits generated over time, especially in terms of emissions reductions and poverty alleviation. Analytical studies and economic and financial assessments of strategic options will be used as inputs for substantive discussions and contributions from diverse stakeholders.

To assess strategic options in a systematic manner, stakeholders' consultation will require the use of a participatory methodology based on social, political, institutional, technical, economical, and environmental criteria. A proposed set of criteria is presented in Table 2b.1. These criteria will be further developed during the preparation of ongoing consultations.

Table 2b.1. Criteria for assessing strategic options

<i>Criteria</i>	<i>Variables</i>
<i>Social</i>	<ul style="list-style-type: none"> <li>• Social inclusion of poor and marginalized groups</li> <li>• Poverty alleviation effect</li> <li>• Equity of resulting benefits</li> </ul>
<i>Economic</i>	<ul style="list-style-type: none"> <li>• Opportunity cost, forgone benefit from alternative options</li> <li>• Implementation and maintenance costs</li> <li>• Economic benefits for different stakeholders</li> </ul>
<i>Environmental</i>	<ul style="list-style-type: none"> <li>• Carbon emissions reductions</li> <li>• Biodiversity loss or gain</li> <li>• Water and soil conservation</li> <li>• Adaptability to climate change and climate variability</li> </ul>
<i>Policy and governance</i>	<ul style="list-style-type: none"> <li>• Political feasibility of implementation</li> <li>• Alignment with national development strategies</li> <li>• Addressing households concerns</li> </ul>
<i>Technical</i>	<ul style="list-style-type: none"> <li>• Continuity of emissions reductions, risk of reversal</li> <li>• Potential leakage and additionality</li> <li>• Doability</li> <li>• Overall contribution to reduced emissions and savings</li> </ul>

In addition, this activity will be implemented in a way that ensures that deforestation and forest degradation concerns are taken into consideration in broader policy arenas, including the upcoming Constitution-making and policy-reform processes, and the preparation of the national forestry sector strategy. The forthcoming Constitution writing, state restructuring process, and consequent policy reforms present an opportunity to reconcile inconsistencies in REDD policy formulation and implementation in Nepal taking into account complex political interactions, political interference and power imbalances among different stakeholders.

#### 2b.2.3. Economic and financial assessments of selected strategic options (final selection)

The consultation process and analytical studies will result in a short-list of REDD strategic options. These options will be subject to further economic and financial assessment, in which analysts will estimate the opportunity cost (forgone revenue from alternative land uses), and the implementation and transaction costs (for example to establish and maintain an enforcement mechanisms), for each selected option. The main objective is to identify the actions that are least costly and mostly economically beneficial in terms of emissions reductions in the country in both the short and long term.

#### 2b.2.4. Preparation and consolidation of the REDD Strategy

The REDD strategy preparation and consolidation process includes three main tasks:

*Strengthening institutional capacity:* The main objective of this activity is to build a definite institutional structure for REDD implementation and to identify synergies among stakeholders from multiple sectors inside and outside of the government. Currently, the REDD institutional structure is anchored in the MoFSC. In addition forestry and non-forestry institutions representing government and non-governmental organizations are supporting the readiness process. However, concrete roles have not been established and sectoral development policies have not been integrated into the scheme. The consolidation of the REDD strategy will require stronger links among different stakeholders and the identification of concrete roles and synergies among them. A stronger institutional framework will be developed during the next year.

*Preparation and dissemination of the REDD Strategy document:* Based on the analytical studies and feedback received from the consultation process, the preparation of a detailed REDD strategy will begin during the second year. It will be integrated with the national development strategy and consolidated at the end of the second year. This strategy will be developed in coordination with a consultation stage and will include the dissemination of results and dialogue through public stakeholder forum. The National REDD strategy Document will be finalized at the end of the second year.

*Endorsement and development of relevant plans:* After its finalization, the REDD National Strategy will be endorsed at the policy level, and relevant plans will be made for its implementation.

#### 2b.2.5. Monitoring and evaluation

The fifth stage is a comprehensive monitoring plan for the implementation of the previous four stages. Monitoring will be performed continuously and the results will be compiled in the National REDD Strategy. The objective of the M&E is to ensure transparency and effectiveness of the REDD preparation process. The monitoring process will be public, transparent, and accessible to all stakeholders. For dissemination and sharing purposes, the REDD Strategy will incorporate the use of electronic platforms and other pertinent communication means in the monitoring strategy.

Table 2b.2. Summary of Strategy Development Activities

	Year 1				Year 2			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
<b>1. Analytical studies</b>								
1.1. Assessing the value of the forest								
1.2. Political economy of land use								
1.3. Assessing carbon emissions of DD drivers								
<b>2. Consultation for strategic options prioritization</b>								
2.1. Outreach of policies and studies								
2.2. Strategic options assessment								
2.3. Consultation on public policy reform and governance								

Table 2b: Summary of Strategy Activities and Budget

Main Activity	Sub-Activity	Estimated Cost (in thousands US\$)				
		2010	2011	2012	2013	Total
Analytical studies	Assessing the value of forest	10	10			20
	Political economy of land use	10	10			20
	Assessing carbon emissions originated from drivers DDs	10	20			30
Extension and dissemination	Development materials and organize consultations			20		20
Economic and Financial assessment of selected options	Analysis and writing		15	40		55
	Dissemination			10		10
Endorsement	Meetings, demonstrations, review			10		10
<b>Total</b>		<b>30</b>	<b>55</b>	<b>80</b>		<b>165</b>
Government				10		10
FCPF			55	70		125
DFID/SDC through National Forest Programme		30				30
Government of Finland (through FRA project)						
JICA (TBC)						
USAID (TBC)						



## 2c. REDD Implementation Framework

This section describes initial ideas for institutional, legal and financial arrangements to ensure effective implementation of Nepal's REDD strategy in a way that ensures efficiency, transparency and accountability at all levels. The arrangements proposed here have been developed based on Nepal's experience of different multi-stakeholder forest management modalities, and also based on benefit-sharing mechanisms proposed or being implemented for protected areas and hydropower schemes. The ideas were also discussed with a range of stakeholder groups and experts. The consultation process will continue at the national, sub-national and local levels with academics, government, civil society, forest-dependent communities, indigenous peoples and local communities, *Dalits* and women. The National REDD Strategy (options described in 2b) provides an overall framework for REDD implementation at the national and a sub-national levels.

The proposed REDD implementation framework is based on the following key principles to ensure ownership of the process and effective implementation:

- Establish the link between carbon ownership rights and land tenure and clarify land tenure issues as a priority during the preparation phase.
- Utilise existing institutional structures and arrangements (as far as possible) rather than creating parallel structures.
- Build on successful experiences of benefit sharing from Nepal and elsewhere, learn from ongoing pilots and encourage further piloting and sharing from these during the preparation phase.
- Utilise multi-stakeholder mechanisms for REDD implementation and benefit-sharing at all levels.

Implementation arrangements are described under 7 broad headings: (i) Forest Carbon Ownership and Land Tenure; (ii) REDD Implementation; (iii) Financing Mechanisms; (iv) Stakeholder Engagement and Governance; (v) Data Management, Monitoring, Reporting and Verification; (vi) Institutional and Governance Reform; and (vii) Work Plan and Budget.

### **2c.1. Forest carbon ownership and land tenure**

With all of Nepal's forest management modalities except for private forests—i.e. Community Forests, Collaborative Forests, Government-managed Forests, Protected Areas, Community Based Conservation Areas, Leasehold Forests, and Religious Forests—land tenure still officially rests with the government, whereas product benefit-sharing varies amongst the different management modalities.

Nepal has demonstrated that community involvement in forest management can significantly contribute to reducing deforestation and forest degradation, especially in the Mid-Hills, and that this significantly contributes to the enhancement of carbon stocks. Communities enjoy management and use rights and the benefits of all forest products (both

timber and non-timber) from forests handed over to them. The Forest Act (1993) defines forest products as ‘all the products available in the forests including timber, leaf, branches, stone, sand, soil, minerals, wild animals and water’. As the concept of forest carbon is new to Nepal, no provision has yet been made under legislation for clarifying carbon ownership, and thus this remains unclear. Forest carbon exists both within plants and within the soil; thus ownership rights to forest carbon could prove hard to define in community forests where rights to ownership of the forest and the underlying land are separated. Carbon could be treated as a forest product (or service), in which case existing benefit-sharing mechanisms based on currently prevailing practices would apply (at least for above-ground carbon). However, there are further complications with this.

A key principle is that carbon rights should be linked to land and forest tenure rights to minimize complexities and there will be a less direct link between forest management responsibility and the potential benefits from carbon trading. This means that issues of ownership and tenure rights for all types of forest management need to be resolved during RPP implementation. Similarly, clear and legally defined benefit-sharing mechanisms that can deliver benefits to communities at the grassroots level will be an important factor for REDD’s success. For these to be developed, further studies and consultations with a wide range of stakeholders—from the local to national levels will be carried out (see TORs in Annex 2c.1).

### ***2c.2. REDD implementation***

Nepal is in the fortunate position of being able to build on its positive experiences with community-based forest management that have successfully tackled the complex drivers of deforestation and forest degradation in certain physiographic regions. Piloting will be an additional means for learning more about REDD implementation approaches applicable for Nepal and will continue to be encouraged.

A hybrid approach to REDD implementation is proposed, although the full details of this still need to be worked out through pilots and further consultations and studies. A hybrid of national and sub-national implementation approaches would allow strategic issues (i.e., policy, legal and tenure arrangements) to be addressed at the national level, while benefit sharing, financing and monitoring can follow sub-national approaches taking advantages of existing and proven multi-stakeholder mechanisms at these levels. The most appropriate scale for Nepal will be determined by the national REDD strategy, which will articulate the necessary policies and other measures needed to reduce forestry related emissions. Once identified, large-scale drivers of deforestation and forest degradation will need to be addressed through national policy interventions coupled with strong political support.

Compensation schemes for participating in the REDD mechanism are difficult to design when opportunity costs and other factors that influence REDD vary among the country’s different geographic regions. This supports the concept of a sub-national approach to implementing REDD where (as proposed by Borner and Wunder, 2008) compensation can be differentiated according to the specific opportunity costs rather than through a uniform national compensation scheme<sup>2</sup>. Sub-national implementation would allow a system of differentiated payments to be more effectively implemented using tested institutional arrangements such as multi-stakeholder bodies at the district and community level. However, the transaction costs of such differentiated and hybrid approaches need to be considered through further analysis and study. A possible challenge to using differentiated payments for Nepal could be

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<sup>2</sup> Borner and Wunder (2008); Incentive to Sustainable Forest Ecosystems

inter-regional or inter-community conflicts arising from the different payments that would result. The diversity of community forests, in terms of area coverage, species type, growth rates may contribute to this.

### ***2c.3. Financing mechanism***

The REDD financing mechanism will need to involve multiple stakeholders at different levels and will require an efficient and transparent system for ensuring that the funds reach the grassroots level. Existing multi-stakeholder bodies such as DFCCs (linked with local government bodies) and community groups can be a part of this as they are already performing similar functions, such as channeling funds for community-based adaptation and local development activities. The disbursement of funds to these bodies through the government treasury system likely delay in implementation due to slow and complex procedures. Additionally, there would be a risk of fungibility if funds are routed through central government channels where competing development needs could lead to a diversion of REDD payments to other activities, thus breaking the link between REDD and financial incentives. A government mechanism may also be subject to weak fund management and governance and lack of downward and horizontal (cross-sectoral) accountability.

Nepal has had some experience of using trust funds or pooled funds in different sectors. In the natural resource sector the National Trust for Nature Conservation is an example for REDD. This fund is managed by a multi-stakeholder board, although political influence and issues of downward accountability and transparency may persist. A similar model for a national-level carbon fund from which payments are made on the basis of a public carbon registry can be considered for Nepal, although details will need to be worked out. Currently, there are pilot projects being undertaken in Nepal (funded by NORAD) that aim to pilot various carbon monitoring, funding, governance, and capacity-building mechanisms. Initial discussions have indicated that a forest carbon trust fund might be an appropriate mechanism for domestic and international REDD related funding, but stakeholders have strongly suggested the need for inclusive membership in the management board and the democratic election of board members on a regular basis. Establishing such a national trust fund may require an act of parliament—this has yet to be fully determined. Certainly, further public consultations are required.

Project-based systems allow REDD financial flows to go towards activities where the lowest opportunity costs exist. Although this might be beneficial from an economic efficiency standpoint and with the view to minimizing abatement costs, such low opportunity cost options do not necessarily bear high co-benefits. Furthermore, Nepal still needs a comprehensive study that can assess the opportunity costs inside Nepal and compare it to other countries that will compete for the same financial sources.

### ***2c.4. Stakeholder engagement and REDD governance***

Coordination between government and non-government bodies is essential for effective implementation of REDD. The process of creating an implementation mechanism to exercise oversight and REDD governance will be a priority to win the continued trust and commitment of all stakeholders. REDD will require additional policy and other measures to be implemented in coordination between the MoFSC, the Ministry of Environment and others relevant government bodies. The exact placement of REDD in the international climate change architecture is yet to be determined.

A multi-sectoral, multi-stakeholder high-level REDD monitoring body under the leadership of the MoFSC has already been formed. This body is comprised of members from 11 ministries and national planning commission. It has been proposed to add civil society organizations working in various related fields. The REDD Cell has already been established under the MoFSC and is serving as the secretariat for REDD activities. This role is expected to continue. There has been wide acceptance of the current RWG due to its inclusive representation from various stakeholders and for maintaining a high level of transparency and public engagement. In the future, it may evolve to become a Board of Directors to a forest carbon trust fund, if such a mechanism is adopted. In this case, the Cell would become the secretariat of the trust and can be mandated by the board to engage in domestic and international dealings on its behalf. At the sub-national level, the DFCC, linked with local government bodies, are already functioning in many Terai districts and have proved to be effective mechanisms for enhancing the ownership and commitment of a broad range of stakeholders to district-level forestry sector planning and program implementation. It has already been proposed to establish DFCCs for every district in Nepal. In the future this may become a potential channel for the flow of funds, monitoring and governance at the sub-national level. At the local (VDC) level, Village Forest Coordination Committees (VFCCs) could also be established as multi-stakeholder bodies. These could play a key role in linking directly with community-based organizations and groups managing specific forests under a bundled approach to governing environmental services including carbon.

A high-level Climate Change Council led by the Prime Minister and represented by various ministries, members of the national planning commission, and experts has recently been formed. This will help to address inter-ministerial coordination problems and challenges of conflicting policies, as well as providing a broad national-level oversight mechanism.

### ***2c.5. Data management, monitoring, reporting and verification***

It has been proposed to create a central clearinghouse for all REDD-related information. This entity would be empowered with the right to engage in carbon transactions; a role that is particularly important in Nepal where the fragmented nature of the forest—and thus carbon ownership—would otherwise lead to high transaction costs and may prove less attractive to buyers. Based on consultations to date, it has been realized that the government does not possess updated information about the types of REDD piloting projects being undertaken in Nepal, and information sharing has been insufficient so far. This indicates the importance of establishing such a national level forest carbon registry.

Such a forest carbon registry can be established at the national level—as with other REDD implementation mechanisms—maintaining broad-based participation of stakeholders in the management of the registry. This type of structure and arrangement can ensure transparency and hold the registry accountable to multiple stakeholders, as well as ensure compliance with REDD quality standards and social safeguards that the government and other actors deem essential.

MRV actions will be coordinated through a single entity, such as this proposed registry. This set-up would help to overcome problems of harmonizing systems at the sub-national levels and on different scales. The registry will also allow for the enforcement of standards. In addition to the quantity of emissions reductions, the quality of emissions reduced is also important. Nepal has already been playing a major role in developing REDD plus Social and Environmental standards for REDD through the Climate Community and Biodiversity Alliance

(CCBA), along with Ecuador and Tanzania.

It is proposed that the DFCC be designated as the initial point of contact for REDD activities at the sub-national level, although this may depend on the state restructuring process. District Forest Offices acting as the secretariats of the DFCC will be responsible for maintaining their district databases and for updating this in the national forest carbon registry. They will also be required to ensure public auditing and scrutiny of records. Within each district, the DFCCs will have primary responsibility for tracking registered activities, through monitoring, reporting and verification. The MRV framework can be linked to this database, thereby allowing tracking of emissions according to the scale of implementation. Further investigations on capacity-building needs for such a system are still needed.

### ***2c.6. Institutional and governance reform***

Nepal is under the process of developing a new constitution, which will lead to state restructuring into a federal system, and changes to the present institutional, legal and government structures. The Natural Resources and Financial Regulations Committee of the Constituent Assembly has submitted its concept paper on this, although much discussion is still required. However, the concept paper already signals a change in direction for the government's long-term strategy for managing and utilizing natural resources. It is anticipated that there will be explicit recognition of the role of communities in protecting, conserving and enhancing natural resources and of their rights to benefit from all types of rewards generated from such actions. The same committee is also proposing to establish a commission for natural resources as a constitutional body. This would not only help to give general guidance on state strategy by bringing together different government and non-governmental actors but could also be an important component of a national dispute resolution system.

Separate legislation will need to be developed for the establishment and management of a REDD Trust Fund (forest carbon trust fund) to ensure transparency, and clarify the roles and responsibilities of various actors. If the REDD-Forestry and Climate Change Cell is to act as the secretariat for all REDD related functions, human resource capacity needs to be enhanced in terms of both staff members and specific skills. Currently, District Forest Offices form the secretariat of the DFCCs, but their capacity needs to be enhanced to do this if the scope is to be broadened to encompass oversight of REDD and other programs related to forests and climate change. The DFCCs and VFCCs need enhanced capacity to ensure the equitable representation of forest-dependent people, indigenous peoples, local communities, women, *Dalits*, other forest users, civil society groups and relevant government departments.

### ***2c.7. Work plan and budget***

The exact nature of the REDD implementation framework is still not clear. Lessons and ideas are starting to emerge from REDD pilots and this will continue. These will inform future development of REDD implementation mechanisms and support policy and implementation developments over the preparation period, such as clarity on carbon ownership. Existing pilots may not address all issues related to REDD. Thus, it is proposed to carry out further studies/consultations during the preparation phase including:

- (i) A study and consultation process for establishing forest carbon ownership in Nepal
- (ii) A study and detailed consultation on proposed ideas for REDD implementation

mechanisms and the associated costs of the proposed institutional arrangements

ToRs for these two studies are provided in Annex 2c. During the studies, consultations will be conducted at various levels, including meetings, workshops, and interviews with a range of stakeholders. The studies and consultations need to be linked with certain key issues and strategies for addressing drivers of deforestation and forest degradation, including a cost-benefit analysis of various options. Consequently, they will be conducted after these drivers and strategic options have been agreed upon (during 2011).

The findings of the studies will be synthesized and developed as policy discussion papers to be used during the policy decision-making process and for endorsement by the high level REDD monitoring body. To accomplish this, workshops, consultations and roundtable meetings will be conducted at various levels. Through this process, it is expected that the policies and programs for the implementation arrangements will be developed and approved by the government of Nepal by mid-2012. Once ready, the institutional reform and capacity-building process will be initiated (probably on a pilot basis initially). The institutional reforms will be done in phases and their results will be monitored, documented and communicated with policy makers for further incorporation into policies and national strategies. Budgets for the consultation processes associated with this component have been included in Component 1b.

Table 2c.1. Work plan

Activities	Time frame					
	2nd half 2010	1st half 2011	2nd half 2011	1st half 2012	2nd half 2012	1st half 2013
1. Finalize ToRs						
2. Conduct Studies						
3. Develop and dissemination of policy briefs						
4. Institutionalizations from piloting						
5. Capacity Building						

Table 2c. Summary of Implementation Framework Activities and Budget						
Main Activity	Sub-Activity	Estimated Cost (in thousands US\$)				
		2010	2011	2012	2013	Total
Studies	Finalize ToR	2				2
	Conduct studies		40			40
	Develop Policy Brief			9		9
	Round table Meeting with Policy drafter and Maker			10		10
Institutionalizations	Restructuring				100	100
	Capacity building				100	100
Total		2	40	19	200	261
Government		2			70	72
FCPF			40	19	130	189
DFID/SDC through funds already committed for Nepal National Forest Programme						
Government of Finland (through funds already committed to FRA project)						
JICA (TBC)						
USAID (TBC)						

## 2d. Social and Environmental Impacts

### ToR for Strategic Social and Environmental Impact Study

#### Background

Strategic Environmental and Social Assessment (SESA) is essential for both avoiding negative impacts (do no harm) and ensuring positive or additional REDD benefits (do good), especially in terms of securing livelihoods improvements and the rights of local, forest-dependent communities (indigenous peoples, women, *Dalit*); promoting the conservation of biodiversity; and maintaining cultural heritage, gender balance, capacity development and good governance. For this, it is essential to identify the expected outcomes, opportunities and risk associated with implementation of strategic options before implementing REDD. An initial stakeholder analysis was conducted during the preparation of the R-PP. Possible drivers of deforestation and degradation, and feasible strategic options for addressing those drivers, have also been identified. In addition, specific consultations with stakeholders, including forest-dependent communities and indigenous peoples were also held during the process.

The REDD strategic options proposed in component 2b aims to contribute to reducing GHGs emissions and poverty reduction, and to enhancing economic growth through the sustainable and equitable management of forests while increasing forest carbon stocks. Implementation of these options will be involved indigenous peoples and local communities, women and *Dalits* as much as possible. Nevertheless, in spite of the positive results expected with regard to the fight against climate change, the launch of a new program could have negative impacts on the environment and on indigenous peoples and local communities. It is therefore necessary to conduct a SESA in order to assess the positive and negative impacts that could be generated in the implementation of REDD strategic options. SESA must therefore adopt a participative process that informs the finalization of strategic options and occurs before the implementation of REDD. This process should focus on the implications for the most vulnerable groups, particularly the forest-dependent people, and indigenous people, and other poor or marginalized groups.

Nepal has an environmental protection act, as well as rules, regulations and guidelines for conducting detailed environmental impact assessments and initial environmental examinations. The FCPF is one of the principal funders of the REDD readiness globally. SESA should comply with the World Bank's safeguard policies and should also consider the principles deriving from existing rules and regulations of Nepal, including international agreements ratified by the government, as well as international practices and protocols protecting the rights of citizens, particularly with regard to impacts on their environment, traditional rights and access to natural resources.

#### Objective

The overall objective of the SESA is to identify opportunities to mitigate environmental and socioeconomic risks during under the implementation of a REDD mechanism in Nepal, and to provide additional improvements in development activities and the environment through



REDD and associated measures adopted to combat climate change. SESA must also enable Nepal to follow the process and objectives laid out in its poverty reduction strategy.

#### Major tasks

##### *Task 1: Stakeholder analysis*

The consultant shall review and update the list of stakeholders identified during RPP development that are directly linked with the social and environmental impacts of the REDD readiness and implementation process.

##### *Task 2: Description of the initial social and environmental situation of the forestry sector in Nepal*

This task consists of collecting, analyzing and presenting basic data relating to the current environmental and social situation of the forestry sector in Nepal.

##### *Task 3: Analysis of possible impacts of the 'no REDD process' scenario*

The consultant shall identify and quantify to the extent possible the social and environmental impacts, both positive and negative, of not implementing a REDD mechanism. This will help to provide a socioeconomic and environmental 'baseline' for REDD implementation.

##### *Task 4: Analysis of the possible impacts of different REDD strategy option scenarios*

The Consultants will analyze the social and environmental impacts of each strategic option. This will help the implementing agency to move the program in the right direction for poverty reduction, environmental protection, socioeconomic development and the protection of traditional rights.

##### *Task 5: Analysis of impacts of different REDD alternatives*

The consultant will identify the impacts, both positive and negative, likely to be observed as a consequence of the implementation of the alternatives for the REDD process. The CONSULTANT will make a distinction between the direct, indirect, cumulative, immediate and future impacts in a quantitative manner, to the extent possible.

##### *Task 6: Verification of compliance with World Bank policies*

Based on the analyses and recommendations above, the consultant will verify that the REDD process is compliant with the World Bank's Safeguard Policies, in particular: (i) OP 4.01 on 'Environmental Evaluation'; (ii) OP 4.04 on the Natural Habitats; (iii) OP 4.10 on Indigenous Populations; (iv) OP 4.11 relating to Physical Cultural Resources; (v) OP 4.12 on Involuntary Resettlement; and (vi) OP 4.36 on the Forests.

Moreover, it is important that SESA confirms the following as major REDD objectives: (i) regulating forest sector activities and promote the fight against deforestation and forest degradation; and (ii) Protecting and promoting the rights and opportunities of indigenous people and local communities from the start.

### *Task 7: Development of an Environmental and Social Management Plan (ESMP)*

The consultant must specific proposals aimed at strengthening the positive impacts of the REDD process on: the quality of the environment, social, cultural and economic well being of the population, particularly that of those groups most dependent on forests, ecosystems and biodiversity; the respect for traditional modes of using natural resources; and the community consultation and participation process. In particular, the ESMP must deal with the issues indicated below:

1. The Service Provider (SP) will recommend strategies and procedures to be implemented throughout the REDD process in view of adopting environmental and social preventative measures, and management and monitoring measures, in order to mitigate the negative impacts that could occur during the REDD process. To this end, the consultant will recommend a simple screening methodology to monitor the activities recommended each year in the annual work plans from a social and environmental viewpoint, in order to remove or reduce risks and negative impacts. The consultant will also recommend a simple monitoring and evaluation system for the social and environmental impacts of the REDD process, with monitoring indicators and a corresponding evaluation procedures and methodology. Finally, the consultant will recommend a public consultation mechanism for the monitoring and evaluation of the REDD process. The consultant will make concrete recommendations to increase public understanding of forest management, and increase the involvement of local communities—particularly indigenous groups, women, *Dalits*, NGOs and other civil society institutions, and the private sector—in the implementation and monitoring of the REDD process.
2. The consultant will recommend national capacity building measures to ensure that the ESMP is effectively implemented. The consultant will recommend public and/or civil society institutions likely to conduct this capacity-building work and define the necessary budget. This capacity building process could include institutional adjustments or procedures, recruitments or new assignments and training for national, local and regional institutional leaders and civil society organizations.
3. Estimated costs of the ESMP shall be evaluated for each measure recommended above. If there is no specific estimate, a methodology for estimating costs will be suggested. This estimate includes the needs for institutional improvement and training to apply the said safeguard measures. The consultant will present the ESMP in the form of measures incorporated directly into the REDD process activities (e.g., methodological improvements, supplements to recommended activities) so that it does not constitute a duplication of the REDD process.
4. The ESMP will also receive support from the Cultural Heritage Management Framework, which must be implemented to ensure that the programs and activities do not harm the physical or moral cultural heritage, or traditional practices and customs.

### *Task 8: Documentation of the analysis, surveys and public consultation results*

The final report will be concise and focused on the diagnostics, conclusions and recommended actions, with figures and synthesis tables. It will be complemented by annexes and a separate volume containing all supporting data, supplementary analyses, consultation reports and summaries, and lists of participants in specific activities.

Table 2d: Summary of Social and Environmental Impact Activities and Budget						
Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2010	2011	2012	2013	Total
Identification of Stakeholders		10				10
Description of initial social and environmental situation of forestry sector in Nepal		10	10			20
Analysis of possible impacts of no REDD Process			15			15
Analysis of possible impacts of REDD Process			25	30		55
Analysis of recommended alternative impacts				15		15
Verification of compliance with World Bank Policies				5		5
Development of ESMP				20		20
Total		20	50	70	0	140
Government						
FCPF			50	70		120
DFID/SDC through funds already committed for Nepal National Forest Programme		20				20
Government of Finland (through funds already committed to FRA project)						
JICA (TBC)						
USAID (TBC)						

### Component 3: Develop a Reference Scenario

As discussed in section 2 of this R-PP, several processes are occurring in Nepal that would be covered under the definition of REDD used by the FCPF. There is deforestation due to conversion of forest to other land uses. Furthermore, there are several drivers and processes that lead to forest degradation as unsustainable harvesting practices and overgrazing. Finally there is enhancement of forest carbon stocks through some of the successful policies and programmes that have already been implemented such as the community forest programmes in hills. The approach for developing a reference scenario for Nepal would, therefore, have to take in account all of these processes based on historic trends and projections of the future developments.

#### **3.1. Proposed approach for determining historic rates of deforestation, forest degradation and enhancement of forest carbon stocks**

Most of the historic forest inventories of Nepal have been geared towards assessing forests and understanding the extent of forest cover. Table 3.1 lists the existing major inventories so far.

Table 3.1: Major historic forest inventories in Nepal

Name	Year	Geographical coverage	Methods applied
1963/64 Forest Resources Survey	1963-67	Terai and Hills	Interpretation of aerial photography (combination of 1953-58 Indian photography and 1963-64 aerial photography), combined with field inventory for commercial forests
Land Resource Mapping Project (LRMP)	late 1970s	Whole of Nepal	Analysis of aerial photographs from the period 1977-1979, complemented by ground truthing, land surveys and topographic maps
Master Plan for the Forest Sector	1989	Whole of Nepal	LRMP information with updating
National Forest Inventory	1994	Whole of Nepal	Combination of 1990 Landsat image analysis, aerial photographs and field measurements collected between 1990 - 1999
Japan Forest Technical Association	2000	Whole of Nepal	Indian Remote Sensing (IRS) data from 1999-2000

Information System Development Project			
Forest Cover Change Analysis of the Terai Districts	2005	Terai	Analysing satellite images (Landsat 1990/91 and 2000/01), supported by ground verification
FAO Global Land Cover Network (GLCN) LCCS for Nepal	2009	Whole of Nepal	Segmentation of Landsat 2000 imagery

Analysis of these existing datasets has concluded the Land Resource Mapping Project carried out in the late 1970s is the most extensive forest assessment available. It appears to be the best available dataset because of the following features:

- it is a wall to wall assessment using a consistent methodology;
- mapped forest and scrub separately;
- within the forest, classification of canopy density into three classes: 10-40%, 40-70% and 70-100%;
- each forest zone was classified according to dominant forest type and the presence of dominant species.

Unfortunately, the 1994 National Forest Inventory is less useful for the purpose of determining a reference scenario for REDD in Nepal. Predominantly it was a low resolution sampling exercise that used different survey types from different dates in different regions. Furthermore, the inventory only made a distinction between forest and shrubs where 'forests' were defined as having a crown cover of >10% and an area >1 hectare. Hence 'forest' is the same (statistically) if it has a 100% crown cover as an 11% crown cover.

The FAO Global Land Cover Network (GLCN) LCCS for Nepal is the most recent study that covers the whole of Nepal, but it focuses mainly on land use and land use change and doesn't provide a lot of information on forest degradation.

From a biomass perspective and carbon perspective, the consistent approach and more detailed classification of canopy density in the LRMP, makes this the most useful dataset. It is recognized that the LRMP data are relatively old and a future REDD mechanism might require more recent data. However differences in methodologies, definitions and data resolution have meant that most inventories conducted since the LRMP have been incompatible with the LRMP data.

Currently, a new FRA project is starting in Nepal for next five years (2010-2014) as a bilateral co-operation between Governments of Nepal and Finland. This project will conduct a forest resource assessment over the whole country and is planning to generate national level baseline data on variables such as extent of forest, status of present forest cover, growing stock, wood and non-wood products, forests in the protected areas, tree resources outside the forest and biological diversity. Planning of this inventory is taking place parallel with the development of the R-PP and discussions are on its way to ensure compatibility of the data coming out of the new FRA with the LRMP.

As discussed at the beginning of this component, the approach for developing a reference scenario for Nepal will need to take into account deforestation, forest degradation and ongoing conservation and enhancements in carbon stocks. The use of biomass surface data over time would capture all these process and allow for the estimation of carbon loss or gain within any area of the landscape. Furthermore, this is easily linked to a future MRV system based on biomass and carbon stocks, therefore creating synergies for capacity development and design of a GIS database.

The LRMP data hold the potential for creating a provisional biomass surface for Nepal that can be used as a first reference for determining changes in forest cover and forest degradation. It is envisioned that a current biomass surface will be created based on high resolution data. This can be part of the planned FRA. To accurately capture the trend between the date of the LRMP and the new assessment, it is envisioned that some type of interpolation will take place using data from one or more of the following existing datasets: (i) 1994 National Forest Inventory, (ii) the 2000 Japan Forest Technical Association Information System Development Project and/or (ii) the 2009 FAO Global Land Cover Network (GLCN) LCCS for Nepal. A separate study will identify the best dataset to be used and it is expected that some reclassification of historic remote sensing data will be required for this.

In summary the following steps are planned for developing a historic reference scenario:

Step 1: The creation of a biomass surface from the LRMP data through:

1. The existing LRMP forest cover maps (1:25,000 and 1:50,000) are currently being digitized into GIS format. These data will be purchased for this component;
2. Calibration of LRMP classes with field samples from all carbon pools from exiting datasets by different organizations, the previous NFI and potentially new field work;
3. Population of the biomass coverage with calibrated values, derived from the combination of 1) existing LRMP data, 2) field sampling (past and present), and 3) modeling.

Step 2: The creation of a current biomass surface that is comparable with the LRMP classification using high resolution data and the planned FRA activities;

Step 3: Development of a multi-year historic reference scenario by using some of the historic datasets available to interpolate between the outcomes of step 2 and 3.

- Detailed study of 1994 National Forest Inventory data, the 2000 Japan Forest Technical Association Information System Development Project and the 2009 FAO GLCN LCCS for Nepal to determine how they can be use for this purpose and which of the three datasets has the most potential;
- Re-interpretation of existing datasets and if required acquisition and processing of new image sets

### ***3.2 Approach for determining reference scenario for future rates of deforestation, forest degradation, conservation and enhancement of forest carbon stocks***

The approach discussed in the previous section is designed to provide a historic reference level of carbon stock changes for Nepal to date. However, it is recognized that the

different drivers of deforestation and forest degradation are working at different speeds in different physiographic regions of Nepal and recent economic and social changes are affecting those drivers. Hence, extrapolation of historic trends might not necessarily be the best approach to estimate future emissions and removals. Nepal is therefore planning to develop projections into the future for changes in forest cover and carbon density based on a combination of historical trend data and possible macroeconomic and development scenarios.

Until now, Nepal has used several models to assess the impacts of forest cover change or deforestation on the supply of forest products or the emission of carbon through deforestation and degradation. The Master Plan for the Forestry Sector (MPFS) used simulation models to forecast three forest cover change scenarios over a period of 25 years but at an interval of five years. A study by the International Centre for Integrated Mountain Development, (ICIMOD) assessed the “Potential for carbon finance in the land use sector of the Hindu-Kush Himalayan region” which also includes Nepal. The assumptions used in their models are based on the data from FAO and India, and some from Nepal. It is a very simplified model, but can be further refined to make it more Nepal specific. Winrock International/Nepal has also estimated the potential benefits of REDD interventions in the forested area of three districts of Terai Arc Landscape of Nepal using a linear projection model. The OC model of ICRAF is also a simplified version of simulation model which can be used to estimate the benefits of REDD in different regions or districts or watersheds of Nepal. Finally, Nepal’s Initial National Communication to the UNFCCC (2004) assessed GHG emission reduction and carbon sequestration potential for the LULUCF sector using COPATH 2002 software.

At the same time in Nepal, models have been used since the 1980s for macroeconomic analyses with the aim of using it in the national planning exercise. Input-output tables were prepared, a social accounting matrix (SAM) was developed, and a computable general equilibrium (CGE) model was constructed in 1985/86 followed by its update in 1987/88.

Based on these combined experiences, Nepal is planning to develop a country wide spatial regression model that is imbedded in a CGE (Computable General Equilibrium) model. Disaggregated data on the forest-related variables can be used to construct a CGE model based on input-output table and SAM. The spatial regression model would enable linking GIS based information from the LRMP and FRA projects to economic variables and parameters and use this to make projections of carbon stock changes under different scenarios. As discussed in component 2, the processes and drivers affecting deforestation and forest degradation in Nepal can vary between the different regions. The selected modeling approach will allow for further refinement at the regional level. The necessity for this will be considered during the development of the model.

For the CGE related modeling work, some of the required data is already available through the Central Bureau of Statistics or it can be obtained from the more recent household survey of Nepal Rastra Bank. Similarly, some information from labor survey can be useful for the modeling exercise. Recent manufacturing census data will enable to compute use and make matrix by industries and hence will enable to give detailed information on the uses of forestry products by different industries. The data sets available from NLSS (Nepal Living Standard Survey) of 2003/04 can be extremely useful for compiling or generating required information. There is also scope of compiling additional information from the specific surveys carried out by CBS in different sectors as a part of updating national accounts. Other historic economic data is readily available from the 1990s onwards to be used in this exercise.

### 3.3 Proposed approach for capacity building

The Department of Forest Research and Survey (DFRS) under the Ministry of Forest and Soil Conservation consists of two divisions i.e. Forest Research Division and Forest Survey Division. It is envisioned that DFRS will lead the development of the reference scenario although a number of activities will be outsourced. It is expected that around 15-20 persons in Nepal will be involved in the process of developing the reference scenario. The current capacity is limited and capacity building activities are expected in the fields of GIS and modeling (including operation and handling of hardware and software), general understanding of REDD and data collection. The contractor for the capacity building of this component is expected to, as a first step, perform a training needs assessment and relate this to capacity building activities planned for the FRA and component 4 of this R-PP.

Table 3: Summary of Reference Scenario Activities and Budget

Main Activity	Sub-Activity	Estimated Cost (in thousands US\$)				
		2010	2011	2012	2013	Total
Creation of a biomass surface from the LRMP data	Purchase of digitized LRMP forest cover maps in GIS format		10			10
	Calibration of LRMP classes with field samples		25			25
	Population of the biomass coverage		10			10
Creation of a current biomass surface	Classification of high resolution remote sensing images combined with ground thruthing		550			550
Development of a multi-year historic reference scenario	Study on usability of intermediate data sets		10			10
	Re-Interpretation of existing data and possible acquisition and processing of new images			550		550



Development of spatial regression model and Computable General Equilibrium model	Generate database based on secondary data and surveys		10	10		20
	Update existing input output table constructed for Nepal			5		5
	Develop separately a land use sub-model as a feedback to the economy-wide model		10	20		30
	Construct a CGE Model and SAM		50	50		100
	Carry out extensive policy simulation exercise				5	5
Capacity building			20	20		40
Total		0	695	655	5	1,355
Government						
FCPF			545	505	5	1,055
DFID/SDC through funds already committed for Nepal National Forest Programme						
Government of Finland (through funds already committed to FRA project)						
JICA (TBC)			150	150		300
USAID (TBC)						

## Component 4: Design a Monitoring System

### 4a. Emissions and Removals

#### ***4a.1. General approach for a monitoring and reporting system for emissions and removals for Nepal***

Under a future REDD mechanism; Nepal will need to have a monitoring and reporting system in place that allows for frequent monitoring system of emissions and removals of greenhouse gases, and other benefits. This monitoring and reporting system should be run and sustained within Nepal and should be cost effective enough to be operating based on financial incentives from REDD.

As previously mentioned in component 3, a FRA project is planned in Nepal for the next five years (2010-2014) as a bilateral co-operation between Governments of Nepal and Finland. The FRA will have the following components:

- Forest cover mapping producing geographically referred information on the forest cover, its extent and quality;
- FRA composed of field sampling activity, digital sampling activity and data processing;
- Development of a Forest Information System including development of a geographically bound Forest Information System (FIS) which is able to deliver thematic maps through the Internet.

The design of the monitoring system for REDD will build on the activities conducted under this FRA project.

As discussed in component 2, decentralized participatory and community based forest management systems have been successful in stopping deforestation and forest degradation in certain parts of Nepal and are a key part of the REDD strategy options. The monitoring and reporting system therefore has to integrate national, sub-national/district and management unit level to account for the contributions of all levels and allow for fair sharing of the benefits based on actual performance. Furthermore, it is important that the information from the MR system will need to be made available at all levels and to actors in different sectors to support decision making related to possible REDD strategy options. The monitoring and information system therefore needs to include government, non-government organizations, civil society, federations, research institutions, private sector and other institutions with each having clearly defined roles and responsibilities. For this, the system can build on the role of existing institutions but will also consider the up-coming state restructuring.

#### ***4a.2. Technical approach for determining emissions and removals***

The technical approach for determining emissions and removals forms the basis for data collection and therefore the entire monitoring system. Since activity data and biomass increment data are not readily available in Nepal the monitoring system will principally be designed to monitor carbon stocks changes. In the beginning, the methodology will use

general assumptions for parameters such as biomass expansion factor and root-to-shoot ratios. However, once more data become available it is expected that Nepal and species specific factors will be developed together with allometric equations.

Nepal will use tier II for the present context and after the enhancement and capacity building Nepal will go for tier III.

In general, data collection will be based on a combined method using remote sensing data and periodic ground inventories measurements throughout all major forest types of Nepal. This will be based on the methodology used in the upcoming FRA. One of the intended outcomes of the FRA is an analysis of the most efficient combination of remote sensing and ground sampling for Nepal, also taking into account the possible future availability of high resolution data at lower prices. The result of this analysis will then be used to plan future data collection activities.

For the ground based inventories, local communities will play an important role in the collection of the data. For the government managed forest, local bodies such as Village Development Committees and District Forest offices engage in monitoring activities whereas in the National Parks and Protected Areas, respective National Park Authorities and Buffer Zone Group can be engaged. The ground inventories will be based on a network of around 1700 - 2000 permanent sample plots which will be established during the FRA. The ground inventories will aim at monitoring all carbon pools, however most emphasis will be on above-ground and below-ground biomass and soil carbon.

To develop the ground based inventories and ensure the quality and consistency of the data collected by communities, Nepal uses its experience with a number of inventory systems at the local level under different forest management regimes. An example of this are the Community Forest Inventories which are based on a uniform methodology designed through wider consultation of stakeholders and forest technicians. Another successful example of community involvement in monitoring in Nepal is the 'Kyoto: Think Global, Act Local' project<sup>3</sup> which produced a field Guide for Assessing and Monitoring Reduced Forest Degradation and Carbon Sequestration by Local Communities (<http://www.communitycarbonforestry.org/>).

The design of the REDD monitoring system will build on these experiences and the involvement of local communities in forest inventory and monitoring will further be tested in the planned FRA and in an ongoing pilot project conducted by the International Center for Integrated Mountain Development (ICIMOD), the Asia Network for Sustainable Agriculture and Bioresources (ANSAB) and the Federation of Community Forestry Users, Nepal (FECOFUN) with financial support from the 'NORAD: International Climate and Forest Initiative Funding Scheme'<sup>3</sup>. Based on these combined experiences, a uniform approach for involving local communities and local level government bodies in forest inventory and monitoring will be developed for Nepal. To ensure quality and consistency, it is anticipated that an internal verification system will be developed, where a sample of the data collected on the local level will be verified by the DFRS staff.

As described in component 2.c, Nepal expects to implement a hybrid approach with sub-national project activities. Any sub-national project will be expected to apply the same or a similar approach to allow for its data to be used in the national system.

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<sup>3</sup> This pilot project will set up a national level payment system for carbon services in three watershed areas of Nepal with the aim to reward communities for managing their forests and the carbon pool within them based on a system for measuring increased forest stock

### 4a.3. Forest Information Management System

As part of the proposed monitoring, data management and reporting system, a National Forest Information Management System (NAFIMS) will be established which includes a Central Forest Geo-Database. The proposed design of this NAFIMS and the intended information streams are illustrated in figure 4.1. The Department of Forest Research and Survey (DFRS) of the Ministry of Forest and Soil Conservation will be overseeing the collection, storage, sharing and management of nationwide forest related spatial data required for the NAFIMS.

The NAFIMS will build a new integrated GIS based Forest Information System that is being developed by the FRA project. The NAFIMS for REDD will build on the FRA database and expand its use for the management of all the relevant attribute, map and image information covering all forests under various land tenures, land-use patterns and management regimes.

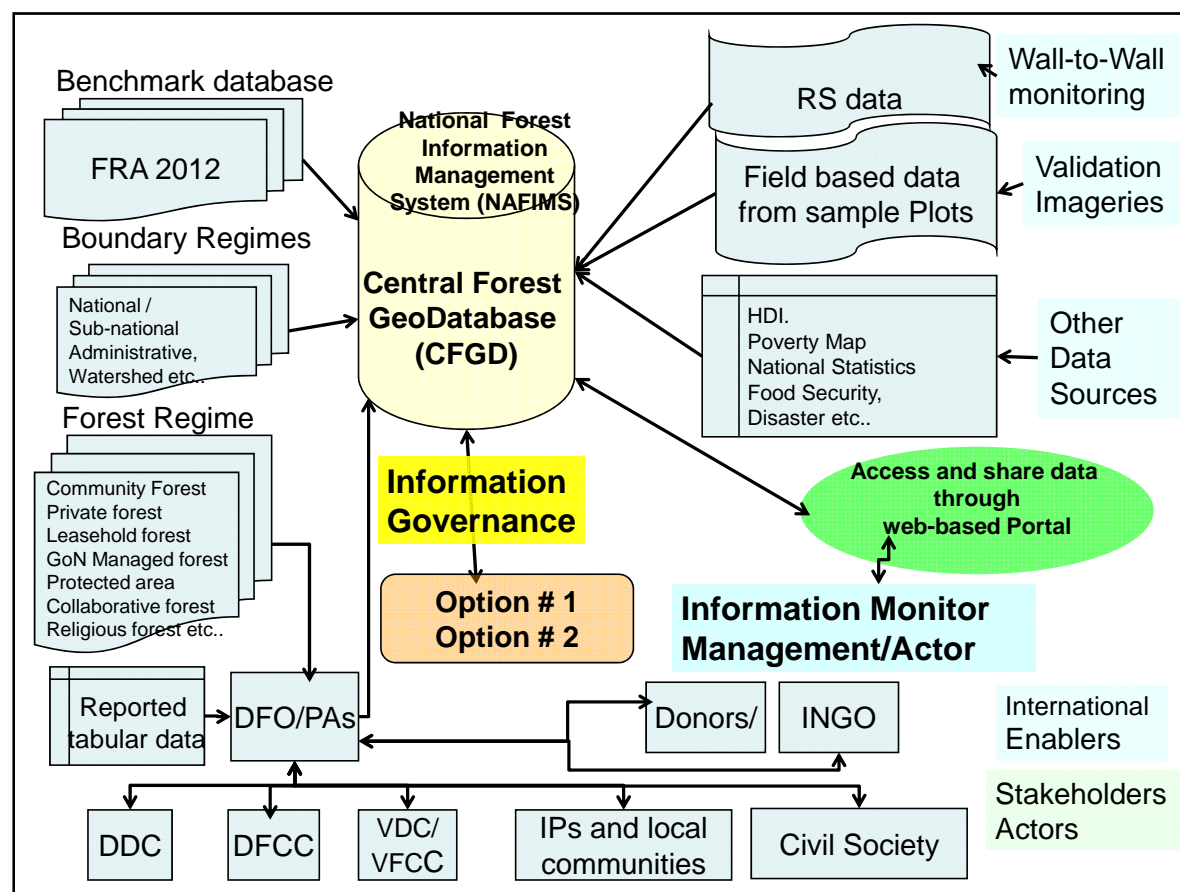


Figure 4.1: Proposed monitoring, data management and reporting system

### 4a.4. Governance structure

The governance system for the proposed monitoring, data management and reporting system is expected to have the following elements:

- National Political and Decision Making Forum will be the Apex body as described in component 1.A;
- National Implementing Agency will be the Department of Forest Research and Survey with the following responsibilities:

- Periodic execution of forest assessments for deforestation and degradation monitoring;
- Design, maintenance and operate National Forest Information Management System (NAFIMS);
- Coordinate the collection of sub-national level information;
- Disseminate NAFIMS deliverables i.e. developing web portal.
- Parallel institutional setup on the Sub-national level with District Forest Coordination Committees as the decision making forum and District Forest Offices as implementing agencies with a district level REDD Cell (as a new section) within the DFO structure.

#### **4a.5. Capacity building needs and ongoing and planned activities**

The following table lists the gaps identified in the existing monitoring mechanism in Nepal before the envisioned monitoring system can be achieved.

Identified Gaps	Details
<b>Forest Cover</b>	
Centralized Monitoring Organization	<ul style="list-style-type: none"> <li>• Department of Forest Research and Survey is the central organization. However, inventories and donor support in the past has failed to build capacity for periodic monitoring because of lacking human and other resources</li> </ul>
Database or Forestry Information System	<ul style="list-style-type: none"> <li>• Lack of central forestry database or information system</li> <li>• National coverage of GIS database for forestry is lacking and available databases are scattered into a large number of organizations</li> <li>• There is a clear and urgent need to actually determine and record, in a useable format, the boundaries of Community Forest User Groups (CFUGs) and other forest management modalities. There is also a need to develop the district-level capacity for this to be undertaken on a continuous basis</li> </ul>
Methodology	<ul style="list-style-type: none"> <li>• Each successive forest inventories of Nepal has dissimilar methodology and no uniform system of methodology for NFI agreed so far</li> </ul>
Human Resource Capacity	<ul style="list-style-type: none"> <li>• Trained HR lacking at national level</li> <li>• Available HR are scattered into different organizations, and in some cases under different work than their specializations</li> </ul>
Resource Availability	<ul style="list-style-type: none"> <li>• Foreign dependency in acquisition of satellite imageries and aerial photographs</li> <li>• Existing imageries and photographs are outdated</li> <li>• Developed forest cover maps and other spatial data are outdated</li> <li>• Past cover change studies incompatible for use of different scales and methods</li> </ul>

	<ul style="list-style-type: none"> <li>• Interpretation of remote sensing images is difficult because hills and mountain terrain of Nepal are highly complex and shadow and topographic effects create problems. Existing Digital Elevation Model (DEM) of Nepal does not provide high level of accuracy without plenty of ground control points that can only be obtained with major expense</li> </ul>
Tree Outside Forests	<ul style="list-style-type: none"> <li>• Private forests not part of inventories,</li> <li>• Data for ToF does not exist</li> <li>• Methodology not defined, guideline does not prevail</li> </ul>
Forest biomass or Carbon Stock	
Baseline Data	<ul style="list-style-type: none"> <li>• No data available for baseline situations on forest biomass</li> <li>• Forest stratification by densities does not exist, although LRMP has some.</li> </ul>
Human Resource Capacity	<ul style="list-style-type: none"> <li>• Trained human resources lacking at local level</li> </ul>
Time series data/ Permanent Sample plot	<ul style="list-style-type: none"> <li>• Most of the Permanent Sample Plots (PSPs) used in different inventories are not re-measured</li> <li>• Established PSPs' record missing</li> <li>• Time series growth data lacking</li> </ul>
Biomass studies	<ul style="list-style-type: none"> <li>• Biomass studies (so far) concentrated over major commercial species</li> <li>• Species specific biomass expansion factor lacking</li> </ul>
Growth Models	<ul style="list-style-type: none"> <li>• Lack of growth studies is one of the serious shortcomings in Nepal</li> </ul>
Lower Strata of Forest	<ul style="list-style-type: none"> <li>• NFIs has ignored the ground layers cover which constitute carbon stock</li> <li>• Non Timber Forest Products (NTFPs) ignored from NFIs</li> </ul>

An important objective of the planned Forest Resource Assessment (FRA) project is strengthening institutional capacity in building and maintaining forestry sector information systems and data sharing among forestry organizations. This project will therefore be an essential part of the development of a monitoring system for REDD in Nepal especially on the national level. On-the job-training, refresher training and specific requirement-based training are already planned under the FRA -including strengthening the human resource capacity in ICT, RS and GIS, in all levels- and will be expanded if necessary. For the capacity development of local communities and local government officials, a separate capacity building programme will be designed and implemented.

## 4b. Other Benefits and Impacts

To determine the other benefits and impacts, measurable and verifiable indicators and a credible methodology have to be developed. Nepal is one of the countries that is supporting the development of the REDD+ Social & Environmental Standards Initiative which is being facilitated by the Climate, Community & Biodiversity Alliance (CCBA) and CARE International (please refer to <http://www.climate-standards.org/>). Recognizing growing awareness at both international and national levels of the need for effective social and environmental safeguards, this initiative aims to define and build support for a higher level of social and environmental performance from REDD+ programs. The draft standards are built on eight principles:

1. Rights to lands, territories and resources are recognized and respected by the REDD+ program;
2. The benefits of the REDD+ program are shared equitably among all relevant rights holders and stakeholders;
3. The REDD+ program improves long-term livelihood security and well-being of Indigenous Peoples and local communities with special attention to the most vulnerable people;
4. The REDD+ program contributes to broader sustainable development and good governance objectives;
5. The REDD+ program maintains and enhances biodiversity and ecosystem services;
6. All relevant rights holders and stakeholders participate fully and effectively in the REDD+ program.
7. All rights holders and stakeholders have timely access to appropriate and accurate information to enable informed decision-making and good governance of the REDD+ program;
8. The REDD+ program complies with applicable local and national laws and international treaties, conventions and agreements.

It is anticipated that these standards will become the basis for monitoring social and environmental impacts of REDD in Nepal. For this, the following activities are planned:

- Desk study to analyze the indicators from the REDD+ Social & Environmental Standards and development of an appropriate methodology and measurable parameters that can be applied in the field in Nepal to assess the impact of REDD activities;
- Incorporate the methodology and parameters in the field manual that will be developed to determine emissions and removals (see component 4a above);
- Capacity building of local communities and local level government bodies to monitor these parameters;
- If necessary, development of a social and environmental baseline for Nepal, taking into account some of the data that will also be collected as part of the FRA.

Discussions are underway with Climate, Community & Biodiversity Alliance (CCBA) and CARE International to pilot these activities on a smaller scale in Nepal.

Table 4: Summary of Monitoring Activities and Budget						
Main Activity	Sub-Activity	Estimated Cost (in thousands)				
		2010	2011	2012	2013	Total
Design of monitoring system for emissions and removals	Analysis of the most efficient combination of remote sensing and ground sampling for Nepal		30			30
	Design of uniform approach and manual for ground based inventories			25	25	50
	Design and implementation of National Forest Information Management System		600	500	300	1,400
	Development of governance structure			25	15	40
	Capacity building national level		150	180	140	470
	Capacity building local level			30	70	100
Development of monitoring system for other benefits and impacts	Desk study		20			20
	Update of field manual			10	10	20
	Capacity building			50	50	100
	Baseline development		10	40		50
	Piloting		50	100	100	250
Total			860	960	710	2,530
Government			50	50	40	140
FCPF			550	650	410	1,610
DFID/SDC through funds already committed for Nepal National Forest Programme						
Government of Finland (through funds already committed to FRA project)			260	260	260	780
JICA (TBC)						
USAID (TBC)						



## Component 5: Schedule and Budget

Table 5: Schedule and Budget							
Comp	Main Activity	Sub-Activity	Estimated costs (in thousands US\$)				
			2010	2011	2012	2013	Total
1.a	RDD working group and APEX body meetings	Apex Body meeting (twice a year)	1.0	3.0	3.0	3.0	10.0
		Stakeholder Consultation Forum meeting (4 times /year)	1.0	3.0	3.0	4.0	11.0
		RWG Meeting (6 times/ year)	2.0	8.0	8.0	8.0	26.0
	Office running	Stationary and office management cost	7.0	14.0	16.0	18.0	55.0
	Office equipment	GPS, computers, software	10.0	15.0	5.0	5.0	35.0
		Furniture and fixture		2.0	3.0	2.0	7.0
	Vehicle Purchasing & maintenance	4W Jeep -1, Mo-bike- 3		67.0	3.0	3.0	73.0
	Human resources	Staff salary	16.0	28.0	29.0	29.0	102.0
		Capacity building and travel	13.0	37.0	40.0	42.0	132.0
1.b	Consultation	Workshops including reflection ( national, regional and local)	200.0	200.0	150.0		550.0
		Public Hearing		400.0	290.0		690.0
		Round Table Meeting	2.0	3.0	2.5		7.5
		Expert Consultation	2.0	2.5	1.0		5.5
	Capacity Building	Curriculum and Training Material Development	4.0	7.0			11.0

		Support to forestry-related and other institutions	3.0	7.0	7.0		17.0
		National Level Trainer/facilitator ToT		13.5			13.5
		District Level Lead Trainer/facilitator ToT		96.0			96.0
		Thematic district Level Training		39.0	30.0		69.0
		Local Level Training		52.0			52.0
		Orientation to Journalists		52.0			52.0
	Awareness Raising and Outreach	FM radio Program	100.0	200.0	36.0		336.0
		Television Program	15.0	20.0	5.0		40.0
		Newspaper Articles	20.0	30.0	12.0		62.0
		Bulletins and Journals		1.0	1.0		2.0
		Web Sites	0.5	0.5	0.5	0.5	2.0
		Leaflets, Posters and Brochures	20.0	40.0	8.0		68.0
		Calendar		19.0	17.0		36.0
	Program Management	Outsourcing Human Resource	30.0	60.0	60.0	30.0	180.0
		Travel and Accommodation	6.0	30.0	30.0	3.0	69.0
		Equipments	10.0	10.0	8.0		28.0
		Administrative Overhead	3.0	6.0	6.0	4.0	19.0
2.a	Follow up studies	Review and Finalize ToR	4.0				4.0
		Factors of Weak Governance, policy implementation and law enforcement	20.0				20.0

		Drivers of Deforestation in High Mountains and Churia	20.0				20.0
		Value Chain of Forest Products	12.0				12.0
		Demand and Supply of Forest Products	25.0				25.0
		Effect of climate change and invasive species on forest degradation	15.0				15.0
	Produce synthesis of findings of the study and disseminate them						
		Development		5.0			5.0
		Dissemination		5.0			5.0
2.b	Analytical studies	Assessing the value of the forest	10.0	10.0			20.0
		Political economy of land use	10.0	10.0			20.0
		Assessing carbon emissions originated from drivers of deforestation and forest degradation	10.0	20.0			30.0
	Development of materials and organize consultations				20.0		20.0
	Economic and Financial assessment of selected options	Analysis and writing		15.0	40.0		55.0
		Dissemination			10.0		10.0
	Endorsement	Meetings, demonstrations, review			10.0		10.0
2.c	studies	Finalize ToR	2.0				2.0
		Conduct studies		40.0			40.0

		Develop Policy Brief			9.0		9.0
		Round table Meeting with Policy drafter and Maker			10.0		10.0
	Institutionalizations	Restructuring				100.0	100.0
		Capacity building				100.0	100.0
2.d	Identification of Stakeholders		10.0				10.0
	Description of initial social and environmental situation of forestry sector in Nepal		10.0	10.0			20.0
	Analysis of possible impacts of no REDD Process			15.0			15.0
	Analysis of possible impacts of REDD Process			25.0	30.0		55.0
	Analysis of recommended alternative impacts				15.0		15.0
	Verification of compliance with World Bank Policies				5.0		5.0
	Development of ESMP				20.0		20.0
3	Creation of a biomass surface from the LRMP data	Digitisation of LRMP forest cover maps into GIS format		10.0			10.0
		Calibration of LRMP classes with field samples		25.0			25.0
		Population of the biomass coverage		10.0			10.0

	Creation of a current biomass surface	Classification of high resolution remote sensing images combined with ground thruthing		550.0			550.0
	Development of a multi-year historic reference scenario	Study on usability of intermediate data sets		10.0			10.0
		Re-Interpretation of existing data and possible acquisition and processing and processing of new images			550.0		550.0
	Development of spatial regression model and Computable General Equilibrium model	Generate database based on secondary data and surveys		10.0	10.0		20.0
		Update existing input output table constructed for Nepal			5.0		5.0
		Develop separately a land use sub-model as a feedback to the economy-wide model		10.0	20.0		30.0
		Construct a CGE Model and SAM		50.0	50.0		100.0
		Carry out extensive policy simulation exercise				5.0	5.0
	Capacity building			20.0	20.0		40.0
4	Design of monitoring system for emissions and removals	Analysis of the most efficient combination of remote sensing and ground sampling for Nepal		30.0			30.0

		Design of uniform approach and manual for ground based inventories			25.0	25.0	50.0
		Design and implementation of National Forest Information Management System		600.0	500.0	300.0	1,400.0
		Development of governance structure			25.0	15.0	40.0
		Capacity building national level		150.0	180.0	140.0	470.0
		Capacity building local level			30.0	70.0	100.0
	Development of monitoring system for other benefits and impacts	Desk study		20.0			20.0
		Update of field manual			10.0	10.0	20.0
		Capacity building			50.0	50.0	100.0
		Baseline development		10.0	40.0		50.0
		Piloting		50.0	100.0	100.0	250.0
6		Travel and Accommodation		20.0	20.0	20.0	60.0
		External reviewers		50.0	75.0	50.0	175.0
		Accountant fees		2.0	2.0	2.0	6.0
Total costs			613.5	3,247.5	2,655.0	1,138.5	7,654.5
Government			19.4	80.8	92.2	142.6	335.0
FCPF				1,408.2	1,488.8	698.4	3,595.4
DFID/SDC through funds already committed for Nepal National Forest Programme			146.0	600.0	664.0	37.5	1,447.5
Government of Finland through funds already committed to FRA project				260.0	260.0	260.0	780.0
JICA (TBC)				210.0	150.0		360.0
USAID (TBC)			448.1	688.5			1,136.6

## Component 6: Design a Program Monitoring and Evaluation Framework

The development of a National Monitoring and Evaluation Program framework is the responsibility of the REDD cell, which assesses the performance of the implementation of the R-PP and the REDD+ readiness strategy. This component will be finalized by the end of June 2010. The anticipated budget is shown below.

Table 6: Summary of Program M&E Activities and Budget						
Main Activity	Sub-Activity	Estimated Cost (in thousands US\$)				
		2010	2011	2012	2013	Total
M&E implementation	Travel and accommodation		20	20	20	60
	External reviewers		50	75	50	175
	Accountant fees		2	2	2	6
Total			72	97	72	241
Government						
FCPF			72	97	72	241
DFID/SDC through funds already committed for Nepal National Forest Programme						
Government of Finland (through funds already committed to FRA project)						
JICA (TBC)						
USAID (TBC)						

## References

References to analytical studies, policy documents, statistics, case studies, and other documentation are available in the following documents.

Consortium NFA, FECOFUN, NIFFIN, ACOFUN, Forest Action, DANAR, HEMWANTI; A Consultation and Participation Plan for Readiness Proposal for Reducing Emissions from Deforestation and Forest Degradation in Nepal. Team Leader: Mr. Shambu Dungal. Kathmandu, Nepal 2010

NFA, SEEPORT, GG Nepal; Quick Assessment of Land Use, Forest Policy and Governance. Team Leader: Dr. Keshav Raj Kanel. Kathmandu, Nepal 2010

Practical Solution, FECOFUN; REDD Strategy Options in Nepal. Team Leader: Dr. Uday Raj Sharma. Kathmandu, Nepal 2010

SEEPORT, GGN; Implementation Framework: REDD Readiness Preparation Proposal. Team Leader: Mr. Tika Ram Dhakal. Kathmandu, Nepal 2010

Development Centre; Social and Environmental Impacts for REDD Readiness Preparation Proposal. Team Leader: Dr. Thakur Prasad Upadyay. Kathmandu, Nepal 2010

LEED, Consultancy; Develop a Reference Scenario, Review of Historical Data Available. Team Leader: Dr. Bimal Keshari Paudel. Kathmandu, Nepal 2010

NFA; Forest Cover Change and Emission Forecasting Model. Team Leader: Dr. Keshav Kanel. Kathmandu, Nepal 2010

ERI, CAFCOL, GG Nepal; Designing a Monitoring System. Team Leader: Dr. Krishna Prasad Paudel. Kathmandu, Nepal 2010

These documents are accessible at:

<http://mofsc-redd.gov.np/>



## Annexes

### Annex 1b-1: Stakeholder Consultations Held So Far on the R-PP

#### 1b-1.1 Summary Events Data Sheet

##### A. General Awareness and Consultations

S. No.	Events	Topic	Date	Organizer	Total Participants	Participants
1	TOT on methodology for REDD	REDD Initiative in Nepal	11-09-2009	ANSAB, FECOFUN & ICIMOD	33	Civil Society/ NGO/ INGO/ GO/media
2	Consultative workshop on REDD negotiation , Pre-Bangkok/Barcelona Climate Change Talks	REDD Negotiation Process: REDD or REDD+  Role of Forest in Adaptation: Technology Transfer, Civil Perspectives: Right of Forest users & REDD and Indigenous Peoples rights, Carbon Finance: Opportunities and Challenges	22-09-2009	REDD-Forestry and Climate Change Cell & FECOFUN	53	Civil Society/ NGO/ INGO/ GO/media
3	Climate Change and <i>Dalit</i> Community in Nepal	REDD Initiatives in Nepal, Climate Change Global Perspective, Global Warming and Climate Change: Challenges for Water Resources Management, Sustainable Development, Human Civilization and Habitat of Living Beings	12-10-2009	REDD-Cell, DANAR, Nepal	45	Civil Society/ NGO/ INGO/ GO/media/
4	Consultative Workshop on REDD - Sharing outcome of Bangkok/Barcelona	Nepal's Proposed Position in COP15/CMP5	14-10-2009	REDD-Cell,	44	Civil Society/ NGO/ INGO/ GO/media/
5	Guest lecture for M.Sc.	Reducing GHG Emission: Initiatives from Forestry Sector	15-11-2009	Kathmandu	35	Students

	international Student,	in Nepal		University		
6	Climate Change and Women	Impacts of Climate Change and Gender Issues	19-11-2009	Jagaran Nepal	300	Women leaders, Civil society/ NGO/ INGO/media
7	National REDD Dialogue	Process & Progress of R-PP in Nepal Issues of International Negotiation with regards to Climate Change keeping view with COP15	25-11-2009	REDD-Forestry and Climate Change Cell	54	Civil Society/ NGO/ INGO/ GO
8	National REDD Workshop	Readiness Preparation Proposal (R-PP) Preparation in Nepal	26-11-2009	REDD-Forestry and Climate Change Cell	45	Civil Society/ NGO/ INGO/ GO
9	National Awareness Generation & TOT on REDD	REDD, Negotiation and Initiative in Nepal	26-12-2009	RECOFT/F ECOFUN	43	Civil Society/ NGO/ INGO/ GO
10	Sharing on COP 15	Sharing on COP 15: REDD negotiations	30-12-2009	REDD-Cell/NEFIN	55	Civil Society/ NGO/ INGO/ GO
11	Climate Change and REDD Workshop	REDD Concepts in Nepal	03-01-2010	FECOFUN	35	Civil Society/ NGO/ INGO/ GO
12	District Forest Officers Workshop	REDD Concepts and Initiatives in Nepal	06-01-2010	Dept. of Forest	55	DFOs
13	Foresters' National Workshop	REDD Initiatives in Nepal (open floor discussion)	07-01-2010	Nepal's Forester's Association,	150	DFOs, DISCOs, Wardens and researchers
14	Planning Workshop Birat Nagar	REDD and REDD in Nepal	9-02-2010	REDD Cell	74	DFO, DSCO, I NGO, NGO, GO
15	Planning Meeting, Hetauda	REDD and REDD in Nepal	16-02-2010	REED Cell	71	DFO, DSCO, I NGO, NGO, GO
16	Planning Meeting,	REDD and REDD in Nepal	19-02-2010	REDD Cell	65	DFO, DSCO, I NGO, NGO,

	Nawalparasi					GO
17	REDD and Indigenous people, Strategic Planning Workshop, Kabhre	REDD and Indigenous People	25-02-2010	NEFFIN	35	Civil Society/ NGO/ INGO/ GO
18	Planning Meeting, Dhanagadhi	REDD and REDD in Nepal	26-02-2010	REDD Cell	67	DFO, DSCO, I NGO, NGO, GO
19	Planning Meeting, Surkhet	REDD and REDD in Nepal	26-02-2010	REDD Cell	66	DFO, DSCO, I NGO, NGO, GO
20	National REDD Stakeholders Consultation Forum	Share on REDD and REDD+ under the UNFCCC process/negotiation	01-03-2010	REDD Cell & NIFFIN	45	Civil Society/ NGO/ INGO/ GO

#### B. Activities conducted during development of Consultation and Participation Plan

Activity /Event		Date	No of Events	Participants	Major Outcomes
Consultation workshops	National Level	Dec 23, 2009	1	<ul style="list-style-type: none"> <li>Total number of participants of the workshop was 52.</li> <li>Government organizations like Department of Forest, Ministry of Forest and Soil Conservation,</li> <li>INGOs,</li> <li>Private sector, including Brick Kilns, Butwal power Company, Timber Corporation Nepal media, local government association, Civil society organizations including FECOFUN, ACOFUN, HIMAWANTI, DANAR, NEFIN, Academic institutions i.e. KAFCOL, women's organizations, <i>Dalit</i> organizations, indigenous organizations</li> </ul>	<ul style="list-style-type: none"> <li>Sensitized on the issues of climate change, REDD and REDD+</li> <li>Identified stakeholders for REDD process and analyzed their possible roles, relations, opportunities and impacts</li> <li>Identified existing effective media and analyzed its effectiveness in REDD process</li> </ul>
	Regional Level	Jan 2, 7 and 12, 2010	3	<p>Total number of participants of 3 workshops was 116.</p> <p>GOs like, DFO, DAO, WDO, , NGOs, <i>Dalit</i> organizations, indigenous organizations, media, political parties, forest users, women, FECOFUN, HIMAWANTI, networks, NGOs, academic institutions, private sector/ forest entrepreneurs,</p>	<ul style="list-style-type: none"> <li>Participants are aware causes and consequences of climate change, concept and issues associated with REDD</li> <li>Identified stakeholders at district level and analyzed their possible stakes (roles, relation, opportunities and impact) towards REDD process.</li> </ul>

					<ul style="list-style-type: none"> <li>Identified suitable outreach media for raising awareness</li> </ul>
	Community Level	January, 2010	12	<p>CBOs including women groups, youth clubs, political parties, local entrepreneurs, women, forest users, CFUGs, local media, <i>Dalits</i>, indigenous peoples, local government representatives, forest dependant people, social leaders, school teachers, students</p> <p>Total participants attending the workshops were 544.</p>	<ul style="list-style-type: none"> <li>Conceptually clarified the concept of climate change and REDD</li> <li>Identified local stakeholders and their stakes on forest</li> <li>Identified possible outreach media at local level</li> </ul>
Validation Workshops	Community Level	Feb 12,13 and 22, 2010	3	<p>CBOs including women's groups, local clubs, ethnic groups political parties, local entrepreneurs, women, forest users, CFUGs, local media, <i>Dalits</i>, indigenous, local government representatives, forest dependant people, social leaders, school teachers, students</p> <p>Total participants attended the workshop were 90.</p>	<ul style="list-style-type: none"> <li>Shared the issues raised from various consultation workshops which need wider consultation during readiness process</li> <li>Shared the stakeholders identified and its analysis</li> <li>Presented the consultation and outreach plan and get feedback</li> </ul>
	Regional Level		2	<p>GOs like District forest office, District Agriculture office, women development office, DDC, political parties, media, academic institutions, and the private sector.</p> <p>Total participants-81.</p>	<ul style="list-style-type: none"> <li>Shared the issues raised from various consultation workshops which aware them about issues of climate change and REDD.</li> <li>Get suggestions on REDD outreach plan.</li> </ul>
	National level	26 Feb, 2010	1	<p>Government organizations like MoFSC, MoEnv., MoA, research institutions like- Forest Action, KAFCOL, ICIMOD, Network organizations- FECOFUN, HIMAWANTI, civil society including <i>Dalit</i> organization, indigenous peoples organizations, women organization, private sector- TCN etc</p>	<p>Suggestions and feedback to the REDD outreach plan.</p>
Expert Consultation		February, 2010	25	<p>Policy makers, technical experts, technical institutions, media, journalist, GOs, INGOs</p>	<ul style="list-style-type: none"> <li>Got idea on type of message to be delivered at different level</li> <li>Understanding on overall situation of awareness and capacity among stakeholders</li> <li>Overview of existing outreach and capacity development mechanisms</li> </ul>

					<ul style="list-style-type: none"> <li>• Got input on consultation and outreach strategy</li> <li>• Input on consultation and outreach activities to be included in the plan</li> <li>• Got feedback on the draft plan</li> <li>• Media</li> </ul>
Resource Center assessment	Government level and Community level	By 15 Feb, 2010	2	Government resource center and community resource center	<ul style="list-style-type: none"> <li>• Better understanding about need for technical and financial support for both government and community managed resource centers</li> <li>• Identified the need of reading and other materials</li> <li>• Understood the areas of improvements for better access of resources to the public</li> <li>•</li> </ul>
Meetings for the programme	Team meetings Consortium meeting		Many	REDD outreach plan preparation team, thematic teams, cluster teams, meeting with REDD cell, Consortium meeting	<p>Gave clear vision to conduct programmes</p> <p>Feedback and suggestion guided the programme in right track.</p>

### Annex 1b.1.2 Summary of Consultation and Outreach Activities

No.	Name of Component	Consultation & outreach activities	Participants
1	Organize and Consult	43 awareness and consultation workshops, 25 expert consultations, 5 piloting of FM program, 4 newspaper articles, Brochures, leaflets, posters, video documentary, flipchart	A total of 2,547 individuals participated in the workshops, including representatives from forest-dependent communities, indigenous peoples, women, <i>Dalits</i> , civil society groups, government officials from various sectors, politicians, journalists, academics, and the private sector
2	Prepare the REDD Strategy	9 workshops, 51 individual consultations	A total of 405 people participated in the workshops including forest-dependent communities, indigenous peoples, women, <i>Dalits</i> , civil society representatives, government officials from various sectors, politicians, journalists, academics, and the private sector
3	Develop a Reference Scenario	2 workshops, 12 individual consultations	Workshop participants - 45 people from various sectors including government, academia, community federations, women's and other civil society groups.
4	Design a Monitoring System	2 workshops, 17 individual consultations	Workshop participants-45 people from various sectors including government, academia, community federations, women's and civil society groups. This was carried out in conjunction with workshops for Component 3.

## 1b-1.2 List of stakeholders Identified

### A. Government & Government Institutions

National Level	Regional, District Level	Community Level
<ul style="list-style-type: none"> <li>Ministry of Forest and Soil Conservation</li> <li>Department of Forest</li> <li>Dept. of Forest Research And Survey</li> <li>Dept. of National Parks and Wildlife Conservation</li> <li>Department of Soil and Watershed Conservation</li> <li>Dept. of Botany</li> <li>Commission: Landless, Bonded Labour and Squatter</li> <li>National planning Commission</li> <li>Ministry of Energy</li> <li>Ministry of Environment</li> <li>Ministry of Finance</li> <li>Ministry of Agriculture, Department of Agriculture</li> <li>Ministry of Women</li> <li>Dept of Cottage and Small Industries</li> <li>Forest Product Development Committee</li> <li>Parliamentary Committee on Natural Resources</li> <li>Nepal Trust for Nature Conservation</li> <li>Human Resource Development Wing (Ministry of Forest)</li> <li>Extension division of Department of Forests</li> <li>Department of Road</li> <li>Vaidyakhana</li> <li>Timber Corporation of Nepal</li> </ul>	<ul style="list-style-type: none"> <li>Regional Forest Directorate</li> <li>District Forest Office</li> <li>National Parks, Reserves and Conservation areas</li> <li>District Soil and Watershed Conservation Office</li> <li>Regional Forestry Training Centre</li> <li>District Administrative Committee</li> <li>Regional Agriculture Office</li> <li>District Agriculture Office</li> <li>District Cottage and Small Industries Promotion Office</li> <li>Women Development Office</li> <li>District Courts</li> <li>Security Agencies (Army, Police, Armed Police)</li> <li>District Livestock Development Office</li> <li>Divisional Road Office</li> <li>Vaidyakhana (herbal medicine centre)</li> </ul>	<ul style="list-style-type: none"> <li>Range post, Illaka Forest Office</li> <li>Village Development Committee</li> <li>Municipalities</li> <li>Police Check post</li> <li>Centre for Agriculture Service</li> <li>Veterinary Service Centre</li> <li>Institutions related with Ayurveda</li> </ul>

B. Private Sector	C. Civil Society	D. Tribal and Indigenous People and other forest dependent groups	E. Groups directly connected with forest for livelihood sustenance	F. Vulnerable groups	G. Academic and Research Institutions
Hydroelectricity Projects Promoters of Alternative Energies Brick Industries Furniture Industry Saw Mills Carbon Traders Collector, Processor and Seller of NTFP Local Hotel Entrepreneurs Entreprises dependent on Wood Financial Institutions Centre for Rural Technology Private Forest Owners Medicinal Plants Processing Companies	Fecofun Acofun NEFIN HIMMAWANTI DANAR Federation Nepalese Industries and Commerce Federation of Herbal Trade Federation of Wood Traders Federation of NGOs Forest related NGOs like ForestAction, ANSAB etc Community Based forest Assistance Network, Nepal IUCN WWF, Care Nepal Federation of Environment Journalists Media and Journalists Political parties Human Right Activists Association of Forest Technicians Nepal Nepal Ranger Association Junior Forest Technician Association	Tribes having direct relation with forest like: Sherpa, Gurung, Magar, Limbu, Rai, Tamang, Newar, Tharu, Rajbansi, Chepang, Raute, Hayu, Pahari, Danuwar, Bote, Majhi, Dom, Dhimal, Satar, Lama, Raji, Meche, Koche	Community Forest Users Leasehold Forest users Collaborative Forest Users Charcoal Burner group Fuelwood traders NTFP like chiraito, Yarsagumba, lokta, honey etc Religious forest users Wood sellers (for livelihood sustenance)	Raute Kamaiya Squatter Dalit especially women Chapang Kusunda Bote, Majhi Raji, Badi Lepcha Meche Koche	Institute of Forestry Kathmandu Forestry College ICIMOD Researchers Schools College, Universities Artists Litterateur



## Annex 1b-2: Consultation and Participation Plan

### 1b-2.1 Consultation and Participation Plan

S.N.	Activities	Target	Level	Focus	Units
<b>A. CONSULTATION</b>					
A.1	Consultation WS	Policy Makers (NPC, MPs, CAMs, Ministries, Civil Society/NGOs)	National	Concept and Themes	2
		Stakeholders and interest groups (including political parties)	National	Strategy, Implementation framework, social and environmental impacts	5
			District	Multi-sectoral and multi-stakeholders	75
			District	Indigenous Peoples	75
			District	Women	75
			District	<i>Dalits</i>	75
			Community Based Forest Groups	Multiple stakeholders	800
A.2	Public hearing	Stakeholders including various interest groups, political parties and general public	Community and District	Implementation framework, strategy options, social/environmental impacts, M&E	240
	Public notice and feedback collection	Stakeholders including various interest groups, political parties and general public	All	Strategy, implementation framework (Newspaper announcements = 20)	750
	Radio announcements	All	All		85
A.3	Roundtable meeting	Policy Makers (NPC, MPs, CAMs, Ministries, Civil Society/NGOs)	National	Strategy, Implementation framework, Reference scenario	5

		Experts	National	Reference scenario, strategy, implementation framework, MRV	5
A.4	Individual consultation	Experts	National	Strategy, Implementation framework, reference scenario, MRV	25
A.5	Review of Draft documents	Experts	National	Strategy, Implementation framework, reference scenario, MRV	25
<b>B. Capacity Building</b>					
B.1	Development of Training of Trainer Curricula	Lead Trainer/facilitators	National/Regional	Training facilitation methods and subject matter on REDD	1
		District Level Facilitators/Trainer	District	Technical training on different themes (modular)	3
B.2	Workshops Design	Stakeholders including various interest groups, political parties, policy drafter and makers	All	Session plans and message development	5
B.3	Establish and Orient Training Expert Team	Team of expert to train Lead Trainer/Facilitator (GOs, NGOs)	National	Rigorous selection, team orientation and preparation for TOT	1
B.4	Conduct Training of Trainers	Lead trainer/facilitator (Gos, NGOs and Private Sector)	National	Training and Facilitation skill and subject matter	1
		General trainer/facilitator (Gos, NGOs and Private Sector)	District	Training and facilitation and conceptual understanding	14
		General/thematic	District	Technical Training on different themes	10
B.5	Training	Representative of Government, Civil Society, Federations, School teachers	District	Concept and issue	75
		Journalists	National	Orientation	75
B.6	Forestry and other academic	All faculties		Orientation	1
		Key faculties		Specific Training	1

	institutions capacity building	Student		Fellowship for Research	10
		Curricula and Material Development		On REDD	1
C. Awareness Activities					
C.1	<i>FM Radio program</i>	All stakeholders	National to Community	General message, issue based message	
	Program development				25
	Translation into regional languages (5)				5
	Broadcasting				325
C.2	<i>Television program</i>	All stakeholders	National to Community	Conceptual message	
	Program Development				1
	Copy and distribution				500
	Translation into regional languages (2)				2
	Broadcasting: Television channel				6
	Cable network supplier				150
	Talk program development				4
	Talk program broadcast				4

	ting				
	<i>Newspaper articles</i>				
	Message development & publishing	Literate people	National and District	Conceptual and issue based	450
C.3	Issue based Writing	Literate people	National and District	Fellowship ( issue based research and publication)	150
	<i>Bulletins &amp; Journals</i>				
C.4	Special issues, articles	Professionals and literate people	National and District	Issue-based and theme-based	2
C.5	<i>Website update and hosting cost</i>	Professional	National and International	Update the activities	
	<i>Leaflets</i>	Stakeholder	District and community	Conceptual message	
	Development				2
	Printing				400000
C.6	Distribution				1
	<i>Posters</i>				
	Development	Normal literate/illiterate people	Community	Pictorial message on REDD	3
	Printing				150000
C.7	Distribution				1
	<i>Brochures</i>	Middle level professionals, students	National and District	General and thematic	
	Development				6
	Printing				150000
C.8	Distribution				1

	ion				
	<i>Calendars</i>	All literate people	All	Containing REDD general and thematic message	
	Development				1
C.9	Printing				50000

### 1b-2 .2 Time line for Consultation and Participation Plan

S.N.	Activities	2010	2011		2012		2013
		2nd half	1st half	2nd half	1st half	2nd half	1st half
A. CONSULTATION							
1	Consultation and Validation Workshops						
2	Public hearing						
3	Roundtable meeting						
4	Individual consultation						
5	Review of Draft documents						
6	Program Review						
B. Capacity Building							
1	Development of Training of Trainer Curricula						
2	Workshops Design						
3	Establish and Orient Training Expert Team						
4	Conduct Training of Trainers						
5	General Training						
6	Forestry and other Academic Institutions Support						
7	Program Review						
C. Awareness Activities							
1	FM Radio programs						
2	Television programs						
	Talk program from Television						
3	Newspaper articles						
4	Bulletins & Journals						
5	Website update and hosting cost						

6	Leaflets						
7	Posters						
8	Brochures						
9	Calendars						
10	Program Review						

### 1b-2.3 Stakeholders to be consulted for various issues relate to REDD

Areas	Major Issues	Stakeholders		
		National	District/Regional	Local
Development and Implementation of national REDD Strategy	Strategy to address drivers of deforestation and forest degradation, Policy and program review and formation, Issues of various interest groups like IPs, Dalits, Forest Users Groups, Forest Dependent People	Ministries ( MoFSC, Land Management, Agriculture, Energy, Environment, Finance, Local development); Civil society organisations, experts, policy makers, political parties, Commissions, Private sector	Officials of the line ministries, political parties, DDC, civil society organisations particularly right based organisation like FECOFUN, ACOFUN	VDC, field based staff of line ministries, local politicians, Forest Dependent Communities including IPs, Women, Dalits, and Forest Users Groups
Development of Implementation Framework	Scale of implementation, carbon ownership and registry, implementation mechanism and benefit sharing	Ministries ( MoFSC, Finance, Environment), Civil society- especially Federations of Forest Users Groups and Communities and related NGOs, Experts,	Officials of line ministries of previous column, civil society organisations particularly right based organisation like FECOFUN, ACOFUN	VDC, field based staff of line ministries, local politicians, Forest Dependent Communities including IPs, Women, Dalits, and Forest Users Groups
Development of Reference Scenario	Historical data and baseline scenario	MoFSC-Department of Research and Survey and Forest, Ministry of Physical Planning- Department of Land Survey, Experts, Civil Society Organisations, INGOs and Forestry related Development Projects	Not Relevant	Not Relevant

Social and Environmental Impact Assessment	Impacts of REDD on various environmental aspects like biodiversity, watershed functions, aesthetic beauty  Social Impacts like Resource Use, Cultural Value and Practices	Ministries ( MoFSC, Environment, Women, Energy), Land Commission  Private sector like- Hydropower Companies,  Civil Society like Federations of various interest groups such as IPs, Dalits, Women, Forest User Groups, other civil society organisations and political parties	Office of the line ministries, civil society like federations of various interest groups such as IPs, Dalits, women, Forest User Groups, other civil society organisations and political parties	VDC, field based staff of line ministries, local politicians, Forest Dependent Communities including IPs, Women, Dalits, and Forest Users Groups
Monitoring Reporting and Verification	Systems of monitoring, reporting and verification of carbon and other benefits	Departments under MoFSC, Ministry of Environment, forest related INGOs and development projects, academic and research institutions, experts and related civil society organizations	District Forest Offices, User's Federations, DFCCs, District Soil Conservation Office, office of protected areas	Indigenous Peoples and Local communities and other local level stakeholders.

### Annex 2a: Assessment of Land Use, Forest Policy and Governance

#### Annex 2a.1. Drivers of deforestation and forest degradation and their underlying causes.

Drivers	Underlying causes	Nature of causes	Affected regions*	Area of Issues	In/out of Forestry
1. High dependency on forests and forest products (timber, firewood, and other NTFPs)	1.1. Poverty and lack of livelihood alternatives	Direct	T, H	S, E	O
	1.2 Limited access to alternatives for fuel wood and timber	Direct	T, H, M	E	B
	1.3 Inefficient forest product use	Direct	T, H, M	T, S, E	B
2. Illegal harvest of forest products	2.1. Weak law enforcement and impunity	Direct/ Indirect	T, H	G	I

Drivers	Underlying causes	Nature of causes	Affected regions*	Area of Issues	In/out of Forestry
	2.2 Weak governance and governance vacuum	Indirect/ Direct	T, H, M	G	I
	2.3 Inefficient distribution mechanisms for timber and firewood	Indirect	T, M	M, G	I
	2.4 Market failure	Indirect	T, H, M	M, E	B
	2.5 Poverty and lack of livelihoods opportunities	Indirect	T, M	S, E	O
	2.6 High cross border demand for forest products	Direct	T, M	E	O
3 Unsustainable harvesting practices	3.1 Weak law enforcement and impunity	Direct	T, H, M	G, Political	B
	3.2 Inadequate resources for research and development	Direct	T, H, M	E	B
	3.3 Insecure tenure	Direct	T, M	G	I
	3.4 Insufficient technical inputs	Direct	T, H, M	T	I
4 Forest fire	4.1 Carelessness	Direct	T, H, M	S	B
	4.2 Intentional	Direct	T, H, M	S, E	B
	4.3 Weak forest fire management practice	Indirect	T, H, M	G, T	I
5 Encroachment	5.1 Expansion of agriculture	Direct	T, H	S, E	B
	5.2 Poverty and landlessness	Indirect	T, H	S, E	O
	5.3 Political motivation	Indirect	T, M	P	O
	5.4 Unclear land tenure, policy and planning	Indirect	T, H	G, P, T	B
6 Overgrazing	6.1 Governance vacuum	Indirect	T, M, H	G, P	B
	6.2 High number of low productive livestock	Direct	T, H, M	S, E, M	O
	6.3 Limited alternatives for fodder	Direct	T, H, M	E, T	B
	6.4 Poverty and lack of livelihoods opportunities	Indirect	T, H, M	E	O
7 Infrastructure development	7.1 Ad hoc policy process and weak coordination between and within sectors	Indirect	T, H	G, P	B
	7.2 Weak mechanism for planning and compensation including EIA and IEE, and approval and monitoring of development projects	Direct	T, H	G, P, T	B



Drivers	Underlying causes	Nature of causes	Affected regions*	Area of Issues	In/out of Forestry
	7.3 Undervaluation of forest land and forest services	Indirect	T, H	E	B
	7.4 New economic growth prospects (e.g. oil and gas, transmission lines, cement factory, airport, hydropower dam etc)	Indirect	T, H	E	O
8. Resettlement	8.1 Undervaluation of forest land and services	Indirect	T, H	E	B
	8.2 Increase demand of land for new settlements	Indirect	T	E, P	O
	8.3 Poorly enforced planning regulations	Indirect	T	G, E, T	B
	9.1 Lack of proven eradication practices	Direct	T	T	I
9. Expansion of invasive species	9.2 Frequent forest fires	Indirect	T, H, M	S, T	O
	9.3 Overgrazing	Direct	T	S, E, T	B
	9.4 Opening of canopy	Direct	T	S, G, T	B

Notes: 1. S-Social, T-Technical, M-Market, G-Governance, E-Economic, P-Policy and N- Natural; 2. T- Terai, M- Mid-hills & H- High Mountain 3. I- internal factors, B- Both internal and external and O- Factors outside the MoFSC

## 2a.2 List of Documents Reviewed and Expert Consulted

### List of Documents reviewed:

Acharya, D. et al. (2008): Organizational and Human Resources Aspects of Forestry Sector. In Proceedings of the National Workshop on Democratization, Governance and Sustainable Development of the Forestry Sector of Nepal. Oli, Bishwa Nath and Sindhu Prasad Dhungana (eds.). Nepal Foresters' Association, Kathmandu, Nepal.

Acharya, D. (2003): A Review and Synopsis of Information Relating to Natural Resource Management in High Altitude Areas in Nepal. A Report Submitted to Livelihood and Forestry Project (LFP), Kathmandu, Nepal

Acharya, Krishna P. et al. (2009): Understanding Forest Degradation in Nepal. Ready for REDD? Taking Stock of Experience, Opportunities and Challenges in Nepal. Acharya, Krishna P. et al. (eds.). Nepal Foresters' Association, Kathmandu, Nepal

Adhikari, Bal Ram. 2002. Forest Encroachment: Problems and Measures to tackle the Problems (in Nepali). Hamro Ban. International Mountain Year Special.

Basnet, Jagat. (2010): The Tilling Fields: Land reform is necessary to establish peace and raise the people's economic status. Kantipur daily (January 3, 2010). Kathmandu, Nepal

Bhattarai, Keshav, and Dennis Conway. (2008). Evaluating Landuse Dynamics and Forest Cover Change in Nepal's Bara District (1933-2003). Human Ecology, 36:81-95.

CBS (2008): Environment Statistics of Nepal, 2008. Kathmandu, Nepal

- Chapagain Devendra, Kanel K., and Regmi D. (1999): Current Policy and Legal Context of the Forestry Sector with Reference to the Community Forestry Programme in Nepal. Submitted to Nepal-UK Community Forestry Project. Kathmandu, Nepal.
- Chomitz, Kenneth M., With Piet Buys et al. (2007): Overview at Loggerheads? Agricultural Expansion, Poverty Reduction, and Environment in the Tropical Forests. The World Bank. Washington D.C.
- Dahal G.P (2000): Population and environmental issues in Nepal and the need for community development policy.
- Dangi, Resham B., and Krishna P. Acharya. (2009): A Quick Review of Potential Benefits and Costs of REDD in Nepal. Ready for REDD? Taking Stock of Experience, Opportunities and Challenges in Nepal. Acharya, Krishna P. et al. (eds.).
- Dangi, R.B. et al. (2008): Potential Options for Economic and Financial Aspects of Forestry Sector. In Proceedings of the National Workshop on Democratization, Governance and Sustainable Development of the Forestry Sector of Nepal. Oli, Bishwa Nath and Sindhu Prasad Dhungana (eds.). Nepal Foresters' Association, Kathmandu, Nepal.
- Deacon, R.T. (1994): Deforestation and the rule of law in cross-section of countries. *Land Economics*. 70: 414 - 430.
- DFRS, HMG, (2002): The Effects of Development Infrastructure on the Forests of Kailali and Kanchanpur (in Nepali). Publication Number 75. Kathmandu, Nepal
- DFRS, HMG. (1999). Forest Resources of Nepal. Forest Resource Information System Project. Publication Number 74.
- Dhital, Maina. (2010): Mouths to Feed: The goal of having hunger by 2015 won't happen if the government doesn't jump to it. *Kantipur daily* (January 10, 2010), Kathmandu, Nepal.
- Edmonds, Eric V. (2002) Government Initiated Community Resources Management and Local Resources Extraction from Nepal's Forests. *Journal of Development Economics*. 68 (1). 89 - 115.
- Geist, Helmut J. and Eric F. Lambin. (2002): Proximate causes and underlying driving forces of tropical deforestation. *Bioscience* 52 (2).
- Griffin, David M. (1991): Implementation of the results of scientific research in practical management: A case study from Nepalese forestry. *Mountain Research and Development*. 11 (3) 195 -201.
- Gulati, Ashok and Kavary Ganguly (Dec 18, 2009). Reform Markets to Tame Food Prices. *The Economic Times*.
- Kanel, Keshav Raj (1995): Farmer and Tree Linkages in the Terai of Nepal. Ph.D. Thesis Submitted to the Faculty of the Graduate School of the University of Minnesota, USA.
- Kanel, Keshav Raj (2008): So far so good: Next Steps in Community Forestry. In *Promise, Trust, and Evolution: Managing Commons of South Asia*. eds. Rucha Ghate et al.
- LFP. (2008): Forest Resource Assessment: 1994 - 2008. Draft From Peter Branney.
- Ministry of Forests and Soil Conservation (MoFSC). (2009): The Future of Nepal's Forests Outlook for 2020. Kathmandu, Nepal.
- NFA 2008. Feasibility Analysis of REDD (Reduce Emissions from Deforestation and Degradation in Developing Country) Principle in the Context of Nepal. *Journal of Forest and Livelihood* 8(1) February 2009 Dahal and Banskota 50 Submitted by Nepal Foresters' Association (NFA) to WWF Nepal Programme.
- Nepal Rastra Bank (2009). Quarterly Economic Bulletin. Volume 43, Number 1 and 2. Kathmandu, Nepal.
- Ostrom, Elinor (1990). *Governing the Commons: The Evolution of Institutions for Collective Action*. Cambridge University Press. USA.
- Poffenberger, Mark. (2009): Forest and Climate Change: Mitigating Drivers of Deforestation. 22 pages.

- Poudel, B.S. (2009). Land Use Land Cover Classification System of Nepal's Pas. Draft.
- Schaeffer R. et al. (2005): Underlying causes of deforestation. Science 307 (5712): 1046-1047.
- Stern N. (2007). Stern Review: The Economics of Climate Change. Cambridge. United Kingdom: Cambridge University Press.
- Sousan, j., Shrestha, B. K., Uprety, L.P. (1995). The Social Dynamics of Deforestation. The Parthenson Publishing Goup. New York.
- Sugden, Fraser. (2009): Absentee landlordism and agrarian stagnation in Nepal: a case from the Eastern Terai. Unpublisehd Part of Ph.D. Thesis.
- UNDP (2009): Nepal Human Development Report 2009: State Transformation and Human Development. Kathmandu, Nepal
- Wily, Liz A., Devendra C., and Sharma S. (2008): Land Reform in Nepal: Where is it coming and where is it going? Submitted to DFID. Kathmandu, Nepal.

## List of experts consulted

### *Ministry of Forest and Soil Conservation(MFSC):*

1. Surya Prasad Joshi, Chief, Foreign Aid division, MFSC
2. Ram Prasad Lamsal, Chief, Monitoring division, MFSC

### *Department of Forest (DoF):*

1. Madhav Acharya, DG, DOF
2. Gopal Kumar Shrestha, DDG, DOF
3. Harihar Sigdel, DDG, DOF
4. Braja Kishor Yadav, DFO, Kathmandu

### *Department of Forest Research and Survey (DFRS):*

1. Sahash Man Shrestha, DG, DFRS
2. Prakash Mathema, DDG, DFRS

### *Department of Wildlife and National Park Conservation (DWNPC):*

1. Gopal Prasad Upadhaya, DG

### *Department of Soil Conservation and Watershed management (DSCWM):*

1. Bharat Prasad Pudasaini, Acting DG

### *Federation of Community Forest Users Nepal ( FECOFUN):*

1. Dev Bahadur Knuwar, FECOFUN
2. Chup Bahadur Thapa, FECOFUN
3. Jog Raj Giri, FECOFUN

### *National Federation of Indigenous nationalities (NEFIN):*

1. Pasang Sherpa, NEFIN
2. Khim Ghale, NEFIN
3. Lhakpa Nuri Sherpa, NEFIN
4. Yogeshwor Rai, NEFIN

### *Timber Corporation Nepal ( TCN):*

1. Shambhu Pd Mainali, TCN

### *Forest Product Development Board (FPDB):*

1. Sumeshwor Nath Upadhaya, FPDB

### *International and National Non Governmental Organisation (I/NGO) and Project:*

1. Ambika Regmi, Chief, BISEP-ST
2. Peter Braney, DFID/LFP
3. Santosh Nepal, WWF/TAL
4. Dinesh Karki, WTLCP

5. Eak Raj Sigdel, WTLCP
6. Basan Shrestha, WTLCP

*Other civil society:*

1. Hari Roka, Constituent Assembly member
2. Somat Ghimire, Community Development Organization

### 2a.3 Terms of References for Studies

1. An in-depth analytical study to identify the causal factors for weak forest sector governance, law enforcement and policy implementation and possible actions to address these.

#### Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is being evolved as a means to reduce forest sector carbon emissions through appropriate forest management practices and enhanced forest governance both in the forestry sector and related sectors. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist developing countries in their efforts to reduce their emissions from deforestation and forest degradation. Nepal has been selected as a FCPF country. Developing and applying strategies and programs to address the drivers of deforestation and forest degradation will be key activities during the REDD-readiness phase. The quick assessment of land use, forest policy and governance carried out during RPP preparation identified nine major direct drivers of deforestation and forest degradation. The assessment also identified that the drivers of forest degradation and deforestation are more severe, pressing and complex in the Terai and Shivaliks compared with other regions of the country. Common root causes for most of these drivers identified in the initial assessment were weak law enforcement, weak policy implementation and poor forest sector governance. Consequently a more detailed analysis is needed to identify the causal factors of these and to develop strategies and programs that can be utilized to enhance forest sector governance, law enforcement and policy implementation issues.

#### Objectives

The overall objective of the study is to identify and analyse forest governance, forest law enforcement and policy implementation issues relating to Nepal's forestry sector (with a particular focus on the Terai) through an analytical and evidence based approach, with a view to identifying actions for reducing forest degradation and deforestation and for enhancing the forest sector's contribution to Nepal's wider economic development, democratic governance and to pro-poor livelihoods.

The study has the following specific objectives:

- To document through an evidence based approach the current status of forest governance and forest law enforcement in Nepal, focusing particularly on the Terai. This might include a

quantification of different forest management modalities and their effectiveness in addressing drivers of deforestation and forest degradation; quantification of the effectiveness of forest law enforcement arrangements (in terms of costs and benefits); and documentation of policy implementation and policy changes (including both formal and informal policy making) in terms of the various influences and interactions between different stakeholders over these.

- To analyse the findings in terms of the political economy of Nepal's forest sector and with a full assessment of the costs and gains (winners and losers) accrued by different stakeholders (from national to local level) in the current situation.
- To identify assess the importance of underlying drivers for weak implementation of policy, law implementation and governance in Nepal's different regions (especially in the Terai)
- To recommend actions and institutional options and modalities to address the identified drivers - focusing particularly on (a) short-term actions which can be relatively easily implemented for early gains and (b) which can gradually lead to longer-term and more substantive actions for the future.
- To develop the study finding into policy briefs which can be used to communicate with different stakeholders (including political bodies, the media, government, civil society and law enforcement agencies) to stimulate wider support and understanding of the recommendations being made.

## Methodology

The study will be governed by an advisory panel consisting of representatives from both government and non-government - including those normally considered as being outside the forestry sector e.g. local government, the private sector etc. The advisory panel will advise the study team and will critically review its findings and recommendations. The study team will review existing information and analyses that have been carried out earlier; it will include consultation with different stakeholders including government officials, NGO representatives, politicians, private sector organizations, people with significant local knowledge including indigenous peoples. The team will seek to gather a broad mix of information ('official' and 'unofficial' data), carry out interviews, conduct field observations and make extensive validation trips for data and information gathering. This will be followed by an analytical period using the evidence gathered to share and discuss further with key stakeholders to seek suggestions and endorsement for the recommendations being made based on this study.

Basic sources of data and information used will be those already collected by central and local governments, community groups, departments such as the Forestry Department and their district offices; and other relevant departments such as transport, police, army, Customs, Central Bureau of Statistics, etc as well as by parastatals e.g. TCN; the private sector (in particular sawmills, and other timber processing industries, timber transportation companies, financial and investment companies);

loggers and individuals involved in the forest sector such as marketing, brokering; civil society including timber associations, national and local NGOs and media; and donor communities.

An initial workshop with the advisory panel and other key stakeholders will be used to help to refine the locations for the field assessments. It is envisaged that study team will visit selected districts including those where forest law enforcement is known to be problematic for interviews and information gathering. A draft report will be presented at a national level dissemination workshop attended by all relevant stakeholder representatives. Given the range and scope of the study several smaller workshops may also be organized at key locations. These will be used to ensure local stakeholder engagement representing different local and ethnic groups.

### Expertise

The study team members should include expertise on forestry, governance, and legal specialists. Team members should possess a good understanding the Nepal's forestry sector and its governance modalities and experiences, forest and related policies, existing laws and regulations related to forest. The team also should have expertise in forest law enforcement processes (FLEG) and the ability to apply international experiences to both information gathering and analysis to Nepal's context.

### Deliverables

A brief inception report will be submitted to the advisory panel seven days after signing the contract. This will outline the detailed plan and methodology and will ensure common understanding of the terms of reference. The final report on Assessment of Forest Policy, Governance and Law Enforcement in Nepal will be provided at the end of the study. This should address the specific study objectives listed above and should contain (in Annexes if necessary) the associated information gathered which provides the evidence on which recommendations are based. It should capture the discussions and proceedings from workshops held during the course of the study and it should be fully referenced with conclusions supported by adequate citation and evidence. Case studies, news and quotes can also provided as evidence. Policy briefs as per the study objectives will also be submitted - the number and topics to be agreed in discussions with the advisory panel. Both the hard copy and soft copy of the report should be submitted to the REDD-Forestry and Climate Change Cell of the Ministry of Forest and Soil Conservation.

### Time-frame

The task should be completed within four months from the date of signing of the Contract Agreement with REDD-Forestry and Climate Change Cell of the MoFSC.

## 2. A study on the drivers of deforestation and forest degradation in Churia and in the High Mountain physiographic regions.

### Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is being evolved as a means to reduce forest sector carbon emissions through appropriate forest management practices and enhanced forest governance both in the forestry sector and related sectors. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist developing countries in their efforts to reduce their emissions from deforestation and forest degradation. Nepal has been selected as a FCPF country. Developing and applying strategies and programs to address the drivers of deforestation and forest degradation will be key activities during the REDD-readiness phase. The quick assessment of land use, forest policy and governance carried out during RPP preparation identified nine major direct drivers of deforestation and forest degradation.

It is reported that the issues of deforestation and forest degradation are particularly severe in the Terai and Churia, although there is very little recent empirical evidence to substantiate this or to distinguish between data from Terai and Churia. It is also not clear whether there are specific drivers of deforestation and degradation for the Churia that make the problems there particularly difficult to address beyond the common root causes which can be assumed to apply more widely e.g. weak law enforcement, weak policy implementation and poor forest sector governance. In the High Mountains it is also reported that forest degradation and possibly also deforestation is taking place, but there is only limited understanding of the drivers behind this. Therefore, although the Churia and High Mountains are very different in their physical and environmental characteristics there is weak understanding of the deforestation and degradation rates and of the specific drivers of deforestation and degradation in both these regions. Consequently a more detailed analysis is needed to identify and understand the drivers in these regions to develop region-specific strategies and programs that can be utilized to address them.

One issue relates to empirical evidence for deforestation and degradation for both the Churia and for High Mountains. In Nepal, forest-based information is generally reported on the basis of administrative districts whereas these particular physiographic regions cross administrative boundaries and usually form only part of the administrative units therefore making it difficult to disaggregate information e.g. many so-called Terai districts encompass portions of the Churia range and data and information is rarely able to be separated even though they have very different characteristics. There is a similar situation between so-called middle hills districts and high mountain regions since data is rarely separately reported.

### Objectives

The objective of the study is to conduct an assessment of the rates and the main drivers of deforestation and forest degradation in the Churia and High Mountain regions of Nepal. The specific objectives of the assessment are to

- Review existing data on deforestation and degradation trend in Nepal and determine the extent to which it can be disaggregated - specifically for Churia and High Mountains
- Identify and assess the direct drivers of deforestation and forest degradation in the Churia and High Mountains based on existing information and data and on discussions with relevant individuals and organizations (including in the areas themselves)
- Identify the underlying causes of the drivers identified - clearly separating out those for the Churia and for the High Mountains
- Identify prioritized strategic options for addressing the drivers for both these physiographic regions and discuss and agree these with the most relevant stakeholders for these regions.

### Methodology

The study will start by undertaking a desk review of existing literature and databases. This will be followed by consultation with different stakeholders including government officials, NGO representatives, politicians, parties, private sector organizations, and people with significant local knowledge; and interviews with the forest dependent communities including Indigenous Peoples'. A thorough problem tree and solution analysis should be conducted for each of the identified drivers. Extensive field visit for detailed discussions and observations will be required in both High Mountains and Churia regions.

A sharing workshop will be used to present the main findings, options and recommendations of the study. This may need to be combined with the wider consultation process taking place under RPP Component 1b.

### Expertise

The study team members should include expertise on forestry, economics and social science. The team members should all possess a good understanding of the Nepal's forestry sector and its governance modalities and experiences, forest and related policies, existing laws and regulations related to forest.

### Deliverables

A brief inception report will be submitted seven days after signing the contract. This will clearly indicate the methodology to be followed for the study, the research questions to be answered and will contain a detailed plan for the study including a timeline. The final report for the study should comprise of 2 clear parts relating to drivers of deforestation in the Churia Region and to drivers of deforestation in the High Mountains. It should be fully referenced and supported by adequate citations and evidence. Case studies, news, quotes and photographs can also be included as evidence. Both the



hard copy and soft copy of the report should be submitted to REDD-Forestry and Climate Change Cell of the Ministry of Forest and Soil Conservation (MoFSC).

#### Time-frame

The task should be completed within four months from the date of signing of the Contract Agreement with REDD-Forestry and Climate Change Cell of MoFSC.

3. A study on the value-chain of forest products (timber and a few key NTFPs) and the effects and consequences of weak governance, administrative controls on pricing and marketing e.g. involvement of parastatals; royalties; administrative hurdles etc.

#### Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is being evolved as a means to reduce forest sector carbon emissions through appropriate forest management practices and enhanced forest governance both in the forestry sector and related sectors. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist developing countries in their efforts to reduce their emissions from deforestation and forest degradation. Nepal has been selected as a FCPF country. Developing and applying strategies and programs to address the drivers of deforestation and forest degradation will be key activities during the REDD-readiness phase. The quick assessment of land use, forest policy and governance carried out during RPP preparation identified nine major direct drivers of deforestation and forest degradation.

One of the main underlying causes of the deforestation and forest degradation has been identified are market failure in the forestry sector. The quick assessment study indicated that there are multiple factors that are contributing to market failure within the value chain of timber and NTFPs. Regulatory and fiscal policies in the harvest, trade, value addition and transport of forest product are arcane in Nepal. There has been virtually no reform or deregulation made in forest product marketing over the last 50 years and central government involvement persists at all levels across a range of activities i.e. forest management; forest regulator, seller of products, collector of revenues and taxes and as judge and jury for forest offenses and law enforcement. The forestry sector is thus characterized by administered prices, permit regimes and opaque marketing systems that have a severe effect on how forests and forest products are valued, how their sustainable management is ensured and the extent to which forestry is able to contribute to Nepal's wider economic development. This situation is also believed to contribute to loss of revenues through tactics which lead to deliberate under-recording of forest product flows and their values and creates a disincentive for legitimate forest product trade at all stages (from forest to final end use) through a long established culture of avoidance and opaqueness.

A study is therefore needed to examine in detail the value chain for certain timber products and NTFPs to identify specifically where and how revenue losses, disincentives to legitimate trade and market failure occur.

### Objectives

The broad objective of the study is to examine in detail the value chain for certain timber products and NTFPs to identify specifically where and how revenue losses, disincentives to legitimate trade and market failure occur. Specific objectives include:

- Review and interpret the wide range of existing value-chain studies that have been conducted in Nepal for timber (especially in the Terai) and various NTFPs (to be agreed at the start of the study)
- Review and map out the rules, regulations and processes (official and unofficial) related to forest product trade in Nepal
- Conduct a detailed value chain analysis of timber and the selected NTFPs agreed - specifically by examining the flows into and out of each point in the value trade and estimating and valuing the losses at each point and the mechanisms by which these take place
- Assess through the value chain approach the value/quantity of cross border trade in timber and the selected agreed forest products
- Provide recommendations for addressing weaknesses in the value chains for the selected forest products that result in market failures

### Methodology

The initial part of the study will be a desk review of available information. The later part of the study to conduct a detailed value chain analysis of certain identified forest products will require extensive field work by a team working closely with local level stakeholders. Such field work may need to be conducted during different seasons to ensure that differences throughout the year are adequately captured. This will include conducting field visits, and interviews with relevant stakeholders throughout the value chain to cross-reference and cross-check official datasets against the source, and where it is observed or supplied, to gather any information on illegal, unregulated and unrecorded timber trade. Focus areas will need to include selected larger towns and cities that drive the demand for timber, transportation routes linking those demand centres, buffer zones of protected areas, major road crossings and international border crossings. It is hoped that a linked study in India will be discussed and if possible conducted together with potential partners there and will contribute additional information on the international timber trade drivers and routes across the borders, including assessing the bilateral and international agreements pertaining to the timber and NTFP trade.

It is recognized that the issues and challenges of gathering information on illegal, unregulated and unrecorded timber trade are many because no matter how broad or narrow illegal forestry activity may be, its extent is impossible to know with any degree of certainty. Reported estimates are generally supported through anecdotal information and supposition and quantifying illegal activity is even less precise.

The study will need to include an initial compilation of the definition of 'legality', i.e. what documentation and proof of legality should timber and NTFP harvesters and users have throughout the value chain based on the current forestry law and other regulations. This initial exercise, if found useful, could then continue through to recommendations for an inclusive and extensive stakeholder consultative process to develop a national standard and legality verification system that underpins the legal framework and, if the regulations exist, ensure sustainability of the timber that is traded. This exercise will contribute towards discussions on legal reforms later if there are evidentiary conflicts between laws and regulations, institutions, and practical verifiers and auditing requirements.

#### Expertise

The study team should include expertise in forestry, forest product marketing and trade and forest economics. Specialists on conducting this specific type of study and analysis of the data obtained may need to be provided from outside Nepal, since this type of study has not been carried out in Nepal before. In particular expertise in obtaining 'unofficial' data and information on forest products and their value chains is required. Study team members should possess a good understanding of the REDD mechanism, marketing of timber and other forest products in Nepal, existing demand and supply systems, forest resource policies, existing laws and regulations related to forest product trade and movement.

#### Deliverables

A brief inception report will be submitted seven days after signing the contract. This will outline the detailed plan and methodology and will ensure common understanding of the terms of reference. A comprehensive fully referenced report including detailed recommendations should be submitted at the end of the study period. Key points of the analysis should be fully supported by evidence (quantitative as far as possible) and otherwise by field observations and locally available information including quotes, and possibly photographic evidence. Both the hard copy and soft copy of the report should be submitted to REDD-Forestry and Climate Change Cell of the Ministry of Forest and Soil Conservation (MoFSC).

#### Time frame

The task should be completed within six months from the date of signing of the Contract Agreement with REDD-Forestry and Climate Change Cell of MoFSC.

#### 4. A study on the existing and potential supply and demand situation for forest products in different regions

##### Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is being evolved as a means to reduce forest sector carbon emissions through appropriate forest management practices and enhanced forest governance both in the forestry sector and related sectors. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist developing countries in their efforts to reduce their emissions from deforestation and forest degradation. Nepal has been selected as a FCPF country. Developing and applying strategies and programs to address the drivers of deforestation and forest degradation will be key activities during the REDD-readiness phase. The quick assessment of land use, forest policy and governance carried out during RPP preparation identified nine major direct drivers of deforestation and forest degradation.

One of the main underlying drivers for deforestation and forest degradation has been identified as the high demand for forest products throughout Nepal including both subsistence and commercial products. On the other hand Nepal has a high percentage of forest cover and Nepal's forests can be managed productively to meet some, if not all, forest product demands. The quick assessment indicated the presence of a gap between the supply and the demand for forest products especially timber and firewood where surpluses for these may exist in some places whilst there are shortages in others. The nature of this supply-demand gap is however very unclear (for example is it local, regional or national) and there is very little quantitative evidence to illustrate this. In particular, it is not known what the available or potential forest product supplies are and how these relate to local and distant demands and how these are changing over time. Hence, a detailed national level study to identify the existing and potential supply and demand of forest products focusing on timber and certain other products is required.

##### Objectives

The broad objective of the study is to conduct a detailed assessment of the existing and potential demand and supply of forest products especially timber and fuelwood. This will be conducted at a national level with subregional studies being used to build up the national picture. Specific objectives of the study include:

- To estimate the existing and potential supply of forest products especially timber and fuelwood in Nepal's regions (to be defined at the start of the study) based on an assessment of forest resources and their ability to supply quantities of forest products in a sustainable way
- To estimate the existing and potential future demand for forest products especially timber and fuelwood in Nepal (both regionally and nationally) based on projections of current trends

- To analyse the balance between supply and demands (current levels and the future projected scenario) both at regional and national levels and to draw conclusions about Nepal's forest product supply and demand situation based on quantitative evidence and future estimates
- To analyse the adequacy of existing supply mechanisms that are in place to meet present and future forest product demands across Nepal (looking at both local, regional and national level mechanisms for movement and supply of forest products)
- To identify potential supply areas for meeting the demand for forest products in other areas
- To make recommendations for balancing the disparity between demand and supply of forest products - especially if it is shown that this varies in different ways across the country.
- To suggest mechanisms for addressing supply-demand gaps at local, regional and national levels as a means to reduce local pressure on forests through excessive demands for forest products.

### Methodology

The study will be based on an analysis of existing information about Nepal's forest resource supply-side information and on available forest product demand information. The analysis itself may require modelling of forest product supply and demand using available models from Nepal and elsewhere. In addition to this, there will need to be adequate consultation with different stakeholder groups to build up the data and information which can be used for such a model. In particular, forest resource assessment information will need to be used for analysing the supply-side for forest products and future trends.

Recommendations for improving and addressing supply-demand gaps should be based on evidence of any existing effective mechanisms (both locally and regionally) and should include evidence of market failures to adequately link supply and demand (identified from the market chain study described above) and suitable mechanisms to address these.

### Expertise

The study team should include expertise in forestry and analysis of forest resource information, modeling, forest resource economics and the team as a whole needs to have a good understanding of silviculture and forest management in Nepal's forests. Study team members should also possess a good understanding of the REDD mechanism, marketing of timber and other forest products in Nepal, existing demand and supply systems, forest resource policies, existing laws and regulations related to forest product trade and movement.

### Deliverables

A brief inception report will be submitted seven days after signing the contract. This will outline the detailed plan and methodology and will ensure common understanding of the terms of reference. A comprehensive fully referenced report including detailed recommendations should be submitted at the

end of the study period. The report should contain- an in-depth analysis of current and potential demand and supply situations according to the study objectives listed above. It should make clear, implementable recommendations for mechanisms for addressing demand and supply gaps at different levels (local, regional and national). Annexes to the main report should indicate how supply and demand models and future projects were developed and what input data sources and variables were used to build these up. Both the hard copy and soft copy of the report should be submitted to REDD-Forestry and Climate Change Cell of the Ministry of Forest and Soil Conservation (MoFSC).

#### Time frame

The task should be completed within four months from the date of signing of the Contract Agreement with REDD-Forestry and Climate Change Cell of MoFSC.

### 5. A study on the effect of climate change and invasive species on forest degradation.

#### Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is being evolved as a means to reduce forest sector carbon emissions through appropriate forest management practices and enhanced forest governance both in the forestry sector and related sectors. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist developing countries in their efforts to reduce their emissions from deforestation and forest degradation. Nepal has been selected as a FCPF country. Developing and applying strategies and programs to address the drivers of deforestation and forest degradation will be key activities during the REDD-readiness phase. The quick assessment of land use, forest policy and governance carried out during RPP preparation identified nine major direct drivers of deforestation and forest degradation.

Invasion by exotic (introduced) species has been identified as one of the drivers of forest degradation in Nepal. However, there is in practice very little empirical evidence to substantiate this claim. In fact it is still unclear to what extent the spread and resulting effects of invasive species such as *Mikania*, *Lantana*, *Eupatorium* and others are a result of, or are an underlying cause of, forest degradation (or possibly both these). Conventional ecological theories tend to indicate that species invasions occur in disturbed ecosystems. However recent anecdotal evidence from Nepal appears to be showing that some invasive species are able to adversely affect intact rather than already degraded ecosystems. A further complication may also be that the nature and extent of invasive species in Nepal may be a consequence of more recent climate changes that allow such invasions to take place where they previously did not occur. Nevertheless, it is also clear that the effects of many invasive species on Nepal's forest ecosystems may not necessarily be of recent origin - although it is likely that such species do affect a forest's ability to thrive as a healthy and sustainable ecosystem. Growth and development of natural regeneration is thought to be particularly affected by invasive plant species in

many places, and this may be adversely affecting forest condition in the longer term. Hence, a detailed study is needed to investigate Nepal's invasive plant species (especially those occurring in forests), and to determine their impacts and effects on forest degradation both now and in the future.

### Objectives

The objective of the study is to conduct a detailed assessment of the effects which certain exotic invasive plant species are having on forests and of future options and mechanisms for addressing such problems. The specific objectives of the study are:

- To identify through discussions with key stakeholders and experts the extent and nature of the problem of invasive plant species in Nepal's forests including an identification of the main invasive species in different areas and their rate of spread
- To review literature from Nepal and elsewhere relating to the invasive species identified.
- To conduct field level assessment in identified problem areas to assess how and why such species are creating problems and to understand the factors that contribute to these including climatic factors, human-induced factors (such as fires, grazing and forest degradation), and others
- To assess the impacts of invasive species - particularly on forest regeneration and growth and to assess the future implications of this on forest degradation
- To explore and discuss ideas and options for controlling invasive plant species based on national and international experiences and on a realistic assessment of the costs, likelihood of success and general feasibility
- Draw conclusions on the threat to Nepal's forests from invasive plant species (generally and in relation to specific species) and to recommend means for tackling problems identified.

### Methodology

The study will be a combination of field visits (including in-depth site based information gathering and analysis), literature reviews and consultations with key experts and stakeholders.

### Expertise

The study team should include expertise in forest ecology, botany and forest resource assessment. Desirable expertise would also include that related to wider aspects of climate-change - in relation to its effects on forest ecosystems and forest management.

### Deliverables

A brief inception report will be submitted seven days after signing the contract. This will outline the detailed plan and methodology for the study and will ensure common understanding of the terms of reference. A comprehensive fully referenced report including detailed recommendations should be

submitted at the end of the study period. The final report should be fully referenced and supported by adequate evidence including - if found to be relevant or available, case studies, photographs and local assessments and knowledge. Both the hard copy and soft copy of the report should be submitted to REDD-Forestry and Climate Change Cell of the Ministry of Forest and Soil Conservation (MoFSC).

#### Time-frame

The task should be completed within four months from the date of signing of the Contract Agreement with REDD-Forestry and Climate Change Cell of MoFSC.



## Annex 2b: REDD Strategy Options

### Annex 2b-1: Strategic options by drivers and underlying causes

\* T=Terai, H, Middle hills, M=High mountains

Drivers	Underlying causes	Nature of causes	Strategic Options	Affected regions *
2. High dependency on forests and forest products (timber, firewood, and other NTFPs)	(1.1) Poverty and lack of livelihood alternatives	Direct	<ul style="list-style-type: none"> <li>• Scale up investment in non-forestry sector employment programs targeting to rural areas to reduce forest dependency (especially for poor)</li> <li>• Invest in sustainable forest-based enterprises to create more employment opportunities in the forestry sector (for both timber and NTFPs)</li> <li>• Provide vocational education</li> <li>• Create skill-based training opportunities for economically poor and marginalized peoples</li> <li>• Establish environmental tax mechanism and use revenues to generate employment alternatives for forest-dependent poor and marginalized peoples</li> <li>• Channel local government resources (i.e., matching funds and resource leverage) to forest-dependent poor and marginalized peoples to promote livelihood improvements</li> <li>• Promote PES mechanisms for the income generation among forest-dependent poor and marginalized peoples</li> </ul>	T, H
	(1.2) Limited access to alternatives for fuel wood and timber	Direct	<ul style="list-style-type: none"> <li>• Increase investment and access to alternative energy technologies for forest-dependent poor and marginalized people</li> <li>• Promote access to technologies that enhance fuelwood efficiency and promote fuelwood substitution for forest-dependent poor and marginalized people</li> <li>• Pilot wood-substitute building materials (e.g. bamboo housing)</li> <li>• Promote cost-effective wood technologies (e.g. particle board, pressed board) for forest-dependent poor and marginalized communities</li> <li>• Promote greater access for forest-dependent poor and marginalized peoples to alternative energy subsidies</li> <li>• Develop user-friendly policies that subsidize private plantations and on-farm, multi-purpose tree planting for fuelwood and timber</li> </ul>	T, H, M

Drivers	Underlying causes	Nature of causes	Strategic Options	Affected regions *
	(1.3) Inefficient forest product use	Direct	<ul style="list-style-type: none"> <li>Promote fuel-efficient cook stoves and fuelwood technology for forest-dependent poor and marginalized people</li> <li>Develop policies that encourage private investment in efficient and alternative timber technologies (e.g. bamboo housing, timber drying, timber treatment, timber processing etc)</li> <li>Pilot and promote use of more efficient wood technologies</li> <li>Explore and pilot environmentally sound alternatives to wood use (including wood recycling and recovery)</li> <li>Implement sustainable management of forest that enhances forest productivity under different forest management regimes</li> <li>Build capacity in improved and cost-efficient forest product utilization technologies</li> <li>Build public awareness and promote attitude change to real value of forest products</li> </ul>	T, H, M
2. Illegal harvest of forest products	(2.1) Weak law enforcement and impunity	Direct / Indirect	<ul style="list-style-type: none"> <li>Institute forestry sector institutional reform to increase accountability and transparency of all concerned agencies</li> <li>Strengthen the incentive and punishment system for both government officials and community-based forest management groups</li> <li>Restructure and reorient/sensitize the GoN staff and HRD systems (including DoF) to ensure removal of offenders</li> <li>Work with the media to 'name and shame' individuals and organizations involved in illegal forest products trade</li> <li>Create better awareness and capacity amongst all law enforcement agencies e.g. police, armed police, army, border police, on forest law enforcement issues</li> <li>Expand participatory forest management systems to forest areas where law enforcement is difficult.</li> <li>Pilot and implement effective, participatory M&amp;E mechanisms at different levels</li> <li>Implement a study on increasing the effectiveness of the judiciary and judicial process with respect to forest law enforcement</li> </ul>	T, H
	(2.2.) Weak Governance	Indirect / Direct	<ul style="list-style-type: none"> <li>Define ownership and use rights for all forest land</li> <li>Bring all forests under an identified and agreed forest management modality</li> <li>Prioritized transfer of forest areas to community-based management regimes and develop appropriate forest management modalities for government forests</li> <li>Promote and establish decentralized and accountable multi-stakeholder forest governance structures (e.g., DFCC) and support multi-stakeholder district forest sector planning (DFSP) and VDC planning</li> </ul>	T, H, M

Drivers	Underlying causes	Nature of causes	Strategic Options	Affected regions *
			<ul style="list-style-type: none"> <li>• Reactivate multi-stakeholder forest governance structure at national level (FSCC)</li> <li>• Sensitize political parties on forest sector governance issues through the parliamentary committee on Natural Resource</li> <li>• Identify and address contradictory legislation (e.g., between Forest Act 1993 and other acts) and cross-sectoral policy issues through National Planning Commission facilitation</li> <li>• Assess alternative governance arrangements for protected areas (e.g., involve indigenous peoples and local communities and local government in management)</li> </ul>	
	(2.3) Inefficient distribution mechanisms for timber and firewood	Indirect	<ul style="list-style-type: none"> <li>• Establish a mechanism for periodic analysis of demand and supply of forest products by geographic region</li> <li>• Pilot and study alternative and more efficient distribution and marketing mechanisms for timber and firewood (e.g., community-based, private, local-government-based)</li> <li>• Establish a mechanism for analysis of forest product demand and supply (legal/illegal) by district, and develop distribution programmed to address demand-supply gaps.</li> <li>• Carry out a study to identify options for restructuring the Timber Corporation of Nepal, Forest Product Development Board and other sectoral public corporations</li> </ul>	T, M
	(2.4) Market failure	Indirect	<ul style="list-style-type: none"> <li>• Study the forest product (timber and fuelwood) value chains (illegal/illegal) to identify weaknesses and 'leakage' and to assess opportunities for tackling them</li> <li>• Develop a mechanism to engage the private sector in the forest sector for the entire value chain of forest products, from planting to end-product development</li> <li>• Carry out a study to identify alternatives to the current tax and royalty systems for forest products and implement the recommendations to foster a more competitive market</li> <li>• Study ways for deregulating markets for forest products (including examples from elsewhere) and implement resulting recommendations</li> </ul>	T, H, M
	(2.5) Poverty and lack of livelihood opportunities	Indirect	<ul style="list-style-type: none"> <li>• Scale up investment in non-forestry sector employment programs targeting rural areas to reduce forest dependency (especially for forest dependent poor and marginalized people)</li> <li>• Promote off-farm income generation activities for forest-dependent poor and marginalized households</li> <li>• Invest in sustainable forest-based enterprises to create more employment opportunities in the forestry sector (both timber and NTFPs)</li> <li>• Implement effective plan for sustainable management of forests that enhances forest productivity under different forest management regimes</li> </ul>	T, M

Drivers	Underlying causes	Nature of causes	Strategic Options	Affected regions *
			<ul style="list-style-type: none"> <li>• Provide vocational education</li> <li>• Create skill-based training opportunities for the forest dependent poor and marginalized peoples</li> <li>• Increase awareness and access to education, health and other livelihood services</li> <li>• Establish and support public land management for identified poor households (Terai)</li> <li>• Promote land allocation for poor households and income generation from products found in community forests</li> <li>• Channel local government resources (matching funds and resource leverage) to forest-dependent poor and marginalized peoples for livelihood improvements</li> </ul>	
	(2.6) High cross-border demand for forest products	Direct	<ul style="list-style-type: none"> <li>• Sensitize border authorities and collaborate with them for effective forest law enforcement – especially at border crossings</li> <li>• Study potential for involvement of local bodies in forest law enforcement and regulating the movement of forest products</li> <li>• Promote large-scale private plantations to meet both domestic and cross-border demands for timber (Terai)</li> <li>• Explore cross-border law enforcement strategies and inter-country negotiations with Indian and Chinese (Tibetan) authorities</li> <li>• Promote and provide incentives for export and cross-border movement of finished forest products</li> </ul>	T,M
3. Unsustainable Harvesting Practices	(3.1) Weak governance mechanisms	Direct	<ul style="list-style-type: none"> <li>• Restructure DoF and (re-) orient and sensitize the DoF staff.</li> <li>• Revise ToRs for DoF staff, (re-)orient and sensitize them.</li> <li>• Promote and establish decentralized and accountable forest governance structures (egFSCC/DFCC)</li> <li>• Explore participatory models for protected area management.</li> <li>• Prepare national forestry strategy through multi-stakeholder process (to replace the expired Forestry Sector Master Plan), incorporating specific strategies for the Mountains, Terai and Middle Hills regions</li> <li>• Develop demand-based forest and land-use plans; translate them into DFSPs and implement them</li> <li>• Improve and execute existing Forest Management Plans (Five-year district forest operational plans)</li> <li>• Clarify land (and carbon) tenure and use rights</li> <li>• Promote handover process for community-based forest management regimes</li> </ul>	T, H, M

Drivers	Underlying causes	Nature of causes	Strategic Options	Affected regions *
	(3.2) Inadequate Budget for research and development	Direct	<ul style="list-style-type: none"> <li>Strengthen coordination mechanisms for promoting policy and planning linkages among the MoFSC, Ministry of Finance, and the National Planning Commission.</li> <li>Pilot sustainable forest management practices and disseminate results to political parties, civil society and other concern stakeholders</li> <li>Facilitate non-governmental organizational to generate fund for R&amp;D</li> </ul>	T, H, M
	(3.3) Insufficient technical inputs	Direct	<ul style="list-style-type: none"> <li>Enhance technical capacity of government officials, indigenous peoples and local communities, and service providers on sustainable forest management and harvesting.</li> <li>Pilot and demonstrate sustainable harvesting practices in the field.</li> </ul>	T, H, M
4. Forest fire	(4.1) Carelessness	Direct	<ul style="list-style-type: none"> <li>Increase community participation and awareness in forest fire management</li> <li>Develop institutional and technical capability of the extension division of the MoFSC, DoF, DFO, local community-based institutions and other stakeholders for awareness-raising on forest fire</li> <li>Provide alternative technology for charcoal production</li> <li>Include awareness raising about forest fire management in school curricula</li> </ul>	T, H, M
	(4.2) Intentional	Direct	<ul style="list-style-type: none"> <li>Increase community awareness and participation in forest fire management.</li> <li>Develop effective mechanism for forest fire monitoring and control.</li> <li>Develop forest fire strategy plan and review existing laws, rules and regulations.</li> <li>Promote multi-purpose fodder and grass species planting and management and encourage stall feeding.</li> <li>Promote use and access to alternative fertilizer to replace shifting agricultural practices in forest areas and farmlands.</li> <li>Provide alternative sources of income for poor people.</li> <li>Review current provisions of the forest act to kill wild animals (tiger/leopard) affecting rural areas</li> <li>Build fire management technical capacity among all stakeholders who are involved in fire fighting</li> </ul>	T, H, M
	(4.3) Weak forest fire management practices	Indirect	<ul style="list-style-type: none"> <li>Prepare strategy to promote community participation in forest fire management.</li> <li>Implement effective plans for sustainable management of forest that enhances forest productivity under different forest management regimes</li> <li>Develop district forest fire management plans.</li> <li>Periodically develop and implement community-based forest fire management plans based on risk assessment.</li> <li>Develop technical capacity among all stakeholders.</li> </ul>	T, H, M

Drivers	Underlying causes	Nature of causes	Strategic Options	Affected regions *
			<ul style="list-style-type: none"> <li>• Train fire fighters and provide firefighting equipment.</li> <li>• Provide insurance for fire fighters.</li> <li>• Establish forest fire monitoring systems and firefighting network at different levels.</li> </ul>	
5. Encroachment	(5.1) Expansion of Agricultural land	Direct	<ul style="list-style-type: none"> <li>• Promote the application of Sloping Land Agriculture Technologies.</li> <li>• Invest to conserve land productivity.</li> <li>• Increase handover of forests to community-based forest management regimes.</li> <li>• Strengthen the incentive and punishment system for government officials, as well as for community-based forest management groups.</li> <li>• Develop national and local land-use policies, planning and implementation of plans.</li> <li>• Demarcate and regularly monitor forest boundaries.</li> <li>• Promote and establish decentralized and accountable multi-stakeholders forest governance structures (for example, FSCC/DFCC).</li> <li>• Enhance value of standing forests through promotion of NTFP markets</li> <li>• Promote local and regional-level PES regimes.</li> <li>• Increase awareness to raise community ownership</li> <li>• Invest in better agriculture practices to increase productivity and address food security.</li> <li>• Implement effective plans for sustainable management of forest that enhances forest productivity under different forest management regimes</li> </ul>	T, H
	(5.2) Poverty	Indirect	<ul style="list-style-type: none"> <li>• Develop land reform and agricultural policies (including cross-sectoral policies) to address fragmentation and inequitable land distribution.</li> <li>• Increase in investment for creation of forest product alternatives and non-forest sector employment in rural areas to reduce forest dependency (especially for poor)</li> <li>• Invest in better agriculture practices to increase productivity and address food security, including on barren lands.</li> <li>• Increase and ensure the equitable sharing of forest-related benefits, including carbon markets.</li> </ul>	T, H
	(5.3) Politically induced		<ul style="list-style-type: none"> <li>• Sensitize political parties and develop mechanisms to get their commitment.</li> </ul>	
	(5.4) Unclear land tenure, policy and planning	Indirect	<ul style="list-style-type: none"> <li>• Develop national and local land use policies, planning and implementation of plans.</li> <li>• Promote land tenure reform at both the national and local levels.</li> <li>• Define and transfer a larger bundle of rights</li> <li>• Improve policy coordination among Forest, Land Reform and Agriculture Ministries for effective cross-sectoral implementation of land policy and administration.</li> </ul>	T, H

Drivers	Underlying causes	Nature of causes	Strategic Options	Affected regions *
			<ul style="list-style-type: none"> <li>• Develop institutional and legal mechanisms to provide increased access to forests to poor and landless families</li> <li>• Provide formal endorsement of forests managed informally.</li> </ul>	
6. Overgrazing	(6.1) Governance vacuum	Indirect	<ul style="list-style-type: none"> <li>• Expand coverage in transferring to community-based forest management modalities</li> <li>• Implement effective plans for sustainable management of forest that enhances forest productivity under different forest management regimes</li> <li>• Support multi-stakeholder district forest sector planning for all district-level (DFSP) and VDC-level forestry sector planning.</li> <li>• Promote land tenure reform at the national and local levels.</li> </ul>	T, M, H
	(6.2) High number of low productivity livestock	Direct	<ul style="list-style-type: none"> <li>• Improve coordination between MoFSC &amp; Ministry of Agriculture for improved breeding technologies, practices and financial resources.</li> <li>• Improve access to breeding improvement programs.</li> <li>• Explore and develop mechanisms to dispose of unproductive livestock.</li> <li>• Increase access to alternative sources of fertilizer.</li> </ul>	T, H, M
	(6.3) Limited alternatives for fodder	Direct	<ul style="list-style-type: none"> <li>• Develop and execute plans to promote fodder production on private and public lands.</li> <li>• Increase fodder production from forest land (including on land allocated for poor households inside community forests).</li> <li>• Implement effective plans for sustainable management of forest that enhances forest productivity under different forest management regimes</li> <li>• Increase technology for and access to concentrated feed at local level.</li> <li>• Investments to promote stall feeding.</li> <li>• Scale up fodder reserve system, especially silage and hay, for use during slack periods.</li> </ul>	T,H,M
	(6.4) Limited alternative income sources	Indirect	<ul style="list-style-type: none"> <li>• Invest in sustainable forest-based enterprises to create more employment opportunities in the forestry sector (both timber and NTFPs).</li> <li>• Scale up investment in non-forestry sector employment programs targeting rural areas to reduce forest dependency (especially for poor).</li> <li>• Provide vocational education starting from secondary school level.</li> <li>• Increase skill-based training opportunities for the poor.</li> <li>• Invest in commercial livestock farming at local level to address the need for local markets and subsistence.</li> </ul>	T, H, M
7. Infrastructure development	(7.1) Inconsistencies within and	Indirect	<ul style="list-style-type: none"> <li>• Review and revise policies to make them more consistent with each other.</li> <li>• Improve coordination and planning among development projects, MoFSC and other ministries, NPC and the National Development Council.</li> <li>• Promote integrated planning, monitoring and evaluation of infrastructure development</li> </ul>	T, H

Drivers	Underlying causes	Nature of causes	Strategic Options	Affected regions *
	among forestry policies and various development policies		<p>projects.</p> <ul style="list-style-type: none"> <li>• Make provision for the compulsory substitution of equivalent forest land used for non-forestry land use.</li> </ul>	
	(7.2) Weak accountability mechanisms for planning and approval of development projects	Direct	<ul style="list-style-type: none"> <li>• Ensure integrated local level planning, monitoring and evaluating of development projects, including local road building.</li> <li>• Sensitize policy makers to forest-related planning issues.</li> <li>• Sensitize local government to forest-related planning issues.</li> <li>• Implement compensation mechanisms for private land lost due to road construction (to ensure forest land is not used)</li> </ul>	T, H
	(7.3) No EIA, IEA or follow-up monitoring	Direct	<ul style="list-style-type: none"> <li>• Make IEE and EIA compulsory for all forest land use conversion projects including infrastructure development</li> <li>• Develop regular joint monitoring and feedback mechanisms in the implementation of plans.</li> <li>• Promote integrated planning, monitoring and evaluation of development projects.</li> <li>• Improve coordination among development projects and activities of MoFSC and other ministries.</li> </ul>	T, H
8. Resettlement	(8.1) New economic growth prospects (e.g. Oil and gas, cement factory, airport, hydropower dam)	Indirect	<ul style="list-style-type: none"> <li>• Make provision for the compulsory substitution of equivalent forest land used for non-forestry land use.</li> </ul>	
	(8.2) Increased demand for land for new settlements	Indirect	<ul style="list-style-type: none"> <li>• Strengthen law enforcement for unregulated settlements and address impunity</li> <li>• Provide alternative settlement areas on non-forested land</li> </ul>	T



Drivers	Underlying causes	Nature of causes	Strategic Options	Affected regions *
	(8.3) Poorly enforced planning regulations	Indirect	<ul style="list-style-type: none"> <li>• Ensure integrated local-level planning, monitoring and evaluation of development projects including local road building</li> <li>• Strengthen law enforcement related to planning and infrastructure development</li> <li>• Sensitize policy makers on forest-related planning issues</li> <li>• Sensitize local government on forest-related planning issues</li> </ul>	T
9. Expansion of invasive species	(9.1) Lack of proven eradication practices	Direct	<ul style="list-style-type: none"> <li>• Develop and execute research plan targeting invasive species.</li> <li>• Disseminate the results to wider stakeholders and integrate the result into policies and plans.</li> <li>• Sensitize concerned authorities on their roles and responsibilities to immediately act to overcome the problem.</li> </ul>	T
	(9.2) Frequent forest fires	Indirect	<ul style="list-style-type: none"> <li>• Promote community participation in forest fire management and fire control</li> <li>• Develop institutional and technical capacity of the extension division of the forest department and other stakeholders to prevent and fight forest fires</li> </ul>	T, H, M
	(9.3) Overgrazing	Indirect	<ul style="list-style-type: none"> <li>• Expand coverage and accelerate transfer to community-based forest management modalities in all regions</li> <li>• Develop and execute plans to promote fodder production on private and public lands</li> <li>• Increase fodder production from forest lands (including land allocation for poor households inside community forests)</li> </ul>	T
	(9.4) Opening of canopy		<ul style="list-style-type: none"> <li>• Enhance technical capacity of Government officials, indigenous peoples, local communities and service providers on sustainable forest management and harvesting.</li> <li>• Pilot and demonstrate sustainable harvesting practices in the field</li> <li>• Expand coverage and accelerate transfer to community-based forest management modalities in all regions</li> </ul>	T
	(9.5) Introduction of new bio-fuel species	Direct	<ul style="list-style-type: none"> <li>• Conduct detailed studies before introducing exotic species</li> <li>• Increase monitoring of importing and planting of exotic species.</li> </ul>	T&H

## Annex 2b-2: Terms of Reference for Studies

### 1. Assessment of the Value of the Forest at the National Level

#### Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is emerging as a promising option to promote appropriate forest management practices in order to reduce carbon emissions and climate change. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist selected developing countries in their efforts to reduce their emissions from deforestation and forest degradation, primarily through capacity building and institutionalizing performance-based incentive mechanisms. Nepal is one of the countries selected by the FCPF for the REDD Readiness Fund and is now in the process of preparing itself for engagement in the REDD mechanism. Developing strategies and programs to address the drivers of Deforestation and Forest Degradation will be essential for REDD-readiness.

The current annual allocation of the national public budget in the forestry sector does not correspond to its contribution to the development of the country. The National Gross Domestic Product (GDP) captures mostly financial contributions in the formal sector. However, due to the large informal economy and poverty in forest areas, most of the contribution from forests to the economy is not accounted for, including contributions to local use (i.e., timber, NTFPs, and other products), and valuable environmental services. Forests provide more intangible benefits than tangible ones. These intangible benefits need to be reflected in the national accounting system. Despite the important role of the forestry sector in the national economy, the national budget does not recognize it as a main asset for the development of the country. If the contribution of the forestry sector could be estimated and highlighted, more attention and focus could be drawn to the need for forestry sector policy development, planning and funding.

#### Objectives the Assignment

The overall objective of the assignment is to estimate the value of forests in the national economy. The specific objectives of the assignment are to:

- Identify the economic and other environmental services provided by the forestry sector, primarily for direct forest users, such as the private sector (including formal and informal) and forest-dependent communities. Secondary users should also be considered, such as the buyers of forest products.
- Estimate the total economic value of the different forest products, including the value of forest products sold for commercial purposes and those used for livelihood support, as well as the value of critical environmental services.
- Develop a policy brief and organize a high-level round table meeting to disseminate the results.
- Develop policy recommendations for the Government of Nepal.

#### Methodology

The guidelines will be based on a review of existing studies and reports, databases available in the MoFSC and its departments, a sample field survey for the area where there have been no previous studies, and the conducting of key stakeholder consultations and workshops.

#### Composition of the Consulting Team

The team of experts should comprise a team leader with a degree in natural resource economics and a forestry background, a forestry specialist, and a social scientist.

## 2. A Study on the Political Economy of Land Use in Nepal

### Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is emerging as a promising option to promote appropriate forest management practices to reduce carbon emission and climate change. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist selected developing countries in their efforts to reduce their emissions from deforestation and forest degradation primarily through capacity building and institutionalizing a performance-based incentive mechanism. Nepal, one of the countries selected by the FCPF for REDD Readiness activities, is now in the process of preparing a REDD mechanism. Assessing strategic options and developing programs to address the drivers of Deforestation and Forest Degradation will be the key activities during the REDD readiness phase. The assessment of land use, forest policy and governance conducted under development of the R-PP has identified nine main drivers of Deforestation and Forest Degradation in Nepal. It reveals that there has been continuous pressure on forest land for other land use purposes, especially for agriculture and infrastructure development. At the same time, Nepal needs to maintain a certain level of forest area to fulfill the domestic use for private sector and livelihood demands, as well as the ecological sustainability of this resource. There are debates on various issues related to the forestry sector, such as how much forest area is actually needed to fulfill the growing demand for forest products; how much should be allocated to maintaining and ecosystems, biodiversity and associated environmental services; and whether some of the forest land should be allocated for agricultural purposes to help bolster food security. These arguments have led to conflicts over land use and tenure systems. Hence, a detailed assessment of the political economy of land use at the national level is proposed to address these issues.

### Objectives of the Study

The overall objective of the study is to conduct a detailed assessment of land use, including the forestland use system, and tenure and associated conflicts, and to offer recommendations for future actions. The specific objectives of the study are to:

- Conduct an in-depth land use assessment including past, present and future demand for land in various categories;
- Identify existing and potential conflicts related to land use and tenure;
- Review land use systems of other countries
- Assess current demand and supply system for forest products for ecological, social and economic purposes, and project future demand and supply scenario,
- Review international and national obligations for Nepal affecting land use;
- Provide concrete recommendations for policies and programs to avoid future conflicts over land use and tenure; and
- Offer evidence-based recommendations on the extent of forest area that Nepal needs to maintain to meet projected social, economic and ecological requirements.

### Methodology

The study will be based on a review of existing literature; and consultations with different stakeholders, including government officials, NGO representatives, private sector organizations, and people with significant local knowledge. The consultant will have to conduct extensive field visits in various geographic regions to gather evidence. Workshops and round table meetings should be organized at the national and sub-national levels, involving government administrators, policy drafters, policy makers, other stakeholders and experts. The study team can use following guiding questions to address the issue of Deforestation and Forest Degradation.

- How much of forest area should be retained as forests?
- How should the encroached forest area of about 90,000 hectares be allocated for different uses?
- What are the tradeoffs among carbon content, financial return, and employment creation per unit of land in different regions?
- What should be the basis of land-use choices in the different physiographic regions?

### 3. Assessment of carbon emissions from drivers of deforestation and forest degradation

#### Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is emerging as a promising option to promote appropriate forest management practices to reduce carbon emission and associated problems. World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist selected developing countries in their efforts to reduce their emissions from deforestation and forest degradation primarily through capacity building and institutionalizing a performance-based incentive mechanism. Among many, Nepal is one of the countries selected by the FCPF for the REDD Readiness. Nepal is now in the process to prepare for REDD mechanism. Assessing strategic options and developing programs to address the drivers of Deforestation and Forest Degradation will be a key activity for the REDD readiness phase. The assessment of land use, forest policy and governance identified nine drivers of Deforestation and Forest Degradation. Each of these drivers affects in a singular intensity the different types of forests and regions according to the physiographic, demographic, and technical capabilities of the forest managers and stakeholders. However, the discussion lacks of scientific evidence and/or analytical assessment of the magnitude of the impact the drivers on emissions reductions in Nepal. This is particularly important for the development of the REDD Strategy. Nepal has identified strategic options to address those drivers. However, this lack of information and analytical work impedes the prioritization of drivers to be addressed and the actions to be undertaken during the development of the REDD Strategy.

#### Objectives of the Study

The overall objective of the study is to conduct a detailed assessment of the magnitude of impacts of the nine identified drivers of deforestation and forest degradation on emissions reductions. The specific objectives of the study are to:

- Conduct a desk review of past literature and analytical studies to assess the consequences of each of the nine drivers of deforestation and forest degradation in Nepal;
- Conduct a review of select forest projects in which effective solutions for emissions reductions can be identified to minimize the effect of drivers of deforestation and forest degradation in Nepal;
- Identify three or four major drivers to be prioritized, and explain the reasons for this selection;

- Conduct a stakeholder forum for dissemination of results and further consultation and assessment; and
- Provide concrete recommendations for policies and programs to avoid future conflicts on land use and tenure.

## Methodology

The study will be based on a review of existing literature, including analytical studies from Nepal and other countries. In addition, consultations with different stakeholders including government officials, NGO representatives, private sector organizations, and people with significant local knowledge, will be performed. Workshops and round table meetings should be organized at the national and sub-national level, inviting policy drafters, policy makers, other stakeholders and experts. The study team can use the following guiding questions to address the issue of Deforestation and Forest Degradation:

- What are the current impacts on emissions of the drivers in each of the physiographic regions, forest areas, and land management regime?
- Which are the potential future impacts on emissions of drivers in each of the physiographic regions, forest areas, and land management regime?
- What are the policy recommendations for a REDD Strategy over the next thirty years?

## Annex 2c: REDD Implementation Framework

### 2c .1 Terms of References

#### 1. A study and consultation process for establishing forest carbon ownership in Nepal

##### Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is emerging as a means of reducing forest sector carbon emissions through appropriate forest management practices and enhanced forest governance, both in the forestry sector and in related sectors. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist developing countries in their efforts to reduce their emissions from deforestation and forest degradation. Nepal has been selected as a FCPF country. Developing and applying strategies and programs to address the drivers of deforestation and forest degradation will be key activities during the REDD-readiness phase.

Forest conservation has been identified as a cost-effective means for reducing global carbon emissions (e.g. Stern Review). Participating countries under REDD such as Nepal need to develop their REDD implementation frameworks to support the measures (strategies) to tackle drivers of deforestation and forest degradation, to address leakages, to ensure equitable and transparent benefit sharing, and to monitor REDD actions and results according to agreed upon national and international standards. Existing literature on REDD implementation has focused heavily on the theoretical aspects of the incentive mechanisms. These need to be put into practice in Nepal in a cost-effective and feasible way to ensure that both national interests and the rights of specific stakeholders (e.g. indigenous peoples and local communities) are secured.

A priority of this process will be to establish carbon ownership rights. This will be a politically sensitive issue. During the current transition period the treatment of usufruct rights as carbon rights can be a viable, albeit temporary, solution, especially if this is backed up with a clear registry structure empowered with the authority to facilitate carbon transactions. However there is a pressing need to continue to encourage further discussion and understanding of issues related to forest carbon ownership, including under different forest management modalities. This study and consultation process aims to do this during the preparation phase.

## Objectives

The objective of the study is to develop a roadmap combined with good understanding across the sector for establishing forest carbon ownership and for linking it with land tenure rights, with a view to having this clearly established by 2012. The study will address the following specific questions:

- What are the criteria for identification of appropriate forest carbon ownership and what would be the impacts on livelihoods of existing payments for environmental services schemes (including carbon)?
- What are the implications for the design and implementation of incentive-based mechanisms for REDD and how can these be put into place during the readiness phase?

## Methodology

The study methodology will include a series of tasks carried out through a review of the literature, consultation with different stakeholders, including government officials, NGO representatives, private sector organizations, academics, legal experts and others with a significant stake in the forest sector. Specific tasks include:

- A review of REDD-readiness activities, including past studies in Nepal (reports on various components) and experiences gained from other countries with a particular emphasis on issues relating to carbon ownership.
  - A Review of Nepal's laws and policies regarding forests, forest management and land tenure to establish possible precedents and processes for development of an institutional mechanisms to establish forest carbon ownership and management.
  - An assessment of gaps in existing forest ownership legislation related to forest carbon and recommendations on appropriate ways for these to be addressed through legislation and other channels (i.e., a roadmap)
  - Identification, through facilitated discussions with forest sector stakeholders, academics and legal experts (international and national), of effective ways through which policies, institutions and laws can be adapted to encompass forest carbon ownership in a way that will ensure benefit flows for forest-dependent communities and maintain democratic rights under the new constitution of Nepal.
2. A study and detailed consultation on proposed ideas for a REDD implementation mechanisms and the associated costs of the proposed institutional arrangements

## Background

Reducing Emissions from Deforestation and Forest Degradation (REDD) is emerging as a means to reduce forest sector carbon emissions through appropriate forest management practices and enhanced forest governance, both in the forestry sector and related sectors. The World Bank has established the Forest Carbon Partnership Facility (FCPF) to assist developing countries in their efforts to reduce their emissions from deforestation and forest degradation. Nepal has been selected as a FCPF country. Developing and applying strategies and programs to address the drivers of deforestation and forest degradation will be key activities during the REDD-readiness phase.

Forest conservation has been identified as a cost-effective means for reducing global carbon emissions (e.g. Stern Review). Participating countries under REDD, such as Nepal, need to develop their REDD implementation frameworks to support measures (strategies) to tackle the drivers of deforestation and forest degradation, to address leakage, to ensure equitable and transparent benefit-sharing, and to monitor REDD actions and results according to agreed-upon national and international standards. Existing literature on REDD implementation has focused heavily on the theoretical aspects of REDD implementation mechanisms, but these need to be put into practice in Nepal in a cost-effective and feasible way to ensure that both national interests and the rights of specific stakeholders (e.g. indigenous peoples and local communities) are secured.

Certain guiding principles for the REDD implementation framework have been indicated in the R-PP, along with some preliminary ideas on implementation mechanisms. At the same time, various pilots are testing and developing ideas on these in Nepal. Depending on the priority options agreed on for REDD strategy implementation, an analysis and design of REDD implementation framework is needed along with indications of the costs of establishing this and ensuring its ongoing operation (since transaction costs for REDD could exceed benefits, it may not provide sufficient incentives for effective implementation).

## Objectives

The objective of the study is to develop an implementable and cost-effective institutional mechanism to implement REDD in Nepal. The study will explore options, estimate costs, examine the results of pilot activities, and make recommendations for a viable institutional arrangement for REDD implementation. Specific questions to be addressed include:

- Can REDD be implemented on a combined (nested) national and sub-national basis (based on the various functions that the implementation arrangements need to address—including legal requirements under the Kyoto Protocol or other international agreements)?
- What would be the implementation costs of REDD under the proposed institutional structure, and does this provide sufficient benefits/incentives based on an assessment of the likely returns? This implies carrying out a financial analysis of the likely costs and benefits of the proposed institutional arrangements.
- What are the various capacity building requirements for the proposed institutional arrangements (based on an assessment of the proposed existing institutions to be involved and their current capacities)? How can these be developed into a plan to ensure sufficient implementation capacity by 2012 for REDD implementation in Nepal?
- What further policies and/or institutional reforms (including legal reforms) are required for establishing the proposed arrangements for REDD? How can these be put in place in a timely manner by 2012?

## Methodology

The study will be based on a review of existing literature, experiences from pilots (in Nepal and elsewhere), consultation with different stakeholders, including government officials, NGO

representatives, private sector organizations, people with significant local knowledge, and interviews with forest-dependent local communities and indigenous peoples.

## Annex 3: Reference Scenario

### 3.1 Terms of References

#### 1. Preliminary ToR for creation of a biomass surface from LRMP data

##### Background

REDD (also referred to as REDD plus) is a new element that is currently being discussed for inclusion in a post 2012 climate change agreement under the United Nations Framework Convention on Climate Change (UNFCCC). REDD calls for policy approaches and positive incentives for reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Nepal is currently undertaking a number of preparation activities to prepare the country to be able to participate in a future REDD mechanism.

One of the core components required for REDD is a reference scenario. A reference scenario is defined as a combination of recent historical data on emissions from deforestation and/or forest degradation and other relevant land uses, and estimated future emissions and removals, leading to a national scenario through time of greenhouse gas emissions, in the absence of additional incentives for REDD.

##### Objectives of the Study

As part of the analysis of historical data on emissions from deforestation and/or forest degradation and other relevant land uses in the reference scenario, the objective of the study is the creation of biomass surface data from the Land Resource Mapping Project data.

##### Methodology

1. Digitization of the 300, 1:25,000 and 1:50,000 LRMP forest cover maps into GIS format, with the attributes recorded within the Forest 'units', entered into polygon fields. Activities for the digitization have already started and if found satisfactory, this step is no longer required or can be limited to those maps that haven't been digitized yet.
2. Calibration of LRMP classes with field samples. These can be obtained from exiting datasets such as those generated by ICIMOD, the LFP project, WWF and other organizations or can be based on new fieldwork. If possible, the biomass estimates (or rather the forest inventory data) obtained by the previous NFI (DFRS, 1999) be retrieved and, if suitable, incorporated. This should allow for preliminary modeling to take place, and on the basis of this, determine a work plan and stratification for further biomass sampling.
3. Population of the biomass coverage with calibrated values, derived from the combination of 1) existing LRMP data, 2) field sampling (past and present), and 3) modeling



### Composition of the Consultant Team

Highly qualified institution or consortium with experience and knowledge of GIS systems and forest field inventory work.

### Time frame

Activities are expected to start beginning 2011 and finish Q3 2011 (depending on possibility and timing of fieldwork)

## 2. Preliminary ToR for creation of a 2012 biomass surface for Nepal

### Background

REDD (also referred to as REDD plus) is a new element that is currently being discussed for inclusion in a post 2012 climate change agreement under the United Nations Framework Convention on Climate Change (UNFCCC). REDD calls for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Nepal is currently undertaking a number of preparation activities to prepare the country to be able to participate in a future REDD mechanism.

One of the core components required for REDD is a reference scenario. A reference scenario is defined as a combination of recent historical data on emissions from deforestation and/or forest degradation and other relevant land uses, and estimated future emissions and removals, leading to a national scenario through time of greenhouse gas emissions, in the absence of additional incentives for REDD.

### Objectives of the Study

As part of the analysis of historical data on emissions from deforestation and/or forest degradation and other relevant land uses in the reference scenario, the objective of the study is the creation of 2010 biomass surface data for Nepal that is comparable with the LRMP classification and incorporates the work being done under the FRA.

### Methodology:

1. Recommendation on high-resolution ( $\leq 5\text{m}$ ) imagery (HR Imagery) that can be used for the whole country. It is envisioned that this HR Imagery will be acquired ideally for the reference year of 2010. It should be purchased as a 'whole of government license'.
2. Classification of high resolution remote sensing images combined with ground truthing. The classification should use the same classes as the LRMP, therefore allowing for change detection between these two dates

### Composition of the Consultant Team

Highly qualified institution or consortium with experience and knowledge of remote sensing, GIS systems and forest field inventory work.

### Time frame

Activities are expected to start beginning 2011 and finish Q4 2011 (depending on possibility and timing of fieldwork)

### 3. Preliminary ToR for Development of a multi-year historic reference scenario for Nepal

#### Background

REDD (also referred to as REDD plus) is a new element that is currently being discussed for inclusion in a post 2012 climate change agreement under the United Nations Framework Convention on Climate Change (UNFCCC). REDD calls for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Nepal is currently undertaking a number of preparation activities to prepare the country to be able to participate in a future REDD mechanism.

One of the core components required for REDD is a reference scenario. A reference scenario is defined as a combination of recent historical data on emissions from deforestation and/or forest degradation and other relevant land uses, and estimated future emissions and removals, leading to a national scenario through time of greenhouse gas emissions, in the absence of additional incentives for REDD.

#### Objectives of the Study

As a part of the analysis of historical data on emissions from deforestation and/or forest degradation and other relevant land uses in the reference scenario, Nepal is planning to develop biomass surface data for the period 1977-1979 (based on LRMP data) and 2010 (based on new FRA project and high resolution data). To accurately capture the trend between the date of the LRMP and the new assessment, it is envisioned that some type of interpolation will take place using data from one or more of the following existing datasets: (i) 1994 National Forest Inventory, (ii) the 2000 Japan Forest Technical Association Information System Development Project and/or (ii) the 2009 FAO Global Land Cover Network (GLCN) LCCS for Nepal. The objective of this study is identify the best dataset or combination of datasets to be used and develop a methodology for development of a multi-year historic reference scenario based on these datasets. If reclassification of existing datasets or acquisition of new datasets is required, this study will develop a ToR for this.

#### Methodology:

1. Analyze the data 1994 National Forest Inventory, 2000 Japan Forest Technical Association Information System Development Project and/or the 2009 FAO Global Land Cover Network (GLCN) LCCS for Nepal.
2. Recommendation on if and how these datasets can be used to capture the trend in deforestation and forest degradation between the date of the LRMP and the new assessment. Recommendation may include the acquisition of additional datasets.
3. Develop of a methodology for deriving a multi-year historic reference scenario based on the biomass surfaces from the LRMP and the 2010 assessment; and the other available datasets.
4. If acquisition and reclassification of remote sensing images is required, develop a ToR for this activity based on the methodology developed in the previous step.

#### Composition of the Consultant Team

Highly qualified institution or consortium with experience and knowledge of remote sensing, GIS systems and forest field inventory work.

#### Time frame

Activities 1-3 of the methodology are expected to take place between mid 2011 and the end of 2011. If re-interpretation of existing data and possible acquisition and processing of new images is required, this will take place in 2012.

#### 4. Preliminary ToR for forest cover change and emission forecasting model

##### Background

REDD (also referred to as REDD plus) is a new element that is currently being discussed for inclusion in a post 2012 climate change agreement under the United Nations Framework Convention on Climate Change (UNFCCC). REDD calls for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Nepal is currently undertaking a number of preparation activities to prepare the country to be able to participate in a future REDD mechanism.

One of the core components required for REDD is a reference scenario. A reference scenario is defined as a combination of recent historical data on emissions from deforestation and/or forest degradation and other relevant land uses, and estimated future emissions and removals, leading to a national scenario through time of greenhouse gas emissions, in the absence of additional incentives for REDD.

##### Objectives of the Study

As part of the estimation of the future emissions and removals in the reference scenario, the objective of the study is to develop, calibrate and simulate a robust country wide spatial regression model that is imbedded in a General Equilibrium Model (CGE) with medium to long-term framework.

##### Methodology

1. Generate database on related areas of forestry sector based on secondary data and also carry out survey for updating data to be useful for deeper analysis and also update input output coefficients and alternative uses of forestry products.
2. Assess existing situation on carbon emissions through deforestation and degradation and identify underlying causes of increased deforestations and degradations.
3. Update existing input output table constructed for Nepal with adequate disaggregation of the forestry sector to identify the changed cost structure and uses of the forestry products.
4. Develop separately a land use sub-model as a feedback to the economy-wide model for assessing likely ramification of changes in the land use pattern on deforestation etc.
5. Construct a CGE Model and SAM with focus on the specification of medium to long term framework based on updated input out put table and calibrate SAM distinguishing quantity and prices and thereafter calibrate shocks on carbon emissions as a result of deforestation and degradation etc.
6. Carry out extensive policy simulation exercise for assessing the economy wide effect of various alternative policy shocks in general and forestry sector medium to long-term effect in particular. The policy shocks should examine the ramifications of following more distinctly:
  - a. Alternative land uses or changes in land use pattern,
  - b. Alternative investment decisions of government, private sector, community and households,
  - c. Policy on alternatives or substitution of energy uses
  - d. Impact of reforestation, regeneration and deforestation
  - e. Pricing Policy
  - f. Industrial policy
  - g. Export and import policy
  - h. Tax and tariff policy etc
7. Provide policy recommendations with focuses on following areas
  - i. Means of protecting carbon stocks
  - j. Role of enhanced carbon stocks on biodiversity, forest livelihoods, and derived forest ecosystem services,
  - k. Policies to ensure sustainable forest management

- l. Economy-wide role and impact of forestry sector management on the economy in general and people's livelihood in particular.

#### Composition of the Consultant Team

Highly qualified and experienced institution or consortium with experience in similar modeling exercise, preferably in Nepal or a country with comparable circumstances

#### Time frame

Activities are expected to start mid 2011 and should be finalized by the end of 2012

### 5. Preliminary ToR for capacity building activities for DFRS

#### Background

REDD (also referred to as REDD plus) is a new element that is currently being discussed for inclusion in a post 2012 climate change agreement under the United Nations Framework Convention on Climate Change (UNFCCC). REDD calls for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Nepal is currently undertaking a number of preparation activities to prepare the country to be able to participate in a future REDD mechanism.

One of the core components required for REDD is a reference scenario. A reference scenario is defined as a combination of recent historical data on emissions from deforestation and/or forest degradation and other relevant land uses, and estimated future emissions and removals, leading to a national scenario through time of greenhouse gas emissions, in the absence of additional incentives for REDD.

#### Objectives

The Department of Forest Research and Survey (DFRS) under the Ministry of Forest and Soil Conservation will lead the development of the reference scenario although a number of activities will be outsourced. It is expected that around 15-20 persons in Nepal will be involved in the process of developing the reference scenario. The current capacity is limited and capacity building activities are expected in the fields of GIS and modeling (including operation and handling of hardware and software), general understanding of REDD and data collection. The contractor for the capacity building of this component is expected to, as a first step, and relate this to capacity building activities planned for the FRA and component 4 of this R-PP

#### Methodology:

1. Perform a training needs assessment and design a training package for DFRS staff and other persons involved taking into account capacity development activities already planned or taking place under 2010-2014 FRA.
2. Perform or arrange trainings.

#### Composition of the Consultant Team

Highly qualified institution or consortium with experience in training in areas of remote sensing, GIS systems, model development and REDD.

#### Time frame

Training needs assessment and design of training package finalized by mid 2011. Trainings to be performed until early 2013

## Annex 4: Monitoring System

### 4.1. Terms of References

#### 1. Preliminary ToR for analysis of the most efficient combination of remote sensing and ground sampling for Nepal

##### Background

REDD (also referred to as REDD plus) is a new element that is currently being discussed for inclusion in a post 2012 climate change agreement under the United Nations Framework Convention on Climate Change (UNFCCC). REDD calls for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Nepal is currently undertaking a number of preparation activities to prepare the country to be able to participate in a future REDD mechanism.

One of the core components required for REDD is a monitoring system for (a) measurable, reportable and verifiable (MRV) emissions and removals of greenhouse gases, and (b) other benefits and impacts over time, in relation to a country's reference scenario.

##### Objectives of the Study

For the monitoring of emissions and removals of greenhouse gases, Nepal is planning to design a system for monitoring forest cover and forest biomass on a regular basis. Data collection will be based on a combined method using remote sensing data and periodic ground inventories measurements throughout all major forest types of Nepal. The objective of this study is to analysis the most efficient combination of remote sensing and ground sampling for Nepal based on costs and required accuracy.

##### Methodology

- Analysis of the 2010-2014 FRA use of remote sensing and selection of sample plots, paying special attention to efficiency, replicability, costs and accuracy;
- Presentation of different alternatives for using remote sensing and ground based inventories in Nepal, also taking into account the possible future availability of high resolution data at lower prices, analyzing the costs of each option and the effect on the accuracy of the data;

##### Composition of the Consultant Team

Highly qualified institution or consortium with experience and knowledge of remote sensing and forest inventory.

##### Time frame

Activities are expected to start mid 2011 and finish end 2011

#### 2. Preliminary ToR for design of uniform approach and manual for ground based inventories

##### Background

REDD (also referred to as REDD plus) is a new element that is currently being discussed for inclusion in a post 2012 climate change agreement under the United Nations Framework Convention on Climate

Change (UNFCCC). REDD calls for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Nepal is currently undertaking a number of preparation activities to prepare the country to be able to participate in a future REDD mechanism.

One of the core components required for REDD is a monitoring system for (a) measurable, reportable and verifiable (MRV) emissions and removals of greenhouse gases, and (b) other benefits and impacts over time, in relation to a country's reference scenario.

### Objectives of the Study

For the monitoring of emissions and removals of greenhouse gases, Nepal is planning to design a system for monitoring forest cover and forest biomass on a regular basis. Data collection will be based on a combined method using remote sensing data and periodic ground inventories measurements throughout all major forest types of Nepal. The objective of this study is to design a uniform approach for the ground inventories measurements and develop a manual that can be used by local government staff and local communities.

### Methodology

- The study will take into account the outcomes of a separate study on the most efficient combination of remote sensing and ground sampling for Nepal to be conducted in 2011 and based on this study define the general requirements (accuracy, carbon pools etc) for ground inventories measurements in Nepal;
- Analyze existing experiences and manuals for ground based inventories in Nepal, including, but not necessarily limited to:
  - Community Forest Inventories;
  - the 'Kyoto: Think Global, Act Local' project' including their field Guide for Assessing and Monitoring Reduced Forest Degradation and Carbon Sequestration by Local Communities;
  - ongoing pilot project conducted by the International Center for Integrated Mountain Development (ICIMOD), the Asia Network for Sustainable Agriculture and Bioresources (ANSAB) and the Federation of Community Forestry User's, Nepal (FECOFUN) with financial support from the 'NORAD: International Climate and Forest Initiative Funding Scheme'.
- Based on these combined experiences, design a uniform approach for involving local communities and local level government bodies in forest inventory and monitoring
- Develop a manual for use on the local level including field testing activities.
- Capacity building at local level

### Composition of the Consultant Team

Highly qualified institution or consortium with experience and knowledge of forest inventory.

### Time frame

Activities are expected to start mid 2012 and finish end 2013

## 3. Preliminary ToR for design and implementation mechanism of National Forest Information Management System

### Background

REDD (also referred to as REDD plus) is a new element that is currently being discussed for inclusion in a post 2012 climate change agreement under the United Nations Framework Convention on Climate Change (UNFCCC). REDD calls for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Nepal is currently undertaking a number of preparation activities to prepare the country to be able to participate in a future REDD mechanism.

One of the core components required for REDD is a monitoring system for (a) measurable, reportable and verifiable (MRV) emissions and removals of greenhouse gases, and (b) other benefits and impacts over time, in relation to a country's reference scenario.

#### Objectives of the Study

Data management and reporting will be an important part of the proposed monitoring system. Therefore a National Forest Information Management System (NAFIMS) will be established which includes a Central Forest Geo-Database.

A Forest Resource Assessment (FRA) project is ongoing in Nepal from 2010 - 2014. One of the components of this project is the research and development of a Forest Information System. This Forest Information System will include geographically bound data and will focus on the sharing and dissemination of these data. This study will build on the work done under the FRA and further develop the FRA Forest Information System into a National Forest Information Management System that can be used for REDD monitoring and other forest management activities in Nepal.

#### Methodology

- Analyze the data needs of Nepal under a REDD mechanism (taking into account the proposed REDD strategy for Nepal);
- Analyze the Forest Information System (FIS) designed under the FRA;
- Prepare plan of action to make additions and changes to the FIS where necessary
- Implementation of FIS -and additions and changes where required (might be performed by separate consultant or consortium)
- Capacity building of staff required to operate NAFIMS in addition to activities already planned under FRA (might be performed by separate consultant or consortium)

#### Composition of the Consultant Team

Highly qualified institution or consortium with experience and knowledge of GIS and databases systems.

#### Time frame

Activities are expected to start mid 2011 and finish end 2013

#### Budget

To Be Determined in consultation with FRA project

### 4. Preliminary ToR for developing a system for monitoring other benefits and impacts of REDD

#### Background

REDD is a new element that is currently being discussed for inclusion in a post 2012 climate change agreement under the United Nations Framework Convention on Climate Change (UNFCCC). REDD calls for policy approaches and positive incentives on issues relating to reducing emissions from deforestation and forest degradation in developing countries; and the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. Nepal is

currently undertaking a number of preparation activities to prepare the country to be able to participate in a future REDD mechanism.

One of the core components required for REDD is a monitoring system for (a) measurable, reportable and verifiable (MRV) emissions and removals of greenhouse gases, and (b) other benefits and impacts over time, in relation to a country's reference scenario.

### Objectives of the Study

For the monitoring of other benefits and impacts over time, Nepal is one of the countries that is supporting the development of the REDD+ Social & Environmental Standards Initiative which is being facilitated by the Climate, Community & Biodiversity Alliance (CCBA) and CARE International. The objective of this study is to design a system for monitoring social and environmental impacts of REDD in Nepal based on these standards.

### Methodology

- Desk study to analyze the indicators from the REDD+ Social & Environmental Standards and develop an appropriate methodology and measurable parameters that can be applied in the field in Nepal to assess the impact of REDD activities;
- Incorporate the methodology and parameters in the field manual that will be developed to determine emissions and removals (see component 4a above);
- Capacity building of local communities and local level government bodies to monitor these parameters;
- If necessary, development of a social and environmental baseline for Nepal, taking into account some of the data that will also be collected as part of the FRA.

### Composition of the Consultant Team

Highly qualified institution or consortium with experience and knowledge social and environmental impact assessment and monitoring in Nepal

### Time frame

Activities are expected to start mid 2011 and finish end 2013