Study of Forest Carbon Ownership in Nepal

Government of Nepal
REDD Implementation Centre
Ministry of Forests and Soil Conservation
Babar Mahal, Kathmandu, Nepal

Date: August, 2015

Produced by: Environmental Resources Institute (ERI) Pvt. Ltd., Dhobighat, Lalitpur, Nepal, GPO Box: 7162, Kathmandu, Tel: +977-1-5544785, E-mail: eri@eri.org.np

In association with

Nepal Energy and Environment Development Services Pvt. Ltd. (NEEDS) and Rural Development Service Center (RDSC), Lalitpur, Nepal

Produced for: REDD Implementation Centre, Ministry of Forests and Soil Conservation, Nepal

Version: Final

Project Team:

Narayan Belbase - Team Leader
Bishwa N Paudyal - Sociologist /Study Coordinator
Bijaya Singh Sijapati - Environment Lawyer
Harisharan Luintel – Forestry Expert

Table of Contents

Acknowledgements

Forest Carbon Ownership is a complex phenomenon, as it is not clearly spelled out in the legal and policy framework of Nepal. REDD Implementation Centre (REDD IC) has commissioned ERI to carry out this study as a preparatory pre-requisite to implement REDD+ programme in Nepal. This study is directed towards the effort and initiatives of the Government of Nepal (GoN) in the realization of emission reduction linking forestry sector to carbon trade, as it has tremendous potentiality if harnessed properly. To meet the requirements of the Readiness Package Content, a clear definition of carbon ownership and carbon rights is the necessary pre-requisite.

On behalf of the study team, I would like to take this opportunity to thank REDD IC for entrusting ERI to undertake this study. My special thanks goes to the entire team of REDD IC including Mr. Man Bahadur Khadka, Mr. Rajendra Kafle, Dr. Narendra B. Chand, Dr. Mohan Poudel, Dr Ambika Adhikari and Mr Chudamani Shrestha who have relentlessly provided their invaluable support during the study. The study team would also like to thank the professionals of REDD+ and forestry sector for their professional insights and inputs to enrich this study. My sincere thanks are also due to various national and international agencies like WWF, ICIMOD, FECOFUN, ACOFUN, HIMAWANTI, NEFIN, etc., for providing their undaunted views and inputs during the course of this study.

I would also like to acknowledge and appreciate the precious contribution and support of DFOs and officials of Nawalparasi, Gorkha and Chitwan districts for their relentless support in organizing local level consultative meetings. Equally, the Chief Warden and officials of Chitwan National Park (CNP) deserve my appreciation and gratitude for their deeper insights and views. The study team would also like to thank the local government officials of Chita wan district for their critical deliberations during the consultations. Sincere thanks are also accredited to the field staffs, CSOs and CBOs at district and community levels for their untiring support and contribution in making this study a reality

My special thank also goes to my other study team members including Mr. Narayan Belbase, Dr Bijaya Singh Sijapati and Mr. Harisharan Luintel for their enormous effort to shape up this report to a conclusion. My professional colleagues and officials from ERI including Mr. Bijaya Raj Poudel, Dr Pradeep Poudel, Dr. Keshav Acharya also deserve special thanks for their continuous support and untiring effort in shaping up this report. Special thanks also goes to Mr. Dil Raj Khanal for his valuable ideas in connecting this study with the latest international developments on REDD+. Last but not the least, the study team is grateful to the entire forest sector including CFUG, LFMG, CFMC, BZMC and local communities of study area for their views, concerns, comments and criticisms that has tremendously helped to enrich this study. Last but not the least, I would like to thank Don Messerschmidt for his contribution in editing the report.

I trust that this report, which is a product of collaboration between Environmental Resource Institute Pvt. Ltd., Nepal Energy and Environment Development Services Pvt. Ltd (NEEDS) and Rural Development Service Center (RDSC) including REDD-IC/GoN and the World Bank. will provide a roadmap for both the policy provisions and their practical applications by broadening the understanding and creating conducive policies and institutional mechanisms for forest carbon ownership and REDD+ benefit-sharing in Nepal.

Bishwa N Paudyal
Executive Director
Environmental Resources Institute (ERI) Pvt. Ltd
Dhobighat, Lalitpur, Nepal
P O Box: 7162, Kathmandu
Tel: +977-1-5544785
Url: www.eri.org.np
Email: eri@eri.org.np

Abbreviations

ACAP	Annapurna Conservation Area Project
BSP	Benefit-sharing Plan
BZ	Buffer Zone
BZCF	Buffer Zone Community Forest
BZMC	Buffer Zone Management Committee
BZRF	Buffer Zone Religious Forest
CAMC	Conservation Area Management Committees
CAs	Conservation Areas
CBD	Convention on Biodiversity
CDM	Clean Development Mechanism
CF	Community Forests
CFM	Collaborative Forest Management
CFMF	Carbon Fund Methodological Framework
Cft	Cubic Feet
CGUGs	Community Forest User Groups
CICC	Inter-Ministerial Climate Change Commission
CIFOR	Center for International Forestry Research
CITES	Convention on International Trade in Endangered Species of Wild Fauna and
CONAFOR	National Forestry Commission
CoP	Conference of Parties
CRN	Coalition of Rainforest Nations
CSO	Civil Society Organization
D&D	Drivers of Deforestation
DANAR	Dalit Alliance for Natural Resources, Nepal (DANAR, Nepal)
DDC	District Development Committee
DFSCC	District Forestry Sector Coordination Committees
DFID	Department for International Development
DFO	District Forest Office
DFRS	Department of Forest Research and Survey
DNA	Deoxyribonucleic acid
DNPWC	Department of National Parks and Wildlife Conservation
DoF	Department of Forests
DPR	Department of Plant Resources
DSCO	District Soil Conservation Office
DSCWM	Department of Soil Conservation and Watershed Management
EFLGVCC	Environment Friendly Local Governance Village Coordination Committee
EMA	Environmental Management Act
ER	Emission Reduction
ER-PIN	Emission Reduction Programme Idea Note
ERPA	Emission Reduction Purchase Agreement
FAO	Food and Agriculture Organization
FCF	Forest Carbon Fund
FCPF	Forest Carbon Partnership Facility
FDF	Forest Development Fund
FECOFUN	Federation of Community Forestry User Groups of Nepal

FGD	Focus Group Discussions
FINNIDA	Finnish International Development Agency
FONAFIFO	National Forest Fund
FORESC	Forest Research and Survey Centre
FPIC	Free and Prior Informed Consent
FRDP	Forest Research Development Plan
FREL	Forest Reference Emission Level
FSRO	Forest Survey and Research Organization
GHG	Greenhouse Gas
GoN	Government of Nepal
Ha	Hectare
IAS	Invasive Alien Species
IFAD	International Fund for Agricultural Development
IGA	Income Generating Activities
IOF	Institute of Forestry
ITTO	International Tropical Timber Organization
IUCN	International Union for Conservation of Nature
LAPA	Local Adaptation Plans for Action
LF	Leasehold Forest
LFUG	Leasehold Forest User Group
LRMP	Land Resource Mapping Project
M&E	Monitoring and Evaluation
M^3	Cubic Meter
MAP	Medicinal and Aromatic Plants
MDG	Millennium Development Goal
MEA	Multilateral Environmental Agreement
MFSC	Ministry of Forests and Soil Conservation
MINAE	Ministry of Environment and Energy
MoAD	Ministry of Agriculture Development
MoFSC	Ministry of Forests and Soil Conservation
MoF	Ministry of Finance
MoSTE	Ministry of Science, Technology and Environment
MPFS	Master Plan for Forestry Sector
MRV	Measurement, Reporting and Verifications
NAPA	National Adaptation Programme of Action
NBSAP	National Biodiversity Strategy and Action Plan
NFI	National Forest Inventory
NFRP	National Forest Research Plan
NGO	Non-governmental Organization
NP	National Park
NPC	National Planning Commission
NTFP	Non-Timber Forest Product
OFMP	Operational Forest Management Plan
PAs	Protected Areas
PES	Payment for Environmental Services
PFMC	Protected Forest Management Council

REDD	Reducing Emissions from Deforestation and Forest Degradation
REDD IC	REDD Implementation Centre
R-PP	(REDD+) Readiness Preparation Proposal
RRI	Rights and Resources Initiative
RWG	REDD Working Group
SCWM	Soil Conservation and Watershed Management
SDC	Swiss Development Cooperation
SESA	Strategic Environment and Social Assessment
SHL	Sacred Himalayan Landscape
SNV	SNV Netherlands Development Organization
SPCR	Strategic Program for Climate Resilience
SPS	Sanitary and Phytosanitary Standards
TAL	Tarai Arc Landscape
TCN	Timber Corporation of Nepal
TISC	Tree Improvement and Silviculture Component
UNFCCC	United Nation's Framework Convention on Climate Change
UNFF	United Nations Forum on Forestry
VAT	Value Added Tax
VDC	Village Development Committee
WWF	World Wide Fund for Nature

Executive Summary

Reducing Emissions from Deforestation and Forest Degradation, conservation of forest carbon stocks, conservation and sustainable management of forests and enhancement of forest carbon stocks (REDD+) is evolving as a means to incentivize forest managers in reducing forest sector emissions from the tropical developing countries. Defining and institutionalizing carbon rights is crucial for devising incentive-based policy instruments aiming to safeguard carbon as public ecosystem services.

In partnership with the World Bank and other international agencies, Nepal is participating in REDD+ preparatory activities (e.g., institutional set up, strategy preparation, capacity building and awareness) since 2008. Among several preparatory actions, (i) defining forest carbon and carbon rights; (ii) provisioning carbon rights in policies and legislations; and (iii) devising institutions to realize these rights have been identified as some of the critical areas of intervention that provide opportunities for achieving effective and equitable REDD+.

As the concept of carbon is abstract and carbon is inseparable with the forest and the land, carbon rights have been inadequately understood and open to different interpretations. There is a possibility that (i) the owner of the forest/land owns the carbon, or (ii) carbon stock could be subjected to a separate, alienable property right, or (iii) the sequestered carbon may be treated as a publicly owned asset regardless of forest and land ownership. The complexities of carbon rights institutionalization increases as different forest stakeholders have overlapping forest tenure and usufruct rights. However, complexities and challenges may provide a ground not only to revisit the historical practices of forest tenure that address primarily local concerns but also to revise them to suit emerging interest and need of forest management that fulfill the global interest of emission reduction.

Clear understanding of carbon rights, and adequate policies and appropriate institutions to realize these rights offer real prospect to help build a new, more stable and constructive foundation for local-global and sectoral collaborations for REDD+, one of the most important climate initiative in the 21st century world. These also help create equitable, prosperous and environment-friendly society in the long-run.

This report –a collaborative product of Environmental Resource Institute Pvt. (Ltd.), REDD-IC/GoN, and the World Bank – presents both vision and roadmap that helps broaden understanding of, and creates policies and institutions, for carbon rights in Nepal. With input from experts, stakeholders, literature, experience, policies, plans and legislations from Nepal and beyond, this report explores the challenges and opportunities and recommends some intervention strategies and actions that help institutionalize and sustain forest carbon rights under REDD+. This report and its recommendations are based on the following understandings, which are developed based on the analysis of evidence and lessons gained from this study.

- There is overwhelming scientific consensus that deforestation and forest degradation in developing countries is well underway and poses grave economic and environmental risks to the world; even developing countries including Nepal should immediately begin acting in concert to seek remedies for forest-based emissions.
- Because one of the major sources of emissions in Nepal is deforestation and forest degradation, addressing these problems requires a clear tenure systems, through the

development and deployment of new policies and institutions capable of enhancing and sustaining the incentives for forest management.

- Although Nepal's global share of emissions is small, it can contribute not only to the global initiative of REDD+ through better forest management but also express solidarity, developing policy and institutional frameworks, and documenting knowledge and lessons.
- Because of the existence of historically successful forest management modalities, Nepal has potential to contribute twin and often challenging goals of achieving conservation and livelihood outcomes simultaneously, by partially or fully internalizing the environmental externalities and institutionalizing incentive-based forest management; e.g., REDD+.
- Since ensuring additionality in carbon sequestration, preventing and controlling leakages and maintaining permanence of carbon stock, and ensuring social and environmental safeguards are critical for successful REDD+, defining and institutionalizing carbon rights that help execute the "bundle of real property rights" characterized by exclusivity, inheritability, transferability and enforceability is critically important.
- Because carbon rights that 'commoditize' carbon for trade is a new and unprecedented type of property right created by legislative and/or contractual arrangements, clarity and strength of property rights over carbon, and the creation of policy provisioning and institutionalizing equitable and fair benefit distribution systems are very important. However, there are currently no adequate provisions for carbon rights in the Nepal's policy and institutional provisions.
- As the trade-offs between local livelihoods, biodiversity conservation and carbon sequestration are uncertain and not well-known, social and environmental safeguards are important to help expand responsible forest management. There are a range of policies, institutional arrangements, usufruct rights, and communities' practices (both traditional and induced) that may be useful to devise locally suitable safeguards.
- Because forest tenure is associated with complex, ambiguous and power sensitive socio-cultural, environmental and economic practices, traditional practices of forest tenure and usufruct rights will have significant bearing on the definition of carbon rights and benefit-sharing in Nepal.
- Although the existing international conventions, and Nepal's national constitution, sectoral policies and legislation, and strategic/periodic plans are not adequate to identify carbon rights exclusively and to trade carbon on the international market, they provide foundations for the definition, scope, institutionalization and operationalization of carbon rights and benefit-sharing.
- Since existing forest governance structures from national to local levels are legitimate and credible, they should be recognized, utilized and refined so as to keep the cost low.
- Because the general mandate of the Ministry of Forest and Soil Conservation (MoFSC) is not adequate enough alone to reduce emission from the deforestation and forest degradation, broader sectoral collaborations between different line agencies and non-government organizations with which to increase the likelihood of curbing deforestation is important.
- Because such collaboration adds complexities and ambiguities to the framing of institutional arrangements, clarity in sharing roles, responsibilities, resources and authorities are essential

at the forefront. All this is very important, as Nepal is going through huge changes in its institutional and governance structures that bring shifts in national values, principles and culture.

This study recommends the following points to define carbon rights, formulate/amend policy, devise/revise institutions, and implement and monitor carbon rights in Nepal.

A. Understanding Carbon and Carbon Rights

1. **The government should consider forest carbon as an ecosystem service**. Scholars and stakeholders refer carbon as the credit for carbon sequestration or emission reduction from the forest. Generally, carbon has been a part of ecosystem services bundle where payment of ecosystem services is in practice. Nepal's policy and legal framework also provide ample space to consider carbon as ecosystem service and this study suggests carbon as an ecosystem service.
2. **The government should distinguish the carbon rights into two parts – carbon ownership rights and carbon credit (or emission reduction title) transfer rights**. This distinction helps understand the nature of forest carbon and its trade on national/international markets. These two parts of carbon rights can be attributed to different persons/agencies that are crucial to manage forests and carbon trade. However, these rights and their relationships should be clearly spelt out in the legislation, and appropriate institutional arrangements should be made to implement the legislative pronouncement/arrangement.
3. **To facilitate the process of transfer or handover of carbon credits by forest-managing communities by the MoFSC, through the DFO, the process should be clearly mentioned either in the forest Regulations or in the Guidelines (or both)**. A resolution to this effect should be passed by the majority vote of the Board of the forest-managing communities. (Forest managing communities include CFUGs, LFUGs, collaborative forest management groups, and similar community-based forest management groups, buffer zone user groups, and conservation area management councils or committees.)

B. Provisions in Policies, Legislations and Plans

1. **The government should amend relevant policies and laws, rather than creating new ones**. As most of the existing forest policies and legislative frameworks have been proved to be effective and efficient to restore the degraded forest landscapes and continue conservation efforts in Nepal, it is commendable to revise those frameworks to accommodate the provisions for carbon rights and trade. It would be cost-effective, compatible with existing institutional practices, and therefore acceptable to many stakeholders.
2. **The government's forest policies and legislation should clearly define carbon ownership right, carbon credit (or emission reduction title) transfer rights, and benefits sharing mechanisms to be accrued from carbon trade**. The government, particularly the MoFSC, should duly consider the implication of new carbon policies and legal provisions (either newly introduced or amended in current policy and laws) to society. This is important, for as the Nepalese society already experiences vastly unequal and the policies and laws, such new legislationi should focus on improving the quality of affected peoples' life. Considering usufruct rights, traditional forest use practices, existing legal

forest rights, forest and land tenure practices, this study suggests that the forest-managing communities should hold the carbon ownership rights while the MoFSC should hold the carbon credit (or emission reduction title) transfer rights. This also implies that the primary right holders of the carbon benefits are the forest-managing communities while the carbon credit transfer right holders (often MoFSC) get certain incentives that are primarily required for the management and facilitation of carbon trade.

3. **The government, utilizing this legislative authority, should formulate appropriate legislation for defining forest carbon, carbon ownership rights and usufruct rights discretely stating that usufruct rights also entail environmental services such as carbon.** It is within the legislative authority of the federal government to make laws in relation to international treaties and agreements; national and international environment management; national parks and reserves; national forest policy, and carbon service (Constitution of Nepal 2015, Schedule 5).

4. **The government's new REDD+ related policy, legal provisions and institutional mechanisms should be designed to strengthen and/or safeguard the existing forest rights of forest-managing communities**. The communities managing forests, conservation areas and buffer zones have different bundles of rights over forests including the right to enter, access, manage, harvest, utilise and sell timber and non-timber forest products (NTFPs). While entrusting carbon credit transfer rights to national entities or focal points (i.e., REDD IC of MoFSC), relevant policies, laws and institutions should ensure that the communities' existing forest rights (both procedural and substantive) are not curtailed but are safeguarded and strengthened further as long as communities' forest management practices contribute to reduce deforestation and forest degradation, conserve and manage forest sustainably, and enhance carbon stocks. Through such provisions and mechanisms, carbon ownership rights should be clearly added to their "bundle of forest rights." They also should ensure that benefits and co-benefits generated from forest management and obtained from the sale of carbon credits under REDD+ scheme are fairly and equitably shared with, and among, forest-managing communities.

C. Institutional Mechanism and Implementation

1. **The government's Ministry of Forests and Soil Conservation (MoFSC) holds the enforceable rights to use forest, transfer carbon credit (or emission reduction title) and explore/receive carbon benefits from international communities**. The MoFSC determine and own the forest lands; conserve, utilize, promote and manage forests; conserve and manage forest products; conserve, utilize and share forest benefits; and implement international agreement and therefore plays the principal role in REDD+ such as determining carbon/emission baseline; maintaining scale, permanence and additionality in carbon conservation; and controlling leakage and preventing double counting. Holding the enforceable rights to forest use and carbon credit (or emission reduction title) transfer by MoFSC is crucial in the sense that it is congruent with the mandate of the Cancun Agreement to coordinate the REDD+ activities at the national level, and with the mandate of the Warsaw Framework to liaise with the secretariat and the relevant bodies under the Convention, as well as the provision of CFMF (Carbon Fund Methodological Framework) in designating a national entity or focal point to serve as a liaison for carbon trade. These situations provide an opportunity to the MoFSC to explore and receive monetary and non-monetary carbon benefits from the international communities. In addition, the MoFSC has

the authority to devise required policies and procedures (e.g., through forest laws or the REDD+ strategy) to distribute benefits equitably among the forest managers/users within the country. However, the MoFSC should be able to delegate/devolve the carbon credit transfer rights or emission reduction title and/or benefit receiving authority to the forest manager/REDD+ project developer/forest-managing communities, particularly if Nepal opts for a project-based REDD+ scheme such as ER programme in Terai Arc Landscape.

2. **The government should make necessary policy and institutional arrangements for meeting the requirement of CFMF**. To fulfill Indicator 36.1 of CFMF, the GoN may amend Forest Act 1993 or Forest Regulation 1994 as there are no provisions to deal with carbon credit. As an interim arrangement to fasten the REDD+ preparation, the GoN should make a clear decision at ministry level (i.e., minister level) to ensure that the ER programme entity (i.e., REDD IC) has the legal authority to enter the ERPA (Emission Reduction Purchase Agreement) with the carbon fund. Similarly, in order to facilitate the process of transfer or hand over of carbon credits to the MoFSC by community-based forest management groups (e.g., CFUGs, LFUGs, collaborative forest management groups, buffer zone user groups, and conservation area management councils or committees) so as to fulfil the Indicator 36.2, the government should include/mention the provision in the forest regulations or in the guidelines that "the forest-managing groups can transfer carbon credit to the MoFSC through its field offices such as DFO (or its field offices) and/or park/conservation area authorities." Until the regulation is amended or guideline is prepared, a ministry level decision can be made. Such decision should delegate the authority "to get a contract signed from the community-based forest management groups that they transfer the carbon credit to the MoFSC" to the DFO and/or park/conservation area authorities. For this, a standard form can be made, which should later be institutionalized as part of forest operational plan, and it can be enforced while approving the new and/or amending the old forest operational plans. A resolution to this effect should require a decision of community-based forest management groups to participate in the ER programme.

3. **The government's MoFSC delegates adequate decision-making authority and provide sufficient human and financial resources to REDD IC** to carry out required activities for REDD+, including (i) entering into an Emission Reduction Purchase Agreement (ERPA), (ii) transferring emission reductions titles, (iii) receiving results-based payments, (iv) coordinating with line agencies to carry out required forest management activities to demonstrate emission reduction result, (iv) realizing carbon rights, and (iv) distributing benefits gained from carbon trade. The delegation of authority to the REDD IC needs to include at least two dimensions – authority and resources (financial and human) so that it can function independently as decision-making body to perform its duties. This would make REDD IC more accountable and efficient in its functioning. However, the REDD IC should be the sole authority to deal with carbon ownership, management, and title transfer so as to maintain integrity with the provisions made under Convention (e.g., according to the Warsaw Framework of REDD+, government is required to designate a national entity for REDD+, which in Nepal is the MoFSC that can delegate only procedural authority).

4. **The government, through the REDD IC, establishes inclusive multi-stakeholder entities that include representatives of the scientific community, forest-managing communities, civil societies, and other relevant stakeholders in the governance and**

decision-making regarding REDD+ activities including reducing deforestation and forest degradation, carbon monitoring, carbon trade and benefit distribution. Establishing such an entity would help increase ownership, legitimacy, credibility and acceptability of overall REDD+ initiatives by the stakeholders in the long-run. The current (or revised if needed) Apex Body and REDD-Working Group can be considered as such an inclusive entity. However, the vibrant mobilization of such body is very important.

5. **The government, through the REDD IC, should lead collaboration with forestry and other sectoral agencies at national, sub-national and local levels to reduce emissions**. Despite the increased awareness among different development agencies to follow a low-carbon development path to reduce carbon emissions, legal provisions of those sectors do not explicitly mention carbon as a resource. Therefore, there is a need of coordination to devise the sectoral guidelines and methods that would be practical to reduce emissions and adapt climate change. The REDD IC should take a lead and active role to make different development sectors (i.e., energy, infrastructure development, industry, irrigation, mining, and roads) sensitive to follow the low-carbon development path particularly through reducing the pressure in the forest and land-use change. It is essential to address drivers of deforestation as well as to mainstream and integrate REDD+ objectives in economic development sector policies and programmes.

6. **The government should mobilize existing relevant institutions (e.g., MoFSC, DFRS, DNPWC, DoF, and REDD IC) to handle the affairs related to carbon trade and carbon rights as much as possible**. Existing institutions (e.g., government, non-government, and research) that are compatible to existing policies, could be cost effective, and accommodative to emerging conflicts and contradictions. However, a certain level of revision could/should be done as per the emerging need. More decision-making authority should be delegated; and adequate human and financial resources should be provided. A new institutional set up may need to be created at national to sub-national and local levels to implement and monitor the REDD+ programme properly, such as regional REDD+ units, district REDD+ working groups, district level REDD+ multi-stakeholder forums and district level REDD+ CSO and IPO alliances, protected area REDD+ units, and local level social and environmental networks. It is equally important that the role of collaboration, planning, implementation and monitoring are clear for these institutions so as to make sure that there are no conflicting mandates and overlapping jurisdiction of different agencies over the same institutional roles and resources.

   The government should also prepare appropriate governance systems to ensure transparency, accountability, and participation in REDD+ processes. These systems need to be duly integrated not only in national and sub-national level policies, legislation, and institutional arrangements, but also in forestry programmes and projects, and carbon trades. Different operational guidelines should be developed to increase the effectiveness of governance.

7. **The government should create a separate fund (e.g., Forest Carbon Fund-FCF) for the management of carbon finance**. The FCF manages benefit flows and prioritizes REDD+ activities at the grass-root level. The operating guidelines that include both procedural and substantive criteria should be developed in an inclusive, transparent and democratic way so as to make FCF initiatives equitable in addressing the special needs of, and reward to, the poor, women, *Dalits*, *Adivasi Janjati* and other marginalised groups.

Different strategies including participatory well-being ranking could be adopted to target the beneficiaries.

8. **The government should consider effectiveness, efficiency and equity as standard operating principles while developing legal and institutional frameworks for carbon rights**. These are important to contribute to the global initiative to reduce emissions while benefiting the forest-managing communities. They help craft detailed and substantive policy, and legal and institutional provisions, to achieve multiple societal goals from managing forest to contributing to maintenance of a sustainable environment.

D. Monitoring and Compliance

1. **The government, through the REDD IC, should make monitoring mechanisms to assess the efficiency and effectiveness of policy and legal provisions and institutional practice periodically**. The objectives of monitoring could be clearly spelled out, that range from controlling, facilitating actions, and/or documenting learning. Monitoring and compliance are equally important to control mis-interpretation and mis-application of policy and legal provisions, reduce corruption and bribe, and ensure fair operations of institutional mechanism. Different methods such as expert-led, self, participatory, and/or joint monitoring could be applied based on the objectives and resource availability. This study also points out the need to form a committee at the district level to monitor and assure that the benefits flow to the lowest level forest-managing communities. It is also advisable to include wider stakeholders monitoring process.

CHAPTER – I

Introduction and Methodology

1.1 Introduction to the Study

As a global environmental initiative, Reducing Emissions from Deforestation and Forest Degradation, the conservation of forest carbon stocks, conservation and sustainable management of forests and enhancement of forest carbon stocks (REDD+) are evolving as means to encourage forest managers to reduce forest sector emissions, particularly in tropical developing countries. Organizations working at the global scale, such as The World Bank, are supporting target countries to participate in REDD+. From 2008, The World Bank's Forest Carbon Partnership Facility (FCPF) has been assisting Nepal to develop and apply strategies to address drivers of deforestation and forest degradation so as to prepare the country to participate effectively in REDD+. Among several preparatory actions for REDD+ in Nepal, the following have been identified as especially important for achieving effectiveness and equity in REDD+: (i) defining forest carbon related concepts such as carbon offset,[1] carbon credit,[2] forest tenure, property rights and carbon rights; (ii) provisioning carbon rights in policy and legislation; and (iii) devising institutions to realize these rights in practice.

Carbon as a resource commodity shifts the notion of forests from those places of local livelihoods to forests as zones of productivity for global environmental services (Bastakoti and Davidsen, 2014). While carbon offset and carbon credits are intangible and abstract concepts are defined either jointly or independently with land and/or biomass, carbon rights is a new and unprecedented type of property right (Streck, 2008) that commoditizes carbon as a form of property so as to allow it to be traded in voluntary and/or regulatory markets. Therefore, understanding the nature of carbon as property and the derivative rights associated with its trading are important in framing carbon rights legally (Peskett and Brodnig 2011). However, the concept of carbon rights has so far been inadequately understood and open to different interpretations. As carbon is inseparable from the forest and the land, there is a possibility that (i) the owner of the forest/land owns the carbon, or (ii) carbon stock could be subjected to a separate, alienable property right, or (iii) the sequestered carbon may be treated as a publicly-owned asset (e.g. in New Zealand) regardless of forest and land ownership.

Defining carbon rights is crucial for devising incentive-based policy instruments aiming to safeguard public goods and services (e.g., carbon, water, biodiversity, etc.) by valuing them and paying people to protect them (Bruce et al*,* 2010). It could be used to encourage forest managers to earn money by keeping their forest intact while selling carbon credit (Fletcher et al*,* 2009). However, as wide range of stakeholders, other than the land owner, may have different and overlapping forest tenure and usufruct rights[3] such as access, use, management, exclusion and alienation rights in forest (Schlager and Ostrom, 1992), clarifying who is legally entitled to reap benefits from carbon under REDD+ is a complex process. Despite the

1 Carbon offset is created when an entity takes a voluntary action that results in the carbon sequestration or the prevention of carbon dioxide or other greenhouse gas (GHG) released into the atmosphere.

2 Carbon credit is an asset representing the commodity derived from the forest carbon.

3 Usufruct is "the right of enjoying a thing, the property of which is vested in another, and to draw from the same all the profit, utility and advantage which it may produce, without altering the substance of the thing" (Bouvier, 1856.)

complexity, it is important that the incentive provided through REDD+ reaches the concerned forest managers and users so as to keep motivating them in managing forests.

So far, there is no internationally accepted operational definition of carbon rights. Different countries, however, have adopted different definitions of carbon rights in their legal systems. Most definitions are comprised of two fundamental concepts: (i) the property rights to sequestered carbon that is contained in land, trees, and/or soil; and (ii) the rights to benefits that arise from the transfer of these property rights (e.g., emissions trading schemes). These concepts indicate that carbon rights can be defined broadly as 'intangible assets created by legislative and contractual arrangements that allow recognition of separate benefits arising from the sequestration of carbon in the biomasses.' This also indicates that the primary carbon rights owner can (i) sell the carbon credits directly in the market, or (ii) transfer the rights to sell carbon credits to an intermediary or agent (a practice common in many existing forest carbon projects, where the primary carbon rights owner is not willing or able to take such responsibility). Also, the idea of carbon rights is equally crucial for devising the benefit-sharing mechanism (e.g., defining beneficiaries, benefit types, benefit-sharing process, etc.) in the context of non-market REDD+ mechanisms.

As Nepal's Forest Act 1993 does not have any provision regarding carbon and related concepts, as the country is preparing for REDD+ readiness package, there is an immediate need to define carbon ownership and carbon rights and to identify or devise an authorized entity to trade carbon credit either in market or non-market settings. Moreover, the ambiguity in conceptual understanding of carbon rights, the existence of different pools of carbon in the forest, existence of different forest management modalities that allow different benefit-sharing mechanisms, and the silence of the Forest Act regarding recognition of carbon as commodity/forest product or environmental service might bring challenges in defining carbon rights. Also, the fact that existing models of community based forest management where the land ownership remain with the government and the forest resources are managed and owned by the community add further complexities to defining carbon rights. In the absence of secure carbon rights, several governance related issues including exclusion in decision-making, lack of accountability, rules, transparency, and corruption may arise. It may create challenges in assuring long-term investments in REDD+. In turn, carbon buyers may be deprived of security they need to invest in REDD+ (Knox et al, 2012).

As Nepal has shown its commitment in REDD+ and is currently preparing required policy and institutional frameworks, a transparent and equitable system operationalizing carbon ownership and usufruct rights needs to be devised, which includes a national geo-referenced registry that manages required information. Gaps in the existing operational frameworks including imminent legal or regulatory changes have to be clearly identified.

In this context, a careful and thorough analysis of principles of national laws, and legal provisions, existing policy, formal and informal forest tenure and property rights, usufruct rights, and emerging practices of carbon rights in other countries would be critical in defining carbon rights. In addition, an analysis of stakeholders' roles, opinions and perspectives regarding forest carbon rights would be critical in devising legitimate and capable institution to trade carbon credit, maintain usufruct rights and facilitate benefit-sharing transparently and equitably. The analyses of policies, institutions and practices are particularly important as the country is going through (i) a national historical process of political transformation leading to state restructuring, promulgation of new constitution and formulation of subsequent policies

and regulations, and (ii) a global processes of addressing environmental concerns. This study is therefore required to bring insights including gaps, issues, challenges, strengths, and opportunities that would be instrumental to define carbon rights, and to devise institutional mechanism for carbon trade in Nepal.

1.2 Objectives of the Study

The main objective of this study is to establish a solid cross-sectoral understanding for defining forest carbon ownership and usufruct rights in Nepal.

In order to meet the main objective, this study seeks to answer the following broader questions:

- What would be the impact of carbon ownership and usufruct rights on communities' livelihoods if payments for environmental services schemes (including carbon) exist?
- What would be 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?

More particularly, this study addresses the following specific questions:

- What are the existing legal frameworks and provisions regarding forest carbon ownership and usufruct rights? And how are these linked to land ownership and forest tenure arrangement?
- What are the strengths and gaps within the existing policy framework for forest carbon ownership and usufruct rights?
- Who is eligible to acquire forest carbon rights under different forest management modalities? Are carbon rights assigned to the land/forest owners only or also to those who have been managing the forest resources and enjoying usufruct rights?
- What will be the role of local and national authorities directly engaged in the management of forest and REDD+ projects?
- Which existing institution(s) will be the most appropriate for enforcement and management of forest carbon rights?
- Are these institutions accessible to most forest-dependent communities and trusted by them to establish forest carbon ownership? And are they capable and appropriate to manage and facilitate REDD+ projects?
- What are the learning from the REDD+ pilot projects?
- What would be 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?

1.3 Methodology of the Study

1.3.1 Overall Methodological Approach

Different methods and tools have been used to generate information and accomplish the study, which primarily include literature review and stakeholder consultations. These methods have different, specific objectives that either complement each other or help triangulate information while collecting and analyzing them. The methods include a series of literature, policy and

regulatory framework review and stakeholder consultation including with government officials, NGO representatives, forest managing groups, academics, and legal experts. Table 1, below, and the subsequent paragraphs provide an overview of the methods, tools and objectives of the study.

Box 1. Specific Methods, Tools, Objectives and Frequency

Method	Tool	Objective	Number
Desk Review	Documents such as policies, laws, case studies, journal articles, project reports available from different sources	• Draw an understanding on conceptual ideas, empirical evidence, and policy contexts in relation to forest tenure, carbon rights and usufruct rights in Nepal and beyond, and • Review scenarios of REDD+ project intervention in Nepal and understand international experiences.	300
Focus Group Discussions	Structured and semi-structured check list/ questionnaires	• Assess current forest management practice and aspiration of authorities and groups about REDD+, and • Identify forest managing communities' opinion and views on carbon rights.	12
Interview with experts and key informants	Structured and semi-structured questionnaires	• Identify key areas of importance to be considered in devising institutional mechanism to operationalize carbon rights, and • Identify possible conceptual and practical link between knowledge generated from different sources.	14
Stakeholder consultation	Structured and semi-structured questionnaires	• Understand different perspectives and ideas in relation to possible policy and institutional framework for carbon rights, and • Identify possible role of stakeholders in institutionalization of carbon rights.	16
Final Sharing and Validation Meeting	Draft Report	• Share study findings, • Solicit comments and suggestions, and • Draw common understanding on the policy, context, modality and practices for REDD+ in relation to carbon rights.	1

Literature review: Examining the country's regulatory framework is important for understanding who is eligible to claim or acquire rights to carbon benefits. Legal and policy frameworks have been reviewed to identify and assess gaps in existing forest tenure related to forest carbon. Published and unpublished research-based literature has been reviewed to expand conceptual understanding on forest tenure, carbon rights, usufruct rights, safeguards and their linkages. Moreover, study reports, case studies, and policy and legal documents were reviewed to get practical ideas regarding challenges, opportunities, gaps, conflicts and complementarities that are critical to develop legal and institutional frameworks for carbon rights. Particularly, documents were reviewed and assessed related to (i) REDD-readiness activities (e.g., past studies conducted in Nepal) that give concrete foundation of REDD+ in Nepal, (ii) case studies of REDD+ project from across the continents (e.g., Asia, Africa, South America and Central America) that give a broader reflection (e.g., challenges, opportunities, issues, etc.) from experience, (iii) Nepal's forest and land use laws and policies that give

broader legal framework under which REDD+ need to operate, and (iv) journal articles that clarify conceptual understanding of different concepts such as land and forest tenure, property rights, carbon credits, carbon rights, carbon trade, etc.

Focus group discussion: A total of 12 Focus Group Discussions (FGDs) have been conducted with different forest managing communities in Chitwan, Nawalparasi and Gorkha districts. FGDs provided contextual understanding of communities regarding perception, expectation and commitment in REDD+ as well as challenges and issues related to carbon rights. Both open and close-ended questionnaires were used for FGDs.

Expert consultation and key informant interviews: A total of14 key informant interviews were carried out to bring qualitative in-depth information. While key informants were selected on the basis of their first-hand knowledge on forest tenure, carbon rights and usufruct rights, experts were selected based on the knowledge and authority/responsibility they possess. Primarily, people engaged with different national/international forestry and REDD+ related organizations and legal professions related to land, forest and environment were selected as experts. Consultations were conducted with experts who have particular knowledge and understanding, to gain insights for the identification/development of institutional framework and formulation of strategies to define and operationalise forest management regime-wise carbon rights at national level.

Stakeholder consultation: Stakeholder consultations were carried out, particularly with the organizations to get their interests so as to identify possible areas of conflict and collaboration. Consultation meetings were the basis to know stakeholders' opinions, perspectives and views regarding ownership of carbon right and institutional framework and strategies to operationalise those rights in different contexts of forest tenure and usufruct rights. The details of focus group discussion, meetings and consultations have been provided in Annex I.

Analysis of information, data and stakeholders' perspectives: The collected information, data and stakeholders' perspectives were analyzed to identify gaps and issues in the existing legal frameworks that affect carbon credit/trade under REDD+. The analysis also draws attention to possible challenges and opportunities at both existing and proposed institutional levels. It has provided the way forward for defining and operationalizing carbon rights under REDD+.

Identify/devise institutional framework: The study identifies a central entity to regulate the sale of carbon credit and benefits sharing under REDD+. The roles and responsibilities of such entity have been spelt out by reviewing and analyzing the current power and functions of existing entity, primarily based on the suggestions from different officials, experts and stakeholders.

Strategies formulation: This study identifies ways by which policies, laws and institutions to regulate carbon rights should be put in place and operationalised effectively so as to promote sustainable forest management and to benefit forest managers. The strategies have been drawn from the documents reviewed; community, district and central level consultations; and considering the equitable benefit-sharing and efficient institutional processes.

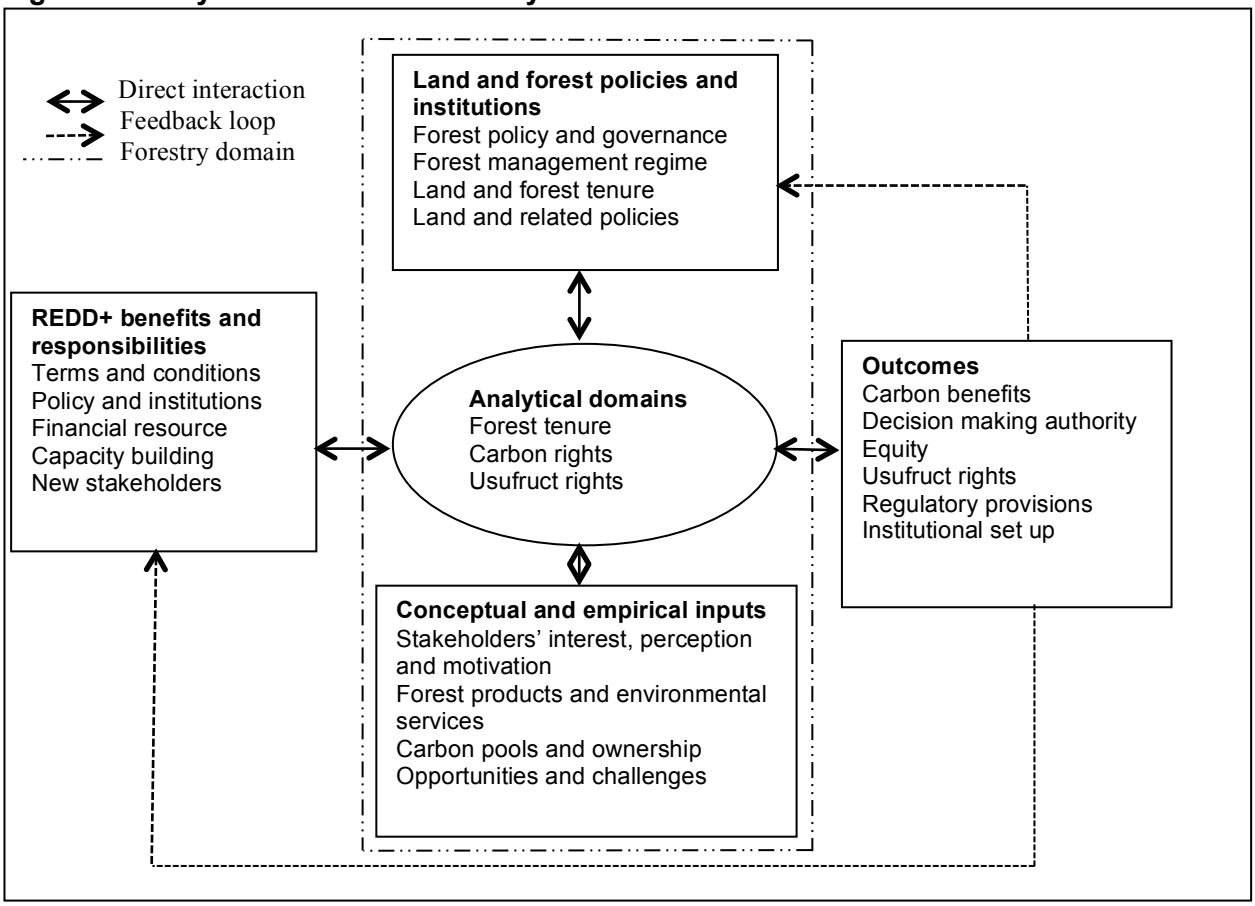
Final sharing and validation meeting: After submission of a draft report, a sharing meeting was organized with major stakeholders in Kathmandu. The objective of this meeting was to share study findings, receive comments and suggestions, and draw common understanding on

the policy, context, modality and practices for REDD+ in relation to carbon rights.

1.3.2 Analytical Model

A general analytical model was developed to guide the overall study including maintaining focus, and organizing data collection and analysis flow. The study team also assessed, examined, triangulated and evaluated the information collected through different sources and means. The following five key areas of logical domain are used to analyze the findings.

Figure 1. Analytical Model of the Study



Analytical domains: Forest tenure, carbon rights and usufruct rights are central in determining REDD+ incentives and therefore to help discover the determinants of REDD+ actions. These factors get affected by stakeholders; national regulatory, policy and institutional frameworks; international practices; and inputs received from carbon credit under REDD+. These factors have been used as core analytical domains while assessing the existing policy, legal and institutional frameworks; reviewing literature; reflecting on experiences; and devising institutional framework and strategies.

Land and forest laws, policies and institutions: Existing laws, policies and institutions related to land and forest provide different information crucial to analysing the strengths, challenges and gaps on forest tenure, carbon rights, and overall forest governance. While clarity in the tenure and usufruct rights provides grounds conducive to define carbon rights, gaps or absence of relevant provisions in the laws provide areas for further work to clarify and

operationalise carbon rights by devising policy, law, institution and strategy. The analysis of laws, policies and institutional practices help craft or amend legal, policy and institutional framework appropriately to suit REDD+.

Conceptual and empirical inputs: To broaden the conceptual understanding and practical application of forest tenure, carbon rights and usufruct rights in the context of REDD+, literature and empirical evidence have been reviewed. The literature and evidence examined provide innovative concepts to institutionalise REDD+ in the context of different forest management regimes. While the concepts were reviewed from the literature, empirical evidences were examined from the cases available across the continents. The concepts and empirical evidence have been adapted to match the national legal contexts and stakeholders' interests.

REDD+ benefits and responsibilities: REDD+ brings both opportunities and challenges to forest managers. While it brings benefits in terms of financial resources, technical knowledge and skill in productive forest management, it also brings responsibility to fulfill certain conditions of environmental standards such as carbon sequestration/enhancement and conservation. Understanding the types, nature and level of REDD+ benefits and responsibilities is important as these affect (i) the motivation and ability of forest managers to manage forest, and (ii) the claim of forest managers on forest tenure, carbon rights and usufruct rights. These in turn affect the effectiveness of REDD+.

Outcomes: This study analyses the outcomes related to carbon benefits, decision making authority, equity, usufruct rights, regulatory provisions and institutional set up. These outcomes are specifically analyzed in relation to policy, law, conceptual understanding, empirical evidence and stakeholder perceptions.

1.3.3 Limitations

The study is primarily based on the ToR, which is the mandate for shaping up the study. The overall study is also, by and large, determined by the existing knowledge, information, lessons, and insights of the respondents and institutions. Since the modalities, practices, concerns and settings of different forest management regimes are diverse, the study has tried to address most of the concerns of policy makers, implementers and forest managers as much as the policy framework and international practice allows. The study is constrained in terms of consultation and its coverage. The consultation meetings and workshops were organized at limited level with different stakeholders engaged in different forest management regimes. The voices and concerns of all the stakeholders might not have been sufficiently represented in the study.

The knowledge gained from the national level REDD+ initiative was considered as a foundation in building an institutional framework and formulating strategies. The information gained through literature review, stakeholder consultation and international experience has been utilized to structure the study modality. The pilot project's experiences were limited to project level and provided information of local level benefit-sharing experience rather than of overall ownership, benefit-sharing and institutional mechanism related to REDD+. As other complimentary studies like REDD+ Strategy, Institutional Framework, etc., were under way, it provided only limited opportunity to establish linkage between different observations, findings and recommendations. Furthermore, the concepts of carbon ownership, benefit-sharing, safeguard system and institutional mechanism on REDD+ are new to all the stakeholders, and therefore, not much vibrant discussions could be held during the consultations and interactions.

CHAPTER – II

Background Situation of Forest and REDD+ in Nepal

2.1 Forest Policy, Tenure and Management Regimes

The forestry sector policy in Nepal can be divided into three broad groups: privatization (before 1950), nationalization (1957 to mid-1970s), and the community orientation (after late 1970s) (Chhetri, Sigdel and Malla, 2001). Over the period, a range of policies and legal frameworks were prepared and implemented. Currently, the Forest Act 1993 and Forest Regulations 1995 are the main legal documents for managing Nepal's forest resources. The Act primarily distinguishes the forests as (i) private and (ii) national on the basis of the land rights. While the forest in the private land (i.e., defined on the basis of Land Revenue Act 1977, Land (Survey and Measurement) Act 1963 and Land Act 1964) is considered as private forest, forest in the public land is national forest. Then the national forests are divided into a variety of management modalities (GoN 1993). Brief descriptions of different forest tenure and management modalities are discussed in the paragraphs below:

A. Private forest: The Forest Act 1993 defines private forest as "a forest developed or conserved in the land which is under the ownership rights of an individual according to the prevailing laws." Broadly, this definition also includes all the trees planted in the private land as private forest. Private forests can be classified into three types: (i) registered private forest, (ii) agro-forests, and (iii) tree tenure system. There is a provision for registering a private forest with the District Forest Office (DFO) to avail the government's support and incentives. The tenurial system of the trees planted on private land (as agro-forest, not registered as private forest) is similar to land tenancy. However, there could be locally customized benefit-sharing systems that allow everyone in the village to use certain forest products from private forest at no cost (e.g., flower or leaves for religious purpose).

B. National forest: National forest is defined as all forests other than private forests, regardless of the demarcation of their boundaries and including cultivated or uncultivated land, roads, ponds, lakes, rivers, streams and the shingly land that is surrounded by or in the vicinity of a forest. It is managed in the following modalities:

B1. Government-managed forest: Government-managed forests occupy the largest area; i.e., 3,431,056 ha (Subedi et al, 2014). These are regulated by the Forest Act 1993 and Forest Regulations 1995. The government has devised different modalities to manage these forests over time, such as Operational Forest Management Plan (OFMP), collaborative management system in the Terai. In government-managed forest, ownership of land as well as the right to harvest, sell, distribute and utilize forest products is vested in the government. Forest management operations are carried out according to an annual and/or a five-year work plan. Legally, local people do not have any rights to use forest products even for household consumption unless specified by the government decision. However, local people traditionally collect grasses, fodder, leaf litters and non-timber forest products (NTFPs) without permission of the authority. The level of concessions to collect these items is mainly depending upon the decisions of field level forest officials.

B2. Community forest: Community forests (CF) are part of national forests that are entrusted to local forest user groups for development, conservation and utilization in the interest of the

community (Gilmour and Fisher 1991). Although, Nepal's community forestry is part of a collective traditional system for domestic and small-scale forest use, which constitutes a broad and significant forest tenure category across the country with substantial importance for forest users (Bastakoti and Davidsen, 2014), it is a most prioritized and decentralized partnership programme between government and local people, which is envisioned as a way forward for better management of forests and for improving the access of people to forests. By the end of June 2014, altogether 18,133 CFUGs involving 2.24 million households were managing 1.7 million hectares of forestland under the CF programme (NBSAP, 2014).

The Act and the Regulations provide legal ground not only to hand over ownership of forest management and use to local communities but also consider those communities as independent, self-organized, autonomous and legal local institution called Community Forest User Groups (CFUGs) (GoN, 1993). While CFUGs can use community forests' products as per need, they can also fix the price and sell the forest products. However, they owe 15 percent sales tax of tender amount and 13 percent VAT to the Government of Nepal for Sal (*Shorea robusta*) and Khayer (*Acacia catechu*) if they sell outside the user group. All the income gained through the sale of products goes to respective the CFUG's fund from which they are required to spend at least 35 percent for poverty reduction and 25 percent for forest development activities. The government holds title over the land under CF and, therefore, CFUGs cannot sell the CF land but can put it as collateral at bank for loan with the permission of DFO.

B3. Leasehold forest: Leasehold forests (LF) are parts of degraded national forests (e.g., with <20 percent canopy cover) that have been leased for the specified purpose(s) to a legally defined institution, forest-based industry or poor community. Community-based LF is handed over for an initial period of up to 40 years and can be renewed for another 40 years. By the end of June 2013, a total of 7,413 households living below the poverty line were engaged in the management of 42,773 hectares leasehold forests (NBSAP, 2014). This is, in essence, a programme complementary to the CF but targeted exclusively to poor so as to positively discriminate in their favour. LF groups have authority to extract forest products as per the operational plan, which they can either distribute/sell among themselves or sell outside.

Similarly, the objective of industrial LF is to supply industrial raw materials and develop eco-tourism. Industrial leasehold forest has to pay fixed amount as lease rent to the government as mentioned in the Forest Regulations 1995. The leaseholders are responsible for protecting the trees that exist at the time of lease. All the incomes derived from the leasehold go to the lessee /entrepreneur.

B4. Collaborative forest: Nepal introduced a new decentralized forest management modality, Collaborative Forest Management (CFM) in 2003. CFM promotes partnership of local forest users, Forest Department, local governments, civil society groups, non-governmental organizations, and private sector in the management of a forest. Through the introduction of CFM, the GoN demonstrated interest in managing government-managed forests of the Terai through the involvement of local government and people in decision-making, implementation, benefit-sharing and monitoring. Main objective of CFM is to manage the Terai and Inner Terai forests actively and sustainably so as to (i) fulfill the need for forest products, (ii) help reduce poverty by creating employment, (iii) maintain and enhance biodiversity, and (iv) increase national and local income. Under collaborative management, benefits have to be shared equally between the central government and local people, both living in the vicinity of the forest and in distant, who are organized in the forest user group (GoN, 2011).

B5. Protected areas: Protected areas (PAs) are declared by the government as national park, reserve or conservation area in consideration of their environmental, scientific and cultural importance. There are a total of 20 protected areas, including 10 national parks, 3 wildlife reserves, one hunting reserve, and 6 conservation areas, which are managed according to the National Parks and Wildlife Conservation Act 1973. There are provisions in the Act for strict and government-led protection of wildlife and their habitats. Fourth amendment to the Act provided participatory schemes such as buffer zone (BZ) with which local people living in surrounding PAs (i) are given an opportunity to harvest thatch grass in PAs upon the payment of nominal royalties annually, and (ii) are provided with incentives (i.e., 30-50 percent of the park income) to contribute to the conservation and community development. BZ user groups need to spend such incentives on nature conservation (30 percent), community development (30 percent), income generation and skill development (20 percent); conservation education (20 percent), and administration (10 percent). However, concerns have been raised that there are no specific provisions in the Act itself to compensate for wildlife damages to indigenous, poor and marginalized communities.

Different types of forest management modalities exist in the BZ. National forests can be managed as BZ forests, buffer zone community forest (BZCF) and buffer zone religious forest (BZRF). While the income of BZ forests (managed by Park authority) goes to the government treasury, all the benefits generated from BZCFs and BZRFs go to the respective user groups. Chief Warden of the park approves the annual or five-year plans of BZCF and BZRF, which are implemented by the groups. The provisions for BZ private forest are similar to provisions adopted in Forest Act 1993.

B6. Conservation areas: Conservation areas (CAs) are managed either by government (e.g., Api-Nappa CA), or by non-governmental organizations (e.g., Annapurna CA, Gauri Shankar CA), or by locally formed management council (e.g., Kanchanjunga CA). The income from CAs generally goes to the CA manager, which is primarily used for the conservation and community development activities in the area through the conservation area management committee (CAMC). Certain percent of the income can be spent on the administrative activities such as 25 percent in Kanchanjunga CA and 15 percent in Api-Nappa CA.

The recently introduced iconic conservation programme known as the 'President Chure Tarai Madhes Conservation Programme, aims to protect forest areas from deforestation and forest degradation along the Chure hill range which links mountain ecosystems and Tarai ecosystems. The detailed Master Plan for this programme is still under formulation.

B7. Protected forests: To protect the special environmental, scientific, or cultural significance of forests, the GoN has established protected forests (PFs) where land tenure remains under government and management ownership goes to protected forest management council (PFMC). The PFMC is responsible to manage the forest in accordance with an approved forest management plan. PFs are managed as core and/or fringe areas. Some PF fringe areas are CFs (e.g., Barandabhar-Chitwan and Basanta-Kailali); some have core area forest (e.g., Dhanusha Dham and Kakre Bihar), and some have all CFs without delineated core and fringe areas (e.g., Khata). The plans provide opportunity to share equal benefits (e.g., generated by harvesting, eco-tourism, etc.) between government and users from core areas. All the income generated from fringes goes to concerned CFUGs.

B8. Religious forest: Religious forests (RFs) are part of national forest that have been

entrusted to any religious entity, group or community for the purpose of maintenance and promotion of religion and/or culture. Religious groups may utilise all forest products (and income) provided that trees are not felled in a way that may have a significant adverse effect on the environment. A forest management plan has to be prepared with the help of forest technician and approved by DFO to legalize RF.

B9. Customary forest management systems: Several customary forest management systems are still practiced in many parts of the country. These traditional management systems have been effective in preserving forests and maintaining systems whereby access of community members is guaranteed. However, it is also reported that management decisions are often controlled by few village leaders limiting the access of poor and marginalized (Acharya et al, 2008). As traditional customs are controlled by a few wealthy elites who get more benefits at the cost of poor households, concerns about equity have been raised.

2.2 REDD+ Initiatives and Lessons

Nepal is a party to the United Nations Framework Convention on Climate Change (UNFCCC), as well as party to the Kyoto Protocol. Since July 2008, it has officially been one of the FCPF countries after the approval of its REDD+ Readiness Plan Idea Note (R-PIN) by the World Bank. Since then the Bank has been supporting Nepal for developing and implementing REDD+ Readiness Preparation Proposal (R-PP) with an aim to enable the country to implement forest carbon pilot projects initially, and to prepare for implementing larger scale incentive based forestry development and conservation programmes at the country level subsequently.

Nepal has prepared R-PP, a roadmap for developing and implementing strategy for REDD+ in 2010 in a participatory way involving government and non-government organizations, civil society, communities and donors (GoN/MoFSC, 2010). The R-PP envisions significant reduction of forest-based emissions by addressing the livelihoods of poor and marginalized forest dependents, and by establishing effective policy, regulatory and institutional structures for sustainable management of forests under the nation's new (2015) constitutional framework. To achieve the vision, the R-PP aims to prepare Nepal to engage in, and benefit from, the emerging performance-based system of REDD+. Such performance-based payment system is based on (i) environmentally and socially sound policies and programmes, (ii) credible emission reference level, and (iii) technically robust systems of forest monitoring and emissions reporting. The R-PP has been contributing to develop REDD+ sensitive forest policy and management systems, forest information and database systems, and human and institutional capacity building for sustainable forest management so as to reduce poverty, develop economy and conserve environment. It has been supporting to carry out a set of studies to pave the way to make REDD+ effective such as clarifying carbon rights, Measurement, Reporting and Verification (MRV) system, Grievance Redress Mechanism (GRM), safeguard systems, forest management, benefit-sharing, etc.

The MoFSC has established a REDD Implementation Centre (REDD IC) to organize REDD+ initiatives in the country that include formulating REDD+ strategy; clarifying carbon ownership (and rights over carbon credits); and strengthening institutional mechanisms for efficient MRV, equitable benefit-sharing and practical safeguards. So far, REDD IC has prepared and been preparing some of the key national documents such as National REDD+ Strategy, REDD+ Implementation Framework, Social and Environmental Safeguard

Assessment (SESA) framework, MRV System, Forest Reference Emission Level (FREL), and Carbon Rights Framework and Grievance Redress Mechanism (GRM). Among these, REDD+ Strategy is the key document that guides overall REDD+ and therefore is being prepared with the support of several analytical studies and wider consultations. Similarly, while REDD+ implementation framework is prepared to set out credible and transparent institutional, legal and governance arrangements to implement REDD+ strategy, SESA evaluates the environmental and social impact of strategy options of REDD+ (Dangi, 2014). Moreover, several institutions are also implementing different initiatives and piloting activities on different aspects of REDD+. To meet the requirements of the Readiness Package Content, Nepal should come to a clear definition of carbon ownership and carbon rights. This study will provide a concrete understanding for defining forest carbon ownership and usufruct rights for a clear legal basis linking with land ownership and forest tenure arrangement.

Nepal is a member of both the FCPF and UN-REDD Programme since 2010. While FCPF supports the country's overall REDD+ Readiness capacity development process, UN-REDD has been providing targeted support in identifying options for the design of an effective, efficient and equitable fund management system for REDD+ finance, and in assessing key policies and measures for addressing drivers of deforestation and forest degradation and linkages to the overall national REDD Readiness process. The government of Finland has been assisting in the Forest Resource Assessment Project. Finland, Switzerland, and UK have been assisting in the implementation of the multi-stakeholder forestry programme (MSFP) which has a strong REDD+ component. Similarly, the WWF Nepal, jointly with CARE Nepal, NTNC and FECOFUN, has been implementing a USAID funded Hariyo Ban programme which also has a REDD+ component. These development partners play meaningful role in shaping up Nepal's national REDD+ implementation framework. Box 2, below, provides a brief of major initiatives on REDD+.

Box 2. REDD+ Initiatives in Nepal

1. **Governance and Payment System for Community Forest Management under REDD+**
   This is the most comprehensive REDD+ project piloted in 3 sub-watersheds in Nepal by ICIMOD, ANSAB and FECOFUN. The project distributed the payment to the communities for 3 years. While 40% of the payment was based on the forest carbon stock in the community forests, 60% of the payment was based on the socio-economic attributes of the community (e.g., proportion of poor (20%), *Dalit* (15%), indigenous peoples (10%) and women (15%)).

2. **Grassroots Capacity Building for REDD+**
   This project is being implemented by RECOFTC, FECOFUN, HIMAWANTI, and ForestAction. It aims to capacitate grassroots stakeholders including CFUGs. It prepared a range of educational materials and media writings by mobilizing media personnel that are useful to create awareness and capacity building. The project trained large numbers of people as grassroots facilitators and published various information materials to create awareness.

3. **Social and Environmental Safeguard Initiatives**
   This initiative is carried out by FECOFUN and CARE Denmark with an aim to develop a REDD+ standard suitable to the Nepalese context. REDD+ SES Secretariat in coordination with REDD- IC facilitated this initiative. Series of workshops were organized to improve social safeguards and develop measures to prevent violation of user rights and gain acceptance from the prevailing Nepalese Act.

4. **Climate Change and REDD+ Programme**

NEFIN has implemented this programme in 40 districts to aware and capacitate indigenous leaders for REDD+ and climate change. This project has developed educational radio broadcasts, education materials, and organized teacher-training.

5. Poverty Alleviation through REDD+ pilot

The project has been implemented from 2009 to 2010 by WWF Nepal in association with Winrock International to develop standard method of forest carbon measurement at landscape level, to generate forest carbon data, to develop a user-friendly mechanism to collate locally-collected data and make them centrally available at the national level, and to emphasize the importance of an equitable benefit-sharing mechanism. This project has been successful in establishing a baseline for certain regions, including the Terai, and has assessed the potential for carbon sequestration, leakage, and additionality within the Terai Arc Landscape (TAL).

6. Hariyo Ban Programme

WWF Nepal, CARE Nepal, FECOFUN and NTNC have been jointly implementing this programme in Terai Arc Landscape and Chitwan - Annapurna Landscape with focus on biodiversity conservation and climate change adaptation, in addition to payments for ecosystem services including REDD+.

7. Himalayan Community Carbon Project

Rupantaran Nepal (under the Plan Vivo framework) with bilateral funding from the UK and Nepal's Livelihoods and Forestry Programme had implemented this programme to seek ways for local communities to engage in international markets for a variety of different ecosystem services using a certification system. The focus was on carbon markets and on forest management methods that increase carbon stocks in community forests by reducing demand for forest products, diversifying local livelihoods to reduce forest dependency, and allocating land within forests to the poorest households.

8. Capacity Building to Southern Civil Society Organizations on REDD+

Nepal Law Society and DANAR Nepal implemented this project with the help of Forest Carbon Partnership Facility of World Bank and Nepal Law Society. The project imparted training of trainers on REDD+.

9. Think Global Act Local

ICIMOD has worked on community carbon forestry (REDD) from 2003 to December 2009 in India and Nepal as a part of the Kyoto: Think Global Act Local research project. It has also developed a participatory method to involve the local communities in assessing carbon and conducted trainings for the locals as well as other development professionals to gain an understating on REDD.

- The lessons learned from these pilot projects are crucial in developing national REDD+ strategy and implementing REDD+ project. However, due to inadequate coordination between REDD IC and forest authority at sub-national levels, the knowledge and lessons have not been conveyed at these levels and limited to project scope only. Nevertheless, some of the lessons gained so far are summarized below.The yearly inventory prepared in three sub-watersheds demonstrated that the community forests are able to sequester and conserve carbon (i.e., achieving additionality condition of REDD+) in the forest. This shows the possibility of community to get benefits from REDD+.

- The grassroots capacity building project demonstrated the need and possibility of partnership and collaboration between grassroots stakeholders to build capacity for combating climate change and REDD+ at local level.
- There is a need to re-orient and strengthen capacity of key REDD+ stakeholders so that they can better analyze and understand their carbon forestry conditions and develop strategies to get more benefits from the REDD+ scheme. Multi-pronged and multi-scale strategies that draw on the strengths of various learning methods and address unique needs of targeted stakeholders would be effective to strengthen capacity (Luintel, 2013).
- Developing information education and communication (IEC) materials and facilitators at national to grassroots level not only sustain the capacity building interventions but also reinforce learning from the intervention. Moreover, carrying out awareness raising activities by mobilizing popular media (e.g., print, radio, television) and media professionals is effective to reach out to many stakeholders and forest managing communities.
- To make REDD+ interventions effective and document lessons, continuous monitoring and critical reflection in a participatory way is crucial.
- As REDD+ programme increases financial transactions particularly inflow of money from outside source, there is possibility of elite capture and leadership conflict. Appropriate institutional mechanism and process to manage conflict and grievance is crucial.
- There is possibility in increasing the restrictions in collecting forest products from the community forests with the commencement of REDD+ (Upreti, Luintel and Bhandari, 2011). There are differences in fund utilization guidelines prescribed by government and REDD+ project. There is a need to harmonize the REDD+ fund utilization guideline (e.g., pilot project recommendation) with the existing fund utilization methods (e.g., as prescribed by CF Guidelines).
- Capacity building programmes of most of the projects, particularly trainings on both social and technical parts of REDD+ to the local leaders, have been successful. However, the coverage of the project is limited to few national stakeholders, district organizations and community leaders. Officials from government agencies are left out from the capacity building programmes. Therefore, there is a need to carry out capacity building programmes for the government forest officials, particularly to those working at district and community levels.
- Only a few projects are able to mobilize local human and other resources and therefore able to develop ownership on the project initiatives. Learning from their experience is important to sustain the initiatives in the long run.

CHAPTER – III

Concepts Related to REDD+ and Carbon Rights

3.1 REDD+ Framework, Features and Issues

REDD+ is accepted as a cheaper, quicker, significant and win-win strategy (Angelsen, 2008) not only to halt land use changes, and reduce deforestation and carbon emissions (Toni 2011) but also conserve biodiversity and reduce poverty in developing countries. The goal of REDD+ is to encourage forest managers/owners by financially incentivizing them either to maintain existing carbon stock in the forest or to generate additional carbon stock (Kanowski, McDermott and Cashore, 2011). Despite the possibility of creating tensions as part of climate finance (e.g. Gupta, 2009; Stadelmann, Roberts and Michaelowa, 2010), REDD+ is seen as a unique opportunity to foster collaboration between developed and developing countries to fight against climate change, biodiversity loss and poverty simultaneously. It allows developed countries opportunity and flexibility to adopt emission offset options and developing countries receive increased, unconventional financial incentives for forest management (Eliasch, 2008).

Several globally-developed sophisticated and science-based requirements and standards such as ensuring additionality,[4] controlling leakages,[5] maintaining permanence,[6] and ensuring social and environmental safeguards are introduced to make REDD+ a successful programme at national and local levels. Social safeguards are primarily introduced to respect national sovereignty of participating country in governing and managing forest resources and to ensure forest rights of, and distribute the payments equitably to, forest dependent people including marginalized and indigenous peoples. In addition, environmental safeguards demands maintaining ecological integrity and conserving forest biodiversity in line with Convention on Biological Diversity (CBD) and other national policies. Also, the several transparent, scientific and reliable Measurement, Reporting and Verification (MRV) systems help monitor the extent and level of REDD+ achievement by estimating accurate forest carbon stocks (Miles and Dickson, 2010; Maniatis et al, 2011) and assess the situation of safeguards.

In addition to the reduction of emissions, recognizing its potential in bringing co-benefits such as conservation of ecosystem services and biodiversity and poverty reduction, scope of REDD+ is broadened to include incentives for a wide array of forest management practices including conservation (Blom, Sunderland and Murdiyarso, 2010). It would include significantly larger forest area than the area currently receiving conservation efforts (Harvey, Dickson and Kormos, 2009), involve billions of dollars, perhaps significantly greater than currently available for biodiversity conservation in tropical forest countries (Eliasch, 2008) and deliver enormous benefits for biodiversity conservation through the protection of species diverse forests (Harvey, Dickson and Kormos, 2009; Gardner et al, 2012). Three principles–'do no harm' to natural forests, maintain long-term ecological integrity of forests, and secure net-

4 The concept of additionality emphasizes crediting only real emission reductions caused due to REDD+ program.

5 Controlling leakage means trees saved within the REDD+ project area do not lead to more trees being chopped down elsewhere.

6 The idea of permanence demonstrates that any trees saved now and credited for carbon sequestration will not be felled down for certain years.

positive impacts for biodiversity–are considered in the environmental safeguards development process (CBD, 2010). While 'do no harm' relates to the risk of conversion of natural forests and the displacement (leakage) of Drivers of Deforestation (D&D) to areas of lower carbon but high biodiversity value, ecological integrity focuses on ensuring the permanence of forest carbon stocks as well as emphasizes the importance of functional significance of biodiversity (Diaz et al, 2009; Thompson et al, 2009).

Increased forest investment in developing countries (Eliasch, 2008) can bring myriad of opportunities, including improvement in forest governance and conservation efforts (Wollenberg and Springate–Baginski, 2010), promotion of low carbon paths to development (Economist 2010a), and fighting against persistent problems of poverty. As over 80 percent of the world's poor draw their livelihoods from forest and related resources (Scherr et al, 2004), REDD+ may support them to generate livelihoods. The programme affects socio-economic actions of billions of forest dependent people, and ecological outcomes at various levels. Therefore, the social and environmental safeguards in REDD+ have generated significant hope in the climate negotiation and CBD processes (CBD, 2011a) as well as among conservation science community (e.g. Stickler et al, 2009; Harvey, Dickson and Kormos, 2009; Strassburg et al, 2009; Busch et al, 2011).

Scholars have identified a range of factors to make REDD+ a successful programme. For instance, Cotula and Mayers (2009) highlighted effective governance, clear property rights and secure tenure of forest are pre-requisites; and Agrawal, Nepstad and Chhatre (2011) recommended the collaborative efforts and use of lessons from the past forestry, agriculture, biodiversity, and development policies. In addition, robust forest and emission databases, proper policy framework and institutional set up and possibility of achieving, and incentivizing, co-benefits are also considered as crucial factors for the success of REDD+. Equally important is the effectiveness, efficiency and equity outcomes from REDD+ programme with different options at different levels (such as national, project and nested levels).

Since the REDD+ programme is designed at international level that need to be implemented at local level, it involves complexities and uncertainty while contextualizing at the local level which lead to both tradeoffs and synergies in the outcomes. Major parts of complexities and uncertainty are contingent on several factors including viewing forest as different resources (e.g., carbon reservoir, natural resources and home for different species and/or people), designing REDD+ features, and formulating institutional and policy processes that are required at local, national and international levels for effective functioning. So far, defining and meeting requirements and standards of REDD+ at the local level; defining and ensuring ownership and tenure security of forestland, forest resources and carbon; enhancing capacity of forestry actors; transforming and balancing *de jure* and *de facto* power relations of actors; maximizing outcomes while meeting the forest product needs; and maintaining equity and justice in benefit-sharing are identified as REDD+ related issues. Addressing these issues is challenging as actors with different objectives, priorities and perspectives have to collaborate at different levels (local to international) and domains (social, economic and ecological).

The trade-offs caused by REDD+ between local livelihoods, biodiversity conservation and carbon sequestration is highly uncertain (Corbera and Brown, 2010; Hiraldo and Tanner, 2011). Different scholars have explicitly indicated that the REDD+ may not be beneficial or rather harmful in certain ways. As Ostrom (2010) mentioned REDD+ is not going to

necessarily help local community managed forests. For instance, REDD+ has now created the notion of 'global forests', which not only moves forests away from their local physical and cultural contexts but also indicates the demands for integrating local forest with global carbon markets and strong governance (Eliasch, 2008). Similarly, by undermining the overall value of the forest, it also tends to over-emphasize forests as 'carbon sinks' that results into adverse effect in existing multi-purpose forest management practices of communities (Caplow et al, 2011), overlooks livelihood related outcomes for local communities (Campbell, 2009; Coomes et al, 2008; Putz and Redford, 2009) and gradually alienate the local people from the resource access in the future (Phelps, Webb and Koh, 2010). However, Karsenty and Ongolo (2012) argued that the concern about the marginalization of forest communities appears to be unjustified in many countries where the capacity of the state is limited by varying crisis-linked situations (e.g., post-conflict, institutional instability and ethnic tensions).

3.2 Forest Carbon and Carbon Credit

Forest carbon is physical resource contained in five different pools of the forest ecosystems. These pools include above ground biomass, below ground biomass, dead wood, humus and soil. Carbon sequestered in the forest is an entirely new forest product that has different and unique features than that of traditional forest goods and services. Carbon sequestered in different pools of forest ecosystems fluxes over time and space not only through the anthropogenic impacts (e.g., forest management, land use change, forest disturbances, etc.) but also through the natural biogeochemical (e.g., photosynthesis, decomposition, etc.) processes and therefore acts as both carbon sink and source (Dixon et al, 1994a). Limited scientific understanding about the complexities associated with monitoring and quantifying forest carbon add further challenges to manage forest for carbon in the long run.

To maintain the actual carbon stock in the forest and also harness the potential of forest to sequester carbon, incentive mechanisms (i.e., carbon market) can be devised for which the concepts of carbon offset and carbon credit are introduced. Carbon offset, which is measured in metric tons of carbon dioxide equivalent (tCO2e), is created when an entity takes an action that results in the carbon sequestration or the prevention of carbon dioxide or other greenhouse gas (GHG) released into the atmosphere. To promote carbon offset across sectors and geographical space, the concept of carbon credit is developed which certify tradable certificate or permit representing the rights to emit. Therefore, forest carbon credit, asset representing the commodity derives from the forest carbon, is the translation of the offset potential of the carbon sequestered in a forest into an intangible asset that can be transferred to a third party and thus enable an acquirer to exclusively use such offset potential under a national, regional or international climate change mitigation regime (Norton Rose, 2010). The idea of carbon credit can be utilized to achieve environmental goals through the well-designed and well-regulated climate change mitigation regimes. However, clarity in carbon rights is essential in underpinning the creation and transaction of carbon credits. Creation and transfer of carbon credits from forest carbon encompasses the chain of procedural rules that enables appropriately sequestered and protected carbon stocks to be translated into a tradable certification of that asset (Norton Rose, 2010).

Carbon offset and carbon credits are intangible and abstract concepts and often can be defined either jointly or independently with land and/or biomass. Forest based carbon offsets and credits often compete with many other environmental as well as economic, social and cultural values, an alternative approaches to conventional legal framework development that allow

greater flexibilities may be useful in defining forest carbon rights so as to balance the tradeoffs and synergy according to the contexts. This allows placing principal focus in meeting the expectations of forest managers/users while defining carbon rights and therefore would increases the likelihoods of the success of REDD+.

The Warsaw Framework of REDD+ made a provision of compliance mechanism to access to results-based finance for carbon credit through the establishment of Green Climate Fund. The Framework specified a range of reporting systems to access the fund for REDD+ such as (i) technical assessment through International Consultation and Analysis (ICA), (ii) application for results-based finance by developing country Parties to the Green Climate Fund, (iii) national forest and emissions monitoring through the guidance of the most IPCC guideline, (iv) national level safeguard information system monitoring, etc.

3.3 Forest Tenure and Property Rights

Land has social, cultural and political value and is particularly central to many contemporary debates such as indigenous rights movements (Platteau, 2000), and PES and REDD+. Despite many equate land tenure erroneously with land title, it covers the right to hold and/or use land and therefore can be equated with *real property rights*. It is often described as a "bundle of rights" reflecting the possibility of existence of multiple right holders of the same piece of land. It reflects the set of institutions and policies that determine how the land and its resources are accessed; who can hold and use these resources; and for how long and under what conditions they may be used (Bruce et al, 2010). Tenure systems are produced and characterized by economic, political and social systems of a country such as formal (created by statutory law) or informal (without legal recognition), and as imported or indigenous. Formal or legal tenure is not always sufficient to impact landholders' decision-making, rather how individuals perceive tenure security matters (Broegaard, 2005).

The term forest tenure always reflects a desire to achieve a clear specification of the nature of right to forest and also signals a desire to separate forest rights from land rights in which it exists. Therefore, it is crucial for devising incentive-based policy instruments aiming to safeguard public goods and services (e.g., carbon, water, biodiversity, etc.) by valuing the goods and the services they provide, and paying people to protect them (Bruce, Wendland and Nauthgon-Treves, 2010). Clear forest tenure is a prerequisite for sustainable management of forests. As both tenure content (e.g., who has what rights) and tenure security (e.g., reform property rights, titling, registration, survey, etc.) for the long run are crucial components of forest tenure, clarifying them warrants a cautious approach as it is a highly political process that may heighten conflicts (Wainwright and Bryan, 2009; Peters and Kambewa, 2007) and provide different opportunities to communities to derive benefits (Deininger and Feder, 2009). Tenure security influences communities' forest use. For example, secured tenure appears to help prevent deforestation to some extent but hardly assures that landholders preserve forests for long (Robinson, Holland and Naughton-Treves, 2011) without external incentives particularly when higher opportunity cost is available for land use change.

Property entails a "system of relations between individuals (…) that involves rights, duties, powers and privileges" (Hallowell, 1943). Generally, property rights are characterized by exclusivity, inheritability, transferability, and enforceability and are usually registered to ensure security in transactions and clear allocation of responsibility. However, the nature of property (e.g., mobility, usability, etc.) and the sectoral policies (e.g., national security, development

planning, public health, environment, etc.) may pose restrictions on the full realization of property, particularly in the case of natural resources (e.g., land, forest, waterbodies, etc.). Forest tenure and land ownership do not necessarily coincide with the right to alter forest cover and carbon stocks. In case of forest, a wide range of stakeholders, other than the landowner, may have different rights to access, use, management and exclusion. Therefore, identifying the property owner may not be adequate to understand the power that affects the carbon stock in a forest (Christy et al, 2007). Perhaps the clear and long-term use rights may be similar to ownership rights. However, specific substantial provisioning of the rights and the conditions under which rights legitimize authority (e.g., government, society), and rights holders withdraw them, affect the rights over forest and carbon (Cotula and Mayers, 2009).

The evolutionary model of property rights envisages a transition from relatively imprecise community-based arrangements to well-defined, often individualized rights that may be inherited and traded. The key determinants of this transition are land scarcity, investment options and the underlying resource value of land. However, economic issues of cost and risk diversification may in fact retain and/or re-induce the collective forms of tenure (Baland and Platteau, 1998; Otsuka and Place, 2001; Platteau, 1992). Public ownership of forest can be shared with communities or private sectors for better management permanently or semi-permanently through the process of decentralization (Costenbader, 2009).

Rights recognized under customary rules may not have equivalents in formal law. At times, formal and customary rights overlap and/or contradict and therefore cause disputes between competing claimants that undermines their security (Christy et al, 2007). Difficulties and complexities arise when formal rights do not take customary rights into account. On the other hand, while the formalization of customary rights may be crucial to protect vulnerable groups (White, 2004), clarity in property rights help promotes investment in the land and resource management.

Forestry projects need medium to long-term investments (FAO, 2006) so as to ensure sound, accountable and sustainable forest management for which secure forest rights to managers/users are prerequisite. Defining property rights to forestland and determining the rights and responsibilities of landowners and communities is essential to effective forest management for carbon sequestration (Stern, 2006). Customary land tenure arrangementa may be cost effective and therefore become important for REDD+ projects.

3.4 Carbon Rights and Benefits

Defining carbon rights will help devise fair and equitable benefit-sharing no matter at what level REDD+ is implemented. However, there is no internationally accepted operational definition of carbon rights. Carbon rights, a new and unprecedented type of property right (Streck, 2008), have been defined as a form of property that 'commoditize' carbon and allow it to be traded in voluntary and regulatory markets. Therefore, understanding the nature of carbon (e.g., sequestered carbon, carbon sink and carbon sequestration potential) as property and the derivative rights associated with trading are important to defining carbon rights legally (Peskett and Brodnig, 2011). Carbon rights can also be defined broadly as intangible assets created by legislative and contractual arrangements that allow the recognition of separate benefits arising from the sequestration of carbon in the biomasses. While the stored carbon would be a self-contained property independent of the physical biomass, the right to trade carbon needs to be created by virtue of legislative and/or contractual arrangements. The concept of carbon rights

has so far been inadequately understood, is highly contextual and is open to many interpretations, as there are different concepts and terminologies used interchangeably. While the association and inseparability of carbon from other resources such as forest and land makes defining carbon rights complex, owning an intangible resource such as actually or potentially sequestered carbon poses more challenges to traditional property law systems that provide a basis for defining carbon rights. The complexities are further aggravated by the governance of carbon trade that is shaped by international treaties and legal norms.

Carbon rights could be used to encourage forest manager/users to earn money by keeping their forest intact while selling carbon credit (Fletcher et al, 2009). However, clarifying who is legally entitled to reap benefits from carbon under REDD+ is a complex process, as multiple actors have overlapping forest tenure and usufruct rights. For example, the owner(s) of the carbon sequestration potential could be same or different from, the owner(s) of the carbon sink, who might also be same or different from, the owner(s) of the sequestered carbon in case of usufruct rights. The complexity might be eased to some extent through careful analysis of the history of forest tenure, ownership and control rights that help reforms or transforms the inequitable and imbalance power relations.

Forest carbon rights frameworks are nationally specific and may be conferred by statute or contract based on the existing analogous laws related to the national property law system of land and natural resources until explicit law is formulated. Since such existing laws have their own specificities, limitations and challenges, ideas generated based on them may not be adequately conducive for facilitating carbon market while protecting the environment at desired level. So far a range of scenarios regarding the ownership of forest carbon have been developed based on the idea and empirical observation, which is given in the Box 3, below.

Box 3. Forest Carbon Ownership

The forest owner owns the carbon sequestered in the forest
The carbon sequestered in the forest may not be sold independently of the forest. However, the owner may undertake the obligation to manage the forest in a way to increase the carbon stock. This obligation could be in the form of:

- a contract,
- a covenant that runs with the land, binding anyone who owns the property in the future,
- a covenant that attaches to a person,
- an easement or servitude, which may attach to a dominant estate or to a person.

  In the latter case, the carbon sequestered in the forest may be transferred independently of any land transfer.

The carbon sequestered in the forest is the object of a separate, alienable property right, such as a usufruct right or *profit à prendre*, governed under the laws concerning land ownership. The owner can sell that right without conveying land ownership. In this context, two options may be envisioned:

- The owner of the carbon has the right to affect the use of the forest to protect the existing forest carbon stock, or to enhance it.
- The owner of the carbon has no inherent right to affect how the forest is used. However, the land owner may separately grant this right through a contract, or through a covenant or other legal mechanism that "runs with the land" and binds any property owner.

The carbon sequestered in the forest is a publicly owned asset
The government holds the forest carbon stock as trustee for the benefit of forest owners or of the public, with no power to sell it or give it away. In this context, two different options may be envisioned:

- The government has no particular power to require landowners to protect or enhance sequestration, or
- The government has the power to regulate the use of land to protect or enhance carbon sequestration.

The government has the power to sell or give the forest carbon stock away. In this connection, two main options may be configured:

- The acquisition of carbon stocks may be open to anybody.

Only a limited number of entities may be eligible to own carbon stocks, such as entities emitting carbon and desiring offsets; "banks" chartered to deal in mitigation credits; NGOs interested in environmental protection; indigenous peoples or other groups of forest stewards.

Source: Rosenbaum et al, 2004 (p.32, cited in IUCN 2009)

Provisions relating to land tenure, tree tenure, forest governance, environmental protection and indigenous rights can all affect how carbon rights are conferred and governed (Rosenbaum et al, 2004). As the carbon is inseparable from the forest and the land, there is a possibility that the owner of the forest owns the carbon and there is no need to establish a separate property right. This may imply that the forest owner cannot sell the carbon independently of the forest (Rosenbaum et al, 2004). If the carbon stock is subject to a separate, alienable property right, independent of the property of the forest, the owner could sell that right without conveying

forest ownership. This may happen through the sale of a usufruct right or *profit à prendre,*[7] governed under the laws concerning land ownership or under general property rules. Alternatively, the carbon sequestered in forests may be treated as a publicly-owned asset (e.g. in New Zealand), regardless of forest and land ownership and the benefits can be distributed to the forest owners or users.

Substantive elements in legal framework for carbon rights include understanding of (i) the existing approach to forest resources ownership rights or substantive usufruct rights, (ii) the likelihood of extension of such rights to carbon sequestered by such forests, (iii) the means by which existing communal or informal rights are or could be recognized and practiced, (iv) any other relevant legal measures that could be utilized for effective and sustainable realization of carbon rights (Norton Rose, 2010).

Identifying genuine carbon seller (e.g., unflawed seller's title, unsold carbon sequestration potential, etc.) and making sure the carbon sequestered in the forest does not decrease (e.g., due to changes in the understanding or in the calculation norms of quantity or flux of carbon, or leakage due to third party activities or natural events, etc.) are two major risks associated with the transfer of carbon rights. These risks can be reduced by making the provision of insurance for sequestered carbon and risk taker for the variations in the estimate of sequestered carbon.

While 'benefit-sharing' is a widely used term, it lacks a clear or consistent definition (Peskett, 2011). However, Behr et al (2012) mention that benefit-sharing is generally understood as allocating, administering, and providing benefits to multiple actors for certain activities or results through some form of positive incentive, opportunity, payment, rent/profit, or other compensation–whether financial or non-monetary. Benefit in this report is referred as perceived net social, economic and environmental benefit gained by the forest managing communities against capital, time and labor investment in the management of forest, forgone alternative use of land and exposure to social marginalization and risk due to the engagement in the REDD+ project. This broadens the scope of benefits by bringing a range of assets (e.g., human, natural, socio-political and physical), their flow and capabilities of communities in achieving those. Understanding carbon rights and usufruct rights in this context is essential for REDD+ projects, as the forestland is owned by the state and the forest management is done by communities and independent agencies (e.g., industries, organizations, etc.).

Ribot and Peluso (2003) and Schlager and Ostrom (1992) showed that access to forest resources and associated benefits is linked with property rights. A clear and strong property right is an important pre-condition for effective management of forests, as it affects incentives, actions and outcomes of resource management (Schlager and Ostrom, 1992; Johnson and Forsyth, 2002). The nature of resource rights–endowment of rights and/or entitlement to exercise these rights in practice–that affect capacity, social differentiation and governance processes at various scales is crucial to understand benefit-sharing (Leach, Mearns and Scoones, 1999). Access to forest resources is also associated with power (Ribot and Peluso, 2003; Sikor and Lund, 2009), with decentralization process (Agrawal and Ribot, 1999), and with customary practices (CIRUM, 2012). The flow of benefits also depends on the resource

7 *Profit à prendre* is "the right to share in the land owned by another. In particular, a *profit à prendre* enables a person to take part of the soil or produce of land that someone else owns." (West's Encyclopedia of American Law, 2008)

endowment (e.g., availability, productivity, size, condition and quality of resources) and governance conditions (e.g., tax, royalty, permit, etc.) (Mahanthy, Guernier and Yasmi, 2009).

Setting up a locally specific, but internationally and nationally appropriate, benefit-distribution mechanisms that address the issues of equity and fairness remains critical and complex for REDD+ to succeed. The goals of REDD+ are more likely to be achieved if benefit-sharing mechanisms are developed following democratic, inclusive and interactive processes so that local forest managing communities can participate in such processes with greater flexibility in defining and shaping benefits and distributional mechanisms (Gebara, 2013).

3.5 Environmental and Social Safeguards

Safeguards can be traced to financial institutions such as The World Bank, where they refer to measures to prevent and mitigate harm from investment or development activities (Griffiths and Tugendhat, 2013). With growing concerns about rights to development and environmental security, rights-based safeguards have emerged. They can be substantive–defining rights and duties or procedural–entailing processes for enforcing those rights and duties (Ituarte-Lima et al, 2013). When the substantive parts of rights are difficult to define precisely, procedural safeguards are of great importance. A Safeguard Information System (SIS) serves to protect the protecting system in the sense that countries have to regularly provide information to the international public on how and to what extent they respect the internationally binding safeguards (UNFCCC, 2012).

The trade-offs caused by REDD+ between local livelihoods, biodiversity conservation and carbon sequestration are highly uncertain (Hiraldo and Tanner, 2011). Therefore, safeguards are important to help expand responsible forest management so that possible harm would be reduced and potential benefits increased. REDD related safeguards can be defined as policies, measures or procedures to protect communities and the environment against social and/or environmental damages or harm (Moss and Nussbaum, 2011). Safeguard policies provide an opportunity to expand and improve cross-sectoral approaches to address the direct and indirect drivers of forest loss and degradation. This lends clarity to the social backdrop of REDD+, where forest-dependent communities and tribes experience marginalization and political exclusion (Sikor et al, 2010). The provisioning of appropriate benefits to forest managers/users is an important element to be considered while developing and implementing safeguard policies, regulations and mechanisms.

The Cancun Agreements (Box 4) include the importance of addressing land tenure, gender rights, drivers of deforestation and forest degradation and forest governance issues in national strategies.

Box 4. REDD+ Safeguards Under UNFCCC Process

a) Actions complement or are consistent with the objectives of national forest programmes and relevant international conventions and agreements;
b) Transparent and effective national forest governance structures, taking into account national legislation and sovereignty.
c) Respect for the knowledge and rights of indigenous peoples and members of local communities, by taking into account relevant international obligations, national circumstances and laws, and noting that the General Assembly has adopted the United Nations Declaration on the Rights of Indigenous Peoples.
d) Full and effective participation of relevant stakeholders, including, in particular, indigenous peoples and local communities.
e) Actions that are consistent with the conservation of natural forests and biological diversity, ensuring that actions are not used for the conversion of natural forests, but are instead used to incentivize the protection and conservation of natural forests and their ecosystem services, and to enhance other social and environmental benefits.
f) Actions to address the risks of reversals.
g) Actions to reduce displacement of emissions.
(Adapted from http://reddplussafeguards.com/what-is-redd-safeguards/)

Safeguards for REDD+ can be disaggregated into four different forms or categories: preventive safeguards, mitigative safeguards, promotive safeguards and transformative safeguards (Arhin, 2014). Preventive safeguards are the minimum requirements for REDD+ strategies (Jagger et al, 2012) that protect the communities from inevitable social and economic impacts including displacement of communities, forced eviction, military brutalization of local communities, loss of non-consumptive use of values such as places of worship, loss of rights to use of resources. These could involve stop recentralizing power from CFUGs. Mitigative safeguards acknowledge a certain level of trade-off and synergy between REDD+ and social goals, and therefore they seek to mitigate and/or minimize the negative distributional impact of REDD+ on local communities and their livelihoods. Promotive safeguards emphasize REDD+ not only for ‘do no harm’ but also for ‘do good’, to promote long term environmental and social benefits such as poverty reduction (Roe et al, 2013). These follow the principles, criteria and interventions that emphasize enhancing opportunities and benefits to forest managing communities by realizing full rights and responsibilities under the prevailing socio-political and institutional regime. They are simply about 'doing something better' than business-as-usual without challenging beliefs and assumptions and the narratives underlying them. Transformational safeguards usually promote a radical shift from business-as-usual policies and practice towards new sets of approaches that better result in the protection of forest as well as the interests of forest managing communities (Brockhaus and Angelsen, 2012). They provide space for critical reflection on the underlying beliefs, assumptions, narratives, policies and practices that have caused historical exclusion, marginalization and unequal access and control of benefits. As we go from preventive to mitigative to promotive to transformation, there could be an increase in the protection and benefits for forest managing local communities.

Regarding Gender Equality and Social Inclusion (GESI), concerns are incorporated in various sectoral legal frameworks and management guidelines (e.g., CF guidelines 2008, Protected Area Management Regulations 1996, Collaborative Forest Management (CFM) guidelines 2003, Leasehold Forestry guidelines 2006, and National Biodiversity Strategy 2002). The incorporation of GESI into forestry, especially community forests, may be due to the growing interest and intervention of civil society in natural resource management. The CF guidelines specify that women should make up 50 percent of the executive committee and occupy one of the two key positions, chairperson or secretary. The guidelines also direct that 35 percent of the CFUG budget be used for the poor.

The SESA proposes land tenure, carbon rights, and benefit-sharing as the first of 14 strategic options that can be pursued in the development of the national REDD+ Strategy. The UN-REDD study also identifies weak tenure (and the role of local governments) as one of the underlying causes of deforestation. The study notes that not only does the central government continue to hold sole management responsibility over large forested areas, the specific balance of responsibility between the government and communities in community-managed forest regimes needs to be adjusted to strengthen the set of benefits that can accrue to the immediate forest managers. Also highlighted was insufficient decentralization of power to the local governments, which limits capacity to carry out forest sector planning at the district level. In order to avoid the trend of elite control of the forest users mechanism, the rules need to be revised to make it mandatory that all User Group Committees must include at least 50 percent representation of *Dalits, Adivasi/Janajati* peoples, and 'below poverty line' community members. The same percentage should be applied in trainings, sensitization, workshops and other activities at all levels of meetings, discussions and interaction (SESA, 2014).

3.6 Payment of Ecosystem Services

Ecosystem services (e.g., material goods, livelihoods services, spiritual/religious/cultural values, and regulatory supports) have no standardized definition, but might broadly be called the benefits of nature to households, communities, and economies (Boyd and Banzhaf, 2006) or, more simply, the good things nature does (Jelinski, 2005). Most of the environmental services have been used as externalities and open access resources and therefore are being degraded day by day. Recently, attention has been paid to establishing a mechanism for payment of environmental services (PES), an incentive based management of natural resources. If the PES is fully market-based, it is considered as a cost effective conservation method that can compensate the cost of service production and supply and also can address the issue of poverty to some extent.

PES is incentive offered to farmer or landowner in exchange for managing his/her land and resource to provide some sort of ecological service. PES programmes attempt to stipulate that the problems of external effects can, under certain conditions, be overcome through private negotiation between affected parties (Coase, 1960). PES is a transparent system for the additional provision of environmental services through conditional payments to voluntary providers (Tacconi, 2012) and therefore is expected to promote the conservation of natural resources in the marketplace. Though several specific ecosystem services were identified and assessed by the Millennium Ecosystem Assessment 2005, climate change mitigation, watershed services and biodiversity conservation are in demand to develop PES institution currently and possibly in future as well (FAO, 2007).

There are different models of PES in practices, such as (i) contracts between ecosystem service providers and service users, (ii) funded by governments and involve intermediaries, such as non-government organisations, and (iii) eco-labelling or certification. The suppliers of the environmental services normally hold the property rights over an environmental good that provides a flow of benefits and accept a payment (i.e., greater than the cost of providing the services). The users of the ecosystem services pay a price (i.e., expected to be lower than their welfare gain due to the services). PES can also be seen as an environmental subsidy (to ES providers) combined, in some cases, with a user fee (on ES users) (Engela, Pagiolab and Wunder*,* 2008).

PES is a voluntary programme in which environmental services, conditions upon which transaction occur, buyers and sellers need to be clearly identified. As Wunder (2005) indicated, some of the conditions for the PES to be operational are: (i) Effectiveness of the services, (ii) efficiency of the transactions, (iii) additionality on the services, (iv) permanence of the services flow, and (v) control of leakage. The actual payment normally depends on the quantity of services flow and therefore periodic measurement, timely monitoring, appropriate policy provisions and institutional practices that manage continuous production and supply of services for the long-run.

PES may not address the entire environmental problem as ecosystems may be mismanaged for many reasons and the payment may not guarantee the change in behavior of service providers (Pagiola, 2003). As many of the benefits of ecosystems are externalities, ecosystems are mismanaged from the perspective of ecosystem managers (Pagiola and Platais, 2007). As ecosystems normally belong to nobody or to the state, local ecosystem managers may not have the full authority and capacity to manage ecosystems and therefore tend to neglect even the on-site impacts of their management decisions (Ostrom, 2003). The suitable response in this case would be to ensure that local ecosystem managers have appropriate property rights (Engela, Pagiolab and Wunder*,* 2008). Moreover, enhancement of education and awareness building, capacity development and access to credit are also most promising approaches to promote PES (Engel, 2007; Bulte and Engel, 2006).

CHAPTER - IV

Lessons from Other Countries

4.1 Empirical Knowledge from Across the World

As part of efforts to bring empirical knowledge and lessons from across the world, four countries from different continents were selected: Tanzania, Costa Rica, Indonesia and Mexico. While selecting the countries for review, a range of factors were considered that include (i) engagement of the country in REDD+ initiatives, (ii) existence of FCPF support, (iii) existence of community-based forest management practices, (iv) coverage of different continents, and (iv) current state of land/forest tenure and property rights development processes.

4.1.1 Case of Tanzania

REDD+ institutional arrangement: The National REDD+ Task Force, comprising 13 representatives from government ministries and one civil society representative, was established to lead the process of developing a National REDD+ Strategy, and to coordinate all activities related to REDD+ during its readiness phase (URT, 2012b; TNRF, 2012). Now the Division of the Environment of the Vice President's Office (VPO) hosts the National Climate Change Steering Committee (NCCSC)–an inter-ministerial committee that comprises Permanent Secretaries from 13 ministries–and the National Climate Change Technical Committee (NCCTC) that oversees and guides the implementation of climate change activities, and management and coordination of REDD+ in the country (URT, 2012b). There are five Technical Working Groups that assist with data and information gathering for the development of the National REDD+ Strategy and of the Draft Action Plan (TNRF, 2012). There are plans to establish a REDD+ Trust Fund to consolidate and distribute REDD+ funds to different stakeholders at the national and sub-national levels and a National Carbon Monitoring Centre (NCMC) consolidate all national data concerning REDD+ (URT, 2012a). REDD+ management and coordination adhering to existing governance structures. The coordination of REDD+ activities at regional and district levels adheres to the existing government local government institutional structure.

REDD+ related policies, laws and plans: Policies and legislations relevant to REDD+ interventions in Tanzania include national vision of development to 2025–to graduate the country from a least developing country to a middle-income country with a strong competitive economy by improving socio-economic opportunities, public sector performance and environmental management (URT, 2012a). National Strategy for Growth and Poverty Reduction (MKUKUTA), the National Environmental Policy (1997), the Forest Policy (1998) which encourages participatory forest management and seeks to integrate biodiversity values in forest management, and the Land Policy (1995) are critical to achieve this vision. Tanzania has a number of plans, policies and laws that support decentralised and participatory forestry most of which support REDD+ activities. For example, the Environmental Management Act (EMA) ofe 2004 empowers the Ministry of Environment and its subordinates to take action on climate change and natural resource management at national to local levels (Richards et al, 2009). The EMA specifies that each city, municipality, district, and town council need to appoint an Environmental Management Committee and an Environmental Management Officer responsible for the governance and management of natural resources and the enforcement and compliance of the EMA (LEAD 2007; URT 2009; URT 2002). The National Forest Policy 1998 and Forest Act 2002 provide incentives and legal frameworks for participatory forestry.

There are two forms of forest management that involve local communities in Tanzania – (i) Joint Forest Management (JFM), where the State (central government or local government) maintains ownership of the land and communities share management responsibilities with the district, and (ii) Village Land Forest Reserves (VLFR), commonly referred to as Community Based Forest Management (CBFM), where communities have full ownership and management responsibilities for the reserve (MNRT 2008b). While the revenue from forest are shared between the village (40 percent) and the district (60 percent); the village has the right to receive 100 percent of the incomes, but needs to pay 10-15 percent to the district for services provided by district officers (Blomley and Iddi, 2009). In addition to these incentives, other incentives such as waving of State royalties from forest products and exemption from local government taxes on transport also apply (URT 2012a).

Land tenure: Both the National Land Act 1999 and the Village Land Act 1999 provide the legal framework for three categories of land in Tanzania: general land (public or open access land), reserved land (land set aside for special purposes), and village land (all land in the village) (URT, 2012a). As large part of general land is actually village land and only the process of registering and demarcating village land boundaries is yet to be completed, the current classification of general land has been highlighted as a problem (URT, 2012a and TFCG, 2011), as it does not adequately reflect actual land-use or occupancy and therefore presents a risk for securing rights over land (URT, 1999). Moreover, the National Land Policy 1995 mentions that the granted Right of Occupancy (the main form of tenure) can either be acquired through a grant by the Commissioner for Land or through customary law (it also includes the derivative Right of Occupancy whereby land can be granted to individuals and groups for use). For the allocation of land to foreign investors, the Investment Act 1997 provides that investor applications need to go through the Tanzania Investment Centre (URT, 2009).

The second draft of the National REDD+ Strategy defines 57 percent of land as general land and provides no detailed explanation of how this is being dealt with. It only mentions that efforts are being taken to provide property rights to communities and private sector actors so that forests on general lands can be protected and managed (URT, 2012a). Despite the existence of clear legal framework for securing land tenure rights, conflicting legal interpretations of land-use and occupancy creates an insecure environment for all village lands that are yet to complete registration and demarcation. Therefore, review and development of a viable national land tenure system is a key to REDD+ intervention in Tanzania.

Issues related to carbon ownership and benefit-sharing: With concerns over the implementation capacity and fiduciary risk of the Tanzanian Government and seeking rapid results, Norway channeled most REDD+ funds to academic and civil society organizations (CSOs). This resulted in the government's reluctance to develop the institutional arrangements necessary to see REDD+ beyond the pilot phase, in particular for finance and benefit-sharing mechanisms (NORAD, 2014). REDD+ pilot projects faced substantial challenges including uncertainties about land tenure, carbon rights and benefit-sharing rules; insufficient technical skills for MRV; and the difficulty of effectively addressing the underlying deforestation drivers (Kweka et al, 2014). The Tanzania National REDD+ Strategy does not explicitly tie carbon ownership to land or forest tenure "leaving communities and other forest owners vulnerable to losing out on rightful benefits, or possibly even compromising their current legal right to use and manage recognized forest land" (TFCG and MJUMITA, 2012). Though a framework for a

National Carbon Trust Fund has been drafted, it has not been implemented as of 2014. Past experience shows that government initiatives often fail to deliver on benefit-sharing with local communities, e.g. under joint forest management, hunting blocks and tourism (Milledge et al, 2007; URT, 2009b). This has led to questions about the efficacy of a strictly managed national fund approach (NORAD, 2014).

Safeguards: Tanzania has participated fully in the development of the standards and the governance of the REDD+ SES Initiative and there are a number of safeguard options (e.g., UN-REDD, FCPF, and CCBA) discussed so far. However, finalization has yet to be done. The second draft of the National REDD+ Strategy states the use of existing legal frameworks (e.g., Environmental Policy 1997, EMA 2004) as benchmarks for integrating Strategic Environmental and Social Impact Assessment (SESA) into policy and decision making processes for REDD+. Both the Environmental Policy and the EMA provide detailed regulations to conduct environmental impact assessments and audits and state that any new strategy, policy and development programme that is likely to have a significant impact on ecological and socio-economic systems, should be subject to a SESA (URT, 2012a). The National REDD+ Strategy aims to further strengthen the Environmental Policy and the EMA, by developing a monitoring system that can ensure that any unforeseen negative impacts are detected and addressed both in relation to REDD+ and other land-use activities (URT, 2012a). Moreover, some of the pilot projects use the principle of Free Prior and Informed Consent (FPIC) as well as seeking joint Verified Carbon Standard (VCS) and Climate Community and Biodiversity (CCB) standard certification.

4.1.2 Case of Costa Rica

Incentive-based environmental conservation as a key strategy: The Republic of Costa Rica is at the forefront of biodiversity conservation, natural resources management, and payment for ecosystem services (PES) programme (GEF, 2005). The country has adopted a mix of economic incentives and regulatory policies, to protect its forests, and aims to become a carbon neutral country in 2021. The National Climate Change Strategy 2009 has strategized both climate mitigation and adaptation activities in which reducing deforestation is a key part as the forestry and agricultural sectors could abate the business as usual emissions scenario in 2021 by 79 percent (Pratt et al, 2010; GOCR, 2013a). Environment and land-use planning, considered as a motor of development, has been one of the four national development priorities for 2011-2014. Similarly, the National Forestry Development Plan 2011-2020 mentions the importance of REDD+ in raising finance and reducing emissions. One of the main policy thrusts of the Readiness Preparation Proposal (R-PP) and Emission Reduction (ER) programmes is to increase the production and use of sustainable timber, both as a way of giving forest extra economic utility and as a way of sequestering extra carbon through increased use of harvested wood products (GOCR, 2013b). The cornerstone of environmental legislation in Costa Rica is the General Environmental Law (Law 7554) of 1995, which created key institutions including the Ministry of Environment and Energy (MINAE) and the National Environmental Council. It is complemented by the Forestry Law (Law 7575) of 1996 and the Biodiversity Law (Law 7788) of 1998. The Forestry Law is strongly conservationist and provides the basis for Costa Rica's PES Programme and therefore for REDD+.

Payment of ecosystem service*:* With the recognition of four ecosystem services, namely (i) emissions mitigation, (ii) protection of water sources, (iv) provision of scenic beauty, and (iv) protection of biodiversity, Costa Rica began to pioneer PES schemes 20 years ago and since

1997, nearly one million hectares of forest have been part of PES schemes. Meanwhile, forest cover has returned to over 50 percent of the country's land area, from just over 20 percent in the 1980s. The PES programmes also contributed to balance equity and effectiveness and lower implementation costs while fitting the international forest conservation agenda as well as local landscape and people (Porras et al, 2013). Forest Law 1996 establishes PES and bans land use change in forests which is seen as paradox by some. For example, some view PES as forest owner subsidy scheme (Costa Rica abandoned subsidy scheme in the mid-1990s as part of the IMF Structural Adjustment Programme); some view PES as a neoliberal forest policy (despite the ban on changing land use); and some view PES a necessary concession to forest stakeholders to get them to accept a ban on forest land-use change.

While the PES principally tries to move away from tax-financing towards user financing (e.g. through water user fees), it promotes competitive contracting which favors larger (over smaller) forest owners such as company and favors individual (over group) contracts. On the other hand, it practically favors applications from indigenous territories, areas with low social development scores, and from properties under 50 hectares. It has so far had relatively little success in attracting cooperation or finance from the private sector.

The Costa Rican PES programme has been a useful example of the balancing act between the 'commodification' of nature and 'fair development', and has created different incentives for different stakeholders. For example, land owners get monetary incentive as well as policy incentive to secure land tenure; public authorities (e.g., National Forest Fund (FONAFIFO)) ensure that PES applicants pay social security benefits to farm employees on time; municipalities and Ministry of Finance easily collect property taxes; and the protected area authority compensates landowners who had land 'expropriated' within national parks until the state can buy their land. While the PES programme has remained quite inexpensive, flexibility has also contributed it a politically viable conservation policy, effectiveness of which depends on conservation cuisine.

PES institutional arrangement for REDD+: As Costa Rica implement REDD+ incentives as an extension of PES, the existing legal framework and a mature set of institutions in environmental management and PES form the strong backbone for REDD+. While the Ministry of Environment and Energy (MINAE) is the executive body responsible for overall environmental matters, Climate Change Office (DCC) within the MINAE is responsible for policies on climate change, including the national carbon market created in September 2013, and the policy of becoming a carbon neutral country in 2021. The FONAFIFO is responsible to coordinate and implements PES programmes including hosting REDD+ Secretariat that develop, design and implement REDD+ strategy. The REDD+ Executive Committee, constitute representatives from key sectors (e.g., indigenous communities and agro-forestry producers), steers the REDD+ process.

Forests and tenure: Costa Rica has a total of approximately 2.67m ha. of forest (FONAFIFO, 2012), and the ownership of which can be divided into four main categories: (i) National Parks and Biological Reserves, which is State-owned and cover 11 percent of the country and including 22 percent of the forest; (ii) National Wildlife Refuges and Forestry Reserves, which may be private, public or mixed and cover 14 percent of the country, including 19 percent of the forest; (iii) Indigenous Territories, 6.5 percent of the country and 10 percent of the forest; and (iv) Private land, which includes 50 percent of the forest (GOCR, 2011). Forest tenure in Costa Rica is 45 percent public and 55 percent private (FAO, 2010).

Carbon rights: Despite the lack of specific legislation, Costa Rica has been trading forest carbon rights–assets that accrue to the legal tenant of the relevant land and may be held privately and traded freely (Navarro, 2010)–since 1997 through PES programmes. The RPP indicates that forest carbon rights is derived on the basis of an analysis of the country's Civil Code (Articles 253-254) and of the Constitutional Courts Resolution No 546 of 1990 on derived rights from land (GOCR, 2011). In return for the payments under the PES schemes, the FONAFIFO acquires the rights to all the four ecosystem services recognised by the 1996 Forestry Law, including the carbon rights (Article 65 Regulation of the Forestry Law). This is the only explicit mention of forest carbon rights in legislation, however the unchallenged consensus is that they are a fully tradable asset that derives from the forest; the owner of the forest is also the owner of the carbon (GOCR, 2011). The R-PP makes it clear that FONAFIFO is not cancelling these credits to generate offsets though it will become carbon-neutral from 2021. Rather it is holding them and may sell them on to a final user (GOCR, 2013a). So far, national funding for PES administered by FONAFIFO comes from a tax on hydrocarbons (by Law 8114 of 2001) and on water (by MINAE Executive Decree 32868 of 2006). Each year, MINAE passes an executive decree fixing the modalities and volumes for PES that year.

Safeguards: As part of safeguards in REDD+, Strategic Environmental and Social Assessment (SESA) identified four key risks: (i) issues relating to land tenure and overlapping land rights for indigenous communities and smallholders; (ii) limited access of communities to natural resources; (iii) the PES schemes as a benefit-sharing mechanism; and (iv) lack of conditions for sustainable forest management. The SESA work-plan sets out five priority areas for action that include: (i) integrating primary, secondary and regenerating forests with the indigenous world view; (ii) resolving land tenure issues and disputes in indigenous territories; (iii) a framework for the National System of Conservation Areas to work together with indigenous territories; (iv) specific schemes of PES Programmes for agro-forestry smallholders and for indigenous territories; and (v) participatory MRV by indigenous communities so as to mitigate risk (Secretariat REDD+, 2013).

4.1.3 Case of Indonesia

Land and forest tenure: In Indonesia, Article 33(3) of the 1945 Constitution states that: "the land and waters, and the natural riches contained therein shall be controlled by the State and exploited to the greatest benefit of the people." Therefore, all rights over land, water and natural resources (including forests) are under State control. The Basic Agrarian Law governs the land tenure, which vests control of all land in the State while recognizes private ownership as well. These legal provisions characterize forest tenure in the country as formally controlled by the state, with weak tenure security for local communities and indigenous peoples. This treatment is reiterated in Forestry Act no. 41 of 1999, according to which the State exercises full rights over forestland. The Ministry of Forestry holds the authority to decide on forest tenure for the people, which include granting concessions or issuing permits, and licenses for forest exploitation and cultivation (Costenbader, 2011).

Although customary rights to forests are recognized in principle, in practice, these rights are marginalized in favor of state interests (USAID, 2010). For examples, (i) the Forestry Department hand out permits for logging and plantations that cover tens of millions of hectares of forests with little regard for customary laws (Forest Peoples Programme, 2011); and (ii) forests defined as '*adat*' (located in traditional jurisdiction areas and defined by customary laws) which is acknowledged by the Forestry Law 41/1999. Despite the legal recognition, there

are no procedures for the management of private forests (Colchester, 2010). In recent years, steps have been taken to better include the rights of indigenous people in forest management. For example, Law no. 32/2009 states that traditional communities have a right to seek compensation from the state for losses suffered due to environmental pollution. The Medium Term National Development Plan 2010-2014 also states that traditional land rights should be taken into account in an effort to maintain local social and cultural values.

Carbon ownership: Indonesia has made progress in regulating REDD+ activities through a series of legislative and executive acts. However, the main REDD+ legal challenges lie in clarifying land and forest tenure (including carbon rights), institutional coordination and instituting safeguards. Rights to carbon and benefit-sharing arrangements have not been clarified, creating uncertainty in existing or currently developing REDD+ activities. If carbon is to be considered a natural resource held within the soil or the forest, a presumption exists that title to carbon follows from ownership of land and forest. This implies that unless the State give out any rights of usage of state forest (such as concessions, permits or authorizations) or the forest is privately or communally held, then carbon rights on state forests are to be deemed owned and controlled by the State.

Benefit-sharing: The Regulation on the Implementation of Forest Carbon states that the holder of the forest carbon permit is allowed to trade the carbon rights (Article 8). It is also mentioned in the Regulation that the implementation of forest carbon activities is encouraged to empower people living both inside and outside of the forest region. A provision for sharing benefits from REDD+ projects between different government levels, project developers and local communities was included in the Regulation regarding Procedures for Licensing of Commercial Utilization of Carbon Sequestration and/or Storage in Production and Protected Forests. However, this was rejected by the Ministry of Finance and therefore ambiguity remains over arrangements for benefit-sharing (Costenbader, 2011).

Land rights conflict: Indonesia established the National Forestry Council in 2009 as a multi-stakeholder advisory body of the Ministry of Forestry, which includes a desk to tackle land rights conflicts. While the Government of Indonesia should take appropriate measures to address land tenure conflicts and compensation claims (Westholm et al, 2011), the National REDD+ Strategy itself makes a case for land tenure reform as a prerequisite for successful implementation of REDD+ (Indonesia REDD+ Task Force, 2012). The implementation schedule of the REDD+ National Strategy also identifies the mapping and acknowledgement of indigenous peoples' territories and local communities in its programme strategy for sustainable landscape management (Indonesia REDD+ Task Force, 2012). However, the REDD+ National Strategy suggests strengthening of Forestry Law no. 41/1999, which grants full rights over forest land to the State indicating that the Ministry of Forestry has the authority to decide on forest tenure for the people, including granting concessions or issuing permits and licenses for forest exploitation and cultivation (Costenbader, 2011).

REDD+ agency: Institutional arrangement for REDD+ in Indonesia have been changing in last couple of years. Both the National Council on Climate Change chaired by the Indonesian President and the National REDD+ Agency which was established by Presidential Regulation 62/2013, were closed down and absorbed by the Ministry for Environment and Forestry (MEF) (both become part of a Directorate General of Climate Change) by the Presidential Decree No. 16, 2015(Lang, 2015). Now, both council and agency need to report to the MEF. The REDD+ agency is primarily responsible to formulate and develop national REDD+ strategy, coordinate

implementation of REDD+ policy; mainstream REDD+ into the national development planning, coordinate for funding mechanism and benefit-sharing, manage REDD+ fund, formulate MRV system, enhance capacity of related agencies, and clarify Indonesian's position in international fora. Several task forces that consist of working groups operate under the agency. The agency is responsible to safeguards fiduciary, environmental and social integrity by formulating principles, criteria and framework indicators and preparing implementation, monitoring and evaluation procedures of safeguards. The agency is also responsible to prepare the strategy to cover the land tenure, governance, biodiversity and FPIC related issues.

4.1.4 Case of Mexico

Institutional arrangement: In Mexico, Inter-Ministerial Climate Change Commission (CICC)–led by Ministry of Environment and Natural Resources and represented by ten key ministries–was established in 2005 to coordinate the development of climate change policies, programmes and strategies (SEMARNAT, 2009). The CICC receives input from the Consultative Council on Climate Change (C4), which is a body comprised of scientists, and civil society and private sector representatives. While the REDD+ Working Group (GT-REDD+) within CICC was established to coordinate REDD+ related issues between ministries, CICC and C4, a multi-stakeholder (e.g., government agencies, non-profit organisations, academia, the private sector, financial institutions, landowners and indigenous groups) Technical Advisory Committee for REDD+ (CTC-REDD+) was established to promote dialogue among different stakeholders regarding the country's REDD+ process (FCPF, 2012a). The National Forestry Commission (CONAFOR), focal point of REDD+ initiatives, not only develops the National REDD+ Strategy in collaboration with the GT-REDD+ and the CTC-REDD+ but also coordinates with international institutions for negotiations and financial supports (CONAFOR, 2010a). The Inter-Ministerial Commission for Sustainable Rural Development (CIDRS), which coordinates cross-sectoral ministries involved in rural development (OECD, 2007), created the Working Group of Territorial Projects, which is coordinated by CONAFOR that aims to ensure coherence between rural development and climate change mitigation and adaptation projects, including REDD+ (SAGARPA, 2012). Coordination between the CIDRS and the CICC is vital as the REDD+ vision in Mexico is sustainable rural development through strengthening local governance and integrated territorial management as central to the development of the national REDD+ strategy (Baker et al, 2014).

Land tenure: There are three broad categories of land tenure in Mexico: federal, communal and small private ownership that are governed by the Federal Civil Code, the Codes of each State and sectoral laws. Specific rules on the use and transfer of forestland are contained in the General Law on Sustainable Forest Development. Communal ownership, which constitutes 53 percent of country's land (Brown, 2004), involves land under the ownership of rural agrarian communities, which are either traditional indigenous communities or *ejidos* (communally managed agrarian villages acting as self-organised legal entities that have been granted collective land holding by the state). According to the Land Distribution Reform 1917, the federal government held ultimate title over all land, allocating only usufruct rights to communities (USAID, 2011). However, in 1992, Article 27 of the Constitution was reformed, creating the Agrarian Law that allows the transfer, rental, or privatization of parcels of land within *ejidos*. According to Article 44 of the Agrarian Law, *ejido* lands are divided into lands for human settlement, lands for common use, and parceled lands. Each category of use is determined and regulated by its own statute created by the groups.

Communities' land rights: Communities are recognized as legal entities empowered to design their own statutes, including the regulation of the exploitation of their natural resources, distribution of profits and authorization of land division on communal and *ejidal* lands. Before passage of Agrarian Law the communities maintained use rights only. The passage of the Agrarian Law provided legal recognition of the rights of *ejidos* and communities to forestland and permitted for the lease and sale of *ejido* property. Also, for implementation of the reform, the Programme for the Certification of *Ejido* Land Rights and the Titling of Urban House Plots (PROCEDE) were created that strengthens land tenure through the survey and certification of land parcels and common use land (Robles and Peskett, 2011). PROCEDE provides the opportunity for the conversion of *ejidal* land parcels to private property, granting *ejido* members the right to rent or sell their individually-owned land thus opening up *ejidos* to private investment (Lewis, 2002). The partial privatisation of *ejidal* land through parcelisation could have significant ramifications on communal management practices and the distribution of any associated benefits, and therefore REDD+. As PROCEDE does not apply to the communal land of indigenous communities, who can only engage in the sale of land parcels should they adopt an *ejidatorial* regime, may opt for the adoption of collective management practices and further define the mechanisms for the equitable distribution of profits generated (Robles and Peskett, 2011), *ejidos* are encouraged to privatize forest land to participate in the programme.

Rights to access natural resources and carbon benefits: The rights of indigenous communities to exploit natural resources existing on their land are recognized in Article 2 of the Constitution. Implementation of the National REDD+ Strategy should therefore not alter existing community rights (CONAFOR, 2010b). However, the Mexican legal framework does not explicitly recognise and regulate carbon rights or ownership, therefore the possibility remains that future carbon ownership regulations might have an implication on existing rights. However, some norms may be seen as providing possible lessons for future regulation. First, under Article 5 of the General Law on Sustainable Forest Development, forest resources (which include environmental services and thus carbon capture) belong to the *ejido*, community, individual(s) or private or public entity that owns the land where they are located. However, the multiplicity of forest definitions has been identified as a possible obstacle to clarifying the forest types covered by REDD+ projects and therefore defining the eligibility of land for such projects (SEMARNAT, 2011; IDLO and FAO, 2011). Second, according to the Federal Civil Code, trees are considered as real property and presumably belong to the landowner due to their adherence to the ground (according to the legal principle of accession), until proven otherwise. There is also possibility that the National REDD+ strategy formalize the carbon ownership as an associated right to forest property (SEMARNAT, 2011). The most recent draft of REDD+ strategy (2014) recognizes that the land owners owns the forest resources and the forest carbon captured and stored in trees but the ownership provisions about the avoided carbon emissions are less clear (appears to imply that the ownership remain with government) (Baker et al, 2014).

Social safeguards: As approximately 80 percent of forest is under communal ownership by either *ejidos* or communities (Bray and Merino-Perez, 2002), REDD+ implementation is likely to occur at the community level (World Bank, 2011) and therefore the communal ownership of forest becomes the central aspect of the national REDD+ strategy (CIFOR, 2010). Social safeguards are therefore important not only in ensuring that REDD+ does not have adverse social implications but also in producing the desired social co-benefits. Several policy and legal

arrangements are in place that helps promote social safeguards. Such as, the Mexican Constitution recognizes the rights and autonomy of indigenous peoples (Article 2). It identifies Mexico as a multicultural state and its various articles guarantee the protection of indigenous peoples, in terms of their rights to self-determination and protecting the integrity of their lands and culture. The National Commission for the Development of Indigenous Peoples (CDI) supports the realisation of these rights despite the lack of specific national regulation of indigenous lands or territories. The Constitution also provides for the protection of the natural environment with the aim of preserving and restoring ecological equilibrium (Article 27). The General Law of Sustainable Forest Development establishes the preferential use of forests in favor of communities. An amendment to this law in 2012 further emphasizes the need of legal safeguards while designing policies and legal instruments that promote and regulate environmental services [such as REDD+] in line with international law (e.g., ILO 169, UNDRIP). Considering all these legal and policy situations, Mexico supports the participation of indigenous people in the implementation of REDD+ (FCPF, 2012a). However, as national REDD+ strategy, safeguards and safeguard information system are still in the development process and there is a lack of procedural requirement for implementing FPIC (CONAFOR, 2015; Baker et al, 2014), concrete provisions are yet to develop.

CHAPTER – V

Prevalent Legal and Institutional Framework Governing Forest and Forest Carbon Tenure in Nepal

5.1 Multilateral Environmental Agreements

Nepal is party to a number of multilateral environmental agreements (MEAs) concerning biodiversity conservation and sustainable natural resource management. To some extent Nepal has been able to fulfill the commitments to these agreements effectively. Some of the MEAs that are relevant to REDD+ are briefly discussed below.

5.1.1 United Nations Framework Convention on Climate Change

Nepal is a party to the UNFCCC 1992[8] and aims to contribute to stabilize greenhouse gas (GHG) concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system. Such a level should be achieved within a time frame sufficient to allow ecosystems to adapt naturally to climate change, to ensure that food production is not threatened and to enable economic development to proceed in a sustainable manner (Article 2). UNFCCC sets out a number of international environmental principles[9] to guide implementation of instruments and assist to meet the objective (Article 3). The decisions of the UNFCCC's annual Conference of the Parties (COP) provide rules and guidance for countries to implement their commitments under the UNFCCC (Denier et al, 2014).

While Conference of Parties (COP) decisions have unique normative authority, they are not legally binding (Baker and McKenzie, 2014). Parties are obliged to take precautionary measures to anticipate, prevent or minimize the causes of climate change and design policies and measures that take into account different socio-economic contexts (Article 3 (3)). Adaptation is specifically identified within article 3 (3) as an area where precautionary principle has an application. The UNFCCC creates an obligation on parties to promote sustainable management of all sinks of emissions (Article 4 (d)). Forests are specially mentioned as a resource to be managed for this purpose, which suggests that the management of forest should focus on enhancing carbon value of forests ahead of other economic, ecological or social interests associated with the forest area (Magurie, 2013). Article 4(8)(c) requires parties to consider the impact of the Convention's obligations on developing countries with forested areas.

Environmental principles are applicable to the Kyoto Protocol,[10] a vehicle in which the mitigation obligations created within the UNFCCC are operationalised (Magurie, 2013). Nepal acceded to the Kyoto Protocol on September 16, 2005.[11] The Parties included in Annex I are

---

8 United Nations Framework Convention on Climate Change (UNFCCC), New York, 9 May 1992, in force 21 March 1994, 31, *International Legal Materials* (1992), 849.

9 The principles are, among others, states have sovereignty over their natural resources and the responsibility not to cause transboundary environmental damage; principle of preventive action; concept of sustainable development including sustainable use, inter-generational equity, intra-generational equity and integration; precautionary principle; polluter-pays principle; and principle of common but differentiated responsibility.

10 Preamble to the Kyoto Protocol to the United Nations Framework Convention on Climate Change, 10 December 1997, in force 16 February 2005, 37 *International Legal Materials* (1998), 22.

11 Kyoto Protocol to the United Nations Framework Convention on Climate Change, Kyoto, 10 December 1997, in force 16 February 2005, 37 *International Legal Materials* (1998), 22.

required to ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the GHGs listed in Annex A do not exceed their assigned amounts, with a view to reducing their overall emissions of such gases by at least 5 percent below 1990 levels in the commitment period 2008 to 2012 (Article 3 (1)). The second commitment period of the Kyoto Protocol commences on 1 January 2013 and expires either on 31 December 2017 or 31 December 2020. The objective of the second commitment period is to "ensure that aggregate emissions of GHGs by parties included in Annex I are reduced by at least 25-40 percent below 1990 levels by 2020". The Kyoto Protocol provides for clean development mechanism (CDM) to assist Parties not included in Annex I in achieving sustainable development and in contributing to the ultimate objective of the UNFCCC, and to assist Parties included in Annex I in achieving compliance with their quantified emission limitation and reduction commitments under Article 3 (Article 12 (2)). The CDM creates an avenue for sustainable development to take place in developing countries, which provides benefits to the country in which the project takes place and which also assists in meeting the ultimate objective of the Convention (Magurie, 2013).

The Parties included in Annex I are empowered by the Protocol to participate in emissions trading for the purposes of fulfilling their commitments under Article 3. Any such trading must be supplemental to domestic actions for the purpose of meeting quantified emission limitation and reduction commitments under Article 3. The COP is required to define the relevant principles, modalities, rules and guidelines, in particular for verification, reporting and accountability for emissions trading (Article 17).

Avoided deforestation became a key part of discussions in 2005 UNFCCC COP, when the Coalition of Rainforest Nations (CRN), led by Costa Rica and Papua New Guinea, proposed 'REDD' at COP 12 in Montreal.[12] REDD gained attraction in 2007 at the 13th session of the UNFCC COP in Bali and was a key element of the Bali Road Map, which set out the work that need to be done under various UNFCCC negotiating tracks in order to reach a secure climate future (Denier et al, 2014). Now, it is known as REDD+ when its scope was expanded in 2009 at COP 15 in Copenhagen to cover the role of conservation, sustainable management of forests and enhancement of forest carbon stocks in developing countries. This expansion aimed to prevent the development of a mechanism that would only reward countries with historically high deforestation/degradation rates (by quantifying the emissions they avoided), in favor of a mechanism that would also incentivize countries with historically low deforestation rates to continue their forest protection or sustainable management (Denier et al, 2014). It did request the developing countries to identify drivers of deforestation. The Copenhagen Accord recognizes that any successful REDD+ scheme must provide positive incentives for countries that take action to reduce deforestation and degradation.[13] There are three principal sources of REDD+ finance: payments from international compliance or voluntary markets (e.g. California's carbon market, or a future UNFCCC market) in exchange for emissions reductions; payments from donors directly to forest countries or through multilateral or bilateral funds (e.g. Norway–Indonesia); and payments generated from forest country budgets (Denier et al, 2014).

---

12 11th Conference of the Parties to the UNFCC, Montreal, Canada, Nov. 28-Dec. 9, 2005, Reducing Emissions from Deforestation in Developing Countries: Approaches to Stimulate Action, U. N. Doc. FCCC/CP/2005/L.2 (2005).

13 15th Conference of the Parties to the UNFCC, Copenhagen, Denmark, Dec. 7-18, 2009, Copenhagen Accord, U.N. Doc. FCCC/CP/2009/L.7 (December 18, 2009).

COP 16 in Cancun in 2010 was another turning point in the evolution of REDD+. It not only created a list of safeguards[14] to be adhered to in the establishment of domestic REDD+ policies but also established the policy framework for REDD+ negotiations that include a national strategy or action plan, national or sub-national forest reference levels, and a national forest monitoring system. It settled the list of eligible REDD+ activities or determined the scope of REDD+.[15]

The UNFCCC REDD+ rules do not use the term 'scale' in the context of implementation, nor do they specify precisely at what scale activities should be carried out. Nonetheless, the rules do largely focus on creating a system (policies, strategy, rights clarity, benefit-sharing, institutional arrangement, etc.) where REDD+ is implemented at the national level (Baker and McKanzie, 2014). It suggests that REDD+ should be implemented at the national level with some flexibility for sub-national implementation (in relation to the establishment of RELs/RLs, monitoring and MRV) as an interim measure.[16] There are three possible ways to measure and award reduced deforestation: on the national and sub-national levels or through a nested approach, which is a hybrid of the first two (Angelsen, 2008). The non-UNFCCC REDD+ mechanisms divide scales into three broad categories: jurisdictional approaches (where the accounting 'jurisdiction' in question is either at the national or subnational level); project-level approaches;[17] or multi-scale nested[18] approaches (Baker and McKanzie, 2014). It further divides jurisdictional approach into a national level approach,[19] and sub-national level approach.[20] Under the national approach, a State would establish a national reference level to determine the baseline amount of deforestation countrywide (Costenbader, 2009).

---

14 The safeguard activities which should be promoted and supported are i) REDD+ activities that complement or are consistent with the objectives of national forest programmes under relevant international conventions and agreements; ii) transparent and effective forest governance structures; iii) respect for indigenous and local community knowledge and rights, noting the adoption of the UN Declaration on the Rights of Indigenous Peoples (UNDRIP); iv) full and effective stakeholder participation in REDD+ activities, particularly indigenous peoples and local communities; v) REDD+ activities that are consistent with conservation of natural forests and biological diversity; vi) actions to address the risks of reversals; and vii) actions to reduce displacement of emissions. Decision 1/CP. 16, Appendix 1, para 2.

15 Decision 1/CP. 16, para 70.

16 Decision 1/CP. 16, para 71 (b).

17 A project-level approach means that incentives flow directly to project developers based on performance against a project baseline. Such stand-alone projects typically are smaller in area than governmental jurisdictions. Rane Cortez et al, 'A Nested Approach to REDD+: Structuring effective and transparent incentive mechanisms for REDD+ implementation at multiple scales' (2010). http://www.nature.org/ourinitiatives/urgentissues/global-warmingclimate- http://www.nature.org/ourinitiatives/urgentissues/global-warmingclimate- change/index.htm. Accessed on April 6, 2015.

18 The 'nested' approach is a system in which smaller scale activities, such as projects smaller than jurisdictional level REDD+ programs, are integrated into an accounting and incentive scheme of a larger jurisdiction, allowing incentives to flow directly to subnational entities and/or project developers in addition to national governments. Ibid.

19 Where REDD+ is implemented through national governments and is likely to result at first instance in carbon and non-carbon incentives flowing to the national government, based on performance against a national reference level. Ibid.

20 Where REDD+ is implemented (and accounted for) at a subnational scale, whether by a subnational or national government. In the former case, the incentives would typically flow to the subnational governmental entity

COP 16 (Cancun Agreement) further decided that REDD+ should be implemented in a phased approach–phase one (development of national strategies or action plans; policies and measures; and capacity building), phase two (implementation of REDD+ policies and measures; national strategies or action plans that could involve further capacity-building, technology development and transfer relating to REDD+; and results-based REDD+ demonstration activities), and phase three (results-based actions that should be fully measured, reported and verified)[21]. Another crucial aspect of the COP 16 is that it also requests developing country Parties, when developing and implementing their national strategies or action plans, to address, inter alia, the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations and the safeguards identified in paragraph 2 of Appendix I to this decision, ensuring the full and effective participation of relevant stakeholders, *inter alia* indigenous peoples and local communities.[22]

COP 17 in Durban in 2011established guidelines for setting forest reference emission levels and forest reference levels. It also clarified that all REDD+ activities should be consistent with the Cancun Safeguards, a set of principles within the Cancun Agreement which aim to ensure that REDD+ not only does no harm, but also delivers multiple social and environmental benefits (Denier et al, 2014). Then the COP in Doha in 2012 adopted an amendment to the Kyoto Protocol establishing a second round of binding greenhouse gas emission targets for Europe, Australia and a handful of other developed countries,[23] which is considered as the most significant achievement. Parties also took final decisions under a parallel negotiating track launched in 2007 in Bali that has produced new mechanisms on finance, review, adaptation and technology, as well as voluntary emission pledges from 94 countries.[24]

COP 19 in Warsaw in 2013 adopted the 'Warsaw Framework for REDD+', which makes REDD+ a reality under the UNFCCC and enables countries to move forward with the implementation of REDD+ activities under the UNFCCC (Climate Law & Policy, 2014). The core elements of this framework include finance, institutional arrangements, safeguards, national forest monitoring systems (including measurement, reporting and verification)[25] and reference emissions levels or reference levels (Denier et al, 2014). The Warsaw Framework invites interested parties to designate a national entity or focal point to serve as a liaison with the secretariat and the relevant bodies under the Convention, as appropriate, on the coordination of support for the full implementation of activities and elements referred to in

---

(e.g. a state, municipality, province, or district), based on performance against a subnational reference level59 (unless this is overruled by a national government). Ibid.

21 Decision 1/CP. 16, para 73.

22 Decision 1/CP. 16, para 72.

23 Centre for Climate and Energy Solutions .2012. Outcomes Of The U.N. Climate Change Conference In Doha, Qatar, Eighteenth Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP 18) and Eighth Session of the Meeting of the Parties to the Kyoto Protocol (CMP 8) November 27-December 7, 2012 Available at http://www.c2es.org/docUploads/c2es-cop-18-summary.pdf

24 Ibid.

25 For developing countries to obtain results-based funding for REDD+ they must fully measure, report and verify "anthropogenic forest-related emissions by sources and removals by sinks, forest carbon stocks, and forest carbon stock and forest-area changes" resulting from the implementation of REDD+ activities. Decision 2/CP.17 paragraph 64, Decision 9/CP.19 paragraph 3

decision 1/CP.16, paragraphs 70, 71 and 73, including different policy approaches, such as joint mitigation and adaptation, and to inform the secretariat accordingly.[26]

Different policies have been formulated for the national implementation of the UNFCCC and also to some extent for the implementation of the Kyoto Protocol in Nepal. The most important among them are Climate Change Policy 2011, NAPA and LAPA. National Biodiversity Strategy and Action Plan 2014 and Forest Policy 2015 include different policies related to climate change, conservation and sustainable management of forest and enhancement of forest carbon stock. The Rangeland Policy and National Land Use Policy also refer to climate change and carbon sequestration and provide couple of working polices for addressing the impacts of climate change. R-PP is being implemented since 2010 and different preparatory work has been carried out for preparing the country to enter into the demonstration phase. REDD+ Strategy, Low Carbon Strategy and other studies are likely to be finalised in the next few months. REDD Implementation Centre has been working effectively under the leadership of Apex Body and REDD Working Group. Although the Nepal Treaties Act 1990 requires that when a treaty to which the government is a signatory, but which has not been ratified, acceded to, approved or accepted by parliament, creates additional obligations that require the enactment of legislation; the government must enact laws for its execution in a timely fashion (Section 9(2)), specific legislation is yet to be enacted for ensuring the national implementation of the key provisions of the UNFCCC and Kyoto Protocol.

Despite these statutory requirements, implementation at the national level has remained weak, especially in the case of MEAs, because the government has neither enacted the required legislation nor has the supremacy been recognised of MEAs over national legislation (Belbase and Thapa, 2007).

5.1.2 Convention on Wetlands of International Importance Especially as Waterfowl Habitat

The Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar Convention) is effective since 1975. In view of the fundamental ecological functions of wetlands as regulators of water regimes and as habitats supporting characteristic fauna, especially waterfowl, the broad objectives of the Ramsar Convention are to reduce the loss of wetlands and to ensure their conservation (Preamble). Each party to the Convention is obliged to designate suitable wetlands within its territory for inclusion in the List of Wetlands of International Importance (Article 2(1). Inclusion in the List is to be based on the wetlands' ecological and overall scientific importance, and particularly on its importance as a waterfowl habitat. At least one wetland must be included in the list when the Convention is signed, or when an instrument of ratification or accession is deposited (Article 2 (4)).

Parties are obliged to formulate and implement planning measures to promote the conservation of wetlands included in the list, and to use wetlands in their territory as wisely as possible (Article 3(1)). Article 4 requires each party to promote conservation of wetlands and waterfowl by establishing nature reserves in wetland areas, whether or not they are included in the list, and to provide adequate supervision of these reserves. The convention's one of most stringent obligations relates to compensation for the loss of the wetlands by additional reserves. Where a Contracting Party in its urgent national interest, deletes or restricts the boundaries of a wetland

26 Decision 10/CP. 19 paragraphs 70, 71 and 73.

included on the List, it should as far as possible compensate any loss of wetland resources, and in particular it should create additional nature reserves for waterfowl and for the protection, either in the same area or elsewhere, of an adequate portion of the original habitat (Article 4 (2)).

Wetlands play an important role in both mitigation and adaptation to climate change. Wetlands such as peat lands, mangroves, salt marshes and sea grass beds have an important and underestimated role in both carbon storage and the regulation of greenhouse gas emissions (Zavagli, 2011). Degraded wetlands are already a significant source of atmospheric carbon and the restoration/rehabilitation of wetlands offers a return on investment up to 100 times that of alternative carbon mitigation investments.[27] The International Panel on Climate Change (IPCC) concluded in the Third Assessment Report (TAR) that some wetlands such as reefs, atolls, mangroves, those in prairies, tropical and boreal forests, arctic (including permafrost) and alpine ecosystems, are considered to be among those natural systems especially vulnerable to climate change. Studies show clearly that changes in distribution and behavior of a large number of wetland species are the consequence of shifts in local or regional climate, weather patterns and resulting changes of vegetation and habitat quality (Zavagli, 2011). Migrant species are likely to suffer especially large impacts as climatic change alters both their breeding and wintering areas, critical stopover sites, and potentially increases the distances they must migrate seasonally.[28]

The 12th COP of the Ramsar Convention urged the parties to maintain or improve the ecological character of wetlands, including their ecosystem services, to enhance the resilience of wetlands as far as possible in the face of climate-driven ecological changes including, where necessary, to promote the restoration of degraded wetlands, and further to promote the ability of wetlands to contribute to nature-based climate change adaptation, particularly the roles of wetlands in regulating water, including reducing risks from water-related disasters, and to sequester and store carbon as important responses for climate change mitigation through the maintenance and enhancement of their ecological functions, and to reduce or halt the release of stored carbon that can result from the degradation and loss of wetlands (Resolution, XI. 14 para 26).

5.1.3 Convention on Biological Biodiversity

The Convention on Biological Diversity (CBD) has been effective since December 1993. The parties to the convention assert that biodiversity must be conserved and sustainably used for the benefit of present and future generations. Its objectives are the conservation of biological diversity, the sustainable use of its components, and fair and equitable sharing of the benefits arising out of the utilization of genetic resources. It recognizes that states have, in accordance with the Charter of the United Nations and the principle of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction (Article

27 Report of the joint Ramsar/CBD technical workshop on 'Water, wetlands, Biodiversity and Climate Change', March 2007.

28 'Wetlands, water, biodiversity and climate change', Report of the March 2007 joint CBD-Ramsar technical workshop.

3). Nepal developed the National Biodiversity Strategy in 2002 and the NBSAP in 2006 as a commitment to Article 6 of the Convention.

The CBD seeks to promote conservation of biological diversity in the wild, through requesting contracting parties to identify regions of biodiversity importance, establish a system of protected areas, restore degraded ecosystems, maintain viable populations of species in their natural surroundings, and develop or maintain necessary legislation and/or other regulatory provisions for the protection of threatened species and populations. It duly recognizes and obliges the parties to respect, preserve, and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional life styles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices (Article 8 (j)).

Recognizing, among others, the importance of providing legal certainty with respect to access to genetic resources and fair and equitable sharing of benefits arising from their utilization, Nagoya Protocol on Access to Genetic Resources and fair and equitable Sharing of Benefits Arising from Utilization to the Convention on Biological Diversity was adopted on 29 October 2010. As a subsidiary legal instrument, the Nagoya Protocol exists to implement the terms of its governing treaty (Grebier et al, 2012) i.e. the Convention on Biological Diversity. The objective of the Nagoya protocol is the fair and equitable sharing of the benefits arising from the utilization of genetic resources, including appropriate access to genetic resources and appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and appropriate funding, thereby contributing to the conservation of biological diversity and the sustainable use of its components (Article 2).

According to the Millennium Ecosystem Assessment (2005), the changing climatic condition is likely to become the dominant direct driver of biodiversity loss by the end of this century. The Intergovernmental Panel on Climate Change estimated that 20-30 percent of species will likely be at a higher risk of extinction with temperature increasing greater than 1.5C° and risks will increase with additional temperature rise (IPCC, 2007). In order to address the impacts of climate change on biodiversity, Aichi Target 15 commits that by 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks is enhanced, through conservation and restoration, including restoration of at least 15 percent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification.

Some REDD+ activities could negatively affect both biodiversity and people including conversion of forests of high biodiversity value to other types of forest, the afforestation (i.e., conversion) of non-forest ecosystems such as grasslands and savannahs, the displacement or disenfranchisement of rural communities, and increased social inequities (Parrotta et al, 2012). Other concerns related to the potential indirect impacts of REDD+ activities on biodiversity include risks of displacement of deforestation and forest degradation to new areas that may have high biodiversity value (Parrotta et al, 2012).

The short-term and medium-term strategies of the NBSAP to meet Aichi Target 20 include: (i) abating deforestation and forest degradation, (ii) planning and implementation of reforestation and afforestation schemes, (iii) designing and implementation of targeted programmes to promoteagro-forestry and private forestry, particularly on marginal and abandoned farmlands,

and (iv)implementation of PES and REDD+ where feasible. A number of priorities have been identified to translate the strategies into actions some of which include: (i) restoration of at least 15 percent of the forested ecosystems through implementation of REDD+ and ecosystem based adaptation programmes by 2020, and (ii) finalization and approval of National REDD Strategy by 2016 (MoFSC, 2014).[29]

5.2 Carbon Fund Methodological Framework

Nepal needs to follow the Carbon Fund Methodological Framework (CFMF) 2013 for developing and implementation of ER programme as it has been a partner country of FCPF along with other countries such as Democratic Republic of Congo, Bolivia, and Vietnam and has been receiving support for the readiness phase. The Global Climate Fund is yet to develop the methodological framework/guidelines.

5.2.1 Land and Resource Tenure Requirement

The first requirement is that the ER Programme Entity demonstrates its authority to enter into an Emission Reduction Purchase Agreement (ERPA) and its ability to transfer title to ERs to the Carbon Fund (CFMF, criterion 30). The proposed terms of the FCPF ERPA between participant entities/countries generating emissions reductions for REDD+ activities and the FCPF include a warranty that the seller has full legal and beneficial title and exclusive rights to the generated emissions reductions, free of any third party interests. The effect of this is that those selling REDD+ emissions reductions will need to be able to secure carbon rights before entering into an ERPA (Baker and McKenzie, 2014).

It further requires that the ER Programme Entity can and should demonstrate its authority to enter into an ERPA with the Carbon Fund prior to the start of ERPA negotiations, either through: (i) Reference to an existing legal and regulatory framework stipulating such authority; and/or,

(ii) In the form of a letter from the relevant overarching governmental authority (e.g., the presidency, chancellery, etc.) or from the relevant governmental body authorized to confirm such authority (CFMF, indicator 36.1). This requirement is also in line with the Warsaw Framework for REDD+ that encourages the countries to set up a national REDD+ entity or designate a focal point to liaise with the secretariat and the relevant bodies under the UNFCC for REDD+ related matters. This entity or focal point can nominate other entities to obtain and receive results based payments for REDD+, provided that these entities comply with the requirements of those providing the payments.

As only the entity that has legal authority to serve as the ER programme entity can enter into ensuing responsibilities, obligations and also claim the benefits, it must be shown in the beginning to take the ERPA process forward. As the MoFSC is the focal ministry for conservation and management of forests, plants, NTFPs and national forest, government forest, community forest, leasehold forest and protected areas and buffer zone, and responsible for implementation of multilateral environmental agreements related to forest, plant, watershed

29 For other strategies for mitigating and adapting to the effects of climate change see MoFSC, 2014, *Nepal Fifth National Report to Convention on Biological Diversity*. MoFSC, Kathmandu, Nepal.

conservation, biodiversity and soil conservation in accordance with GoN (Business Allocation) Regulations[30] 2013, it is the ER programme entity.

In accordance with the GoN (Allocation of Business) Regulations 2013, the mandate, power and functions of the MoFSC are, among others, conservation, utilization, promotion and management of forests; conservation and management of forest products; conservation, utilization and sharing of forest benefits including plants, wildlife, biological diversity, and natural environment; demonstration and dissemination of forest, plant, wildlife, biological diversity, climate change related with forest sector, watershed conservation, and soil conservation; and implementation of international agreements related to forest, plant, wildlife, watershed conservation, biological diversity, and soil conservation. Discharge of these functions by the MoFSC, its departments, and other agencies as well as implementation of different policies, strategies, MEAs and legislation will support the MoFSC to transfer title of carbon credits generated under different community based-forest management regime. Furthermore it has already established the REDD IC which has been working since 2010 and "there is also written understanding between the MoFSC and MoSTE that the MoFSC will be the lead agency for REDD+ related work".

As the CFMF Indicators 36.1 is mandatory to fulfill appropriately, the Government of Nepal (GoN) should make necessary policy and institutional arrangements for meeting the requirement. For this, the GoN may amend the forest act 1993 or forest regulation 1994 as it is not spelt out in the current legislative frameworks. Since the amendment in the act and regulation may take long time, the GoN should make a clear decision at ministry level (i.e., minister level) as a short-cut process so as to ensure that the ER programme entity has the legal authority to enter to ERPA with the carbon fund.

Another requirement of the CFMF is that the ER Programme Entity must demonstrate its ability to transfer to the Carbon Fund Title to ERs, while respecting the land and resource tenure rights of the potential rights-holders, including indigenous communities in the Accounting Area. The ability to transfer Title to ERs may be demonstrated through various means, including reference to existing legal and regulatory frameworks, sub-arrangements with potential land and resource tenure rights-holders and benefit-sharing arrangements under the Benefit-Sharing Plan (Indicator 36.2). The implications of Indicator 36.2 for Nepal is that the MoFSC (REDD IC) is that it must not (i) abridge the rights of the land and resource rights of forest managing and dependent communities, (ii) refer to the provisions of the Forest Act, Land Act and National Parks and Wildlife Act which stipulate that GoN holds the land title over national forest, government managed forest, community forest, protected areas, and iii) it should also develop benefit-sharing plan which should provide the details of the sharing of the benefits to be accrued from carbon credit with forest managing and dependent communities. The Government needs to realize and appreciate the fact that it has the land title, but in reality it is the community that have been managing forest under different forest management regimes. It should, therefore, provide a fair and large share of the benefits to be accrued to the forest managing and dependent communities. Only then it will meet the requirements of the Indicator 36.2 and achieve REDD+ outcomes with ease.

30 GoN (Business Allocation) Regulations 2013 has been formulated by the Council of Ministers in accordance with the article 43 (2) of the Interim Constitution of Nepal 2007 which reads: The allocation of portfolios and transaction of business of the Government of Nepal shall be carried out as provided for in rules approved by the Government of Nepal.

Another key criterion is that the ER programme needs to show that it has undertaken and made publicly available an assessment of the land and resource tenure regimes present in the Accounting Area[31] (CFMF, Criterion 28). Indicator 28.1 of the CFMF further requires the ER programme to review the assessment of land and resource tenure regimes carried out during the readiness phase at the national level (i.e., SESA) and, if necessary, supplement this assessment by undertaking an additional assessment of any issues related to land and resource tenure regimes in the Accounting Area that are critical to the successful implementation of the ER programme, including:

- The range of land and resource tenure rights (including legal and customary rights of use, access, management, ownership, exclusion, etc.) and categories of rights-holders present in the Accounting Area (including Indigenous Peoples and other relevant communities);
- The legal status of such rights, and any significant ambiguities or gaps in the applicable legal framework, including as pertains to the rights under customary law;
- Areas within the Accounting Area that are subject to significant conflicts or disputes related to contested or competing claims or rights, and if critical to the successful implementation of the ER programme, how such conflicts or disputes have been or are proposed to be addressed; and
- Any potential impacts of the ER programme on existing land and resource tenure in the Accounting Area.

The ER programme is required to demonstrate that the additional assessment has been conducted in a consultative, transparent and participatory manner, reflecting inputs from relevant stakeholders. The context and rationale for land and resource regime tenure as per the CFMF is that land tenure and resource rights are complex in REDD+ country settings, and efforts to address them are being explored by a range of REDD+ initiatives. Information on land tenure and resource rights can help inform sound ER programme design, as it may help identify affected rights-holders in the Accounting Area, can guide the targeted design of ER Programme Measures, can contribute to efforts to draft equitable benefit-sharing plans, and can demonstrate the ER Programme Entity's ability to transfer title to ERs. Beyond what is required to implement an ER programme, the ER programme potentially may contribute to progress towards clarifying land and resource tenure in the Accounting Area.

Besides, the CFMF indicator 28.2 requires the ER programme to explain how the relevant issues identified in the above assessment have been or will be taken into consideration in the design and implementation of the ER programme, and in the relevant Safeguards Plan(s). If the ER programme involves activities that are contingent on establishing legally recognized rights to lands and territories that Indigenous Peoples have traditionally owned or customarily used or occupied, the relevant Safeguards Plan is required to set forth an action plan for the legal recognition of such ownership, occupation, or usage. Beyond what is required for the successful implementation of the ER programme, the ER programme is encouraged to show

31 CFMF Glossary defines accounting area as the area for which a reference level is established and over which emissions and removals from forests or select REDD+ Activities are being measured, reported and verified consistently.

how it can contribute to progress towards clarifying land and resource tenure in the Accounting Area, where relevant.

The ER Programme is further required to provide a description of the implications of the land and resource regime assessment for the ER Programme Entity's ability to transfer title to ERs to the Carbon Fund (indicator 28.3).

Although the UNFCCC does not mention the need to clarify carbon rights, and in the absence of an international regulatory mechanism, carbon rights have become relevant because of the interest in the trading of carbon as a commodity and the current prevalence of the voluntary carbon market as a means of attracting finance (Denier et al, 2014). The above criteria provide some guidance and additional requirements to the parties to put in place a clear land and forest carbon tenure so that there is no further deforestation and forest degradation as well as reference level could be maintained and displacement and reversals could be prevented. Carbon rights also need to be clarified because the owner of trees, forest, or an area of land will not necessarily be the owner of the sequestrated carbon, since 'in some jurisdictions (such as Nepal) rights of access and use of natural resources, including forests, may be considered separately from the ownership of the land on which they grow (Baker and McKanzie, 2014).

The Cancun Agreement encourages all parties to find effective ways to reduce the human pressure on forests that results in greenhouse gas emissions, including actions to address drivers of deforestation. It also requests developing country parties, when developing and implementing their national strategies or action plans, to address, inter alia, the drivers of deforestation and forest degradation, land tenure issues, forest governance issues, gender considerations and the safeguards identified in paragraph 2 of Appendix I to this decision, ensuring the full and effective participation of relevant stakeholders, inter alia indigenous peoples and local communities. The Warsaw Framework substantiates the REDD+ Rules of Cancun Agreement and accordingly reaffirms the importance of addressing drivers of deforestation and forest degradation in the context of the development and implementation of national strategies and action plans by developing country Parties, as referred to in decision 1/CP.16, paragraphs 72 and 76.

5.2.2 Benefit-sharing Requirement

As the REDD+ benefits[32] and their distribution systems can be of different types, there could be a variety of ways in which they can be tailored with different REDD+ stakeholders.[33] While the REDD+ benefit-sharing refers to the distribution of net gains from the implementation of REDD+ (Luttrell et al, 2012), REDD+ benefit-distribution system can be defined as a mechanism which allows allocation of benefits derived from REDD+ projects to relevant stakeholders (Denier et al, 2014). REDD+ benefits are relevant to different stakeholders and can be used to best align their interests with the long-term goal of shifting land-use practices

32 REDD+ benefits include carbon benefit for the purposes of climate mitigation and adaptation, and non-carbon benefits such as preserving biodiversity and watersheds, and protecting the rights of indigenous communities (Baker and McKenzie 2014; WWF 2013).

33 The stakeholders and potential beneficiaries of REDD+ at national level could include national financial institutions (e.g., treasury), legal frameworks, national audit offices/REDD+ registries, government departments (e.g., environment/ forestry/ agriculture/ finance), REDD+ trust fund working groups, and intermediaries and at local level they include local government, community groups, individuals, wider community, and project developers and implementers (Peskett 2011).

(Lutrell et al, 2012). However, REDD+ programmes need to target the particular benefits to the most relevant stakeholders at any given level so as to make the REDD+ programme effective (Lutrell et al, 2012). The programmes can create compelling value propositions for different stakeholders by tailoring their interests, needs, burdens and abilities to tolerate risk (Maderia et al, 2012). Tailoring benefits equitably depends on an understanding of who the beneficiaries are in terms of needs, current livelihoods, costs, performance, and tenure (Kelly et al, 2012). Any mechanism needs to ensure that small elite groups are not over-compensated and that as many as possible small landholders (who are usually poor) are involved in the scheme (Mohammed, 2011). Land management schemes (e.g., REDD+) could provide benefits more fairly by a declining reward for each additional unit of land while distributing the costs of, and benefits from, participation (Schwarte and Mohammed 2011). This would result in diminishing payment as landholding size increases which encourage participation of small landholders while ensuring that the large landholders do not rip off the benefits. However, if this type of targeting is not initially successful, monitoring and assessments of effectiveness of incentives would enable adaptive management for REDD+ projects (Kelly et al, 2012). One criteria for benefit-sharing should be canopy cover and carbon sequestration capacity of community managed forest rather than the size of the community managed forest. Those forests that are smaller in size, sustainable forest management is more effective, hence such forest have more carbon sequestration capacity.

Since the creation of positive incentives for reducing emissions is key in gaining support for REDD+ activities (Denier et al, 2014), criterion 29 of the FCPF CFMF requires the ER programme to provide a description of the benefit-sharing arrangements, including information specified in indicator 30.1, to the extent known at the time. Similarly, criterion 30 of the CFMF requires the Benefit-sharing Plan (BSP) to elaborate the benefit-sharing arrangements, building on the ER Programme, and considering the importance of managing expectations among potential beneficiaries. As one of the main determinants of the acceptability of an intervention such as PES or REDD+ is the perceived fairness of the distribution of the costs and benefits of the intervention (Sommerville et al, 2010), fairness should be considered while developing the BSP. The BSP is made publicly available prior to ERPA signature, at least as an advanced draft, and is disclosed in a form, manner and language understandable to the affected stakeholders for the ER Programme12 (CFMF, indicator 30.1). ERPA stipulates that the BSP should contain certain information (Box 5).

Box 5. Information Required for Benefit-Sharing Plan (BSP)

A careful design of benefit-sharing and incentivizing criteria is essential before introducing such modalities. One of the working polices of the **13th Plan** is to make appropriate arrangements for the distribution of income to be received from ecosystem services with the stakeholders that have been actually contributing in forest conservation. Although the working policy does not mention about incentive based mechanism, it indicates to incentivize those forest managing communities that have been contributing to conservation of forest and thus enhancement of carbon sequestration capacity and carbon stock. If there is fairness and equity in the incentive system, people should be more willing to participate in the REDD+ programme and contributing in conservation of forest and enhancement of carbon stock. The following information is needed to be included in the benefit-sharing plan:

- Identification of the categories of potential beneficiaries (i.e., who consider appropriate emission reduction strategies in their action plan, deserve land and resource tenure

rights, and title ERs), their eligibility to receive potential monetary and non-monetary benefits (i.e., culturally appropriate and gender and inter-generationally inclusive) under the ER Programme and the types and scale of such potential benefits.

- Criteria, processes, and timelines for the distribution of monetary and non- monetary benefits.
- Monitoring of the benefit-sharing plan, including, as appropriate, an opportunity for participation in the monitoring and/or validation process by the beneficiaries themselves.

Through community consultation, it is possible to assess the preferences of the participant communities for the amount and type of benefits, and thereby develop positive attitudes and promote a sense of ownership among local communities (Mohammed, 2011). Along this line, CFMF criterion 31 requires that benefit-sharing arrangements for ER Programme are designed in a consultative, transparent, and participatory manner appropriate to the country context that reflect inputs of all stakeholders. This process is informed by and builds upon the national readiness process, including the SESA, and taking into account existing benefit-sharing arrangements, where appropriate. Equitable participation, access and distribution of costs and benefits are rarely a by-product of a mechanism's operations, and instead, likely have to be an explicit focus of benefit design and delivery (Maderia et al, 2012).

To make sure that the BSP implementation is transparent (CFMF, Criterion 32), relevant information is required to be annexed in the ER Programme monitoring report and interim progress report and made public. The benefit-sharing arrangement is obliged to reflect the legal context (CFMF, Criterion 33). Indicator 33.1 obliges the design and implementation of the benefit-sharing plan to comply with relevant applicable laws, including national laws and any legally binding national obligations under relevant international laws. Where specific benefit-sharing rules have not been defined in laws or policies, they need to be constructed, for example through contracts–standard instruments have been developed for managing these in existing forest carbon market based systems (e.g., ERPAs) (Peskett, 2011). As non-carbon benefits are also integral to the ER Programme (Criterion 34, CFMF), the programme needs to identify such benefits, prioritize them, and describe how they can be generated and/or enhanced (Indicator 34.1, CFMF). Indicator 34.2 obliges stakeholder engagement processes to be carried out for the ER Programme design and for the REDD+ readiness phase so as to identify such benefits. ER programme is required to indicate how information on the generation and/or enhancement of such benefits be provided during ER programme implementation (Criterion 35, CFMF). If relevant, this approach also may use information drawn from or contributed as an input to the Safeguards Information Systems (SIS) (Indicator 35.1, CFMF). Information on generation and/or enhancement of priority non-carbon benefits need to be provided in a separate annex to each ER programme monitoring report and interim progress report, and will be made publicly available (Indicator 35.2, CFMF).

One of the reasons behind the requirement to provide the details of the co-benefits could be because the countries which do not provide forest carbon rights to the communities should also provide benefit-sharing arrangement along with the co-benefits so that the financial interest of the people are protected. In the case of Nepal, the government has already taken the initiative to include carbon sequestration as one of the ecosystem services and ownership of which is not clear yet. Government seems not to be in favor of providing carbon ownership right (along

with other ecosystem services such as water) to the forest managing communities–a conservative move regarding carbon rights. On the other hand, it opens the door for sharing more benefits with the community. Now the government should unambiguously stipulate in the Forest Regulations that the forest managing communities are also entitled to get the benefits to be accrued from all the environmental services. More importantly, the government needs to stipulate pro-poor benefit distribution mechanism which can be done as suggested by (Mohammed, 2011) such as (i) ensuring equitable participation by and consultation with the communities directly affected by the scheme; (ii) delivering absolutely positive net benefit to the poor; (iii) benefiting the poor proportionally more than the relatively well-off; and (iv) enhancing and making use of the poor's primary assets (e.g., labor and social capital). Moreover, as mentioned by WWF (2013) where the state retains all carbon rights, it can still allocate revenue or benefits from carbon credits to landowners and forest dwellers by specifying in the relevant forest regulations.

As REDD+ projects affect local wellbeing by (i) creating (or blocking) material opportunities for wealth creation and well-being (e.g., jobs, revenue streams, infrastructure, and improved educational conditions); (ii) enhancing (or weakening) populations' security (e.g., tenure security, food security, livelihood security, and adaptability to climate change); and (iii) facilitating (or preventing) the empowerment of individuals and communities to participate in decisions affecting local land-use and development (Lawlor et al, 2013), a careful approach to legislative, policy and programmatic efforts to provide fair and equitable carbon and non-carbon benefits to poor, women, *Dalit*, indigenous peoples and other disadvantaged groups is advisable. A better approach in the current context would be to clearly mention that the forest managing communities have carbon ownership rights over the forest carbon stock. In addition, Forest Act 1993 and Forest Regulations 1995 also need to be amended to include the measures that ensure benefits to the pro-poor communities irrespective of economies of scale of carbon production. The bottom line for developing REDD+ BSP should be that it must respect, and build on, the current benefit-sharing arrangements in practice in different forest management modalities that exist in the country as they are relatively well accepted by many stakeholders.

Ensuring multi-stakeholder involvement that reflects the diversity of Nepal's forestry sector as well as stakeholders from households' level in VDCs to central level as well as ministries such as agriculture, local development, energy and infrastructure is essential and challenging. The importance of indigenous peoples in terms of their historical and cultural connection to forests merits due recognition and promotion. As noticed during the course of this study, forest managers at local level, forest users and forest dependent communities, local people living in and around forests and part of the broader forest ecosystem as well as local government authorities, CSOs, CBOs, IPOs, NGOs, etc. are primary stakeholders of the REDD+. Similarly, different ministries such as agriculture, energy, irrigation, local development and development partners, donor communities, international agencies, educational institutions, research organizations and national REDD governing authority are other stakeholders of REDD+ process. The Strategic Environmental and Social Assessment Report (2014) has clearly mentioned about the institutions and their roles in this regard.

It is important to ensure that the process of selecting stakeholders is transparent so that interested parties may participate and that all stakeholders are provided with equal opportunity to engage and contribute to outcomes. Particular attention needs to be given to the inclusion of indigenous peoples and other forest-dependent communities, women and other marginalized

groups. Stakeholder groups should be supported to self-select representatives where appropriate.

5.3 National Policy, Legal and Institutional Framework

5.3.1 Policy Framework

There is a range of policy frameworks in the field of forestry and allied sectors that are influential to shape carbon rights under REDD+ directly and/or indirectly. Brief description of some of these policies is given in the following paragraphs.

Forest Policy 2015: The Forest Policy 2015[34] aims to maintain environmental balance by conservation of forest, plants, wildlife, protected area and watershed; and strengthen the governance of forest sector. It stipulates seven policies including ensuring judicious distribution of benefits arising from conservation of biological diversity and resources as well as environmental services; and adopting mitigation and adaptation measures for mitigating negative effects of climate change. Further, it strategizes (i) making appropriate legal and institutional arrangement for payment of ecosystem services (PES); (ii) enhancing the capacity of local communities to mitigate, adapt and develop resilience to negative effects of climate change on ecosystems; (iii) developing forest management system based on land use which is climate change adaptation and mitigation friendly; and (iv) increasing access to technology, financial resources and capacity development available for mitigation of negative effects of climate change. Although three out of four strategies are for addressing the negative effects of climate change, not a single strategy explicitly mentions about REDD+. However, some of the working policies provide space for REDD+REDD+ and carbon sequestration (Box 6).\

Box 6. Working Policies that Provide Space for REDD+ and Carbon Sequestration

- Ambit of carbon sequestration will be expanded through sustainable management of forests.
- Necessary support will be provided to those programmes that reduce the carbon emission from forest areas and forest products.
- In order to encourage carbon sequestration, certain portion of the royalty earned from sell of forest products and use will be invested in forest conservation activities including forest fire control.
- Appropriate technology will be identified, developed, and utilized for mitigating adverse impacts created by climate change.
- Forest management plans will be made friendly to climate change adaptation.
- The impacts and risks of climate change on ecosystem that have already occurred and likely to occur in future will be regularly studied, researched and monitored.
- Forest fire will be prevented and controlled by mobilizing public participation, using modern technology and adopting remedial tools.

As the forest policy states that necessary law, guidelines, and procedures will be formulated, revised and improved, it is expected that the above policies will also have necessary statutory

34 Approved by the Council of Ministers, Government of Nepal on February 3, 2015

backing in due course. Under the rubric of risks, it stipulates that if legal arrangement, institutional framework, skilled/efficient human resources and fiscal arrangements are not made, that status of implementation of this policy would not be effective. It is therefore logical to expect that the MoFSC will take necessary legal measures and establish necessary institutions for reducing emissions from deforestation and forest degradation, devolution of forest rights, rights to benefit from forest carbon and benefit distribution.

National Wetlands Policy 2012: The objectives of the National Wetlands Policy, 2012[35] are to conserve biodiversity and protect environment by conserving wetland areas, involve local people in the management of Nepal's wetlands and conservation, rehabilitation and effective management of wetland areas; support the wellbeing of wetland dependent communities by conserving and managing wetlands resources sustainably and wisely; and enhance the knowledge and capacity of stakeholders along with maintaining good governance in management of wetland areas.

Wetlands have been divided into four categories on the basis of ownership, viz., wetlands situated in protected areas; wetlands located in forest areas; wetlands that are outside forest areas and are under the ownership or possession of government agency or an autonomous organization; and wetlands situated on private land. Thus it supports government, local bodies and legal entity and private tenure over the wetland resources depending on the location of the wetlands.

To use wetlands wisely, the working policy covers and addresses wide array of crucial issues such as (i) increasing the productivity of wetlands by formulating and implementation of land use plan; (ii) protection and sustainable utilization of wetland fauna and flora by maintaining the abundance and diversity of such fauna and flora; (iii) promotion and adoption of environment friendly technologies, utilization of services and products available in the wetland areas; (iv) establishment of Wetland Fund for conservation and sustainable use of wetland resources; (v) involving wetland dependent communities in the conservation and management of wetlands and improving their livelihoods through promoting wetland based enterprises, knowledge-base and skills; and (vi) formulation and implementation of guidelines for distribution of benefits arising from wetlands to the wetland dependent communities.

The Policy also provides for Working Policies to promote good governance in the management of wetlands such as soliciting participation of local, district and central level stakeholders in the formulation, implementation, monitoring and evaluation of wetland conservation programmes; necessary institutional arrangements for making conservation and management of wetlands transparent and effective; formulation of an integrated legislation by amending existing natural resources related legislation for effective conservation and management of wetland areas. To be effective, the implementation of policy demands inter- ministerial coordination between the Ministry of Agriculture Development, Ministry of Irrigation, Ministry of Energy, and DDCs, Municipalities and VDCs.

Rangeland Policy 2012: The goal of the Rangeland Policy[36] is to adopt scientific method and management system based on environment friendly technology for sustainable management of

35 Ministry of Forest and Soil Conservation, 2012, *National Wetlands Policy 2012*. MoFSC, Singhadurbar, Kathmandu, Nepal.

36 Approved by the GoN on 2012-04-10 AD.

rangelands utilizing traditional knowledge, skill and technology in participation of communities. One of the objectives of the Policy is to help maintain ecological balance by conserving, promoting, and sustainable and scientific utilization of rangeland biological diversity.

The specific policies under the heading of increasing productivity by upgrading rangelands stipulate, among other things, to make necessary legal arrangement to provide rights and responsibility to local communities for the conservation, promotion and utilization of rangelands; make arrangements for grazing based on the capacity and production level of rangeland without degrading the existing quality of rangelands; make rangeland development and management proper in coordination with different stakeholders including protected areas; and protect the facilities of livestock rearing farmers which they have been utilizing as traditional grazing land inside community forest areas. It is apparent that the Policy wishes to guarantee the usufruct rights of local communities over rangelands.

The specific policies on maintaining ecological balance by conservation, promotion, and sustainable and scientific utilization of rangeland biological diversity states making arrangements for conservation, promotion of rangeland biological diversity and sustainable use of natural resources and emphasizing conservation of such commodity by bringing them under the ambit of intellectual property rights legislation; and carrying out research to learn the contribution of rangelands in carbon sequestration and implementing the findings of the research. Although only one of the working policies deals with carbon sequestration, it is important in the sense that it shows the realization as well as policy commitment to promote rangelands as carbon sinks. However, it would be essential to clarify who has the title over rangelands, since the state, VDC and individual citizens have ownership over rangeland depending on where the rangeland is situated- inside protected areas, outside protected areas, public land. The policy itself recognizes the need for research on the contribution of rangelands on carbon sequestration. If commissioning of this study gets priority, the rangeland ecosystems and the communities that have been contributing to their conservation will get the incentive to further enhance the carbons stock in near future.

Climate Change Policy 2011: The goal of the Policy is improving livelihoods by mitigating and adapting to the adverse impacts of climate change, adopting a low-carbon emissions socio-economic development path and supporting and collaborating in the spirits of country's commitments to national and international agreements related to climate change. The Policy includes different targets such as preparation of a national target for carbon trade in order to benefit from the Clean Development Mechanism by 2012; and formulation and implementation of a low carbon economic development strategy that supports climate-resilient socio-economic development by 2070 B.S. (2014).

The objectives of this policy is to establish a Climate Change Centre as an effective technical institution to address issues of climate change and also strengthen existing institutions; implement climate adaptation-related programmes and maximize the benefits by enhancing positive impacts and mitigating the adverse impacts; enhance the climate adaptation and resilience capacity of local communities for optimum utilization of natural resources and their efficient management; and improve the living standard of people by maximum utilization of the opportunities created from the climate change-related conventions, protocols and agreements, among others.

The provisions of the Climate Change Policy include expanding the scope of carbon sequestration through scientific management of the forests, formulating and implementing land use plans and controlling deforestation; establishing a Climate Change Fund for mobilizing the financial resources from public and private, internal and external sources to address the issues of climate change; generating financial resources by promoting carbon trade and Clean Development Mechanism; generating financial resources through the implementation of the polluter pays principle and the payment for environmental services concept; and allocating at least 80 percent of available funds for field-level climate change activities; and updating information and building capacity from local to policy level on climate adaptation, impact mitigation, low carbon growth, technology development and transfer, and carbon trade.

The Climate Change Policy under the rubric of climate-friendly natural resources management include developing and implementing a scientific land use system; proper utilization, promotion, conservation of forest resources as a means of alternative livelihoods; prioritizing and implementing programmes on the sustainable management of forests, agro-forestry, pasture, rangeland, and soil conservation that can address the impacts of climate change; encouraging carbon sequestration and investing some of the benefits from the use of forest products for controlling forest fires and conserving forests; and developing a mechanism for optimal utilization of international, regional and local funding sources, including reducing emissions from deforestation and forest degradation.

In order to implement the policies effectively, the strategies and working policies adopted by the Climate Change Policy include promoting the plantation of multi-purpose tree species in private fallow land, areas affected by soil erosion, landslides and sloping; and creating a favorable condition, through financial and technical facilitation, for communities involved in carbon sequestration to yield the maximum benefits from those activities; and committing at least 80 percent of total funds available for climate change-related programmes at the community level.

The policy also proposes establishing a separate Climate Change Fund for implementing programmes related to climate adaptation and resilience, low carbon development, risk identification, research, and development and utilization of technologies; and allocating at least 80 percent of the total budget from Climate Change Fund directly to programme implementation at the community level. Allocation of 80 percent of the Fund for community level intervention to address impact of climate change is indeed a very encouraging policy commitment for communities that have been suffering from adverse impacts of climate change, and/or using measures for adaptation to climate change also have been assisting to promotion of forest health by conservation of forests. It is very likely to contribute to address opportunity cost thus preventing the land use changes and reducing emissions from deforestation and forest degradation.

National Land Use Policy 2012: The objectives of the National Land Use Policy 2012[37] are, among others, to categorize land for optimum utilization of land and land resources; maintain a balance between development and environment; and protect land which has special significance such as geographical, cultural, religious, historical and touristic.

37 National Land Use Policy was approved by the GoN (Council of Ministers) on April 17, 2012.

The policy categorizes land into seven types for the optimum use of land and land resources - agricultural area, residential area, vocational area, industrial are, forest area, public use area, and other necessary areas as designated. The policy adopts different policies to encourage conservation, management, and utilization of land in accordance with the categorization; manage fragmentation of land; and maintain a balance between development and environment which includes that government land will be conserved in a manner to maintain at least 40 percent of the country's land as forest area; uncontrolled fragmentation of land will be discouraged; forest land of minimum green belt and open space will be determined in urban areas; environmentally sensitive area will be identified and protected; biological diversity will be conserved and promoted by maintaining a balance among land, environment and development; and developmental activities will be operated taking into account the principle of sustainable development and impact of climate change in order to maintain balance between development and environment.

The working policies of the Land Use Policy directly contributing to REDD+ are the provision of green certificate (*harit purja*) that will be provided by demarcating the boundary of forest area; arrangements will be made for not allowing the land that has been specified as forest area for any other uses; if there is no other option than using forest land area for development work, the provisions relating to maintaining at least that much of land area as forest in other area from the budget of the project and accordingly developing forest area will be enforced; in such situation the provision that at least 25 trees must be planted if one tree of the forest area is to be cut will be effectively implemented; degraded forest area will be managed as per the Forest Act by carrying out afforestation in such areas; forest area will be developed by planting trees in government and public land river bed (*Ukash)* that are not in appropriate use; to conserve areas that are very sensitive to soil erosion, conservation oriented community forest will be encouraged if the land is government or public and private forest will be encouraged in case such land is under private ownership; especial arrangements will be made for conservation of watersheds, wetlands, protected areas, buffer zone, national parks and reserves, pasture land etc.; biological corridors including areas of potential forest for biological corridors will be developed as protected forest and forest area, range land and wetland areas will be conserved; and arrangements will be made for not allowing the land with special geographical, cultural, religious, historical, strategic and environmental significance for any other purposes.

The Policy gives due regard to the importance of community managed forests, protected areas, and wetlands. Since the working policies emphasises that arrangements will be made for not allowing the land that has been specified as forest area for any other uses, and compensatory plantation of trees, it would provide assurance to communities that have been managing the forests that their usufruct right will not be curtailed because of infrastructure and other developments. However, now the focus should be on implementation of different components of the Policy; formulation and implementation of land use plan and development of nnecessary legal and institutional arrangements. The Policy has started a new trend of time bound target, for the Policy states that necessary legal and institutional arrangements are to be made by April 16, 2014. Although the Ministry of Agricultural Development has not been able to meet this deadline owing to different reasons, the enactment of land use legislation will have long term implication on tenure arrangement, guaranteeing usufruct right and preventing land use change which is likely to have adverse impact on carbon sequestration capacity of carbon pools of the country.

As the mission and one of the objectives of the National Land Use Policy focus on environment, it is very likely that the programmes developed to implement this Policy will give due regard to environment conservation. The policy's intent and commitment to environment conservation and addressing the negative impacts of climate change including deforestation and forest degradation is reinforced by the specific policies such as environmentally sensitive area will be identified and protected; and developmental activities will be operated taking into account the principle of sustainable development and impact of climate change. Despite all these progressive provisions, the pace of implementation of the Policy has been slow which has contributed to change of land use with negative effect on environment balance.

Irrigation Policy 2013: The specific provisions of the Irrigation Policy 2013 state, among others, that emphasis will be given on implementation of programmes relating to management of climate risk, disaster risk and adaptation and mitigation for addressing the effects of climate change; existing legislation and institutional arrangement will be reformed in order to comply with international treaties, agreements and standards relating to irrigation.

Working policies under the rubric of environment conservation and water quality management stipulate that irrigation projects/systems will be constructed in a manner that the negative environmental effects of the projects/systems is least; necessary competence and public awareness will be enhanced for this purpose; EIA or IEE will be conducted in accordance with the prevailing law and public hearing and social audit will be the basis for identifying the likely negative effects of the project on the environment. This policy requires to give due consideration to environmental and social impacts.

It further stipulates that in the course of using water for irrigation from any river/rivulet, only the remaining water will be utilized for irrigation purpose after discharging minimum water in the same river/rivulet; water quality monitoring, study and research will be carried out in order to utilize water for irrigation without having negative effect on the environment. However, these provisions are not being implemented in reality although these provisions were also included in the previous Irrigation Policy of 2003.

5.3.2 Legal and Regulatory Frameworks

Constitution of Nepal 2015: The Constitution of Nepal 2072 (2015) provides several direct and indirect rights to the people. These rights include: right to clean and healthy environment, and right to compensation from environmental polluter (Article 30), right to property (Article 25), right to justice (Article 20), rights to employment (Article 32), rights of consumer (Article 44) right to constitutional remedy (Article 46). The Development Policy of the state is guided by sustainable development, and the policy relating to protection, promotion and utilization of natural resources focuses on the protection, conservation of available natural resources in the country in accordance with the principle of inter-generational equity (Article 51). Signing, ratification, approval, and accession to a treaty are vested in the federal government. Any treaty that is related to natural resources and its utilization requires to be passed by a twp-thirds majority of both the sessions of the federal parliament (Article 279).

The Constitution, under Annex 5 empowers the Federal government for the formulation of international and national policies for environmental management, national parks, wildlife reserve, wetlands, national forest policy and carbon services. Federal and State governments jointly are also empowered for the formulation of environmental protection and conservation policies in line with the sustainable development (Annexes 6). Similarly, State governments

and Local governments are also empowered to formulate necessary policies for the protection of environment and management of natural resources and land use (Annex 7 and 8). Thus the Constitution has paid great attestation for the protection and conservation of environment and land use. Necessary laws can be enacted for the implementation of federal, provincial, and local policies.

The Constitution of Nepal 2015 guarantees the right of every person to acquire, own, sell and otherwise dispose of property, subject to the existing laws. As maintained by Dhungel et al, (1998) with regard to the right to property related provision of the Constitution of the Kingdom of Nepal 1990, the property right guaranteed by the constitution is also a private right and includes property which may be acquired, owned, sold, or disposed of is capable of being either tangible or intangible. It is equally applicable to the right to property related provision of the Constitution.

It is apparent that the right to property is subject to existing laws, and is not absolute. It means that the state can regulate the acquisition, ownership, sell and disposal of private property on the basis of existing laws. As the Constitution entitles the state, except in the public interest, to acquire or create any encumbrance on the property of any person without compensation, it corroborates that the right to property is not absolute. Nevertheless, as long as the individual or a group of persons have ownership over a property, they have the bundle of rights over that property including tangible or intangible property.

In case any property is requisitioned, acquired or encumbered by the state in implementing scientific land reform programmes or in the public interest in accordance with the law, the state is obliged to pay compensation. The amount and basis of compensation and relevant procedures must be as prescribed by law. Read literally, it appears to mean that the government must not disturb the distribution of wealth which would be arrived at in people's private dealings with one another. This makes the right to property a very serious and significant right, to be enforced most energetically and some constitutional theorists believe the entitlement to compensation to be excessive (Dhungel et al, 1998).

Forest Act 1993: This law vests the ownership over national forest and community forest, leasehold and religious forest over the GoN (Section 67). It thus recognizes tenure of the government over forestland whatsoever be the forest management regime. However, rights of access, management, harvest, and so on are extended to community forest and leasehold forest user groups. If the law exists specifically for tree tenure as distinct from land tenure, the right to the tree then includes the rights to the carbon in the tree (Bruce et al, 2010). The government is further empowered to acquire any private property that falls within the boundary of national forest by paying compensation (Sections 3-17).

Forest means an area fully or partly covered by trees (Section 2 (a)). Forest products include products which are contained or found in or brought from forests (i) timber, firewood, charcoal, catechu, rosin, wood-oil, bark, lac, *Pipla*, *Pipli*, (ii) tree, leave, fruit, flower, *Mahwa, Chiraito*, *Kutki* and all kinds of wild herbs, vegetation and different parts or organs thereof; (iii) boulder, soil, stone, pebble, sand; or (iv) bird, wild life and trophy thereof (Section 2 (c)). Although the definition is broad enough to cover products such as timber, non-timer, wildlife and sand and soil, it is silent about environmental services provided by the forests, let alone the carbon stored by forests.

The law provides for the establishment of users groups and allows them to utilise forest products by developing and conserving forest for the collective interest (Section 41). The district forest officer (DFO) may hand over to registered CFUGs any part of a national forest, to be managed as 'community forest' (Section 25(1)). The CFUGs are required to develop, conserve, use and manage the forest handed over to them. They may sell and distribute forest products according to an operational plan, at a price determined by the users group itself. Thus, CFUGs hold a proprietary right to the respective forest that has been handed over to them. They do not have, however, a land title over the community forestland. Property right includes bundle of rights based on the framework developed by Rights and Resources Institute (RRI). These rights include access, withdrawal or use; management; exclusion; due process and compensation; duration and alienation rights in the bundle of rights (RRI, 2012). Nepal's community forest management system includes almost all these rights except for right to alienate which is limited to collateral (Stevens, et al, 2014).

Users groups may also make amendments to the operational plan (Section 26 (1)), but only if such alterations are not "likely to affect adversely the environment in a significant manner" (Section 26 (2)). In theory, these provisions allow communities to participate in management and decision-making, and to share in the benefits from the use of forest resources. This, however, is not always true in practice (Belbase and Thapa, 2007).

The Forest Regulations 1995 provides that users groups are permitted to collect and sell only those forest products specified in the operational plan (Rule 32 (1)), and must rehabilitate the area after timber and other forest products have been taken (Rule 32 (2)). Certain activities prohibited in community forest include clearing a forest area for agriculture (Rule 31 (1)(b)); capturing or killing wildlife in contravention of the relevant laws (Rule 31 (1)(e)); extracting or transporting rocks, soil, pebbles or sand (Rule 31 (1)(f)); and carrying out any activity that may cause soil erosion (Rule 31 (1)(d)).

The Forest Act also allows the government to hand over any part of a national forest as a leasehold forest to any corporate body, industry or community (Section 32 (1)). Such forests may be used for a number of purposes, including selling and using forest products, promoting plantation, setting up tourist operations, and carrying out agro-forestry or wildlife farming, as long as these activities are compatible with the conservation and development of the forest (Section 31). Leasehold forests may also be used to produce raw materials for industries based on forest products (Section 31 (a)). Priority, however, is given to community forests: any part of a national forest suitable for community forest use cannot be handed over as leasehold forest (Section 30).

The Bill to Amend the Forest Act proposes to allow the government to manage any part of a government managed forest as prescribed in collaboration with District Forest Office, local body, and users. It proposes that 40, 10 and 50 percent of timber and firewood produced from collaborative forest will go respectively to government, local body and collaborative forest users group.

The government retains the right to use community forest and leasehold forest areas for the implementation of the plan having national priority where no alternative is available, as long as no significant adverse effects are created (Section 68 (1)). In cases where the execution of a project of national priority in a forest area causes any loss or harm to local individuals or communities, compensation is to be paid by the operators of the project (Rule 65 (1)), who also

bear the expense of cutting, processing and transporting forest products approved for use in the project (Rule 65 (2)). These provisions comprise the constituents of the concept of public purpose mentioned in the constitution (Bhattarai and Khanal, 2005). Thus the members of CFUGs and other community forest user groups are also entitled to compensation in case of any loss or harm.

The Government may designate any part of the national forest which has environmental, scientific or cultural significance or any other special importance as protected forest by publishing notification in Nepal Gazette (Section 23). The Department of Forest is required to develop operational plan for the activities to be carried out in a protected forest and submit to the MoFSC for approval (Section 24 (1)). DFOs are required to implement the operational plan.

National forests not handed over to communities are strictly regulated, and the Forest Act contains detailed provisions aimed at restricting their use. A wide range of activities are prohibited in a national forest, including cultivating land, setting fires, constructing dwellings, grazing animals, cutting or damaging plants and trees, hunting, removing forest products, extracting sand or soil, burning charcoal, and damaging forest products while carrying out licensed felling activities (Section 49). The Government has the tenure over land and carbon contained all five carbon pools.

The major issue with the emergence of REDD+ and Nepal's effective participation in REDD+ process is whether forest products includes the carbon stored in forests and whether the communities those who have been managing the forest under different forest management regimes have the right to trade the carbon and enjoy the associated benefit. One school of thought is carbon stored in forests is intangible forest product, thus the communities that have been managing the forest are entitled to get the benefit from sell of carbon stored in the respective forests. Another view is that as the current definition of forest product does not recognize intangible products and environmental services, the state is the owner of such services.

The confusion as to whether the communities that have usufruct right over forest also have the property right over carbon contained in the different carbon pools in the respective piece of forest is resolved when the usufruct rights of the communities is reviewed. Usufruct rights comprise the range of legal rights and agreements whereby an entity may use and derive benefit from property that belongs to another entity, provided the property is not impaired (Takacs, 2009). It is further reinforced by some who maintain that a wide range of property rights may accrue to entities that can use biological resources in certain ways without actually owning those resources themselves (Luttrell et al, 2007). Since the Forest Act and Forest Regulations respect and promote usufruct rights and the forests that have been handed over to communities as community forest, leasehold forest or religious forest have the authority to collect and sale the forest products in accordance with the operational plan, the users group have carbon tenure over the above ground biomass, dead wood, litter and organic soil carbon within the forest area that has been handed over to respective users group. After the passage of the Bill to Amend the Forest Act from the Legislative Parliament, users group of collaborative forest will also have the carbon tenure in accordance with the share proposed by the Bill. It is not clear whether they have the tenure over carbon contained in below ground biomass for the ownership over national forest and community forest, leasehold and religious forest over the GoN.

National Parks and Wildlife Conservation Act 1973: The National Park and Wildlife Conservation Act 1973 describes five categories of protected areas, namely national parks, wildlife reserves, controlled (strict) nature reserves, haunting reserves and conservation area[38] (Section 2). National park is defined as an area set aside for the conservation and management of the natural environment, including fauna, flora and landscapes (Section 2(a)). A strict nature reserve is an area of unusual ecological significance set aside for the purpose of scientific studies (Section 2 (b)). These two types of areas are to be managed, as far as, possible, without human intervention. An area to be managed according to an integrated plan for the conservation of natural environment and balanced utilization of natural resources is defined as conservation area. Nevertheless, it does not define the term forest product.

GoN may, as it deems necessary, designate any area as national park, reserve, conservation area by publishing a notification in Nepal Gazette including the boundary (Section 3 (1)).The government may change the boundary, or transfer the ownership, or blackball or depose a national park, reserve or conservation area by publishing notice (Section 3 (2)). Similarly, it may designate any area around a national park or reserve as buffer zone by publishing a notification in Nepal Gazette (Section 3A). Without the permission of authorized officer activities such as the hunting of any animals or birds; building of any house, hut or any other structure; clearing or cultivating any part of the land or harvesting of any crops; pasturing or watering of any domesticated animals or birds; cutting burning or damaging any tree, bush or other forest products; and mining within protected areas are prohibited inside a national park or reserve (Section 5).

Protection is accorded to 26 species of mammals, nine species of birds, and three species of reptiles by including them on the list of protected wildlife (Section 10).[39] Ironically, neither the list has been revised in the past 40 years since the enactment of the Act nor protection has been accorded to wild flora.

The warden has the authority to form a user's committee for the management of fallen trees, dry wood, firewood and grass in a national park, reserve, conservation area or buffer zone in co-ordination with local authorities.

This Act was considered to be the most efficacious piece of legislation in the past. However, different kind of conflicts have emerged between protected area and local communities such as loss of life and livestock to carnivorous predators; park regulations have limited the rights of local villagers to graze their animals within park boundaries and collect forest products; and destruction of agricultural crops by herbivores; lack of opportunity to buffer zone community to participate in the governance and management of protected areas. All this has produced resentment against protected areas and polarized the public opinion as well as opinions of some of the independent professionals.

One of the major shortcomings of the Act had been lack of scope for community participation in conservation design and management of protected areas in the past which has partly been addressed by incorporating the concept of buffer zones by amending the Act in 1993. There is demand for and still room for improvement in the management of the protected areas by

38 It is an area set aside to be managed in accordance with an integrated plan for the protection of the natural environment and the sustainable use of natural resources (Section 2 (E1)).

39 Schedule 1 of the Act provides a list of protected wild animals.

increasing the participation of local communities in the governance of national parks and wildlife reserves. Some articles of the National Park and Wildlife Conservation Act promulgated in 1973 have already become outdated and are not suitable to the demands for development of the protected areas in the changed political and social context of the country (GoN/MoEST, 2008). It is high time that the MoFSC critically reviewed the Act and made arrangements for the enactment of a new piece of legislation repealing the 40 years old Act.

Buffer Zone Management Regulations 1996: The Buffer Zone Management Regulations (BZMR) 1996 were issued under the NPWCA to regulate land use, ensure compatibility with protected area management goals, facilitate public participation in the conservation and development of the area, and allow for benefit-sharing.

The warden of a protected area is responsible for preparing a management plan for that protected area's buffer zone (Rule 5). The plan, to be approved by the Department of National Parks and Wildlife Conservation (DNPWC), must include activities to promote community development, environmental conservation and the balanced utilisation of buffer zone resources. The government may channel 30-50 percent of the revenues generated by the national park or reserve (such as earnings from tourism) to local communities for conservation and development activities (NPWCA, Section 25A). Further, the BZMR makes the Warden responsible for conservation of (a) wildlife, (b) natural environment and natural resources, (c) biodiversity, (d) forests and (e) development works in the buffer zone area (Rule 7).

The law provides that the warden may, in coordination with settlements and local authorities, divide the buffer zone into units to facilitate management (Rule 4). The warden is also empowered to form users committees for the buffer zone, in coordination with local government authorities (NPWCA, Section 16C; BZMR, rule 8), in order to manage fallen trees, dry timber, fuel wood and grass inside a national park, reserve, conservation area or buffer zone. Other powers and functions of the users committee include implementing the activities as prescribed in the approved work plan of the respective area; implementing the project appropriately for which it has taken responsibility; making arrangement for operation and maintenance of the project for which it is responsible; submitting the budget and annual programme and getting them approved by convening a meeting of the users; prescribing the type, quantity, the area, method, time and fees for the forest products necessary for the daily use of local people annually; and operating the fund of the users committee (Rule 10).

A users committee may implement activities specified in the approved plan for its unit. A users committee may apply to the warden to take responsibility for managing any forest in the buffer zone area designated as buffer community forest (Rule 21). The users committee of the buffer community forest committee must be allowed to use the forest resources of the forest planted and grown by the users committee by not exceeding the extent and quantity as mentioned in the plan by paying the fees as prescribed (Rule 21 (10)). Users committee of the buffer community forest is allowed to use the forest resources received from the forest area conserved as the community buffer forest by the users committee by not exceeding the extent and quantity as mentioned in the plan (Rule 21 (11)).

Similarly, a religious authority, group or community may apply to the warden to take responsibility for a buffer religious forest, defined as any religious place situated in the buffer

zone, provided that religious activities do not negatively impact the environment or the rights of other users (Rule 22).[40]

The warden may dissolve a users' committee of a buffer zone community forest or a buffer zone religious forest if the users committee is unable to implement work plans, or if it contravenes rules and regulations (Rule 14).

Under the BZMR, a number of activities are prohibited in a buffer zone, unless specific permission has been granted by the warden (Rules17 and 19). Such activities include harvesting trees, carrying out cultivation and any other destructive practices inside forests; mining, quarrying stone, soil or sand, or removing any substances in a way that is likely to have significant adverse impact on the environment; using hazardous pesticides or explosives in a river, stream or source of water flowing inside a buffer zone; and hunting wildlife. Prohibition on activities such as harvesting of trees, mining, quarrying stone, and soil without the permission of warden has been contributing to conservation and enhancement of forest carbon stock.

Promulgation and implementation of BZMR is a farsighted initiative to address the park and people conflict. However, the irony is that warden has full authority over buffer zone community forest and other user groups, whereas the CFUGs established under the Forest Act are legal entity. Consequently, the user groups have relatively limited usufruct right in buffer zones which is justified by the authorities saying that the goal of protected areas and national forest is completely different. Despite the fact that there is difference in the legal status of the community forest users group and buffer zone users committee, when the definition of the usufruct rights is used to review whether they have the tenure over carbon in the buffer zone forest handed over to them for management, it is inferred that they also have the right over carbon contained in the four carbon pools, excluding the below ground biomass.

Conservation Area Management Regulations 1996: The boundary of a Conservation Area is determined by the GoN by publishing a notification pursuant to Section 3 of the National Parks and Wildlife Conservation Act 1973. For the management of the Conservation Area, the Institution must divide the Conservation Area in various conservation areas (*Ilakas*) as necessary on the basis of the natural boundary (Rule 5).

The concerned conservation officer is required to constitute a conservation area management committee in each VDC within the Conservation Area for the effective implementation of the construction works related to the community development activities, protection of the natural environment of that area and management programme related to the balanced utilization of natural heritage of the Conservation Area (Rule 8). The functions, duties and powers of the committee are, among others, to prepare and submit a work plan to the Chief for the protection of the natural environment, community development, development of natural heritage and its balanced management within own area; collect fees for fishing, consuming of forest products, pasturing animal or using natural resources pursuant to these Regulations and also to provide a license; and operate creative activities for the prevention of the calamity such as landslide and soil-erosion, protection of the forest products, conservation of natural resources and wildlife, environmental cleanliness and community development of the consumers (Rule 9).

---

40 The Forest Act 1993 (Sections 35-37) also provides for the handing over of religious forest under conditions similar to those related to buffer religious forest areas.

Each conservation area management committee is obliged to develop and submit draft of the Management Work Plan to the Conservation Officer relating to the natural resources that has to be utilized in its area, conservation of the wildlife and their utilization, community development and promotion of the interest of local consumers (Rule 14 (1)). After receiving the Management Work Plan from the different committees, the Chief must prepare a comprehensive Management Work Plan, harmonizing it and making uniform with the management work plans received from the committees.

A number of activities are prohibited in a conservation area, unless specific permission has been granted by the chief (Rules 16). Such activities include hunting wildlife; cutting, felling or harvesting trees, plants or set on fire or carrying out any other destructive practices; mining, quarrying stone, soil or sand, or removing any substances; causing harm to wildlife, bird and destruction of public land; and using electric current in a river, stream or source of water flowing inside a conservation area.

If any activity that has been conducted or likely to be conducted within or outside of the conservation area adversely impacting or has the potential to have adverse impact on the land use, public health, natural environment and in the conservation of natural resource of the conservation area; the chief or the conservation officer may issue an order to the concerned person to stop such activity immediately or to take corrective measures (Rule 17).

The fee that has to be paid for the consumption of the forest product for daily use from inside the conservation area, for grazing the animal or utilization of other natural resource must be as determined by the conservation area management committee (Rule 25 (1)). The Committee is obliged to give a license to the person paying the fee (Rule 25 (2)). Conservation area Management Guidelines 1999 empowers the chief to provide permission for collection and transportation of only those forest products and herbs which are not prohibited by prevailing law outside the conservation area for commercial purposes, subject to conducting environmental impact assessment and re-production plan by taking prescribed fee (Section 21(2)).

Conservation Area Government Management Regulations and Kanchenjunga Conservation Area Management Regulations also provide for management of conservation areas. The former is based on the concept of users group and users committee under the leadership of warden and the latter is based on users group and users committee under the leadership of Conservation Area management council with representation from users committee, mothers group, community forest users group, disadvantaged groups and a person who has significant contribution in conservation work.

Soil and Watershed Conservation Act 1982: In order to properly manage the watershed, the Soil and Watershed Conservation Act 1982 was enacted. The term land use system is defined as a process of having a long-term use of land by doing farming or other acts in such a manner as not to weaken or destroy or as to keep on the physical and chemical qualities maintaining the fertility of such land (Section 2 (c)).

The GoN may designate any area as protected watershed areas (Section 3). The Watershed Conservation Officer (WCO) may carry out, *inter alia*, in a protected watershed area:

- Construct and maintain dams, embankments, terrace improvements, diversion channels, and retaining walls necessary for erosion and landslide control,

- Carry out plantation, plant grasses, weeds or other vegetation, and look after, maintain and grow the same,
- Protect vegetation in landslide-prone and steep slope areas and undertake afforestation programmes, and
- Maintain fertility of soil and balance cleanliness of water and environment (Section 4).

Notwithstanding anything contained in the prevailing law, carrying out activities such as cutting or otherwise destroying any such trees, plants or other forest products as that person may deal according to his/her will pursuant to the prevailing law relating to forests; cutting or otherwise destroying any existing forests, trees, plants, weeds, grasses or other natural vegetation; carrying out any act causing the collection or dumping of stone, sand mud, etc. or any act causing the collected or dumped stone, sand, mud etc., to be swept away; excavating or taking away stone, sand or other kind of soil; establishing an industry, business or settlement of habitation; and grazing cows, buffaloes, sheep, goats, chicken and similar other domestic animals and birds is not allowed in the lands within a conserved watershed area, which are specified as a land that is vulnerable or likely to be vulnerable to floods or landslide or soil erosion without permission of the WCO (Section 10).

Since this law empowers the government to acquire any industry or relocate any settlement, it can have direct impact on the private land tenure. However, the government is obliged to give reasonable compensation to the industry or settlement that is to be resettled. The Act outlines the essential parameters necessary for proper watershed management of sympatric rivers and lakes, but it does not provide for community participation in the decision-making process, thus impeding effective implementation of the Act. Further, the major lacuna of this law is that not a single watershed has been designated as conserved watershed as per this law.

Land Act 1964: The objectives of the Land Act 1964 are to divert inactive capital and burden of population from the land to the other sectors of economy in order to accelerate the pace of economic development of the country; to bring about improvement in the standards of living of the actual peasants dependent on the land by making equitable distribution of the cultivable land and by making easily accessible the necessary know-how and resources on agriculture and to keep up the convenience and economic interests of the general public by providing encouragement to make maximum increase in agricultural production.

This Act abolishes the *zamindari* (landlord) system of land ownership (Section 3). The term *zamindari* (or "*jimidari*", as it appears in the Act) is defined as "any system of collecting land taxes according to law and depositing the proceeds" with the government, and includes the *Kipat*[41] system of tenure (Section 2(h)). Land previously held under the *zamindari* system is to be registered in the name of the *zamindar*, in keeping with prescribed ceilings.

Ceilings on ownership are specified in section 7 and vary according to geographical location. The maximum size of an agricultural holding is 6.6 hectares, while the largest homestead may cover 0.66 hectares (Section 7). Land in excess of these ceilings is to be acquired by the prescribed authority (Section 15) upon payment of compensation (Section 19). The land so acquired may be sold or re-allotted (Section 21) and, until the sale or re-allotment is finalised,

41 *Kipat* is a system of land tenure which is based on communal land ownership and originated in the eastern hills of Nepal in which land belonged to the local community under 'customary law' and not to the state. They were able to retain control of their communal land within a broad framework of local autonomy.

may be "given away" for cultivation on "any terms" to the former landowner or tenant, or any other person (Section 21A). Such land is to be distributed among *Dalits,* members of ethnic communities and bonded laborers who have been freed, with priority given to residents of the VDC or municipality in which the land has been confiscated (Section 21, as amended in 2002).

Exemptions on these ceilings may be granted in the case of land led by the government itself, or by industries, or educational and medical institutions (Section 12). Other types of holdings that may also be exempted from ceilings include land held by DDCs, VDCs or municipalities (Section 12 (b)); land used "under prescribed conditions for agricultural purposes" prescribed by the government (Section 12 (e)); land under the jurisdiction of the *Guthi* corporation (Section 12 (f)); and land held by cooperative agricultural societies (Section 12 (g)).

Tenancy in land was abolished from 1996 by means of the Fourth Amendment to the Act (Section 25 (2)) 19. The amendment allows tenants to retain 50 percent of the land they were previously farming or occupying, or to accept a cash payment based on the current value of the land to which the tenant is entitled (Section 26D).

The Land Act 1964 empowers the GoN to implement land use programme in any or all the areas of the country to ensure use of the land based on the nature of the land (Section 51 (h) (1)). While classifying land for the purpose of implementation of land use programme, land must be classified on the basis of nature of soil, fertility, geographical situation of the country, environment and climate (Section 51 (h) (2)). The Act provides for the formation of a nine member Land Use Council under the Chairpersonship of the Vice Chairperson of the National Planning Commission to determine national land use policy (Section 51 (f). \

Land (Survey and Measurement) Act 1963: Land includes all categories of land, including those with buildings, gardens, orchards, trees, factories, lakes, ponds etc. (Section (2)(a)). Government land is defined as the land where roads, railway, government building or office exist including forest, shrubs, jungle, river, streams, river bed (Nadi Ukas), lake, pond and ridge thereof, main canal, water course (Kulo), *Ailani* (barren unregistered land), *Parti* (Barron) and other types of land, steep slope (*Bhir), Pahara, Dagar*, shore (*Bagar*) which is under the control of Government and such other lands as prescribed by the GoN as government land by a public notification (Section 2 (e)).

Roads, wells, water conduits, shores, ponds and banks thereof, exits for chattels, pasture lands, graveyards, burial sites, inns, *Pauwas*, *Dewals*, religious meditation sites, memorials, temples, shrines, *Chowk, Dawali*, sewerage, *Chautaro*, lands where fairs, markets and public entertainment or sports sites are located, which have been used publicly but not personally since ancient times, and such other lands as prescribed to be the public land by the GoN by a public notification is defined as public land (Section 2 (3)). Informal land tenure continues to exist in the form of State-owned and public land occupied by different kind of people such as landless people, and bonded laborers. It mostly occurs in urban and semi-urban areas but can also be found in rural areas. It is neither officially recorded by the government nor recognized by the cadastral system of Nepal (CSRC, 2009).

Landholder or landowner means a person who has right to be a landowner of/in a land in accordance with the prevailing Nepal law (Section 2 (b)). Thus legal person can also be a landowner which is also clear from the definition of government land. This law therefore creates three kind of land tenure government, public and private. Municipalities and VDCs have been managing public land.

A landholder or owner who has since ancient times owned, possessed and cultivated a land, except a barren land, public land and a land within the forest boundary as determined, without any evidence, registration and payment of land-revenue, must also get the land registered. If such a landholder shows up, he/she get such a land registered on the basis of such ownership and possession since long ancient times (Section 6 (5)). It is clear from the foregoing provision that even if a piece of land has been possessed and used by an individual since time immemorial and it is not a barren land, or public land or does not fall within the boundary of forest, such piece of land cannot be registered in an individual's name and it belongs to the original land owner. This, however, is not always true in practice. \

Government is obliged to register the land if the concerned person makes a claim in writing, along with the evidence, over a land which is registered, and land revenue of which is maintained, in his or her name, which has been owned and possessed by him or her and which contains private forests and shrubs, in the name of the concerned landholder in accordance with the decision made by the committee formed pursuant to Section 11B of the Act (Section 5 (c)). Thus this law has also promoted ownership of private forest.

Under this law land may be registered on the basis of an unofficial deed if it has remained in the uninterrupted possession of an individual for just 15 years (Section 6(5a)).

Land Revenue Act 1978: This law also defines government land and public land. Coincidently the definition of these terms by the Land Act and this Act are exactly the same. It establishes Land Revenue Office in each district of Nepal (Section 3). This law prohibits the registration in individual's name of public lands or national forests and cultivation of such lands (Section 24 (1)). For example, converting traditional public thoroughfares, community ponds or common pasture lands to agricultural use is prohibited. Where any person has registered any public land or government land in his or her name and cultivated it prior to or after the commencement of this section, such registration must *ipso facto* (by the fact itself) be void (Section, 24 (2)). The Land Revenue Office or an authority specified by GoN must cross off the registration of such land standing in the name of any person. Any person who registers or cultivates a governmental land or public land shall be punished by the Land Revenue Office with a fine of Rs. 1000 to Rs. 10,000 and such a land must be kept/made barren (Section 29). However, unregistered lands may be given over to private cultivation following approval from the designated committee and subject to such conditions as are prescribed (Section 26).

Land Acquisition Act 1977: The Land Acquisition Act defines land as any land belonging to any person, and walls, buildings, trees etc. on such land, etc. and includes permanently installed things thereon (Section (2) (a)). It authorizes the government to acquire any land, and as much land as it determines to be necessary, for public purposes (Section 3). The GoN is required to pay compensation and the amount awarded is to be decided by a four-member committee (Section 13 (2)). There is, however, no requirement that this amount be determined according to market value, nor that compensation be disbursed within a specified time (Section 16 (2) (a)).

The acquisition itself may not be appealed. Appeals concerning the amount of compensation are to be submitted to the Ministry of Home Affairs within 15 days of the notification issued by the committee, and the decision of the Ministry is final (Section 25 (7)).

Once land has been acquired, the government is not required to use the land for the purpose for which it was originally taken (Section 33). The land may subsequently be sold (Section 35).

This law is thus seriously limited in two ways: first there is no requirement that the compensation be paid at the fair market value or any stipulation that compensation be dispersed within a specific time; and second, there is no obligation that the land acquired be in conformity with a clear site plan.

Environment Protection Act 1996: Environment is defined to include all natural, cultural, and social systems, economic and human activities and their constituent parts and the interaction and interrelationship among the constituent parts.

The Environment Protection Act 1996 obliges the proponents to prepare an IEE and /or EIA report in relation to prescribed plans, programmes or projects which may cause changes in existing environmental conditions by physical activity, development activity or change in land use. Thus the word proposal has been progressively defined to include plan. The general interpretation is that the definition of the word proposal is limited to projects and therefore the Act only requires EIA at project level and does not cover plans, policies and legislation (Belbase, 1998). Another interpretation is that the word proposal has been so comprehensively defined by this law that it includes plans, policies and legislation thus requiring preparation of strategic environmental assessment in relation to any plan, policy or legislation. After having prepared the IEE or EIA, the proponent is required to apply to the relevant government agency with the IEE or EIA report for approval of the proposal. Schedule 1 of the Environment Protection Regulations, 1997 provides the list of proposals that require preparation of an IEE and Schedule 2 provides the list of proposals in relation to which EIA must be conducted.

The GoN is empowered to delineate as an environmental conservation area, any area which contains biodiversity, rare wildlife or plants and places of cultural or historical significance which are considered extremely important from the point of view of environmental protection (Section 10 (1)). It is also empowered to prohibit any kind of activity in such conservation areas by publishing a notification in Nepal Gazette (Section 10 (2)).

The Environment Protection Regulations prohibits, among others, the following activities inside any environment conservation area:

- Any act liable to produce adverse impacts on biodiversity,
- Any act that results in damage to or in the alteration, impairment and removal of sites of cultural or historical significance,
- The mining and excavation of minerals, stones, earth, gravel and other materials,
- The operation of hotels, lodges, public transportation, health posts, schools, or other types of services, and
- Entering into the conservation area without permission of the authorized official of the Ministry of Science, Technology and Environment (Rule 30 (1)).

The execution of any work, however, permitted by the MoSTE for the management and development of the environment protection area are permitted in the environment conservation area (Rule 30 (2)). Nevertheless, this law is silent as to whether the State has the title over such land and who would have land tenure if environment conservation area delineated by the government includes the public land and/or private land. Similarly, it is also not clear whether the communities would have usufruct right if a forest area which is managed by community is included in the environment conservation area.

Local Self Governance Act 1999: Under this law, local government bodies including the DDCs, Municipalities and VDCs hold the right to manage specified natural resources. A VDC performs functions related to a variety of matters including agriculture, rural drinking water, irrigation, river control, the prevention of soil erosion, and tourism and cottage industry (Section 28). Under the rubric of 'forest and environment', VDCs are empowered to prepare and implement programmes with regard to forests, vegetation, biodiversity, soil conservation, and environmental conservation in the village development area (Section 28(h)). Although the LSGA has been in force for the past 14 years, VDCs have not given priority to the development of a separate programme for prevention and control of deforestation and degradation of forest.

A VDC has full title over certain property situated within the village development area, including "public properties" not owned by an individual or by the government or a DDC, such as public drainage and sewerage; roads and bridges; ponds, water spouts, taps, wells and ghats; temples, and grazing fields (Section 68 (1) (b)). As per the Land (Measurement and Survey) Act 2019 public land includes roads, wells, pond, grazing land, cemetery, temples, public recreation area and playground, which do not belong to any individual and that, can be used by public. These public lands are currently being managed by VDCs and municipalities which fall in the respective area of the VDCs and municipalities.

Natural heritage is also included in this list of assets (Section 68(1)(d)), as are forests according to existing forest laws or handed over by the GoN (Section 68(1)(c)). VDCs may impose a variety of taxes and fees. These include land revenue or land tax (Section 55 (b)), rent and tenancy tax (Section 55 (c)), and a tax on natural resources utilisation within the village development area (Section 55 (j)).

Municipalities are required, among other things, to assist in environment conservation by controlling air, land and water pollution in the municipality area; conservation of environment, forest, plants and other natural heritage; collection, transportation and disposal of solid waste of the municipality area (Section 96 (1) (c)). Most of the municipalities have concentrated only on collection and disposal of solid waste that too has been very ineffective.

Municipalities have also full title over public properties not subject to any proprietary right of any individual and not within the control of GoN or District Development Committee, such as public drainage, sewerage, bridges, ponds, temples, public rest houses, inns, houses, water springs, water spouts, wells, grazing fields, outlets, courtyards, alleys, roads, paths and trees on either side of the roads (Section 134 (1) (b)); forests according to the prevailing forest laws or handed over by the GoN (Section 134 (1) (d)); and natural heritage (Section 134 (1) (e)). Municipalities are also entitled to impose a variety of taxes and fees. These include land revenue, house and land tax (Section 136), rent and tenancy tax (Section 137), and a service fee for providing facilities such as parks, and tourism sites (Section 145).

The DDC is also required to promote environmental conservation, and to develop and implement a plan to conserve soil, vegetation, forests and biological diversity (Section 189(1) (g)). Although one of the functions of the DDC is to develop and implement a plan to conserve soil, vegetation, forests and biological diversity, it is ironic that most of the DDCs have not been able to give priority to development and implement programmes related to conservation of biological diversity. The MoFALD needs to take this issue into account and take especial

measures to ensure that DDCs give priority for development and implementation of plans and programmes for conservation of forests.

The DDC also sell sand from rivers and canals, stones, soil and driftwood in its area, but is required to pay 35-50 percent of the proceeds so collected to the VDC concerned (Section 218). It has been one of the major causes of deforestation and degradation of forests and loss of biological diversity in Shivalik area. However, the implementation and enforcement of this Act has been patchy, in large part to the inadequacy of expertise, experience and training of the local staff of the DDCs and VDCs (GoN/MoEST, 2008a).

Public Roads Act 1974: The Public Roads Act obliges Department of Roads to plant trees along all public roads and it is the duty of the VDCs and Municipalities to maintain and protect the trees (Section 16 (2)). It is surprising that the Act is completely insensitive of conservation of biological diversity and forests, whereas most of the highways and district and village roads constructed in the country have contributed to degradation, deforestation and loss of biodiversity. Despite the fact that construction of roads has created significant negative impact on forests and natural environment in different part of the country, the objectives of the Public Roads Act only focus on acquisition of lands for development of roads and collection of tax from landholders.

The Act which was enacted almost 40 years ago still has not been amended to include provisions relating to conservation of forests and biodiversity. It is high time that the Act is amended in order to include necessary provisions for prevention and control of loss of forests.

Mines and Minerals Act 1986: Under the Mines and Minerals Act 1986, ownership of all minerals, whether occurring in private or government-owned land, is vested in the government (Section 3). Thus this law nationalizes all the minerals. Although this provision is not likely to create any tenure insecurity in government forest, it is very likely to serve as disincentive for conservation of forests and enhancement of carbon sink in community based forest management areas. The definition of minerals included in section (2) (a) is so broad as to include rock, sand, soil, stone, and anything else that could contain minerals on any private or government-owned land. The person carrying out mining operations must not cause significant adverse effect on environment while undertaking mining operations, (Section 11 (a) (1)). The person undertaking such operations is obliged to adopt corrective measures as directed by the Department of Mines and Geology (Section 11 (a) (2)).

The person carrying out mining operations must, among others, take measures for environmental protection such as carryout mining operation in a manner it causes least effects on the surface and ground water; manage appropriate siltation of wastes, pond and drainage for water flow; use affluent treatment measures, as required; adopt minimum pollution emitting methods, as far as possible in the sources of mine where poisonous gas and maximum dust are produced; use minimum sound producing explosive goods or machinery in the mining operation, as far as possible, carryout mining operation in a manner it causes minimum adverse effect to the flora and fauna, carryout mining operation in a manner so that it cause minimum adverse effect to the natural beauty and cultural heritage (Mines and Minerals Regulations 1999, rule 33).

There is consistency and overlap in some provisions such as the definition and ownership of minerals between the Forest Act and this law. As per the forest law sand, stone, boulders are a forest product and where the forest is handed over to CFUGs they are entitled to sell the forest

products. Although the law requires taking conservation measures, the reality in practice is not that encouraging. The problem is further exacerbated by the absence of Department of Mines and Geology in different districts which has constrained its efforts to monitor the effects of mining operations on forests, water bodies and public health.

Water Resources Act 1992: Under this law, all water resources are owned by the state (Section 3). All water use, other than for specified purposes, mainly domestic use, is regulated by means of licenses (Sections 4 and 8). Formal state control over the water resources was consolidated in 1992, through the Water Resources Act. Earlier laws governing the use of water, such as the Canal Act 1963 and the Canal, Electricity and Related Water Resources Act 1967, prescribed licensing arrangements but made no explicit mention of state ownership. State ownership of water resources was provided statutory cover for the first time under the 1992 Act.

The law establishes the priority in which water resources are to be utilised (Section 7). The government may develop water resources, and acquire related land, equipment and structures for "extensive public use", upon payment of compensation (Section 10).

The Act allows for the formation of water users associations (WUAs) as a way for communities and groups to utilise water resources for collective benefit (Section 5). Such groups must be registered with the prescribed official or agency (Section 5(1)). Water-related projects initiated by the government may be handed over to WUAs, which then become the 'owners' of the infrastructure (Section 11). WUAs have the right to determine and levy fees on the members of the group (Water Resources Regulations 1993, Rule 5).

Land or residential buildings, if required for the construction of dams, barrages, canals, other water-works, pipelines or water distribution facilities, may be used or acquired by the government on behalf of license holders (Section 16). This provision is likely to have serious implication on conservation of forest and prevention and control of loss of forests, since construction of mega dams, barrages and associate infrastructure require or are constructed in forest land. Although WUAs are also required to obtain licenses, this provision is generally applied to commercial projects and not enforced stringently in the case of small drinking water schemes executed at the village level.

Since ownership of water resources vests in the state, there is no provision for compensation when water resources on an individuals' land are utilised by the state. Compensation is only offered in cases where land, buildings or infrastructure have been acquired (Section 10 (3)) or damaged during the execution of a project (Section 15 and 16).

Irrigation Regulations 2000: The users of the irrigation system (i) developed and operated by GoN, (ii) maintained and reformed by GoN, (iii) constructed and operated by the farmer groups must submit an application to the concerned Irrigation Office for the registration of the users' association.

The powers and functions of the users' association are, among others, to repair, maintain, operate and manage the irrigation system operated by it; avail water to the user farmers at appropriate time in proper quantity as required by the type of crop and the condition of the land; mobilize public participation for maintenance of the irrigation system; construct additional structures to increase irrigable area considering the supply of water; collect service fee from users and deposit it as prescribed by concerned Irrigation office; and exclude those

users who fail to pay the service fee; collect late charge and to inform the same to the concerned Irrigation office.

The users' association is required to maintain up to-date record including the record of the service fee to be paid by the users for the use of service made available by it showing expenditure incurred for the maintenance as well as balance of its fund (Rule 6 (1)). The users' association is required to establish a separate fund for the maintenance of irrigation system and structures and deposit at least 90 percent of the service fee and other income in the fund (Rule, 9 (1)). At least 90 percent amount must be allocated for the maintenance of canal, branch or secondary canal, minor or tertiary canal (Rule, 9 (2)).

Users associations are not allowed to hand over the ownership to others by way of sale, donation, exchange or agreement or otherwise of the projects handed over to it; prohibited to damage, spoil or change the structure; to carry out any activity which mitigate the quantity and quality of the water for irrigation; to reduce the quantity of water used by the users except on the circumstances as provided in this Regulation; and to authorize any other person or organization to operate the project that has been handed over to it (Rule 11).

Users' association may plant trees on the side or right of way of a canal, branch or secondary canal, minor or tertiary canal, water course or field channel after the approval of community forest work - plan according to the prevailing Forest Act and Rules from the concerned Forest Office. In the course of determining the place for plantation, coordination must be maintained with concerned Irrigation Office (Rule 12 (1)). Until the work plan is approved, users' association may sell the rotten or fallen trees lying on the side of canal, branch or secondary canal, minor or Tertiary Canal, water course or field channel and the trees which need pruning may be pruned upon the approval of the committee constituted under the coordination of the Chief of the concerned Irrigation Office (Rule 12 (1).

The duties and responsibilities of the user are to inform the Project Office immediately if it is known that someone has misused the Service or caused leakage of water or committed that kind of act or has attempted to commit such an act; and to provide necessary assistance to the Project Office on works of construction, repair and maintenance and protection of the structure.

Town Development Act 1988: The Town Development Act 1988 is yet another legislation to define land. Land includes any land and the building, structure, lake, pond and tree etc. which has remained permanently in such land and such things adjoining permanently to the said building, structure, lake, pond and tree, etc.

The GoN is empowered to form Town Development Committee (TDC) in any area, city, rural area, town area or regional development centre as need be (Section 4 (a)). This law creates a system of TDC which are directed to divide demarcated town development areas into appropriate land use zones, and to maintain all basic community services and facilities, such as road, transport, electricity, drainage, sanitation and open space based on density of such area located within such urban settlements (Section 3). Local body is authorized to formulate local planning with participation of concerned land owner or tenants, in such area where town planning has not yet been approved (Section 3A).

On behalf of the TDCs, the Act empowers the GoN to acquire any lands necessary for town planning (Section 16). Amongst the many regulatory powers to enforce its mandate, the TDCs may control or prohibit, pursuant to public notification, the use of agriculture, natural

resources, vegetation, flora, fauna, religious or historical places, and cultivated or uncultivated land for any construction purposes (Section 9). Besides, it may regulate, control or prohibit, pursuant to public notification, the use of places of scenic beauty, tourist spots, and those activities which have adverse impact on public health or that pollute the environment (Section 9(1)(4)).

The functions, duties and powers of the TDCs include classifying town planning area in to various land use area (Section 11 (1) (1); specifying necessary conditions or standard in land use area for physical development (Section 11 (1) (2)); classifying the land on the basis of land use area (section11 (2) (2a)); setting guideline for institutions or local body upon prescribing condition or standard for the physical development of land (Section (11) (2) (2b)); prescribing condition for construction and other activities to be done in forest, stream, riverside and water area for the protection of nature and environment of town planning region, and performing activities as per the said conditions (Section 11 (1) (4)); and prohibiting the use of natural resources that causes adverse effect on nature (Section 11 (1) (5)).

The TDCs are authorized, subject to policy and directives of the GoN, operate the land development programmes to manage residential land for fulfilling the basic need of residents of various income groups in the course of making development of town in planed manner; and for other township activities (Section 12 (1)). In case any institution intends to operate the physical development planning in the area where town planning has come into force, it shall take approval from the committee (Section 12A (1)). After taking approval from the TDC, the concerned institution must operate the approved plan as per the terms and standard prescribed by the Committee (Section 12A (2)).

The provisions of the Act could be utilized to prevent encroachment of forest and wetland areas and promoting conservation of forest in towns and urban areas. It is possible only if the members of TDC understand and appreciate the importance of conservation of forest and biological diversity.

Electricity Act 1992: The survey, generation, transmission or distribution of electricity without obtaining a licensee is prohibited (Section 3). However, a licensee is not required for the generation, transmission or distribution of electricity of up to 1 MW. Any person or corporate body who wishes to conduct a survey, or generate, transmit or distribute electricity over 1 MW is required to submit an application to the prescribed officer, along with an economic, technical and environmental study report[42] (Section 4 (1)). The Electricity Regulations 1993 require that the application should also include details of the measures to be taken to reduce or mitigate the adverse effects of the activity on environment; social and economic effects of the project on the relevant area; and a detailed evacuation and rehabilitation plan in the event of emergency (Rules 12 (f) and 13 (g)).

The Act forbids negative effects on the environment, such as soil erosion, flood, landslide and air pollution while generating, transmitting or distributing electricity (Section 24).

Electricity Development Centre is required to, after examining the application, publish a notice about it for the information of the general public (Rule 16). If any person considers that the construction and operation of the project is likely to cause adverse effects, s/he may provide

42 Contrary to the requirements of the Electricity Act, the Environment Protection Regulations require preparing EIA report for the generation of electricity above 5 megawatts.

comments to the Centre within thirty-five days from the date of publication of the notice. The Centre may include conditions in the license aimed at mitigating the adverse effects. The penalty for generating, transmitting or distributing electricity without obtaining a license is a fine of up to five thousand rupees, and the activity may be closed down.

If land and house of any person is to be utilised or acquired for the purpose of generation, transmission, or distribution of electricity, the licensee may submit an application to GoN (Section 33 (1)). After conducting necessary enquiries into the matter, the GoN may make available such land and house in the same manner as it makes available to any corporate body under the prevailing laws. If the land is owned by the government, such premises must be made available on lease for the period up to the term of license (Section 33 (2)). If construction work relating to the generation, transmission, or distribution of electricity has been performed by GoN or a licensee, GoN may prohibit use of a house or land located in the area where such construction work is performed or the premises of a house or land located in the prescribed distance from such place of construction by any other person for any specified purpose. GoN or the licensee shall pay compensation, as prescribed, to the concerned person for such damage or loss caused due to such prohibition (Section 33 (3)).

Nepal Petroleum Act 1983: All petroleum occurring or found in any private or public land within Nepal is the property of GoN (Section 3). It has the exclusive right to carry out petroleum operations (Section 4 (1)). Subject to the provisions of the Act and Regulations framed hereunder and the petroleum agreement, petroleum operations must be conducted: (a) with due diligence, efficiency, economy and in accordance with sound petroleum industry practices; (b) with due regard to the safety of persons and property, with particular care to avoid damage to forest and other natural resources and to avoid pollution and ecological damage; and (c) in accordance with the best conservation practices in order to secure the maximum ultimate recovery of petroleum (Section 5 (1)). Although the objectives of the Act is completely silent about conservation of forest and other natural resources, section 5 (1) (b) requires to give due regard to the safety of persons and property, with particular care to avoid damage to forest and other natural resources and to avoid pollution and ecological damage.

Although the GoN is empowered to declare any area as prohibited area for petroleum operations for reasons of national security, public interest, historical importance or tourism development or may allow petroleum operations in any specific area prescribing special conditions (Section 9(1)), it remains to be seen whether the government will declare a national park as prohibited area if large deposit of petroleum is found inside it. Further, petroleum operations are required to give due regard to the safety of persons and property, with particular care to avoid damage to forest and other natural resources and to avoid pollution and ecological damage. However, the practice so far prevalent in the area of mining excavation and construction of roads is that such activities are operated at the cost of nature and natural resources even perpetuating environmental injustice to local people.

5.3.3 Strategies and Plans

National Biodiversity Strategy and Action Plan 2014: National Biodiversity Strategy and Action Plan (NBSAP) 2014 prioritizes the actions for adaptation to and mitigation of the effects of climate change through the implementation of PES and REDD+ where feasible. Other priority actions include: (i) devising mechanism for sharing the benefits from such projects, (ii) ensuring participation of all the stakeholders in decision-making process, (iii)

defining the goal of biodiversity conservation in the REDD+ strategy roles of different stakeholders, (iv) devising mechanism to assess changes in biodiversity following REDD+ implementation, and (v) developing and implementing climate change adaptation plans and safeguards against possible negative effects of REDD+ implementation on biodiversity. These priority actions declare that at least 5 percent of the forest ecosystems to come under REDD+ implementation by 2020. Although all priority actions are very important and useful for enhancing the carbon stock by increasing the quality and quantity of forests, it is too early to say that the MoFSC will be able to implement these taking into account the slow pace of the implementation of the projects included in the National Biodiversity Strategy implementation Plan 2006.

Priority actions of the NBSAP on institutional strengthening include strengthening the National Biodiversity Coordination Committee (NBCC) (by also providing legal recognition) and its secretariat (through provision of adequate human and financial resources), by 2016; putting in place an effective district and VDC/municipality level coordination and monitoring mechanism through establishment of Environment Friendly Governance District Coordination Committee in at least 15 DDCs, and Environment Friendly Local Governance Village Coordination Committee or Environment Friendly Local Governance Municipal Coordination Committees in at least 30 selected VDCs/municipalities by 2017; and strengthening inter-agency coordination for policy and programmes for improved management of biodiversity.

13th Plan (2014/15-2017/18): Another most recent policy instrument is the Thirteen Plan 2014 which was approved by the GoN in 2014. One of the objectives of the Forest and Soil Conservation sector is to ensure environmental services by conserving and managing forests, biological diversity and watersheds.

The strategies of the sector are conservation, sustainable management, optimum utilization of forest sector's resources; improvement in supply of forest products, creation of additional employments and improvement in livelihoods through forest products which are received from sustainable management of forest areas and utilization and commercialization of ecosystem services; and creation of promotional and cooperative environment for overall conservation and development of forest sector, among others.

The sector has altogether 34 working policies and some of them are related with REDD+ (Box 7).

Box 7. REDD+ Related Working Policies of the 13th Five-Year Plan

- Necessary protectoral, conservational, and promotional tasks will be undertaken to maintain at least 40 percet forest area of the total land,
- Community based forest management including community forest will be developed and expanded,
- Additional trees will be planted and managed in proportion to loss of forests due to construction of national priority infrastructure development,
- Participatory and coordinated mechanism will be formed and implemented to control forest encroachment, illegal felling, poaching and forest fire,
- Extensive afforestation will be done with the participation of all the stakeholders in public, community and private including forest areas,

- Forest management will be done through sustainable and scientific forest management system,
- Landscape area biological corridors etc. will be identified, categorized, and appropriately managed in order to effectively address climate change, ecosystem services and biological diversity,
- Arrangements will be made for conservation and management of forests and natural heritage at landscape level,
- Capacity enhancement and empowerment and green employment based programmes will be implemented for improvement of livelihood of forest dependent poor, women and ultra-poor,
- At least 35 percent of the income received from community forests will be invested for social and economic empowerment of ultra-poor and arrangement will be made for proper monitoring of this provision,
- Necessary and appropriate adaptation and risk management programmes will be implemented/operated at watershed level by estimating potential risks of climate change,
- Appropriate arrangements will be made for distribution of income to be received from ecosystem services with the stakeholders that have been actually contributing in forest conservation,
- Strategic framework for sustainable and scientific forest management will be formulated and implemented,
- In recognition of the contributions made by the forestry sector towards mitigation of, and adaptation to, adverse impact of carbon synthesis and sequestration/accumulation, initiative will be taken for building a process and mechanism necessary for conducting programmes aimed at mobilizing additional financial resources with the REDD concept;
- Arrangements will be made for conservation of forests, environment and biological diversity and effective monitoring of environmental impacts while construction of physical infrastructure, and
- While implementing programmes, transparency, participation and accountability will be prioritized.

For the first time, payment of environmental services has been included in the working policies of Forest and Soil Conservation sector. Almost all the aforesaid working policies are related to REDD+ in one way or the other and contribute to reducing emissions from deforestation and forest degradation, sustainable management of forests and conserving and enhancing forest carbon stocks. However, the real issue is whether the MoFSC and other actors and stakeholders involved in conservation and management of forest can implement these working policies and achieve the objectives in the three years (plan period).

13th Plan 2014: Land Reform and Management Sector: The objectives of the Land Reform and Management sector of the 13th Plan are, among others, to create environment for maximum utilization of land and land resources; and increase access of socially and economically disadvantaged/marginalized class.

Strategies include formulation of Land Policy and implementation of National Land Use Policy 2069; promoting conservation of government and public land; and increasing access of

economically and socially marginalized including poor landless class to land by operating scientific land reform programme in managed, effective and coordinated manner.

Altogether 15 working policies have been adopted by this sector including National Land Policy which will be formulated and implemented; Land Use Policy will be implemented by revising the existing legislation; and unauthorized, uncontrolled and unmanaged settlement development will be stopped. Formulation of National Land Policy and implementation of Land Use Policy is expected to contribute to enhancement of the quality and productivity of forest areas as well. However, there is inconsistency between the working policy which states that Land Use Policy will be implemented by revising the existing legislation with one of the working policy of National Land Use Policy 2012 which states that necessary legal and institutional arrangements are to be made by April 16, 2014. It seems that the government has given up the idea of enacting separate land use legislation. As we have seen the fate of the land use related provisions included in the Land Act 1964 through the Fifth Amendment to the Act in 2058, it needs to be borne in mind that patch work might not be effective to address the existing land use problems.

13th Plan 2014: Environment and Climate Change Sector: The vision of the Environment and Climate Change sector of the 13th Plan is achieving sustainable development by creating clean and healthy environment through wise use of natural resources. The vision has taken into account the right to clean environment guaranteed by the Interim Constitution. Had it been included in the objectives of the Sector, it would have more pressure on the Ministry of Forest and Soil Conservation (MoSTE) to strive for promoting this as a fundamental right. Since, it takes usually more than 20 years to achieve the vision of any organization or sector, it might be inferred that MoSTE has relegated the constitutionally guaranteed fundamental right clean environment to low priority.

One of the objectives of the sector is to adapt to and address the adverse effect of climate change by making human activities and development processes environment friendly in line with the concept of green development. The strategies include operation of environmental management programme as an integral part of development programme by internalizing environmental management into development programmes; and sustainable conservation and management of natural resource and heritage and adaptation to climate change by providing continuity to environmental incentives, poverty reduction and disaster risk reduction.

The Environment and Climate Change sector has adopted 20 working policies. Some of the most relevant working polices with adaptation to and mitigation of impacts of climate change are as follows:

1. Contribution to the poverty reduction of of general people will be made by implementation of NAPA at local level through Local Adaptation Plan of Action;
2. Coordination will be done from the MoSTE as the focal point for works in regard to environment conservation and climate change;
3. Relevant agencies will be mobilized for obtaining maximum benefits from implementation of environment related treaties and conventions to which Nepal is a party particularly under clean development mechanism of the Kyoto Protocol;
4. Coordination and partnership will be made among donor agencies, NGOs, local bodies, community organizations and other agencies in the activities related to environment and

climate change;

5. Emphasis will be given to develop infrastructures that are likely to environment friendly and adapting to climate change;
6. Inter-agency coordination will be strengthened in formulation and implementation of plan in accordance with environment friendly plan framework;
7. Green economy programme will be developed by developing green development framework and will be internalized in all the sectors of economic activities;
8. Management of hazardous waste will be moved forward in coordination with concerned agencies;
9. In order to implement the principles of 'polluter should pay' and 'pollution reduction also gives benefit', the use of transportation means which use environment friendly fuel and are less polluting will be encouraged by developing and implementing required mechanism;
10. Poverty and environmental incentive programmes will be effectively implemented for alignment of environment and poverty reduction;
11. Arrangements will be made for spending certain percent of income earned from natural resources on protection of natural resources, environmental research and development**.**

The working policies sound like wish list for a ministry, which does not have district level line agency even in districts such as Morang, Parsa and Banke where most of the industries are located. If it really wishes to have coordination and partnership among NGOs, local bodies, community organizations and other agencies in the activities related to environment and climate change, it needs to establish its district level office in some of the districts. Some of the working policies have been simply carried forward from the Three Year Plan (2067-2070).

The Master Plan for the Forestry Sector (MPFS): The Master Plan for the Forestry Sector (MPFS), approved in 1989, particularly marked a new era when it officially prioritized the devolution of key forest tenure rights to local communities. It provided a policy background and planning strategy for forestry by setting medium-and long-term objectives into the next century (Palit 1996). The MPFS objectives are to meet people's basic needs for fuel wood, timber, fodder and other forest products on a sustained basis, and to promote people's participation in the development, management, and conservation of forestry resources (MPFS 1988). The third objective of the plan is to work towards community management of the country's forests.

The plan states that: "The principles of the decentralization policy will be applied to the forestry sector by community forestry, which will have priority among other forest management strategies. Priority will be given to poorer communities, or to the poorer people in a community. If the availability of forestland exceeds the needs of the local communities, the excess will be allocated for forest management in the following priority sequence: people living below the poverty line, small farmers, and forest-based industries (MPFS 1988)."

The MPFS equally addresses the issue of women's participation by stipulating in its guidelines that one-third of any user committee's members should be women. The MPFS institutionalized the programme approach, introducing six major forestry sector programmes. Among the six, Community and Private Forestry Programme is the largest (GoN, DoF 1997). Its policy

supports the development and management of forest resources to meet their basic needs and embarks on the phased handing over of all accessible hill forests to communities, to the extent that they are able and willing to manage them. It provided strong policy commitment and ushered a new era in community based forest management. The Forest Act which was enacted in 1993 in line with the MPFS provides a legal basis for the participatory community based biodiversity and forest management.

5.3.4 Synthesis of Policies, Legislations and Plans

It is obvious from the above provisions of the Forest Policy 2015, Rangeland Policy 2012, Climate Change Policy 2011, and National Land Use Policy 2012 that the policy framework of the country has given due consideration to climate change adaptation and mitigation. Some of the policies are highly progressive as they provide basis for expanding the ambit of carbon sequestration through sustainable management of forests; providing necessary support to those programmes that reduce the carbon emission from forest areas and forest products; encourage carbon sequestration, investing certain portion of the royalty earned from sell of forest products and use in forest conservation activities including forest fire control; making necessary legal arrangement to provide rights and responsibility to local communities for the conservation, promotion and utilization of rangelands; carrying out research to learn the contribution of rangelands in carbon sequestration and implementing the findings of the research; conserving government land in a manner to maintain at least 40 percent of the country's land as forest area; and bringing at least five percent of the forest ecosystems to come under REDD+ implementation by 2020. However, legislative initiative is yet to be taken to provide statutory backup to these proactive policy pronouncements.

In spite of the fact that Nepal is among the very few countries that have provided the right to live in a clean environment as a fundamental right, neither the new laws have been enacted nor the existing laws have been amended in line with the constitutional fundamental right and different MEAs particularly the United Nations Framework Convention on Climate Change, Kyoto Protocol, and different decisions of the Conference of Parties and Meeting of Parties. Necessary legislation are required to be enacted to ensure that citizens enjoy the fundamental rights, the State successfully implements the Responsibilities, Directive Principles and Policies of the State as well as fulfills its obligations under different MEAs. However, the State has drastically lagged behind in this regard. That is the reason, even the word climate change is difficult to find in prevailing laws of Nepal, let alone carbon sequestration, carbon management and carbon ownership. There is, therefore, disconnect between the policy requirements, international commitments and the legal framework of the country. Ownership of carbon is an issue that requires substantive legal provisions. As long as the country lacks substantive legal provision for carbon ownership and title transfer and associated procedural arrangements, full implementation of REDD+ is unlikely to be possible. If the Bill that has been drafted for amending the Forest Act 1993 is enacted by the Legislature Parliament, it would fill some of the legal gaps existing in the area of carbon management.

5.4 Institutional Framework

Nepal has put in place relatively impressive institutional framework for addressing adaptation to, and mitigation of, the impact of climate change, conservation of biodiversity and for institutional oversight. Among the 11 Committees established by the Legislative Parliament, Environment Conservation Committee, and Agriculture and Water Resources Committee have

the potential to play important role in contributing to the achievement of REDD+ outcomes. The powers and function of these parliamentary committees include - making the GoN accountable to the Parliament.[43] The Environment Conservation Committee keeps legislative oversight on the programmes of MoFSC and Ministry of Science, Technology and Environment (MoSTE), and the Agriculture and Water Resources Committee on the Ministry of Energy, Irrigation, Agricultural Development, and Land Reform and Management.

Climate Change Council chaired by the Prime Minister is the highest agency to guide and oversee the formulation and implementation of climate change-related policies and to take necessary measures to make climate change a national development agenda. Minister of different ministries such as Energy, Finance, Forest and Soil Conservation, Health and Population, Home Affairs, Irrigation, and Science Technology and Environment are also the members of the Council.

The Prime Minister chairs the National Tiger Conservation Committee and the Minister for Forests and Soil Conservation serves as the Member Secretary. Some of the principal functions of the Committee are to have short term and long term plan formulated and implemented for maintaining and increasing the number of tigers in natural habitat; and coordination for enhancing policy and work efficiency for increasing the number of tigers, protection of habitat, and have coordination and implementation in policy level and working aspect for conservation of overall biodiversity by increasing the number of tigers, protection of habitat, and continuity in functioning of ecosystem and dynamism in the processes.

National Biodiversity Coordination Committee has been established under the chairpersonship of the Minister of Forests and Soil Conservation with the objective of mainstreaming all biodiversity programmes in the country. Representatives from relevant government ministries, private sectors, and donors are members of the committee. As per the National Biodiversity Strategies and Action Plans (NBSAP) 2014, its representation has been increased which includes ministries such as energy, federal affairs and local development, and physical infrastructure and transport whose development activities have negative effect on forests and biodiversity.

The MoSTE is the designated national authority under the UNFCCC and the MoFSC is the lead Ministry for REDD+ initiative in the country. The MoFSC is the national focal point for implementing the CBD. The Ministry implements its policies, plans and programmes through five departments,[44] five regional directorates, 74 district forest offices, 56 district soil conservation offices and several projects under the ministry.

An inter-ministerial high level policy steering REDD+ Apex Body has been formed by the MoFSC. It is chaired by the Minister for Forests and Soil Conservation with the representation of nine government and three non-government agencies. The MoFSC has formed REDD+ Working Group (RWG) which is chaired by the Secretary of MFSC. Likewise, REDD+ Multi-stakeholder Forum and REDD+ CSO and IPO Alliance have also been set up and working for complementing the REDD+ initiative.

---

43 Rule 110, Constituent Assembly Regulations, 2014.

44 Department of Forest (DoF), Department for Forest Research and Survey (DFRS), Department of National Parks and Wildlife Conservation (DNPWC), Department of Plant Resources (DPR), Department Soil Conservation and Watershed Management (DSCWM).

Apex Body: The Apex Body is an inter-ministerial institution that ensures multi-sectoral coordination and cooperation for planning and implementation of REDD activities at the highest level. It is chaired by the Minister, MoFSC, who is responsible for the overall coordination of REDD activities, and includes inclusiveness. Apex Body encompasses top-level officials from eleven government ministries, representatives from private sector, public sector and civil society organizations, and the National Planning Commission.

Each of the 11 ministries has been requested to select two representatives from private sector and civil society organizations working in the field of particular ministry to represent in the Apex Body. This makes the Apex Body a total of 49 members. Eleven ministries of the government proposed by REDD Strategy include members from the Ministry of Finance, MoFSC, Ministry of Culture, Tourism and Civil Aviation, Ministry of Energy, Ministry of Agriculture Development, Ministry of Land Reform and Management, Ministry of Federal Affairs and Local Development, the Ministry of Infrastructure and Transport, and the MoSTE. The meetings of Apex Body was planned to occur twice a year (REDD Cell, 2013). The REDD+ Strategy 2015 (Draft) suggests making the Apex Body functional and effective with appropriate ToR and operational guideline (Face the Future, 2015).

REDD Working Group: RWG has been formed under the leadership of Secretary, MoFSC, which ensures representation of different forestry related stakeholders. Currently, RWG comprises of 12 members, among them nine members represent government and the rest three represent non-governmental sectors. The responsibilities of the RWG are to provide technical, and institutional support to the REDD IC and to oversee and monitor the planning and implementation process of different programmes of REDD IC. Besides, the RWG provides innovative ideas, monitor programme activities and facilitate preparing a comprehensive REDD strategy.

The RWG has been actively providing guidance to the REDD IC on different thematic areas and issues ranging from defining its own role and the roles and responsibilities of other REDD+ stakeholders such as Stakeholder Forum, and REDD IC to facilitating the participation and stake of different agencies in REDD+ initiative through their representation; preparation of R-PP, MRV, SESA and ER PIN. For instance, it had taken the decision in one of the meetings to include the Director General of the Department of National Parks and Wildlife Conservation as a member and Institute of Forestry, Pokhara as an invitee; to submit the R-PP to FCPF by April 19, 2012; and assign the lead role for MRV to the Department of Forest Research and Survey (DFRS).

REDD Implementation Centre: REDD Forestry and Climate Change Cell was established by the MoFSC in 2010. Now it is called REDD IC and has been formally approved by the Ministry of General Administration. The REDD IC established as an extended arm of the MoFSC is the lead institution to undertake REDD readiness activities in Nepal. The REDD IC is responsible for coordinating the readiness process at the national and sub-national levels among diverse stakeholders. Setting up of Climate Management Section, Remote Sensing and Land Information System Section, Budget and Programme Section, and Administration and Finance section have also been approved.

Its powers and functions include development of policy and programme; monitoring, reporting and verification; coordination among different agencies and stakeholders; disseminating information; capacity development; and ensuring benefit-sharing. It has been working as the

sole organization for preparing the country to effectively participate in the global and national REDD+ initiative. It has been contributing to further strengthen the climate change related activities through abatement of deforestation and forest degradation and promotion of sustainable forest management. Since, REDD IC now has full-fledged staffing with their enhanced capacity and confidence to take leadership in REDD+ readiness processes in both technical aspect and procurement management, the Government of Nepal strongly believes that the objectives of REDD+ will be achieved (REDD Cell, 2013).

REDD Multi-stakeholder Forum: It functions as the principal outreach and communication platform. REDD IC frequently organizes meetings of the REDD Multi-stakeholder Forum to update the forum members on the progress of REDD+, and seeks advice from the members. The Forum includes representatives from the private sector, civil society, media, government organizations, community based organizations, local and international NGOs, donors, academia, research organizations and all other stakeholders interested in REDD activities.

In addition, a Steering Committee under the leadership of MoFSC secretary has been formed to oversee the studies conducted for REDD readiness. These expert groups are continuously providing technical support to the REDD Cell.

REDD+ CSOs & IPOs Alliance: REDD+ CSOs & IPOs Alliance is a platform of CSOs and IPOs working in forestry and REDD+. It is formed to discuss and develop a common understanding on REDD+ on behalf of Civil Society Organizations and Indigenous Peoples Organizations. It was established on 22 September 2009 with the initiation of FECOFUN, NEFIN and various other CSOs who were working on forestry and REDD+. A total of 123 organizations including women and *Dalits* are actively involved in this alliance.

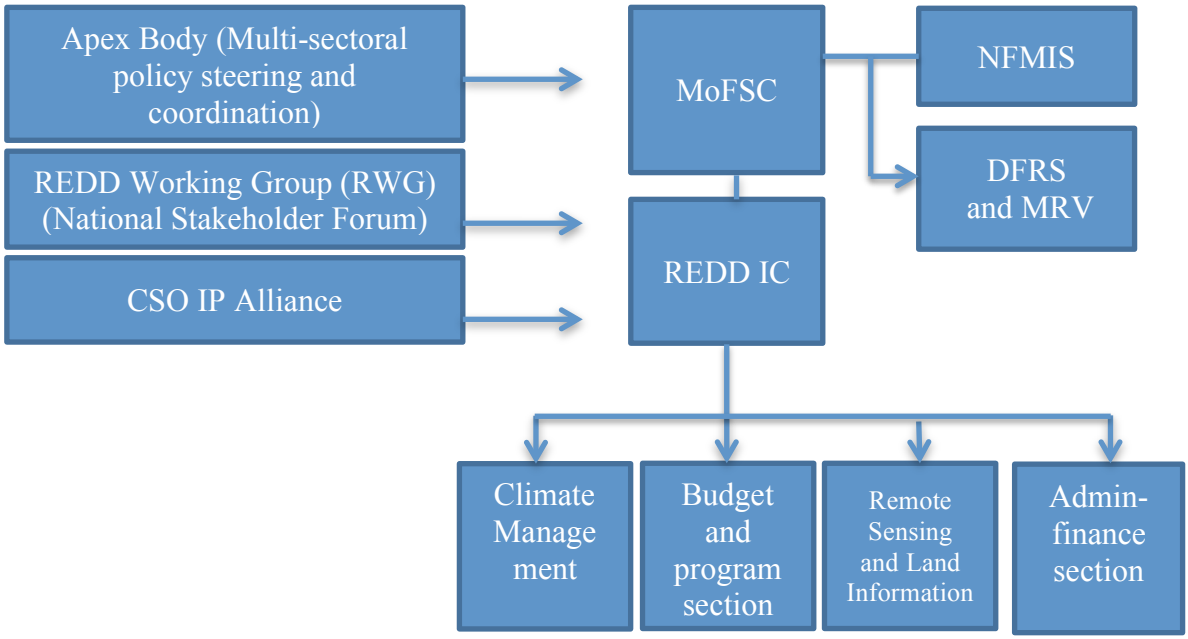
The main objective of the alliance is to advocate for developing justifiable REDD+ framework and mechanism in Nepal, and to empower and build capacity of CSOs and IPOs in the contemporary issues of REDD+. FECOFUN is serving as a secretariat for the Alliance and organizing its regular meetings/workshops to discuss and develop its common vision. This Alliance developed its vision on REDD+ in 2010 and is now revising it considering the new context of REDD+ in Nepal.

A 20-member National Biotechnology Coordination Committee has been formed under the chairpersonship of the Minister of Science, Technology and Environment with representation from the National Planning Commission, government ministries, universities, National Agricultural Research Council, and user groups. The Committee makes decision on biosafety proposals related to Genetically Modified Organisms (GoN/MoFSC, 2014).

REDD+ Civil Society Organisations' Alliance, Nepal (REDD+ CSO Alliance) was formed in 2009 and comprises of more than 15 NGOs. It plays an active role in advocating for the development of a REDD+ strategy and national safeguard system of REDD+.

Climate Change Initiatives Coordination Committee also exists which is chaired by the Secretary of MoSTE. It has representation from various stakeholders including relevant ministries, I/NGOs, academia, private sector, and donors. It is expected to serve as the key national platform for ensuring regular dialogues and consultations on climate change related policies, plans, financing, programmes and projects in order to foster synergy and avoid duplication (NBSAP, 2014). The figure 2 below provides the existing institutional structure of REDD+ at central level.

Figure 2. Existing Institutional Structure for Implementation of REDD+



At sub-national level, there is no structure for coordinating civil society organizations. The Regional Directorate of the Department of Forest (DoF) is the only authority to bridge the District Forest Office (DFO) and central level authority. At district level, District Forest Sector Coordination Committees - DFSCC (2068), (the then DFCC 2062) exists to steer forest sector related activities and are active in most of the districts. It consists of forest officials, political parties, representatives of community, CSOs and the private sector. FECOFUN had refrained from providing its representation in the DFSCC saying that it was formed without community consultation; it is not inclusive and representative to assure the community rights; and it is predominantly represented by government officials that strongly restrict them to have opportunity to raise concerns in the DFSCCs and the decisions made by it. Accordingly, FECOFUN has refrained from providing its representation in it in some of the districts.

The GoN adopted Environment Friendly Local Governance Framework in 2013. It provides for the establishment of an 18 member Environment Friendly Governance District Coordination Committee (EFGDCC) which is chaired by the Chairperson of the DDC. Its principal function is to coordinate, monitor, evaluate and review all the programmes related with environment, disaster reduction, climate change adaptation, land use classification and solid waste management being implemented in the district.

Similarly, it also provides for the establishment of Environment Friendly Local Governance Municipal Coordination Committee (EFLGMCC), and Environment Friendly Local Governance Village Coordination Committee (EFLGVCC) at municipality and VDC levels respectively. One of the main tasks of the EFLGVCC is to coordinate, monitor, evaluate and review all the programmes related with environment, disaster, land use classification and solid waste management being implemented at the VDC level. The Ministry of Federal Affairs and Local Development (MoFALD) has already established these institutions in 12 districts, 33 municipalities and 60 VDC as a pilot. The plan is to ultimately establish them in all the 75 districts, 191 municipalities and 3,754 VDCs.

CHAPTER – VI

Major Gaps and Issues

6.1 Conceptual Understanding

REDD+ does not fully acknowledge the link of different political, economic, technical, ecological, and social issues in governing tropical forests (Peskett et al, 2011; Thompson et al, 2011). Rather, it would destabilize forest governance (Bluffstone et al, 2013) and exacerbate the persistent efforts of governments and corporations to exert increasing control over forests, lead to reverse recent trends of forest devolution, thereby reducing community autonomy and well-being (Lovera, 2009; Phelps et al, 2010). Similarly, taking the case of Nepal by Khatri (2012) and also by taking the case of Madagascar by Ratsimbazafy et al, (2011) demonstrated that there is possibility of subtle recentralization of forest governance power by the state forest authority and negative sufferings of forest dependent poor from REDD+ project. The *Economist* (2010b) also published the similar idea. Upreti et al, (2011) and Paudel et al, (2011) reported that REDD+ pilot project in Nepal not only reinforced the existing conflicts in the forest managing communities but also induced new ones. REDD+ poses numerous risks to local communities as it could (i) encourage a recentralization of forest land and tenure authority with stronger state-and-expert control mechanisms and top-down governance; (ii) impose exclusionary carbon-focused forest conservation approaches on previously livelihood-oriented forests; and (iii) increase land speculation and land grabbing by reversing decentralization and violate customary rights by introducing formal restrictions on new forest-related rights. This may jeopardize the outcome of REDD+ for local forest communities in Nepal as the community and the state may be driven by very different interest that could ultimately boost or erode existing community forestry (Bastakoti and Davidsen, 2014).

Challenges to meet REDD+ standards in Nepal are aggravated due to the lack of adequate and dedicated policy framework, limited competency of stakeholders, inadequate attention to the local ecological conditions and communities' socio-economic requirements, and lack of local people's free, prior and informed consent (FPIC). Also, the voices from the forestry and development practitioners are surfaced that REDD+ incentive will perhaps be too weak to address the historical, cultural and socio-political causes that drive D&D in Nepal particularly in the Terai region.

Using intercontinental coarse forest data and highly aggregated common forest design principles, Chhatre and Agrawal (2009) demonstrated that there are possibilities of both tradeoffs and synergies between carbon sequestration and livelihood benefits of communities, and that, therefore, detailed studies are needed to better understand the interface between REDD+ and forest commons. Similarly, on the basis of a study made in Amazon forest, Bottazoi et al (2014) recommend that better understanding on the interconnections of institutional, socio-economic and biophysical dimensions of resource systems is needed to know the implications of REDD+ in tropical forest areas. In line with these studies, Beyene et al (2013) also reported that the quality of local institutions might be one of the most important determinants of carbon sequestration in the forest commons. Recent decentralized approaches to forest management have also called for greater participation of communities in political decision making (Sikor et al, 2010) and for acceleration of land titling (Morgera, 2009) despite studies of carbon sequestration in forests often remain vague in relation to appropriate land

rights. Though these issues are documented elsewhere, interaction with experts, key informants, stakeholders and forest-managing communities during the course of the study also revealed similar issues in Nepal at different levels.

Issues related to forest carbon and carbon credit: There is limited but varied information about the forest carbon fluxes in the tropical forest. The forest carbon information is highly contextual and dependent on the methodology used to estimate. Also, the scale at which the forest carbon assessment is carried out affect the understanding about its dynamics. In case of Nepal, there is no adequate empirical evidence and knowledge regarding forest carbon and carbon credit yet. As the country has wide variety of geographic features, climatic regions, topographic variations, species diversities and disturbance factors (e.g., fire, harvesting, grazing, landslides, etc.) that affect forest carbon fluxes, issues related to understanding carbon dynamics, and methodologies to measure carbon stock remains challenging.

Issues related to forest tenure and property rights: Forest tenure reforms though are taking place gradually, there are not adequate, appropriate, and credible governance and regulatory frameworks in place in Nepal. Conflicts between forest dependent communities and the government still exist in utilizing forest product particularly for the income generation or commercial purposes in many parts of the country. Those conflicts appeared due to the isolated and sectoral tendency to define forest tenure ignoring the historical trajectory of peoples' land resource access, livelihood strategies, and resource dependency that created distrust between the state and people. Also, the most common practice 'defining tenure practically in the titling alone' is inadequate to realize the objective of the tenure rights, which need additional support including capacity building and institutional support. In many cases, the interpretations of types and levels of property rights over forest resources intersect and create confusion and ambiguity between different stakeholders (e.g., local communities, local government, and department of forest).

Issues related to carbon rights and benefits: Since carbon is gradually being considered as resource for financial incentive, the issue of ownership and/or rights over it has recently emerged. So far, not much has been done in defining it and operationalizing it particularly in the tropical developing countries including Nepal. Also, the complexity in understanding it is associated with the definition of carbon (sequestered carbon, carbon sink, carbon sequestration potential) rights itself. The definition of rights may pave the way to identify beneficiaries. However, in the context of forest commons such as community forestry, collaborative forest management and others, it may lead to other challenges such as level and nature of benefits, equity, elite capture, corruption, etc.

Issues related to environmental and social safeguards: The past deeds of many governments and environmental organizations has resulted in different social problems such as displacement and alienation of people from the resource base such as in Chitwan National Park. Therefore, there are valid suspicions whether the REDD+ project will follow the similar path. Also, the biodiverse forests such as in the Terai might be converted into carbon intensive species such as Sal (*Shorea robusta*) despite the provisions of safeguards. Communities' tendency to make Sal forest by clearing other less valuable species have already been reported.

Issues related to payment of environmental services: Markets may not be able to efficiently operate given the scope, nature, types, governance, regulation, and management of forest and associated environmental resources. In addition, issues related to leakage and sustainable

supply of services, trust and reciprocity, institutional arrangement, etc., are equally relevant. So far, true payment of ecosystem services (PES) has not been practiced in Nepal; and it lacks credible contextual knowledge and well developed policy framework in implementing PES.

REDD+ and issue of forest dependents: For the success of any REDD+ programme in Nepal, it is essential to ensure that the monetary and non-monetary benefits provided by the programme are sufficient to alter (or even maintain) land use behaviors of opportunity cost-bearers; i.e., forest-managing communities. For example, if a REDD+ programme or strategy limits livelihood activities (being legal or not), then opportunity costs arise. If these costs are not compensated in some way (financially or otherwise), there could be two implications: (1) pressure on forests will continue, or (2) the opportunity cost will cause harm to communities, which is a violation of international good practice standards.

Cost of transaction: So far the transaction costs of establishing and operating a REDD+ programme in Nepal are not known. Unavailability of accurate data and use of average carbon stock estimates, survey, estimation and disaggregation of carbon stock for each management regime (at group level), existing capacity, reporting system including MRV and group specific socio-economic and other data to address the safeguard issues are other concerns of REDD+.

Operationalizing safeguards: Operationalizing safeguards in national REDD+ architecture still remains a major challenge in Nepal, particularly in the area of benefit-sharing. Effective, efficient and equitable outcomes of REDD+ require proper implementation of safeguards. The contextual equity is predominant factor to differentiate the conditions that embedded in the social and political contexts, which are highly heterogeneous. These put some people or groups at disadvantage. A guideline to operationalize safeguards is absent at both national and community levels.

Carbon right regulatory framework: Carbon ownership may either be a separate proprietary interest, or a proprietary interest linked to forest or land ownership. Nepal's forest law does little to determine who owns the right to the carbon sequestered in forests. However, even if existing laws do not mention carbon rights by name, they could potentially be interpreted to govern carbon, thus creating an implicit carbon right.

Forest governance: It is revealed from the fieldwork and stakeholder consultation that the local elites have by and large captured the role of decision making and control over the resources in the much touted community-managed forest regime as well. Also, transparency, accountability and inclusion are some of the prominent issues in such forest management regimes. Similarly, the forestry sector overall has just started to be organized in a transparent and inclusive manner at least in the paper. Some of the institutional arrangements such as GESI is yet to implement as intended.

6.2 Policy and Legal Frameworks

The major gap in the legislative and policy framework is that forest carbon sequestration has neither been defined as a forest product nor as an environmental service. Thus, the ownership rights to such carbon and arrangements relating to sharing of the benefits are yet to be defined. The bill to amend the Forest Act has tried to address this gap by defining environmental service which includes the benefits such as carbon sequestration, conservation of biodiversity, hydrological system, eco-tourism and other benefits as prescribed.

The working policies of the Forest Policy 2015 state, among others, that ambit of carbon sequestration will be expanded through sustainable management of forests; necessary support will be provided to those programmes that reduce the carbon emission from forest areas and forest products; and in order to encourage carbon sequestration, certain portion of the royalty earned from sell of forest products and use will be invested in forest conservation activities including forest fire control. It is also silent about sharing of the benefits to be accrued from carbon trading.

The existing laws and policies are also silent regarding institutional arrangements for REDD+ related work. One of the functions of law/policy is to establish adequate institutions to ensure transparent, prompt, effective and fair implementation of its provisions. At present, this is lacking, as only the REDD Implementation Centre has been endorsed by the Ministry of General Administration.

There are overlapping jurisdictions at different agencies over the same resources such as forest products. As mentioned above, forest products include boulder, soil, stone, pebble and sand. As per the Forest Act community forest users group has the authority to sell soil, stone, pebble and sand located in the community forest area. Contrary to the provisions of Forest Act, under the Mines and Minerals Act 1986, ownership of all minerals, whether occurring in private or government-owned land, is vested in the government (Section 3). This inconsistency is further compounded by the provisions of the Local Self Governance Act which empowers the DDCs to sell sand in the rivers and canals, aggregate, soil, drift wood, etc., lying in its area as prescribed (Section 218).

Most of the development work such as construction of roads, irrigation canals, schools, hospitals takes place in forest areas. The agencies that promote such works, however, are not required by the Forest Act or other sectoral legislation to plant trees and conserve them in adjoining areas or some other place as compensatory measures. It is essential for the sectors such as infrastructure development, irrigation, mining, and roads to be sensitive towards the REDD+ objectives and also contribute to reducing deforestation and forest degradation, sustainable forest management and conservation and enhancement of forest carbon stock while undertaking different activities to promote the mandates of respective sector.

Implementation of forest and protected area related policies and legislation used to be very effective till about one decade ago. It has been weak over the past decade mainly due to the lack of political capital needed and enough human and financial resources.

Nepal is one of the countries which is considered to have innovative policies, legislation and forest and protected area management models. However, there is gap in the implementation of different polices and legislation. Slow pace of implementation of some of the sectoral policies such as National Land Use Policy 2012 has direct bearing on the conservation of forest.

It would be in the best interests of the state as well as the people that have been managing the forests and particularly women, *Dalits* and indigenous communities, if their rights, responsibilities and entitlements *vis-a-vis* REDD+ is clearly spelt out. Although the Bill to Amend the Forest Act stipulates that the arrangements for sharing of the benefits arising from PES will be as prescribed in the Forest Regulations, it would be better to provide the basis for sharing of the benefits in the Forest Act itself. One of the principal criteria could be well-being of the communities that have been contributing to conservation and enhancement of carbon stock and sustainable management of forest.

Nepal is party to different MEAs such as the Ramsar Convention, Convention on Biological Diversity, UNFCCC, and Kyoto Protocol to the UNFCCC. While a lot of work needs to be done for the national implementation of these MEAs in one hand, increasing synergetic effect of those MEAs is also yet to be embarked upon.

6.3 Institutional Gap

One of the principal roles of the institutions is to strive for fulfilling the objectives of different laws, policies and programmes that they have been administering and implementing. Although the Forest Act and Forest Regulations have been in force for the past 20 years, conservation and sustainable use of forest is yet to be mainstreamed and integrated in sectors such as energy, infrastructure development, irrigation, mining, and roads. It is necessary for these sectors to be sensitive towards the REDD+ objectives and also contribute to reducing deforestation and forest degradation, sustainable forest management and conservation and enhancement forest carbon stock while undertaking their sectoral activities. Neither the MoFSC, DoF or DFO nor sectoral ministries has been able to do so. If this trend continues during the full-fledged implementation of REDD+, it would be almost impossible to fulfill the contractual obligations under ERPA.

It is only the REDD IC that has been approved by the Ministry of Public Administration. Besides, there are other institutions that need to be established for implementation of different aspects of REDD+ like SESA, MRV, Carbon Registry, Carbon Payment, etc. There is need to establish appropriate institutions to ensure transparent, prompt, effective, efficient and fair implementation of REDD+ including benefit-sharing.

Appropriate institutional arrangements are also required for resolution of grievances and conflict that may arise in the future during the implementation of REDD+ related legal provisions, strategies, policies, programmes and ERPA. A formal process to resolve complaints helps facilitate more equitable outcomes and minimize delays when conflicts arise (Jhaveri and Adhikari, 2015) which does not exist at present. It is expected that the study on Grievance Redress Mechanism (GRM) commissioned by REDD IC will provide appropriate mechanism for the same.

Though the REDD IC is responsible for coordinating the readiness process at the national and sub-national levels among diverse stakeholders, there is a lack of proper institutional and technical infrastructure at the sub-national level to operate the REDD+ programme including benefit-sharing, financing and monitoring activities at the sub national level. Though there are line offices of the MoFSC at regional, district, sector and range post level, there is still weak technical knowhow as well as dedicated unit and human resource(s) to manage REDD+ programme and activities. Similarly, the institutional and technical infrastructures required in agencies, such as the DNPWC and protected area authorities to implement REDD+, they are not enough. It is very unlikely that the MoFSC will be able to manage the REDD+ related programme activities at the district level without effective and efficient institutional arrangement and trained human resources.

The Department of Forest Research and Survey (DFRS) of the GoN has been identified by the REDD Strategy 2015 (Face the Future, 2015) as the national implementing agency for MRV system to establish and operationalize a national MRV system and to link country's REDD+ policy and the forest carbon MRV. However, its institutional as well as technical capacities to manage, maintain and update the National Forestry Information Management System in an

effective, efficient and transparent manner needs to be built. The MRV capacity within the country is still weak and capacity building efforts are needed.

CHAPTER - VII

Regulatory Framework and Institutional Arrangement for REDD+

7.1 Regulating REDD+ Carbon Rights And Benefit-Sharing

The REDD IC is the lead institution that has been undertaking REDD readiness activities in Nepal. The REDD readiness activities in Nepal have been guided by the R-PP. It was approved by the FCPF in 2010, providing Nepal with a grant to implement the activities outlined in the R-PP. The 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 while addressing the livelihood concerns of forest dependent poor and marginalized people, and establishing effective policy, regulatory and institutional structures for sustainable management of forests under the forthcoming new constitutional framework.

The MoFSC has established a three-tiered institutional mechanism for implementing REDD+ at central level, consisting of the REDD+ multi-sectoral, multi-stakeholder coordinating and monitoring committee as the Apex Body; the REDD Working Group and the REDD IC as the coordinating entity at national level. Besides these mechanisms, a stakeholder forum has been established to engage a wide range of stakeholders in the entire REDD+ process. However, forest carbon, forest carbon ownership right, usufruct right in relation to forest carbon is yet to be defined, in spite of the fact that these terms need to be defined to ensure full-fledged implementation of REDD+ and REDD+ outcomes.

Forest Carbon as an ecosystem services: The term forest carbon has been used as both product and service depending on the context. It has been regarded as product when people refer to it as a physical commodity. However, when people refer to it as the credit for carbon sequestration or emission reduction function, it is generally regarded as a service. Since there are different legal provisions for forest products and forest services, different stakeholders might have different political interests to define carbon as either product/good or service. In Nepal's forest legislations, ownerships and rights over forest products are relatively clearer (e.g., in case of community-managed forest, they are owned by community) and ownership of forest services are not as clearly defined (e.g., carbon, water, biodiversity, etc.). Therefore, there is an opinion that forest carbon also needs to be defined as forest product so that there will be less contradiction over carbon rights and, thereby, over carbon trade.

It is better to know about the differences in concepts of products and services before considering a working definition of carbon as a product or as a service. Generally, forest products are tangible and discernible items that can normally be supplied to s buyers while trading. In the production and trade of forest products, buyers are considered as outsiders and ownership rights of the products are transferred to the buyers through the process of trade. On the other hand, service is normally considered as an intangible benefit, either in its own right or as a significant element of a tangible product, which satisfies an identified need. Forest services are primarily produced in specified locations and cannot be physically transferred for trade. Also the buyers cannot be ignored during the production process of forest services and the ownership of the services is not transferable to the buyers through trade. In carbon trade, only the carbon credits that allow buyers to emit a certain level of carbon are transferred.

The Millennium Ecosystem Assessment (2005) considered carbon sequestration as a benefit obtained from the regulation of ecosystem processes and, therefore, carbon is considered as a regulatory service obtained from forest. It has also been noted that carbon has always been the part of ecosystem service bundles where PES is in practice (e.g., in Costa Rica). However, there are certain complexities associated with the carbon trade considering carbon as service (e.g., such as governance, institutions, policy, ownership transfer, etc.). Carefully introducing appropriate legal and institutional provisions supported by well-functioning governance and monitoring can deal such complexities of defining and implementing carbon rights as ecosystem services.

The current provisions made in the 13th Five Year Plan, forest policy and other relevant environmental conventions in which Nepal has been the party also provide ample space to consider carbon as ecosystem service. Therefore, considering the immobile and inseparable nature of the carbon with forest and land, its association with land tenure, trade systems (e.g., transfer only the ER title), national legal framework (i.e., provide space for clarity in legal and institutional domains) and international practices, carbon in Nepal should be categorized as ecosystem service.

Similarly, the government should define forest carbon ownership right as right of a person or community to access, benefit, manage, right to refuse access and use, right to legally challenge and obtain compensation, length of time to exercise the forgoing rights and right to transfer by sale, lease or some other means forest carbon sequestrated by the different pools of carbon over which the person or community has respectively property right or usufruct right.

While defining forest usufruct right, the government should define it as forest usufruct right comprising of the range of legal rights and agreements whereby a community or communities may conserve, develop, manage, use and draw from forest area handed over to it or them as community forest, leasehold forest, collaborative forest, buffer zone community forest, or designated as conservation area from national forest, all the profit, utility and advantage which the forest or conservation area may produce that belongs to the Government of Nepal, provided fundamental quality, and quantity and total land area of such forest or conservation area is not impaired.

7.1.1 Holder of Enforceable Rights to use Forest and Transfer ER Title

The state has the title over forest land while local communities manage part of the national forest and protected areas and enjoy the usufruct rights provided by provisions of the Forest Act 1993 and National Parks and Wildlife Conservation Act 1973. As discussed above, the right to property guaranteed by the Constitution is subject to the laws enacted from time to time.

The mandate, power and functions of the MoFSC, in accordance with the Government of Nepal (Allocation of Business) Regulations 2013 are, among others, to conserve, utilize, promote and manage forests; to conserve and manage forest products; to conserve, utilize and share forest benefits including plants, wildlife, biological diversity, and natural environment; to promote demonstration and dissemination of forest, plant, wildlife, biological diversity, and climate change related with the forest sector, watershed conservation, and soil conservation; and to implement international agreements related to forest, plant, wildlife, watershed conservation, biological diversity, and soil conservation.

Since the State has the land title of all the national forests irrespective of management regimes, and the MoFSC is the agency to perform all the activities of forest conservation and management on behalf of the GoN, it is wise for the MoFSC to have enforceable rights to use and exploit the forest carbon credit to enable it to regulate the use and sales of REDD+ carbon rights and effectively distribute the benefits among the forest dependent communities. The Biogas Support Programme (BSP) in Nepal has already practiced carbon credit transfer to the BSP/AEPC before the installation of bio-gas plants. Trading in carbon credits accumulated from household biogas plants relies on the aggregate decisions of individual households to switch to renewable bio-gas technology and to transfer their carbon trading rights to the government. Households transfer future carbon revenue to the government (Barnhart 2014).

In order to facilitate to the meet the requirement of CFMF Indicator 36.1, the process of transfer or hand over of carbon credits of ER programme to the MoFSC by community-based forest management groups (e.g., CFUG, LFUG, collaborative forest management group, buffer zone user groups and conservation area management council or committee), the government should include/mention the provision in the forest regulations or in the guidelines that "the forest-managing groups can transfer carbon credit to the MoFSC through its field offices such as DFO (or its field offices) and/or park/conservation area authorities." Until the regulations are amended and guidelines are prepared, a ministry level decision can be made. Such a decision should delegate to the authority "to get a contract signed from the community-based forest management groups that they transfer the carbon credit to the MoFSC" to DFO and/or park/conservation area authorities. For this, a standard form can be made, which should later be institutionalized as part of forest operational plan and can be enforced while approving the new and/or amending the old forest operational plans. A resolution to this effect should require a decision of community-based forest management groups to participate in the ER programme. Similarly, to fulfill the requirement of the CFMF Indicator 36.2 the government should transfer Title to the Carbon Fund through MoFSC.

The Warsaw Framework of REDD+ invites interested Parties to designate, a national entity or focal point to serve as a liaison with the secretariat and the relevant bodies under the Convention, as appropriate, on the coordination of support for the full implementation of activities and elements referred to in decision 1/CP.16, paragraphs 70, 71 and 73, including different policy approaches, such as joint mitigation and adaptation, and to inform the secretariat accordingly.[45] In line with the Warsaw Framework for REDD+ which encourages countries to set up a national REDD+ entity or designate a focal point to liaise with the Secretariat and the relevant bodies under the UNFCCC for REDD+ related matters[46], the MoFSC has already established REDD IC.

It also notes that the national entities or focal points of developing country Parties may nominate their entities to obtain and receive results-based payments[47]. Furthermore, FCPF Carbon Fund Methodological Framework's criterion 30 requires the Emission Reduction Programme Entity[48] to demonstrate its authority to enter into an Emission Reduction Purchase

45 Decision 10/CP.19, para 1.

46 UNFCCC Decision 10/CP.19

47 Decision 10/CP.19, para 2. For other responsibilities which the national entity or focal point needs to discharge, please refer Decision 10/CP.19, para 3 and 4.

48 The ER Programme entity is the party or parties specified as such in the ERPA, who enters into an ERPA with the World Bank as the trustee of the Carbon Fund. CFMF, Glossary.

Agreement (ERPA) and its ability to transfer title to ERs to the Carbon Fund. Without the authority to enter into an ERPA, the Entity be it MoFSC or REDD IC or any other agency, neither can enter into an ERPA nor it will be acceptable to Carbon Fund or any other carbon financing agency. Unless such authority is vested in an institution, the carbon financing institution will not be willing to put in its resources.

It, therefore, necessitates designating an existing institution or establishing an entity and providing enforceable rights to use and transfer ER title to one of the agencies/departments of the MoFSC. Thus, MoFSC should have the enforceable rights to use forest and transfer the ER title as required for carbon trading. It must also be required to comply with the ERPA and ensure effectiveness, efficiency and equity while implementing REDD+ including benefit-sharing. However, MoFSC need to be able to transfer rights of carbon credit or emission reduction title to the projects particularly if Nepal opt project based REDD+ scheme and/or participate in voluntary carbon market.

7.1.2 Authorized Entity to Explore and Receive REDD+ Benefits

REDD+ is expected to generate wide range of benefits and non-carbon benefits. The monetary benefits include REDD+ finance and REDD+ benefits including funds flowing into a REDD+ host country from public or private sources that reward performance; and cash or in-kind benefits received by domestic stakeholders as an incentive or reward for their contribution to REDD+ programmes (Davis and Williams, 2012). It is expected to generate non-carbon benefits, which include, as also mentioned by Lee (2011), conserving biodiversity, adaptation needs, protecting ecosystem services, economic benefits and community benefits. Specifically these co-benefits include (ii) conservation of biodiversity–both flora and fauna; (ii) control of land degradation, erosion, and desertification; (iii) empowerment of rural women and other disadvantaged groups; (iv) enhancement in carbon yields and carbon stocks, mitigation of climate change, provision of timber and non-timber forest products, and livelihood benefits for local communities; (v) reduction of emissions from deforestation and forest degradation, and dependence on forest products; (vi) generation of revenue and income through tourism and forest services; and (vii) poverty reduction and community development.

As discussed above under the sub-section 7.1.1, the "Holder of enforceable rights to use forest and transfer ER title," one of the responsibilities of the national entity or focal point nominated by the government (i.e., REDD IC) is to obtain and receive results-based payments. However, the result-based payments only accrue after the respective country participating in REDD+ is able to show that the initiative taken have contributed to mitigation actions in the forest sector. The activities so undertaken should be consistent with the general principles of REDD+, listed in paragraph 1 of Appendix 1 of Decision 1/CP.16, which include contributing to the achievement of the objective set out in Article 2 of the Convention; ensuring that activities are consistent with national sustainable development needs and goals; promote the sustainable management of forests; are implemented in the context of sustainable development and reducing poverty while responding to climate change and are results-based.[49]

As emission reductions is very likely to be rewarded in Nepal on the basis of national reference level, and the government has land title over all the forests and protected areas except private forest and also it has the authority to formulate and implement policies to guide forest

49 Decision 1/CP.16, Appendix I, para 1.

management and benefits sharing, the MoFSC should have the authority to explore and receive the REDD+ forest benefits and results including monetary and co-benefits. However, this arrangement should be reviewed when the GoN is able to establish forest reference level or baseline at community/project level, since as Hirte (2015) also stated, attribution to any given rights holder may be easier to determine particularly when the project uses a spatially explicit baseline. Nevertheless, as a prerequisite, the government should determine, either in the forest law or the REDD Strategy, how the monetary and co-benefits to be accrued from emission reductions will be equitably shared among the communities contributing to REDD+ outcomes.

7.1.3 Rights to Clear the Land and Harvest Timber and Non-Timber Products

As discussed in preceding sections, the Forest Act 1993, Forest Regulations 1995, National Parks and Wildlife Conservation Act 1973, and Buffer Zone Management Regulations 1996 provide different rights to user groups including the right to harvest different forest products (e.g., leaf, litter, firewood, timber and non-timber forest products). CFUG has the authority to independently determine the price and sell the forest products. The bottom line is that harvesting has to be in accordance with the provisions of the approved forest operational plan. Buffer zone community forest users groups also have the authority to use the forest resources as per the plan. However, they are allowed only to use those forest products received from the forest, which they have planted and grown and also by paying certain fees (Rule 21(10)).

The Conservation Area Management Guidelines 1999, Conservation Area Government Management Regulations 2000 and Kanchenjunga Conservation Area Management Regulations also provide some authority to users for collection, utilization and transportation of only those forest products which are not prohibited by prevailing law outside the conservation area for commercial purposes by complying with the provisions set forth in these regulations.

Although, communities managing forest, conservation areas and buffer zones have different rights including the right to manage, harvest, utilise and sell timber and NTFPs, the laws are silent with regard to the ownership of forest carbon right. While entrusting carbon credit transfer rights to national entity or focal point (as mentioned in the subsection 7.1.1 above), it must be ensured that communities right to manage, harvest, utilise, and sell timber and NTFPs is not curtailed as long as these practices contribute to conservation of forest, sustainable management of forests and enhancement of forest carbon stocks. It must also be ensured that REDD+ carbon benefits and co-benefits generated and obtained from sale of carbon credits is fairly and equitably shared with and among forest managing/users communities.

7.1.4 Ways to Ensure Benefit for Forest-Dependent Communities

This study recommends addressing the concerns of opportunity cost bearers, forest-managing communities, since the success of REDD+ initiative is contingent on alteration and maintenance of their land use behaviors. For REDD+ to be successful in incentivizing behavior that leads to reduce net emissions (while also avoiding harm and potentially creating benefits to forest-dependent communities), the right to benefit from sequestered carbon and reduced emissions must be clearly delineated (Knox et al, 2012). REDD+ benefits incentivize forest-managing communities only if the benefits flow reaches to the communities. It is therefore essential to identify the elements of a REDD+ benefit-sharing system. As identified by Peskett (2011), this study also highlights three elements of benefits sharing which include (i) the types of benefits that arise through REDD+; (ii) the actors (including the beneficiaries) between whom benefits are shared; and (iii) the cross-cutting formal and informal rules that govern how

benefits are shared. These elements will serve as a guide and may facilitate to achieve equity, efficiency and effectiveness in benefit-sharing if they are mentioned in relevant policy and legislations. Legislations and/or contract provisions should specify the kind of benefits to be accrued to whom and how. This finding is in line with Takacs (2009). Most of the stakeholders have also suggested adding a separate section for the provisioning of forest carbon ownership and sharing of benefits accrued from carbon trade in the Forest Act 1993.

Clarifying tenure rights is central to an efficient, effective and equitable REDD+ mechanism as it can help identify who the key REDD+ stakeholders are, who should participate in decision-making processes as well as who should obtain benefits (Sunderlin et al, 2014). One of the issues related to benefit-sharing is whether the communities are entitled to carbon sequestrated by all the five carbon pools and carbon sequestration potential of the land since they have usufruct rights under different forest management regimes. As suggested by the individuals and officials consulted at the central and district levels, forest carbon ownership right should not be divided on the basis of carbon pools. The benefits accruing from the five carbon pools and carbon sequestration potential of the land should be duly shared with forest-managing communities. The government also needs to take reasonable share of the benefits as it has the land title and also plays key role in the management of forest and carbon finance.

The government should develop benefit-sharing plan for fair and equitable sharing of monetary and non-monetary benefits. It should transparently develop the plan with the engagement of representatives of forest managing communities, women, *Dalits, Adivasies, Janajatis* and experts. As the benefit-sharing plan evolves, the government should share it with stakeholders at large and also revise it as per the feedback from different stakeholders.

In order to ensure that REDD+ monetary and non-monetary benefits reaches to the forest-managing communities, it would be better to create a separate fund at national level so as to help facilitate benefit flow and prioritize REDD+ activities at the grass-root level. If the funds received from REDD+ finance goes to the central treasury, channeling it back to the forest-managing communities and REDD+ project is likely to be less prioritized in comparison to physical infrastructure development; also it will be time consuming, as it should go through the complex bureaucratic process.

The focus should be on increasing the size of the carbon finance pie of forest managing communities by reducing the transaction cost. It is also essential to ensure that the transaction cost of management of carbon trade and benefit-sharing is least as far as possible. The higher the transaction cost, the less the forest-managing communities will end up receiving the benefits. Consideration should be given to keep the transaction cost low by making administrative support efficient for benefit-sharing so as to maintain higher level of carbon benefits reached to the communities.

The criteria for benefit-sharing needs to be developed through an inclusive, transparent and democratic way so as to make it equitable in the sense that it addresses the needs of, and reward the poor, women, *Dalits, Adivasies Janajatis* and other marginalised groups that are the most dependent on forest. Therefore, one of the effective ways to target the beneficiaries is to conduct participatory wellbeing ranking at the community level. Preventive measures should be taken to ensure that the local elites do not capture the highest share of the benefits. This study suggests that carbon benefits are distributed when food prices are low, and therefore local

communities can free up cash for expenditure in more productive activities which ultimately help REDD+ activities. This finding is in line with the finding of Slater (2009).

During the consultation, formation of a committee at the district level to monitor the benefits flow to the lowest level of forest-managing communities and to prevent and control misappropriation was suggested. The level of benefits should reflect the contribution made by forest-managing communities in conserving forest, and preventing deforestation and forest degradation.

7.1.5 Ways to Maintain Democratic Rights under a Federal State Structure

The Constitution of Nepal 2015 guarantees the right to a clean environment. However, fair and equitable access to forest, sustainable use of forests, and equitable sharing of the benefits are yet to be guaranteed by the Constitution as a fundamental right of the citizens. Since Nepal is practicing community-based forest management including protected areas for several decades, time has come to give due recognition to forest-managing communities for their fair and equitable access to forest, sustainable use of forests and equitable sharing of the all types of benefits accrued from the forest by provisioning in the higher level of legislation including the Forest Act 1993.

Even if fair and equitable access to forest, sustainable use of forests and equitable sharing of benefits is guaranteed by the constitution as a fundamental right, it will have only limited benefit if there are no responsibilities incorporated to protect the forest. Only if the health of forests is maintained and enhanced, the present and future generations can enjoy the benefits accruing from forests. It is also important to ensure permanence of the long-term viability of reduced emissions from a REDD+ project, which is heavily dependent on the forested area's vulnerability to deforestation and/or degradation. Such responsibility is also required to ensure that reduction in carbon emissions in one area does not result in increased emissions in another area. Therefore, it would be farsighted to include protection of forest as a fundamental duty of every citizen in the new constitution and forestry legislation to be subsequently amended or enacted.

In order to get reasonable share of global carbon finance, Nepal should prepare appropriate governance systems that ensure transparency, accountability, rule of law, and participation. It is equally essential to make the policy makers, government forestry institutions and forest managing communities accountable and devise institutional mechanism to facilitate their participation in decision-making and forest management. Transparency, accountability and participation also need to be duly integrated not only in the national and sub-national level policies, legislation and institutional arrangements but also in the forestry programmes, projects, and activities. In fact, they should be well reflected to the rules of the forest-managing communities because that is where most of the forest dependent realize the democratic values, principles and practices.

7.1.6 Impacts of the Carbon Ownership and Usufruct Rights on Livelihoods

The livelihoods of the people living in or around forests are inextricably linked to the forest ecosystem. People depend on the forest for a variety of forest products for food, fodder, agriculture, housing, and an array of marketable forest products, which can potentially degrade forest if harvested unsustainably. However, there is a limited understanding of the livelihood implications of REDD+ interventions despite the implementation of REDD+ pilot projects in

the country. Implementation of REDD+ is likely to have impact on the local livelihoods in different ways, both positive and negative. Different groups of the forest-managing communities such as poor, women, *Dalit* and ethnic groups may be affected disproportionately. Nevertheless, implementation of REDD+ is very likely to provide monetary and non-monetary benefits to forest-managing communities and other stakeholders. It would, therefore, be wise to implement REDD+ in a manner that enhances the livelihood opportunities and at the same time increases REDD+ outcomes. If it has more negative impacts than positive on the livelihoods and/or usufruct rights of the local people, communities will not conserve the forest resulting in to unsustainable management of forest.

If the title to the land is the sole criteria for allocating forest carbon ownership right, it would not be possible for the GoN to ensure permanence and ultimately rather than getting additional benefits and revenue from carbon trading, the State will end up losing its revenue. It would, therefore, be most appropriate and fair if the carbon ownership right is allocated to the forest-managing communities. It would ensure unabated continuation of community based forest management practices, and also provide communities additional incentives from carbon trade.

Rather than attaching forest carbon ownership with land tenure, it would be most pragmatic and farsighted allocating carbon ownership right based on the usufruct right. If the nation indeed wishes to build on the achievements of community-based forest management practices and achieve successful REDD+, usufruct rights should be the main criteria for allocating carbon ownership right. In order to promote REDD+, which is only possible where there is secured carbon right, it would be very wise to explicitly stipulate that usurfruct right entails carbon rights of the commuities in community-based forest management regimes. If it is not mentioned and recognized by law it is very likely that it would disincentivze the communitines rather than incentivizing the communities and will be contrary to the goal of REDD+. If the forest carbon ownership is allocated on the basis of current usufruct right, it would have positive impact on the livelihood of forest dependent communities, provided it is ensured that the REDD+ benefits reach the poor. One of the major suggestions of the central and district level consultations has been that the benefits or funds of REDD+ must flow to the forest-managing communities which should be shared equitably. It would be better to err on the side of caution before taking any decision relating to forest carbon ownership right rather than the one that would serve disincentive to the communities' livelihood and jeopardize achievement of the objectives of REDD+.

7.1.7 Implications of the Design and Implementation of REDD+ in Benefit-Sharing

Working policies of the Forest and Soil Conservation sector of the 13th Plan (2014/15-2017/18) stipulate taking necessary action to develop institutional infrastructure to receive potential benefits from REDD+ implementation, and to make appropriate arrangements for distribution of REDD+ benefit among the stakeholders that have been actually contributing in forest conservation. Although the working policies do not mention about incentive based mechanism, it indicates to incentivize those forest-managing communities that have been contributing to conservation of forest and thus enhance carbon sequestration capacity and carbon stock. If there is fairness and equity in the incentive system people should be more willing to participate in the REDD+ programme and contribute to conservation of forest and enhancement of carbon stock. Therefore, careful design of benefit-sharing and incentivizing criteria is essential for institutionalization of REDD+.

Nepal can and should explore the opportunities for the payments for broader ecosystem services and conservation incentives learning from other countries like Costa Rica and Mexico. For this, lessons from different pilot projects including ICIMOD, ANSAB and FECOFUN led REDD+ pilot project need to be well documented and analysed in relation to socio-economic, cultural and policy context. The ICIMOD-led pilot project at least attempted to put a price on carbon sequestration as a performance based mechanism to reduce deforestation and therefore can give crucial lesson in this regard. For example, a good lesson of this endeavor is that it has initiated the incentive distribution to the communities for the conservation (40 percent) and social safeguards (60 percent). However, during the field visit to these project sites it is said that, 60 percent of the payment to socio-economic attributes of the community provided less focus to the five major areas of intervention of REDD+ and raised dissatisfaction at user group level. It warrants more reflection and refinement in the institutional arrangement both procedural as well as substantive dimensions.

The level of incentives that is more than opportunity costs would be useful for the success of REDD+. A uniform rate of payment on the basis of forest area is likely not well-suited for REDD+ incentive, which requires concrete results in terms of quantity of carbon emissions reduced or removed by project activities.

7.1.8 Policies, Laws and Institutions to Adapt to Encompass Forest Carbon Ownership

In line with UNEP (2013), it is suggested to make changes in legal framework to provide necessary legal provisions, mandates and authority for existing institutions to manage REDD+ activities. The laws and policies should be amended in such a way that they clearly spell out the forest carbon ownership right so that investment in forest carbon could likely be sustainable. For sustainability *to be achieved*, legal regimes should result in forest carbon projects that are 1) *effective*, i.e. they work without complication and deliver and maintain the desired carbon benefits over the long term; 2) *synergistic*, i.e. they maximize benefits for all local communities, biodiversity, climate, and investors; and 3) *equitable*, i.e. gaps between rich and poor narrow as a result of forest carbon projects (Takacs, 2009).

As a precursor to successful implementation of REDD+ programme, forest policies and legislation should clearly define carbon ownership right and benefits sharing mechanism to be accrued from carbon trading. While defining carbon rights, impact of laws and policies on the society should be duly considered. As Goepel (2010) has pointed out, Nepalese society has been already vastly unequal, laws and policies should focus on improving the quality of life of the peoples to be affected particularly the poor and marginalized. As all REDD+ stakeholders and scholars within the country and beyond appreciate the fact that carbon benefits are contingent upon clear land/forest tenure, one of the major criteria for carbon trading is clear, secure and uncontested land/forest tenure. Therefore, legislative, policy and institutional arrangements should either be revised or new laws should be formulated and enacted to clarify the forest tenure. The following points should be ensured by amending the Forest Act 1993 and Forest Regulations 1995 and/or the National Parks and Wildlife Conservation Act 1973, Conservation Area Management Regulations 1996 and Buffer Zone Regulations 1996:

- The forest managing communities have right over the carbon sequestrated by the five carbon pools that they have been managing as per the Forest Act or National Parks and Wildlife Conservation Act;

- Unambiguous stipulation that the usufruct rights of the forest managing communities includes the right over the forest carbon and the associated benefits accrued from carbon trading and REDD+ outcomes;
- Right of the forest managing communities to receive the monetary and non-monetary benefits equitable arising from carbon credits and carbon financing should be protected.
- Duty of the forest dependent and managing communities to conserve and sustainably manage forest and conserve and enhance forest carbon stock;
- Forest managing communities' responsibility to entrust carbon credit trade rights to MoFSC or focal point, and the MoFSC's responsibility to safeguard and not abridge/curtail forest managing communities' bundle of existing property rights (both procedural and substantive);
- Duty of the MoFSC or the focal point to comply with the ERPA and ensure effectiveness, efficiency and equity while implementing REDD+ initiative including benefit-sharing;
- Provisions to make ministries such as energy, infrastructure development, industry, irrigation, mining, and roads to be committed towards conservation and sustainable management of forest and conservation and enhancement of forest carbon stock by first preventing the use of forest while implementing their programmes or for development of infrastructure projects to promote/fulfill the mandates of their respective sectors and where there is no alternate other than utilizing the forest area planting and protecting at least 25 trees for one tree cut while undertaking sectoral activities;
- Measures for a clear institutional framework that sets out clear mandates and facilitates inter-sectoral cooperation at the central, provincial/regional and district levels;
- Provision for creation of a separate fund for management of monetary benefits and carbon finance;
- Responsibility of forest policy makers, managers and forest managing communities to be transparent, accountable and promote right to information and participation of stakeholders in and to REDD+ initiative; and
- Appropriate provisions for clear, transparent, enforceable sanctions for non–compliance, and GRM also need to be included. Policy maker, government official, member of the community managing forest or individual who do not comply with the legislation must end up paying severe penalty even after the retirement of the policy maker, government official or representative of community managing forest who did not comply with the law.

It is the legislative authority of the Federal Government to make laws in relation to international treaties and agreements; national and international environment management; national parks and reserves; national forest policy, and carbon service (Constitution of Nepal 2015, Schedule 5). Utilizing this legislative authority, the Federal Government should either amend the Forest Act 1993 and National Parks and Wildlife Conservation Act 1973 and/or formulate appropriate legislation for defining forest carbon, carbon ownership right and usufruct right discretely stating that usufruct right also entails environmental services such as carbon.

Policy makers and parliamentarians must understand and realize tenure's role in promoting effectiveness, efficiency, and equity in REDD+, as so aptly summarized by Jhavri and Adhikari (2015) (see Box 8, below). Therefore, there is no reason for the parliamentarians or government to shy away from providing forest carbon ownership right to communities managing forests.

Box 8: Tenure's role in promoting effectiveness, efficiency, and equity in REDD+

Elements	Roles
Effectiveness	• The essence of REDD+ is to reward those who maintain or enhance the carbon sequestration of forests and compensate them for lost opportunities; this could include direct payment schemes to landholders, which would require a clear rights holder who has rights to exclude others. • The holders of rights to forest carbon must be held accountable in the event that they fail to fulfill their obligation - the "conditional" part of conditional incentives.
Efficiency	• Clear tenure rights reduce transaction costs, such as time and funds required for conflict resolution. • Secure tenure rights increase the policy options available, and thereby enable governments and project proponents to choose more cost-effective implementation strategies.
Equity	• When tenure is unclear or not formalized, forest people may be excluded from forests and/or from participation in REDD+ benefits; in particular, if REDD+ increases the value of standing forests, a resource rush may result that places the rights of current residents at risk. • REDD+ will inevitably prohibit certain uses of forest resources; this must be done with due process and compensation, and without increased hardship, for poor forest peoples.

An appropriate and adequately capacitated and authorized institutional framework is one of the necessary benchmarks for REDD+ to be effective. Such institutional framework should at least consist of clearly spelt out powers and functions, have inclusive representation, a well-functioning decision making body and secretariat, and have adequate financial budget to perform the tasks assigned to them. It is wise to capacitate and mobilize existing institutions for all kinds of REDD+ related activities as far as possible as (i) they are more compatible to existing legal, policy and institutional set up, and (ii) they could be cost effective, (iii) there could be less institutional conflict and contradictions. Therefore, either REDD strategy or forest law should provide adequate authorities and functions of already existing REDD+ institutions such as Apex Body, RWG and REDD IC. However, if needed in view of emerging functions and responsibilities, revision in the institutional structure should be carried out. .

One of the functions of law and policy is to establish adequate institutions to ensure transparent, prompt, effective and fair implementation of its provisions and policy pronouncements. As also mentioned by Denier et al, (2014), the study recommend coordination between institutions responsible for the management of different land-use sectors

is important for REDD+ as many key drivers of deforestation stem from sectors other than forestry. There is need for more horizontal and vertical coordination among several government units and different levels of government. The role of the REDD Apex Body and Working Group could be crucial in maintaining horizontal and vertical coordination, provided they have the required legal mandate. However, more critical reflection is warranted to document the lessons from the past experience of, and making the functioning of, Apex Body and RWG.

The REDD+ related law, REDD strategy and/or institutions should also include the ways to ensure that /stakeholders cannot take undue advantage of their provisions. For instance, it should prevent the provisions from being mis-interpreted and mis-applied that may lead to weak governance, bribery and corruption. These mechanisms are the keys to secure fair and just implementation of the law and policy.

In order for REDD+ to be effective, the study recommends to settle the issue of conflicting mandates and overlapping jurisdiction of different agencies over the same forest resource. Conflicting mandates and overlapping jurisdictions can create inefficiencies and sometimes prevent institutions from achieving their respective goals (Denier et al, 2014). Although the inconsistencies have been identified and proposed to be done away with by the National Biodiversity Strategy and Action Plan 2014 as well, significant efforts are yet to be taken to address the inconsistencies. As also indicated by WWF (2013), this study emphasizes the need to resolve possible conflicts early in the REDD+ process, by harmonizing and mainstreaming REDD-related legislation with forest and other sectoral legislations. Furthermore, as WWF (2013) mentioned, this study also suggest either (a) reframing existing forest, land-use planning, and other related laws and policies to maximize incentives for climate change mitigation, or (b) developing new, cross-cutting national and subnational REDD+ legislation to address incoherent, inconsistency and conflicting policies during the design of REDD+ legal frameworks. However, this study suggests amending the Forest Act 1993 to include required provisions rather than formulating and enacting a separate law for REDD+. It also recommends the government to include a separate chapter to deal with REDD+ in the Biodiversity Management Act, which it has already committed to be enacted by the end of 2016 in the NBSAP.

The study underscores the REDD IC to take lead role to make different development sectors (i.e., energy, infrastructure development, industry, irrigation, mining, and transport) sensitive to follow low-carbon development path that explicitly help achieve REDD+ objectives. Though efforts towards this are already initiated, more work is yet to be done.

7.2 Proposed Institutional Framework

The REDD Strategy 2015 stipulates that the institutional structure for the implementation of REDD+ strategies and programmes will be based on existing government institution and using already approved institution where possible. The key elements of these structures will be covering policy, a coordination and steering entity, a MRV system entity and a benefit-sharing mechanism entity, all operational from center to sub-national and district levels (Face the Future 2015).

The Ministry of General Administration has approved REDD IC. It has been managing the Readiness phase with the guidance from and oversight from Apex Body and RWG which are chaired by the Minster, and Secretary of MoFSC, respectively. Although REDD IC has been

working since 2010 the required institutional arrangement for REDD+ is yet to be formally established and made functional.

In order for REDD+ initiative to be properly and effectively managed and the funds to be flowed to community level, institutional arrangement must be clearly conceptualized, established and powers and functions spelt out. Composition and powers and functions of the Apex Body, RWG, REDD IC, and other agencies need to be clearly provided in the law. To enable these bodies to work effectively, it is essential to provide statutory recognition to them and legal provisions relating to composition, powers and functions. Statutory recognition is also required to enable these institutions to function and make them accountable to the people and forest health.

A Forest Carbon Fund needs to be established for managing forest carbon financing including the ensuring of fund flow from bilateral, public and private financing and sharing of the funds at the community level. It should also be responsible for the payment of incentives from central down to sub-national, district and community levels. The REDD IC should serve as the secretariat to the Forest Carbon Fund. Legal authority is also required for setting up or entrusting the responsibility for discharging different tasks related to REDD such as MRV.

REDD Apex Body: The existing REDD+ Apex Body working as an inter-ministerial high-level policy steering and coordination entity chaired by the Minister of the MoFSC is already established. As suggested by the REDD Strategy, a clear Terms of Reference (ToR) and operational guideline is needed to make the Apex body's role functional and effective.

REDD Working Group (RWG): The RWG is already formed as a REDD multi-stakeholder forum chaired by the Secretary of MoFSC. The RWG should provide a strategic leadership to REDD IC by providing technical and institutional support, reviewing the progress, monitoring of programme activities, integrating programme priorities, and helping to create operational environment for smooth implementation of REDD+ strategy. A clear ToR and operational guideline is needed to make its role functional and effective. It would be better to provide it statutory recognition by including its composition, powers and functions in the Forest Act or the Forest Regulations.

National Multi-Stakeholder Forum (NMSF): Since the REDD National Multi-Stakeholder Forum already exists in the prevailing REDD+ process, it can be merged within the RWG to make the institutional structure slim and functional. The objective of outreach and communication could be fulfilled if representatives from different agencies such as - private sector, civil society, media, government organizations, community based organizations, indigenous peoples organizations, local and international NGOs, donors, academia, research, GESI related organizations and other stakeholders represent in the REDD+ process.

REDD CSO and IPO Alliance: This is a platform of CSOs and IPOs working in forestry and REDD. The objective is to discuss and develop a common understanding on REDD+ on behalf of wide spectrum of Indigenous Peoples Organizations, Women, *Dalit* and Civil Society Organizations and advocate for developing justifiable REDD+ framework and mechanism. A clear ToR and operational guideline is needed to make its role functional and effective.

All the three structures (REDD Apex body, REDD Working Group (RWG) and REDD CSO and IPO Alliance) at national and subnational level should function as steering body and

provide guidance for promoting REDD+ outcomes, equitable benefit-sharing and inter-sectoral coordination and cooperation.

REDD Implementation Center (REDD IC): It is the formal structure that has already been approved by the GoN to implement REDD+ programme in Nepal. It is led by Joint Secretary, and is located under the MoFSC. This should work as a secretariat of the REDD+ programme in Nepal. The center is authorized to provide leadership on REDD+ at national level with responsibility for policy and programme development, monitoring, reporting and verification, coordinating among different stakeholders and agencies, disseminating information, extension and capacity-building, and ensuring benefit-sharing to carbon right holders. It has four sections: Climate Management Section, Remote Sensing and Land Information System Section, Budget and programme section and Admin-finance section. Although the REDD IC has been working under the strategic direction of Apex Body and RWG, it would be useful to spell out its powers and functions in detail in the Forest Regulations. Unless it has legal mandate and autonomy, it might not be able to function effectively and be accountable to the communities that have been managing the forest and forest-managing communities. There will be added benefit if more authority and autonomy is provided to REDD IC. To accommodate a wider level of stakeholders and its programme it is necessary to have a project management unit (PMU) under the REDD IC.

Similarly, the coordination and linkage mechanism between REDD IC and DNPWC is not clear yet regarding implementation of REDD+ programme. A project management unit (PMU) needs to be established and human resources provided in the protected areas for implementing REDD+ programme in protected area offices.

Central Carbon Registry (Clearing house): As recommended by REDD Strategy 2015, DFRS-NAFMIS should act as a Central Carbon Registry in the beginning, which should serve as a repository of REDD+ related information, allow for enforcement of standards and engage in carbon transaction by maintaining broad-based participation of stakeholders in the management of the registry. Moreover, the responsibility of Carbon Registry should be clearly spelt out.

Carbon Payment Authority: In line with REDD Strategy 2015, a Carbon Payment Committee should be formed representing multi-stakeholders to make decisions for the payment of incentives to right holders. A ToR and operational guideline should be developed to guide the committee for its functioning, and tracking carbon benefit transactions according to the volume, location and type of emission reductions. Since it is necessary to assess the transaction modalities and transactions related to carbon payment to be done either from forest carbon fund, treasury office or financial institutions, the efficiency, equity, transparency and accountability should be the guiding principles.

Monitoring and MRV System: As suggested by REDD Strategy 2015, the Survey Division of DFRS should be reformed to 'Forest Survey and NAFMIS & MRV System Management Division' (as MRV Division) to ensure effective, efficient and transparent governance of measurement, monitoring and management of data under the MRV system. However, the existing commitment, institutional and technical capacity should be identified, clarified and enhanced. Similar arrangement should be made at regional and district level.

Apart from the above-mentioned institutions, GoN has constituted the Climate Change Council chaired by Right Honorable Prime Minister in July 2009. The chair of REDD+REDD+ Apex

Body is one of the members of the council. The council has mandate of providing guidance for the integration of climate change related aspects in the policies, plans and programmes. The Apex Body should be linked with this council to bring synergy and help address issues and challenges of conflicting policies and legal frameworks.

7.3 Proposed Benefit-Sharing Mechanism

From the perspective of REDD+, co-benefits arise from the maintenance or restoration of forest ecosystems that would otherwise have been degraded or lost. The rapidly growing literature reflects the importance and sensitivity of safeguards and co-benefits from REDD+. As also pointed out by Joshi et al (2013), the co-benefits and associated key stakeholders should be determined by the social, ecological and institutional contexts in which REDD+ activities are implemented . Most crucially, FCPF standards concretely answer the questions still pending in UNFCCC negotiations by drawing a clear-cut distinction between monetary and non-monetary benefits in one hand, and non-carbon benefits on the other. Monetary and non-monetary benefits are bundled together and defined as 'goods, services or other benefits related to payments received or funded with REDD+ payments, or any other benefits that are directly related to the implementation and operation of a REDD+ programme, provide a direct incentive to implement it, and can be monitored in an objective manner' (Id., at 32). Both monetary and non-monetary benefits are to be specifically reported in Benefit-sharing Plans. Conversely, non-carbon benefits are defined as 'benefits produced by or in relation to the implementation and operation of an emission reduction programme, such as the improvement of local livelihoods, the building of transparent and effective forest governance structures, progress on securing land tenure, and enhancing or maintaining biodiversity and/or other ecosystem services.' Non-carbon benefits are not to be reported in Benefit-sharing Plans (Id., at 25).

The following benefit-sharing mechanism has been recommended based on the existing rights, benefit framework, prevailing practices and consultation at the central and district levels. However, a wider level discussion and management arrangement is necessary for further scrutiny. In addition, the experiences from REDD+ pilot initiatives and national and international practices are also considered while designing the framework. The following table describes details on the existing benefit-sharing modality, ownership and REDD+ revenue sharing modality. The management cost for forest carbon trading should be first deducted from the gross income received from carbon trading and only the net income should be shared as shown below:

Box 9: REDD+ Income / Benefit-Sharing Mechanism

SN	Management Tenure	Existing Benefit-sharing Arrangement	Carbon Ownership	REDD+ Income/Benefit-sharing Modality
1	Government forest	• Of the total revenue generated from government-managed forests, 10 percent goes to DDC. • Regarding the 90 percent revenue generated from government-managed forests, there is no guideline or system to know exactly how much revenue generated is used for which purpose by the GoN. • Of the total income generated from the sale of unclaimed or stray (*dariyaburdi*) timber, 50	• Forest – GoN • Land/soil GoN • Other – GoN	• GoN - 70% • LGB – 10% • Local Catchment Area - 20%

		percent goes to DDC. The DDC must use at least 50 percent of that money in forest development.		
2	Protected Forest	• Of the total income from PF, 50 percent goes to DFO and 50 percent goes to PFMC. • Of the total DFO's income, 10 percent goes to DDC. The DDC must at least use 50 percent of the money to forest development. • Regarding the remaining 90 percent of the DFO's income, there is no guideline or system to know exactly how much revenue generated is used for which purpose by the GoN. • PFMC must allocate 50 percent income for forest and biodiversity conservation.	• Forest – GoN • Land/soil GoN • Other – GoN	GoN - 50% LGB - 10% PFMC - 40%
3	Community forest	• According to the Forest Act 1993, at least 25 percent income from the CF must be spent for forest protection and management of community forest. • Similarly, according to the Community Forest Development Guidelines 2009, of the total income from CF, each CFUG has to spend 35 percent for poor, women, *Dalits*, and indigenous nationalities (ethnic groups)	• Forest – CFUG • Land/soil – GoN • Other – GoN	GoN - 20% CFUG - 80%

4	Collaborative forest	• 50 percent of income goes to CoFMG (the total revenue generated is shared on the basis of 50 – 50).
		• Of the total income gained, the CoFMG follows the following norm for expenditure:
		  o Management of Collaborative Forest - 40 percent
		  o Poverty reduction, community development and capacity enhancement - 50 percent
		  o Administrative cost- max 10 percent
		• 50 percent income goes to GoN through DFO. There is no guideline or system to know exactly how much revenue generated is used for which purpose by the GoN.
			• Forest – CoFMG
			• Land/soil – GoN
			• Other – GoN
				GoN - 40%
				LGB - 10%
				CoFMG - 50%

4	Leasehold forest	• There is no provision for the use of income generated from leasehold forests (in both pro-poor and industrial leasehold forestry).		
		• Pro-poor	• Forest – LFMG • Land/soil – GoN • Other – GoN	GoN - 10% LFUG – 90%
		• Industrial (including tourism)	• Forest – Lessee • Land/soil – GoN • Other – GoN	GoN - 50% Lessee – 50%
5	Private forest	• There is no provision for the use of income from private forests. It is considered as private property.	• Forest – Owner • Land/soil –	GoN - 10% Private forest Owner – 90%

			Owner • Other – Owner	
6	Religious forest	• Religious groups must spend the income generated from the religious forest to religious purposes only.	• Forest – RFUG • Soil – GoN • Other – GoN	GoN - 10% RFUG – 90%
7	Buffer Zone			
	Buffer Zone Community Forest	• There is no provision but practice is that the expenditure is made according to BZCF management plan approved by chief conservation officer.	• Forest – BZCF • Land/soil – GoN • Other – GoN	GoN - 50% BZCF – 50%
	Buffer Zone Religious Forest (BZRF)	• Religious groups must spend the income generated from the religious forest to religious purposes only.	• Forest – BFRF • Land/soil – GoN • Other – GoN	GoN - 10% BZRF – 90%
	Buffer Zone Private Forest (BZPF)	• There is no guideline for the use of income from private forests	• Forest – Owner • Soil – Owner • Other – Owner	GoN - 10% BZPF – 90%
	BZ Government Forest	• 10 percent of the total revenue is allocated to DDC. The DDC must use at least 50 percent of such revenue for forest development. • Regarding the 90 percent, it goes to the government revenue. There are no guidelines or system to know exactly how much revenue generated from forests and where it is invested.	• Forest – GoN • Land/soil – GoN • Other – GoN	GoN - 50% LGB – 10% BZMC -40%
8	National Park, Wildlife Reserve and Hunting Reserve	• Out of the total revenue generated from National Parks, Wild Life and Hunting Reserves, 30-50 percent income is allocated to the Buffer Zone Management Council (BZMC). It is required to invest this revenue in the following areas: o Conservation activities: 30% o Community development: 30% o Income generating activities: 20% o Conservation education: 10% o Administrative cost 10% • The remaining amount goes to the government revenue.	• Forest – GoN • Land/soil – GoN • Other – GoN	GoN - 50% BZMC -50%
9	Conservation Area			
	CA1 – ACAP – (Agency Managed) e.g. NTNC	• 100% income generated from the use of natural resources is utilized as per the approved plan. • Of the total income generated from fine, 50	• Forest – GoN • Land/soil – GoN	GoN - 30% CAMCmt - 70%

		percent goes to committee treasury and 50 percent is utilized for protection and development works. • Government does not provide any budget.	• Other – GoN	
	CA2 -KCA	• Government provides budget for the management of conservation area. • 100% income generated from the use of natural resources is utilized as per the approved plan. • Of the total expenditure of the user committee, administrative cost must not be more than 25 percent.	• Forest – CAMCunl [50] • Land/soil – GoN • Other – GoN	GoN - 50% CAMCunl - 50%
	CA3 – Government managed	• Government provides budget for the management of conservation area. • Of the total budget for the community development, Council can spend unto 15 percent for administrative works. • Income generated from the conservation area goes to government revenue.	• Forest – CAMC[51] • Land/soil – GoN • Other – GoN	GoN - 70% CAMC - 30%

It is the responsibility of GoN and/or its collaborative partner to invest for the preparation of REDD+, negotiation and carbon trading. It should be covered from gross income received from carbon trade and the remaining net income or benefit should be distributed to the forest-managing communities. The Strategic Environmental and Social Assessment (SESA) should be the guiding document while sharing benefit at local level. However, a separate operational guideline should be prepared for result based funding.

Benefit-sharing must be fair and the process transparent. All the REDD+ income and expenditure should be transparent and made available online. The benefit-sharing process and benefit-sharing should be monitored at the district level as well as sub-national and national levels. In case of the provincial government, the Federal Government should provide certain share from the revenue which it gets from the benefit-sharing arrangement of carbon financing. It is also suggested that the benefit-sharing should also take into account the management input provided by the government.

If the size of the forest managed under different management modalities are small and will not be feasible for benefit-sharing, a minimum ceiling of the forest acquisition or a condition of applying by a group of users as a single entitlement or a single entity to receive benefit from REDD+ should be determined. For such arrangement at least 300 ha of forest should be the minimum holding criteria.

50 Conservation Area Management Council

51 Conservation Area Management Committee

CHAPTER - VIII

Conclusions

The concept of carbon rights that represent either carbon ownership and/or carbon credit transfer rights is relatively new and unprecedented. Defining and institutionalizing carbon rights is fundamental to devise incentive-based policy instruments that help conserve and manage forest-based public goods and services by valuing them and paying people to protect them. Practically, there are complexities, ambiguities and challenges in defining and operationalizing carbon rights due to (i) the dynamic nature of carbon fluxes in relation to forest, ecosystem services, land and atmosphere, (ii) the abstract nature of the concepts of carbon rights and their trades that made them difficult to understand and communicate with stakeholders, and (iii) the diversities and complexities of forest governance at local to national and international levels. However, these complexities, ambiguities and challenges can be overcome by conscious efforts informed by past experience of forest management and well-intentioned policies, plans and legislations.

The age-old land and forest tenure practices, existing national forestry legal frameworks and the newly agreed international conventions provide ample space for creating rights over forest carbon. Some international policy and methodological guidelines (e.g., the Warsaw Framework, Cancun Agreement and CFMF) and national legal frameworks (e.g., Nepal's Forest Act 1993) and traditional forest management and usufruct benefit-sharing practices (e.g., community-managed forests) provide motivation, useful insights, broader direction and procedures, and bottom-line of the forest rights in defining carbon rights and crafting institutional set up for realizing these rights. Nepal's forestry policies, plans and legal frameworks developed after the restoration of democracy in 1990 provide foundation for defining and realizing forest carbon rights explicitly in Nepal. Particularly the communities' forest management and use rights under different participatory management models provide direction for establishing these rights. However, there is an acute need to add specific and explicit provisions in the legal documents so as to institutionalize carbon rights. Care should be given to add carbon rights on top of safeguarding existing usufruct rights while amending the legal provisions.

Drawing lessons from experience and empirical evidence from across the countries help develop general understanding about the implications of carbon rights in forest management and livelihood benefits of forest-managing communities. Establishment of regular monitoring mechanism in realizing the usufruct rights in practice is one of the critical components of institutionalization process of carbon rights. Effective monitoring process can be institutionalized by developing democratic, transparent and inclusive mechanisms at both national and local levels. These mechanisms could be helpful to provide input for the broader monitoring, reporting and verification (MRV) of carbon and safeguard systems, which is essential part of overall REDD+ initiatives.

A range of pertinent issues/areas for further studies have emerged during the course of this study. Some of such study areas include (i) understanding spatial and temporal carbon dynamics on the basis of types of forest ecosystems and forest management practices, (ii) implications of different forest tenure and property rights regime in the management of forest and carbon emissions, (iii) finer level analysis of inter-sectoral policy, plans, legislations and

institutional practices with a focus on developing low-carbon development strategy and promote true collaboration, (iv) improvement of governance and institutional practices that increase the sustainability, efficiency, effectiveness, equity, legitimacy and credibility of forest management.

In order for REDD+ to have positive implications for conservation of forest, enhancement of carbon stock and increased payment to communities, it is necessary to clarify forest carbon right; make incentive payments conditional on delivery of REDD+ outcomes; design programme activities to minimize the costs of participation while allowing for productive activities to occur alongside REDD+. Similarly, it is also essential to account for multiple benefits in targeting payments or incentives; strengthen the enabling legal, policy and governance framework; provide a clear institutional framework that sets out clear mandates and facilitates inter-sectoral cooperation; and provides clear, transparent, enforceable sanctions for noncompliance, in combination with grievance redress mechanisms. It is expected that the above issues will be addressed appropriately by the REDD Strategy.

References

Acharya, K.P., J. Adhikari and D.R., Khanal, 2008, Forest tenure regimes and their impact on livelihoods in Nepal. *Journal of Forest and Livelihood*, 7 (1): 6-18.

Agrawal, A. and J. Ribot, 1999, Accountability in decentralization: A framework with South Asian and West African cases. *The Journal of Developing Areas*, 33: 473-502.

Agrawal, A., D. Nepstad and A. Chhatre, 2011, Reducing emissions from deforestation and forest degradation. *Annual Review of Environment and Resources*, 36: 373-396.

Angelsen, A. (ed.), 2008, *Moving Ahead with REDD: Issues, Options and Implications*. CIFOR, Bogor, Indonesia.

Arhin, A.A., 2014, *Safeguards and Dangerguards: A Framework for Unpacking the Black Box of Safeguards for REDD+*. Department of Geography, University of Cambridge.

Baker and McKanzie, 2014, *The Consolidated Guide to the REDD+ Rules under the UNFCCC*. http://www.bakermckanzie.com/reddrulebook

Baker, R., J.C. Carrillo and A. Silverman, 2014, The development of a national safeguard system for REDD+ in *Mexico: A Case for the Value of International Guidance*, BiC, CEMDA and CIEL.

Baland, J.M., and J.P. Platteau, 1998, Division of the commons: A partial assessment of the new institutional economics of land rights. *American Journal of Agricultural Economics*, 80(3): 644-650.

Barnhart, S., 2014, From household decisions to global networks: Biogas and the allure of carbon trading in Nepal. *The Professional Geographer*, 66 (3): 345-353.

Bastakoti, R.R. and C. Davidsen, 2014, REDD+ and Forest tenure security: Concerns in Nepal's community forestry. *International Journal of Sustainable Development & World Ecology*, 21 (2): 168-180.

Behr, D.C., E.M. Cunningham, G. Kajembe, G. Mbeyale, S. Nsita, and K. Rosenbaum, 2012, *Benefit-sharing in Practice: Insights for REDD+ Initiatives*. PROFOR.

Belbase N. (ed.), 2011, *Environmental Right and Governance: Resource Material*, (Nepali language). Forum for Justice, Kathmandu, Nepal.

Belbase, N. 1998, The Environment Protection Act 1996 of Nepal. *APJEL*, 3: 65-77.

Belbase, N. and L.B. Thapa, 2007, Environmental justice and rural communities, Nepal, in P. Moore and F. Pastakia (eds.), *Environmental Justice and Rural Communities, Studies from India and Nepal.* IUCN (International Union for Conservation of Nature and Natural Resources), Bangkok and Gland.

Beyene, A.D., R. Bluffstone and A. Mekonnen, 2013, *Community Controlled Forests, Carbon Sequestration and REDD+: Some Evidence from Ethiopia*. Discussion paper Series. Environment for Development.

Bhattarai, M. and D.R. Khanal, 2005, *Communities, Forests and Law of Nepal: Present State and Challenges*. FECOFUN. ProPublic, Kathmandu, and CIEL, Washington, DC.

Blom, B., T. Sunderland and D. Murdiyarso, 2010, Getting REDD to work locally: Lessons learned from integrated conservation and development projects. *Environmental Science and Policy*, 13: 164-174.

Blomley, T. and S. Iddi, 2009. *Participatory Forest Management in Tanzania 1993-2009: Lessons learned and Experiences to Date*. Ministry of Natural Resources and Tourism, Forestry and Beekeeping Division Dar es Salaam, United Republic of Tanzania.

Bluffstone, R., E.J.P. Robinson and P. Gulthiga, 2013, REDD+ and community-controlled forests in low income countries: Any hope for linkage? *Ecological Economics* 87: 43-52.

Bolin, A., L. Lawrence and M. Leggett, 2013, *Land Tenure and Fast-Tracking REDD+: Time to Reframe the Debate?* Oxford: Global Canopy Programme.

Bottazoi, P., D. Crespo, H. Soria, H. Dao, M. Serrudo, J.P. Benavides, S. Schwarzer and S. Rist, 2014, Carbon sequestration in community forests: Trade-offs, multiple outcomes and institutional diversity in the Bolivian Amazon. *Development and Change*. Vol 45 (1): 105-131.

Bouvier, J., 1856, A Law Dictionary Adapted to the Constitution and Laws of The United States of America and of The Several States of the American Union (6th edition). Childs & Peterson, Philadelphia, PA.

Boyd, J. and S. Banzhaf, 2006, *What Are Ecosystem Services? The Need for Standardized Environmental Accounting Units*. Resources for the Future Discussion Paper.

Bray, D.B. and L. Merino-Perez, 2002, *The Rise of Community Forestry in Mexico: History, Concepts, and Lessons Learned from Twenty-Five Years of Community Timber Production*. The Ford Foundation.

Brockhaus, M. and A. Angelsen, 2012, *Seeing REDD+ Through 4Is: A Political Economy Framework, Analysing REDD*. Center for International Forestry Research (CIFOR), Bogor, Indonesia.

Broegaard, R., 2005, Land tenure insecurity and inequality in Nicaragua. *Development and Change* 36(5): 845-864.

Brown, J., 2004, Ejidos and Communidades in Oaxaca, Mexico: Impact of the 1992 Reforms. RDI Reports on Foreign Aid and Development No.120. http://www.landesa.org/wp-content/uploads/2011/01/RDI_120.pdf. Accessed in June 2025.

Bruce, J., K. Wendland and L. Naughton-Treves, 2010, Whom to Pay? Key Concepts and Term Regarding Tenure and Property Rights in Payment-Based Forest Ecosystem Conservation. Land Tenure Center Policy Brief 15. http://www.nelson.wisc.edu/. Accessed on 20 February 2015.

Bulte E. and Engel S., 2006, Conservation of tropical forests: addressing market failure, in R. López, J. Stiglitz, and M. Toman (eds.) *Sustainable Development: New Options and Policies*. Oxford University Press, New York.

Busch J., F. Godoy, W.R. Turner and C.A. Harvey, 2011, Biodiversity co-benefits of reducing emissions from deforestation under alternative reference levels and levels of finance. *Conservation Letters* 4: 101-115.

Campbell, B.M., 2009, Beyond Copenhagen: REDD+, Agriculture, Adaptation Strategies and Poverty', *Global Environmental Change* 193 397-99.

Caplow, S., P. Jagger, K. Lawlor and E. Sills, 2011, Evaluating land use and livelihood impacts of early forest carbon projects3 lessons for learning about REDD+. *Environmental Science & Policy* 14 (2): 152-167.

CBD, 2010, Outcomes of the Global Expert Workshop on Biodiversity Benefits of Reducing Emissions from Deforestation and Forest Degradation in Developing Countries. Convention on Biological Diversity, UNEP/CBD/WS-REDD/1/3, Nairobi.

CBD, 2011a, REDD-Plus and Biodiversity. Technical Series No. 59. Convention on Biological Diversity, Montreal.

Chhatre, A. and A. Agrawal, 2009, Tradeoffs and synergies between carbon storage and livelihood benefits from forest commons. *Proceedings of the National Academy of Sciences*. 106 (42): 17667-17670.

Chhetri, R.B., H. Sigdel and Y. Malla, 2001, Country Profile Report for the Forum on the Role of Forestry in Poverty Alleviation: Nepal. Forestry Department-FAO, September 2001.

Christy, L.C. et al, 2007, Forest Law and Sustainable Development. Addressing Contemporary Challenges through Legal Reform. The World Bank, Washington, DC.

CIFOR, 2010, Forests, Land Use, and Climate Change Assessment for USAID/Mexico. Final Report. CIFOR, Bogor, Indonesia. http://pdf.usaid.gov/pdf_docs/PNADT898.pdf. Accessed in June 2015.

CIRUM, 2012, Customary Law in Forest Resources Use and Management: A Case Study among the Dzao and Thai People in North-West Vietnam. Culture Identity and Resources Use Management (CIRUM), International Work Group for Indigenous Affairs (IWGIA) and Asia Indigenous Peoples' Pact (AIPP).

Climate Law and Policy, 2014, Unpacking the 'Warsaw Framework for REDD+': The Requirements for Implementing REDD+ under the United Nations Framework Convention on Climate Change. February 2014. Briefing Note.

Coase, R.H., 1960, The problem of social cost. *Journal of Law and Economics* 3: 1-44.

Colchester, M., 2010, Free, Prior and Informed Consent: Making FPIC Work for Forests and Peoples. Prepared for the Forests Dialogue, FPIC Initiative.

CONAFOR, 2010a, Readiness Preparation Proposal (R-PP) Template. Forest Carbon Partnership Facility, SEMARNAT-CONAFOR.

CONAFOR, 2010b, Visión de México sobre REDD+: Hacia una Estrategia Nacional.

CONAFOR, 2015, Mid-Term Progress Report: Mexico. Forest Carbon Partnership Facility, Readiness Fund.

Coomes, O.T., F. Grimard, C. Potvin, and P. Sima, 2008, The fate of the tropical forest: Carbon or cattle? *Ecological Economics* 65 (1): 207-212.

Corbera, E. and K. Brown, 2010, Offsetting benefits? Analyzing access to forest carbon, *Environment and Planning* 42: 1739-1761.

Cortez, R., et al, 2010, A Nested Approach to REDD+: Structuring Effective and Transparent Incentive Mechanisms for REDD+ Implementation at Multiple Scales. http://www.nature.org/initiatives/climatechange/files/nested_paper_final_60110.pdf.

Costenbader, J. (ed.), 2009, *Legal Frameworks for REDD*. Design and Implementation at the National Level. IUCN, Gland.

Costenbader, J., 2011, REDD+ Benefit-sharing: A Comparative Assessment of Three National Policy Approaches. FCPF Facility and UN-REDD Programme.

Cotula, L. and J. Mayers, 2009, Tenure in REDD: Start-point or Afterthought? *Natural Resource Issues No. 15*. London: International Institute for Environment and Development.

CSRC, 2009, Land and Land Tenure Security in Nepal (Country Study, Nepal). Community Self Reliance Centre (CSRC), Kathmandu, Nepal.

CSRC, Land Watch Asia and Asian NGO Coalition for Agrarian Reform and Rural Development (ANGOC). 2009. *Land and Land Tenure*. Community Self Reliance Centre. Kathmandu, Nepal.

Dangi, R., 2014, *Status of REDD+ Readiness in Nepal: Learning from R-PP Implementation, Youth Alliance for Environment*. REDD+ Readiness in Nepal.

Davis, C. and Williams L.J., 2012, *Institutional Assessment Tool for Benefit-sharing under REDD+*, Tetra Tech ARD, Burlington, Vermont.

Deininger, K. and G. Feder, 2009, Land registration, governance, and development: evidence and implications for policy. World Bank Research Observer 24 (2): 233-266.

Denier, L., S. Korwin, M. Leggett and C. MacFarquhar, 2014, *The Little Book of Legal Frameworks for REDD+*. Global Canopy Programme, Oxford, UK.

Dhungel, S.P.S., B. Adhikari, B.P. Bhandari and C. Murgatroyd, 1998, Commentary on the Nepalese Constitution. DeLF Lawyer's Inc., Kathmandu, Nepal.

Diaz, S., A. Hector and D.A. Wardle, 2009, Biodiversity in forest carbon sequestration initiatives: Not just a side benefit. *Current Opinion in Environmental Sustainability*, 1: 55-60

Dixon, R.K., S. Brown, R.A. Houghton, A.M. Solomon, M.C. Trexler, and J. Wisniewski, 1994a, Carbon pools and flux of global forest ecosystems. *Science*, 263: 185-190.

Economist, 2010a, Better REDD than Dead. *The Economist*. September 25, 2010.

Economist, 2010b, Keeping it in the Community. *The Economist*. September 25, 2010.

Eliasch, J., 2008, Climate change: Financing global forests. *Eliasch Review*. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228833/9780108507632.pdf. Accessed 30/12/2014.

Engel, S., 2007, Payments for Environmental Services: Potentials and Caveats. *IED Newsletter No.1*. Institute for Environmental Decisions. ETH, Zürich.

Engela, S., Pagiolab S. and Wunder S., 2008, Designing payments for environmental services in theory and practice: An overview of the issues. *Ecological Economics*, 65: 663-674.

Face the Future, 2015, *REDD+ Strategy for Nepal*, REDD Implementation Center, Ministry of Forests and Soil Conservation, Kathmandu, Nepal, and Face the Future (Netherlands), in association with Arbonaut (Finland), Practical Solution Consultancy Nepal (PSPL) and Nepal Environmental and Scientific Services (NESS),

FAO, 2006, *Better Forestry, Less Poverty: A Practitioner's Guide*. Rome, Italy: FAO.

FAO, 2007, *The State of Food and Agriculture: Paying Farmers for Environmental Services*. FAO. Rome.

FAO, 2010, *Global Forest Resources Assessment*. FAO, Rome.

FCPF, 2012, *REDD Readiness Progress Fact Sheet*. Country: Indonesia.

Fletcher, L.S., D. Kittredge D., Jr. and T. Stevens, 2009, Forest landowners' willingness to sell carbon credits: a pilot study. *Northern Journal of Applied Forestry*, 26 (1), 35-37.

FONAFIFO, 2012, *Estudio de cobertura forestal de Costa Rica 2009-2010*. San José, Costa Rica.

Forest Peoples Programme, 2011, *National Update on REDD+ in Indonesia*. Rights, Forests and Climate Briefing Series, October 2011.

Gardner, T.A., N.D. Burgess, N. Aquilar-Amuchastegui, J. Barlow, E. Berenguer, T. Clements, F. Danielsen, J. Ferreira, W. Foden, V. Kapos, S.M. Khan, A.C. Lees, L. Parry, R.M. Roman-Cuesta, C.B. Schmitt, N. Strange, I. Theilade and I.C.G. Vieira, 2012, A framework for integrating biodiversity concerns into national REDD programmes. *Biological Conservation* 154: 61-71.

Gebara, M.F., 2013, Importance of local participation in achieving equity in benefit-sharing mechanisms for REDD+: a case study from the Juma Sustainable Development Reserve, *International Journal of Commons*, 7 (2): 473-497.

GEF, 2005, *Mainstreaming Market-Based Instruments for Environmental Management. Project Executive Summary*. GEFSEC Project 2994, Ministry of Environment and Energy and National Forestry Financing Fund, Costa Rica.

Gilmour, D.A. and R.J. Fisher, 1991, *Villagers, Forest and Foresters: The Philosophy, Process and Practice of Community Forestry in Nepal*. Sahayogi Press, Kathmandu, Nepal.

GOCR, 2011, *Propuesta para la Preparación de Readiness R-PP*. Submitted to FCPF April 2011. San José, Costa Rica.

GOCR, 2013a, *Emissions Reduction Program Idea Note (ER-PIN).* Submitted to FCPF February 2013. San José, Costa Rica.

GOCR, 2013b, *Presentation on Costa Rica ER-Program, Sixth Meeting of the Carbon Fund (CF6)*, Washington, DC, March 15th to 16th, 2013.

Goepel, Maja (2010) Formulating future just policies: Applying the Delhi Sustainable Development Law Principles, (2) *Sustainability* 1694-1718.

GoN, 2011a. *Collaborative Forest Management Directives, 2011*. Ministry of Forest and Soil Conservation, Kathmandu, Nepal.

GoN, 2011b, *Study on REDD+ Piloting in Nepal*. REDD Forestry and Climate Cell, Kathmandu, Nepal

GoN, DoF, 1997, *The Community and Private Forestry Programme in Nepal*. Government of Nepal and Department of Forest, Kathmandu, Nepal.

GoN, MoEST, 2008 *Nepal-Thematic Assessment Report: Biodiversity*. Ministry of Environment, Science and Technology, Kathmandu, Nepal.

GoN, MoEST, 2008, *A Nepal-National Capacity Self-Assessment Report and Action Plan*. Ministry of Environment, Science and Technology, Kathmandu, Nepal.

GoN, MoFSC, 2014, *Nepal Biodiversity Strategy and Action Plan 2014*. Government of Nepal. Ministry of Forest and Soil Conservation, Kathmandu, Nepal.

GoN. 1993, *Forest Act 1993*. Ministry of Forest and Soil Conservation. Kathmandu, Nepal

GoN. 2014, *REDD+ SESA and ESMF Nepal REDD+ Strategic Environmental and Social Assessment*. REDD Cell, Kathmandu, Nepal.

GoN/MoFSC, 2010, *Nepal's Readiness Preparation Proposal REDD – 2010 – 2013*. Submitted to Forest Carbon Partnership Facility/World Bank, and Ministry of Forest and Soil Conservation, Kathmandu, Nepal.

Greiber, T., S.P. Moreno, M. Ahren, J.N. Carrasco, E.C. Kamau, J.C. Medaglia, M.G. Oliva, and F. Perron-Welch, in cooperation with N. Ali and C. Williams. 2012. *An Explanatory Guide to the Nagoya Protocol on Access and Benefit-Sharing*. IUCN. Gland, Switzerland.

Griffiths, T. and H. Tugendhat., 2013, Introduction: Why Safeguards Matter. E-Newsletter Special: Safeguarding Human Rights in International Finance. Forest Peoples Programme. Moreton-in-Marsh, UK.

Gupta, J., 2009, Climate change and development cooperation: Trends and questions: Current opinion. *Environmental Sustainability*, 1 (2): 207-213.

Hallowell, A.I., 1943, The nature and function of property as a social institution. *Journal of Legal and Political Sociology* 1: 115-138.

Harvey, C.A., B. Dickson, and C. Kormos, 2009, Opportunities for achieving biodiversity conservation through REDD. *Conservation Letters* 3: 53-61.

Hiraldo, R. and Tanner T., 2011, Forest voices: Competing narratives over REDD., *IDS Bulletin* 42 (3): 42-51.

Hite, K., 2015, *Benefit-sharing and REDD+: Considerations and Options for Effective Design and Operation*. USAID-supported Forest Carbon, Markets and Communities Program. Washington, DC

ICIMOD, ANSAB and FECOFUN, 2011, *Operating Guidelines of Forest Carbon Trust Fund 2011*. ICIMOD, ANSAB, FECOFUN, Kathmandu, Nepal.

IDLO and FAO, 2011, *Legal Preparedness for REDD+ in Mexico*. IDLO and U.N.FAO.

Indonesian REDD+ Task Force, 2012, *REDD+ National Strategy*. Indonesia.

IPCC, 2007, Climate change 2007: Impacts, adaptation, and vulnerability, in M.L. Parry, O.F. Canziani, J.P. Palutikof, P.J. van der Linden, and C.E. Hanson, (eds.), *Climate Change 2007: Impacts, Adaptation, and Vulnerability: Report of the Intergovernmental Panel on Climate Change (IPCC).* Cambridge University Press, Cambridge, U.K.

Ituarte-Lima, C., M. Schultz, T. Hahn, and S. Cornell, 2013, *Discussion Paper: Safeguards for Scaling-Up Biodiversity Financing and Possible Guiding Principles.* Based on first discussion paper on: Safeguards For Scaling-Up Biodiversity Financing and Possible Guiding Principles—UNEP CBD/COP/11/INF7 (2012). Stockholm, Stockholm Resilience Centre.

Jagger, P., K. Lawlor, M. Brockhaus, M.F. Gebara, D.J. Sonwa, and I.A.P. Resosudarmo, 2012, REDD+ safeguards in national policy discourse and pilot projects, in A. Angelsen, M. Brockhaus, W.D. Sunderlin, and L.V. Verchot (eds.), *Analysing REDD+: Challenges and Choices*. CIFOR, Bogor, Indonesia.

Jelinski, D.E., 2005, There is no Mother Nature–There is no Balance of Nature: Culture, ecology, and conservation. *Human Ecology* 33 (2): 271-288.

Jhaveri N.J. and J. Adhikari, 2015, *Nepal Land and Natural Resource Tenure Assessment for Proposed Emission Reductions Program in Terai Arc Landscape*. Draft. USAID Tenure and Global Climate Change Program, Washington, DC.

Johnson, C. and T. Forsyth, 2002, In the eyes of the state: negotiating a 'rights based approach' to forest conservation in Thailand. *World Development* 30 (9): 1591-1605.

Joshi, L., B.S. Karki, K.C. Poudel, K. Bhattarai, R. Dangi, K. Acharya, B. Uprety, V. Singh, N. Chand, and U. Manandhar, 2013, Co-Benefits of REDD+ in community managed forests in Nepal. *Journal of Forest and Livelihood* 11 (2) July, 2013: 65-68

Kanowski, P.J., C.L. McDermott, and B.W. Cashore, 2011, Implementing REDD+: lessons from analysis of forest governance. *Environmental Science & Policy* 14 (2): 111-117.

Karsenty, A. and S. Ongolo, 2012, Can "fragile states" decide to reduce their deforestation? The inappropriate use of the theory of incentives with respect to the REDD mechanism. *Forest Policy and Economics*, 18: 38-45.

Kelley, L., E.M. Madeira, J. Blockhus, and D. Ganz, 2012, Synthesis of Benefit-sharing Mechanisms from the Natural Resource Sector: Lessons for Redd+. The Nature Conservancy, Washington, DC. https://www.conservationgateway.org/Documents/BenefiSharing2012_Backgrounder.pdf

Khatri, D., 2012, Is REDD+ redefining forest governance in Nepal? *Journal of Forest and Livelihoods*. 10 (1): 74-87.

Knox, A., D. Vhugen, S. Aguilar, L. Peskett, and J. Miner, 2012, *Forest Carbon Rights Guidebook: A Tool for Framing Legal Rights to Carbon Benefits Generated Through REDD+ Programming*. Tetra Tech ARD, Vermont.

Kweka, D.L., S. Quail, and J. Campese, 2014, Case report: Tanzania, in E.O. Sills, S.S. Atmadja, C. de Sassi, A.E. Duchelle, D.L. Kweka, I.A.P. Resosudarmo, and W.D. Sunderlin (eds.), *REDD+ On the Ground: A Case Book of Subnational Initiatives Across the Globe*. CIFOR, Bogor, Indonesia.

Lang, C., 2015, Indonesia's decision to put the REDD+ Agency in the Ministry of Environment and Forestry as "not in accordance" with Norway's US$1 billion REDD Deal. *REDD monitor*. http://www.redd-monitor.org/2015/01/30/indonesias-decision-to-put-the-redd-agency-in-the-ministry-of-environment-and-forestry-is-not-in-accordance-with-norways-us1-billion-redd-deal. Accessed in June 2015.

Lawlor, K., Madeira E.M., Blockhus J. and Ganz D. J., 2013, Community Participation and Benefits in REDD+: A Review of Initial Outcomes and Lessons. *Forests.* 4: 296-318.

Leach, M., R. Mearns, and I. Scoones, 1999, Environmental entitlements: dynamics and institutions in collaborative natural resource management. *World Development* 27: 225-247.

LEAD, 2007, Tanzania- Environmental Management Act, 2004, 3/3 Law, *Environment and Development Journal* (LEAD).

Lee, D., J. Seifert-Granzin, T. Neeff, D. Göhler, L. Bernd-Markus, and A. Busch, 2011, *Maximizing the Co-benefits of REDD-Plus Actions*. Discussion paper for a Regional Expert Workshop supported by the German International Climate Initiative, September 27-29 2011, Subic, Philippines. http://www.climatefocus.com/sites/default/files/maximizing_the_cobenefits_of___redd plus_actions.pdf. Accessed on March 30, 2015

Lewis, J., 2002, Agrarian change and privatisation of *ejido* land in Northern Mexico. *Journal of Agrarian Change* 2: 402-420.

Lovera, S., 2009, REDD Realities, in U. Brand, N. Bullard, E. Lander, and T. Mueller (eds.), Contours of climate justice: Ideas for shaping new climate and energy policy. *Critical Currents* 6: 46-53. Dag Hammarskjöld Foundation, Uppsala, Sweden.

Luintel, H., C.S. Silori, S. Frick, and B.H. Poudyal, 2013, Grassroots capacity building for REDD+: Lessons from Nepal. *Journal of Forest and Livelihood* 11 (2): 1-13.

Luttrell, C., K. Schreckenberg, and L. Leo Peskett, 2007, *The Implications of Carbon Financing for Pro-Poor Community Forestry, Forest Policy and Environment Program*. Forestry Briefing 14. Overseas Development Institute, UK.

Luttrell, C., L. Loft, M.F. Gebara, and D. Kweka, 2012, Who should benefit and why? Discourses on REDD+ benefit-sharing, in A. Angelsen, M. Brockhaus, W.D. Sunderlin, and L.V. Verchot (eds.), 2012, *Analysing REDD+*: *Challenges and Choices*. CIFOR, Bogor, Indonesia. http://www.cifor.org/publications/pdf_files/Books/BAngelsen1201.pdf

Maderia, E.M., L. Kelley, J. Blockhus, D. Ganz, R. Cortez, and G. Fishbein, 2012, *Sharing the Benefits of REDD+: Lessons from the Field.* The Nature Conservancy. Arlington, VA.

Maguire, R., 2013, Foundations of international climate law: Objectives, principles and methods, in E. Hollo, K. and M. Mehling (eds.), *Climate Change and the Law*. Springer Netherlands, Dordrecht, NL, 83-110.

Mahanthy, S., J. Guernier and Y. Yasmi, 2009, A fair share? Sharing the benefits and costs of collaborative forest management. *International Forestry Review*, 11(2): 268-280.

Maniatis, D., Y. Malhi, L. Saint Andre, D. Mollicone, N. Barbier, S. Saatchi, M. Henry, L. Tellier, M. Schwartzenberg, and L. White, 2011, Evaluating the potential of commercial forest inventory data to report on the forest carbon stock and forest carbon stock changes for REDD under the UNFCCC. *International Journal of Forestry Research* 2011: 134526. doi:10.1155/2011/134526

Miles, L. and B. Dickson B., 2010, REDD-plus and biodiversity: opportunities and challenges. *Unasylsva* 61: 56-63.

Milledge, S.A., I.K. Gelvas, and A. Ahrends, 2007, *Forestry, Governance and National Development: Lessons Learned from a Logging Boom in Southern Tanzania*. TRAFFIC East and Southern Africa; Tanzania Development Partners Group; Ministry of Natural Resources and Tourism. Dar es Salaam, Tanzania.

Millennium Ecosystem Assessment (MA). 2005. *Ecosystems and Human Well-Being: Synthesis*. Island Press, Washington.

Millennium Ecosystem Assessment, 2005, *Ecosystems and Human Well-being: Biodiversity Synthesis*. World Resources Institute, Washington, DC.

MNRT, 2008, *Participatory Forest Management in Tanzania: Facts and Figures*. Ministry of Natural Resources and Tourism, Forestry and Beekeeping Division. Dar es Salaam, Tanzania.

MoFSC, 2014, *Nepal Fifth National Report to Convention on Biological Diversity*. MoFSC, Kathmandu, Nepal.

MoFSC, 2015, *REDD+ Strategy for Nepal* (Draft). Ministry of Forests and Soil Conservation, Babarmahal, Kathmandu, Nepal

Mohammed, E.Y., 2011, *Pro-Poor Benefit Distribution in REDD+: Who Gets What and Why Does It Matter?* REDD Working Paper. IIED, London.

Morgera, E., 2009, Participation, Balancing of Rights and Interests, and Prior Informed Consent, in J. Costenbader (ed.) *Legal Frameworks for REDD*, pp.35-56. Gland: IUCN.

Moss, N. and R. Nussbaum, 2011, *A Review of Three REDD+ Safeguard Initiatives*. Forest Carbon Partnership Facility & UN-REDD Programme.

Navarro, G., 2010, *The Evolution of Costa Rica's Carbon Rights*. REDD Net Case Study.

NORAD, 2014, *Real-Time Evaluation of Norway's Climate and Forest Initiative*, Annexes 3–19. LTS International.

Norton Rose, 2010, *Forest Carbon Rights in REDD+ Countries: A Snapshot of Africa*. Norton Rose Group. London.

OECD, 2007, *OECD Rural Policy Reviews Mexico*. OECD Publications, Paris.

Ojha, H., Baral J.C. and Dahal N., 2008, *Can Nepal Benefit from Forest Carbon Financing? An Assessment of Opportunities, Challenges and Possible Actions*. Livelihoods and Forestry Programme, Kathmandu, Nepal.

Ostrom, E., 2003, How types of goods and property rights jointly affect collective action. *Journal of Theoretical Politics* 15 (3), 239–270.

Ostrom, E., 2010, *Keynote Speech*. The South Asian Network of Development and Environmental Economists. December 2010.

Otsuka, K. and F. Place, 2001, Introduction, pp.1-21 in K. Otsuka and F. Place (eds.) *Land Tenure and Natural Resource Management–A Comprehensive Study of Agrarian Communities in Asia and Africa*. The John Hopkins University Press, Baltimore, MD, and International Food Policy Research Institute, Washington, DC.

Pagiola, S. and G. Platais, 2007, *Payments for Environmental Services: From Theory to Practice*. The World Bank, Washington, DC.

Pagiola, S., 2003, Farmer responses to land degradation, in K.D. Wiebe (ed.), *Land Quality, Agricultural Productivity, and Food Security: Biophysical Processes and Economic Choices at Local, Regional, and Global Levels*. Edward Elgar, Cheltenham.

Palit, S. 1996. *Comparative Analysis of Policy and Institutional Dimensions of Community Forestry in India and Nepal*. Discussion Paper Series No. MHR 96/4. ICIMOD, Kathmandu, Nepal.

Parrotta, J.A., C. Wildburger and S. Mansourian (eds.), 2012, *Understanding Relationships between Biodiversity, Carbon, Forests and People: The Key to Achieving REDD+ Objectives*. A Global Assessment Report. Prepared by the Global Forest Expert Panel on Biodiversity, Forest Management, and REDD+. IUFRO World Series Volume 31. Vienna.

Paudel, N.S, H. Luintel, D. Khatri, and S. Karanjit, 2011, *REDD+ and Conflict: A Case of REDD+ Project in Nepal*. Phase II Study Report. ForestAction and RECOFTC, Kathmandu and Bangkok.

Peskett, L. 2011, *Benefit-sharing in REDD+: Exploring the Implications for Poor and Vulnerable People*. World Bank/REDD-net. Washington, DC.

Peskett, L. and G. Brodnig, 2011, *Carbon Rights in REDD+: Exploring the Implications for Poor and Vulnerable People*. World Bank and REDD-net.

Peskett, L., K. Schreckenberg, and B. Brown, 2011, Institutional approaches for carbon financing in the forest sector: Learning lessons for REDD+ from forest carbon projects in Uganda. *Environmental Science and Policy*, 14(2), 216–229.

Peters, P.E. and D. Kambewa, 2007, Whose security? Deepening social conflict over customary land in the shadow of land tenure reform in Malawi. *The Journal of Modern African Studies* 45: 447-472.

Phelps, J., E.L. Webb, and L.P. Koh, 2010, Risky business: an uncertain future for biodiversity conservation finance through REDD+. *Conservation Letters,* 4: 88–94.

Platteau, J.P., 1992, Land Reform and Structural Adjustment in Sub-Saharan Africa: Controversies and Guidelines. *Economic and Social Development Paper* 107. Rome: FAO.

Platteau, J.P., 2000, Allocating and Enforcing Property Rights in Land: Informal versus Formal Mechanisms in Subsaharan Africa. *Nordic Journal of Political Economy*, 26(1): 55-81.

Porras, I., Barton D.N., Miriam M. and Chacón-Cascante A., 2013, *Learning from 20 years of Payments for Ecosystem Services in Costa Rica*. IIED–Shaping Sustainable Markets Papers series.

Pratt, L., L. Rivera, and F. Sancho, 2010, *NEEDS Project–National Economic, Environment and Development Study for Climate Change, Options for Mitigation of Greenhouse Gas Emissions in Costa Rica: Towards Carbon Neutrality in 2021*. INCAE Business School.

Putz, F.E. and K.HI. Redford, 2009, Dangers of carbon-based conservation. *Global Environmental Change* 19: 400-401.

Ratsimbazafy, L.C., K. Harada, and M. Yamamura, 2011, Forest conservation and livelihood conflict in REDD: A case study from the Corridor Ankeniheny Zahamena REDD Project, Madagaskar. *International Journal of Biodiversity and Conservation.* 3(12): 618-630.

REDD Forestry and Climate Change Cell, 2013, *Mid Term Report*. Submitted to World Bank, FCPF Grant on REDD Readiness, Kathmandu, Nepal.

Ribot, J. and N. Peluso, 2003, A theory of access. *Rural Sociology* 68 (2): 153-181.

Richards, M. et al, 2009, *Getting Started on REDD in Tanzania: A Scoping Study for the Katoomba Incubator*. East and Southern Africa Katoomba Group. http://www.forest-trends.org/documents/files/doc_2496.pdf. Accessed October 31, 2012.

Rights and Resources Initiative (RRI), 2012, *What Rights? A Comparative Analysis of Developing Countries' National Legislation on Community and Indigenous Peoples' Forest Tenure Rights*. Washington, DC: Rights and Resources Initiative.

Rights and Resources Initiative and Ateneo De Manila University, 2014, *Status of Forest Carbon Rights and Implications for Communities, the Carbon Trade, and REDD+REDD+ Investments*. http://www.rightsandresources.org/documents/files/doc_6594.pdf.

Robinson, B., M. Holland, and L. Naughton-Treves, 2011, *Does Secure Land Tenure Save Forests? A Review of the Relationship Between Land Tenure and Tropical Deforestation*. CCASF Working Paper 7. Climate Change, Agriculture and Food Security (CCAFS), Copenhagen, Denmark.

Robles, F.F. and L. Peskett, 2011*, Carbon Rights in REDD+: The Case of Mexico*. REDD net.

Roe, S., C. Streck, L. Pritchard, and J. Costenbader, 2013, Safeguards in REDD+ and forest carbon standards: A review of social, environmental and procedural concepts and application. *Climate Focus*. Washington, DC.

Rosenbaum, K.L., D. Schoene, and A. Mekoua, 2004, Climate change and the forest sector: Possible national and subnational legislation. *FAO Forestry Paper* 144: 31-33.

SAGARPA, 2012, *La Comisión Intersecretarial para el Desarrollo Rural Sustentable, CIDRS, acordó la creación de Grupo de Trabajo de Proyectos Territoriales (GTPT)*. The REDD Desk, Mexico. Global Canopy Programme, Oxford, UK.

Scherr, S.J., A. White, and D. Kaimowitz, 2004, *A New Agenda for Forest Conservation and Poverty Reduction: Making Markets Work for Low Income Producers*. Washington, DC: Forest Trends.

Schlager, E. and E. Ostrom, 1992, Property rights regimes and natural resources: a conceptual analysis. *Land Economics* 68 (3): 249-263.

Schwarte, C. and E.Y. Mohammed, 2011, *Carbon Righteousness: How to Lever Pro-Poor Benefits from REDD+*. IIED Briefing.

Secretaria, REDD+, 2013, *Plan de trabajo SESA REDD+*. Costa Rica.

SEMARNAT, 2009, *Programa Especial de Cambio Climático 2009-2012*. Mexico.

SEMARNAT, 2011, Estrategia Nacional Para REDD+ (ENAREDD). Elementos para el diseño de la Estrategia Nacional para REDD+. Versión cero. Noviembre de 2011. (Draft)

Sikor, T. and C. Lund, 2009, Access and property: A question of power and authority. *Development and Change* 40 (1): 1-22.

Sikor, T., S. Johannes, T. Enters, J.C. Ribot, N. Singh, W.D. Sunderlin, and L. Wollenberg, 2010, REDD-plus, forest people's rights and nested climate governance. *Global Environmental Change,* 20 (3). Doi:10.1016/j.gloenvcha.2010.04.007

Sommerville, M., J. Jones, M. Rahajaharison, and E. Milner-Gulland, 2010, The role of fairness and benefit distribution in community-based payment for environmental services interventions: A case study from Menabe, Madagascar. *Ecological Economics* 69, 1262-1271.

Stadelmann, M., J.T. Roberts, and T. Michaelowa, 2010, Keeping a Big Promise: Options for Baselines to Assess "New and Additional" Climate Finance. CIS Working Paper no. 66. ETH Zurich and University of Zurich, Switzerland.

Stern, N., 2006, Executive Summary, in N. Stern, *The Economics of Climate Change*. The Stern Review. Cambridge University Press, Cambridge, UK.

Stickler, C., D.C. Nepstad, M.T. Coe, D.G. McGrath, H.O. Rodrigues, W.S. Walker, B. Soares-Filho, and E.A. Davidson, 2009, The potential ecological costs and co-benefits of REDD: A critical review and case study from the Amazon region. *Global Change Biology* 15, 2803-2824.

Strassburg, B., R.K. Turner, B. Fisher, R. Schaeffer, and A. Lovett, 2009. Reducing emissions from deforestation – the ''combined incentives'' mechanism and empirical simulations. *Global Environmental Change – Human and Policy Dimensions* 19, 265-278.

Streck, C., 2008, *Climate Change and Forests: Emerging Policy and Market Opportunities*. Brookings Institution, Washington, DC.

Subedi, B.P., C.L. Das, and D. Messerschmidt, 1998, *Tree and Land Tenure in the Eastern Terai, Nepal: A Case Study from the Siraha and Saptari Districts, Nepal*. Community Forestry Case Study No.9. U.N. FAO, Rome.

Subedi, B.P., P.L. Ghimire, A. Koontz, S. C. Khanal, P. Katwal, K.R. Sthapit, and S. Khadka Mishra 2014. *Private Sector Involvement and Investment in Nepal's Forestry: Status, Prospects and Ways Forward.* Study Report, Multi Stakeholder Forestry Programme - Services Support Unit, Babarmahal, Kathmandu, Nepal.

Sunderlin, W., A. Larson, A. Duchelle, I.A.P. Resosudarmo, T.B. Huynh, A. Awono, and T. Dokken, 2014, How are REDD+ proponents addressing tenure problems? Evidence from Brazil, Cameroon, Tanzania, Indonesia, and Vietnam. *World Development* 55: 37-52.

Tacconi, L., 2012, Re-defining payments for environmental services. *Ecological Economics*, 73(1): 29-36.

Takacs, D., 2009, *Forest Carbon: Law and Property Rights*. Policy Paper. Conservation International, 2009.

TFCG (Tanzania Forest Conservation Group) and MJUMITA (Tanzania Community Forest Conservation Network), 2012, *Recommendations from civil society organizations for Tanzania's 2nd Draft National REDD+ Strategy and Draft Action Plan*. Dar es Salaam: Tanzania Natural Resource Forum.

Thompson, I., B. Mackey, S. McNulty, and A. Mosseler, 2009, *Forest Resilience, Biodiversity and Climate Change. A Synthesis of the biodiversity/Resilience/Stability Relationship in Forest Ecosystems*. Technical Series Secretariat of the Convention on Biological Diversity, 43, Montreal 67. Secretariat of the Convention on Biological Diversity, UNEP, Montreal, Canada. http://www.cbd.int/doc/publications/cbd-ts-43-en.pdf.

Thompson, M.C., M. Baruah, and E.R. Carr, 2011, Seeing REDD+ as a project of environmental governance. *Environmental Science Policy* 14(2): 100-110. doi:10.1016/j.envsci.2010.11.006

TNRF, 2012, *Newsletter No. 7*, Tanzania Natural Resource Forum, March 31st 2012.

Toni F., 2011, Decentralization and REDD+ in Brazil. *Forests*, 2: 66-85.

UNEP, 2013, *REDD+ Implementation: A Manual for National Legal Practitioners*. UNON Publishing Services Section, Nairobi.

UNFCCC (United Nations Framework Convention on Climate Change), 2012, *Report of the Conference of the Parties on its Seventeenth Session, held in Durban from 28 November to 11 December 2011*. Addendum: Part Two: Action Taken by the Conference of the Parties at its Seventeenth Session. Durban Decision 12/CP.17

Upreti, D.R., H. Luintel, and K. Bhandari, 2011, *REDD+ and Conflict: A Case of REDD+ Project in Nepa*l. Phase I Study Report. ForestAction Nepal and RECOFTC, Kathmandu and Bangkok.

URT (United Republic of Tanzania), 1999, Village Land Act (and Regulations) No. 5 of 1999. Ministry of Lands and Human Settlement. Dar es Salaam, Tanzania.

URT (United Republic of Tanzania), 2009, *Tanzania's National REDD-Readiness Programme: Participatory Forest Management and REDD: Linkages and Design Issues*. Division of Environment Office of the Vice-President, Dar es Salaam.

URT (United Republic of Tanzania), 2009a, *National Framework for Reduced Emissions from deforestation and Forest degradation (REDD)*. Division of Environment, Office of the Vice-President, Dar es Salaam.

URT (United Republic of Tanzania), 2009b, *National Framework for Reduced Emissions from Deforestation and Forest Degradation (REDD)*, Dar es Salaam, Tanzania: VPO, Department of Environment.

URT (United Republic of Tanzania), 2012a, *National Strategy for Reduced Emissions from Deforestation and Forest Degradation (REDD+)*. Division of Environment, Office of the Vice-President, Dar es Salaam, Tanzania.

URT (United Republic of Tanzania), 2012b, *Forest Carbon Partnership Facility (FCPF) REDD Readiness Progress Fact Sheet. Country: Tanzania, June 2012*. Dar es Salaam, Tanzania. http://www.forestcarbonpartnership.org/sites/forestcarbonpartnership.org/files/Documents/PDF/Mar2012/REDD%20Tanzania%20Fact%20Sheet_March%202012_0.pdf. Accessed October 23, 2012.

USAID, 2010, *Land Tenure and Property Rights Profile: Indonesia*. USAID, Washington, DC.

USAID, 2011, *Country Profile. Property Rights and Resource Governance: Mexico.* USAID, Washington, DC.

Wainwright, J. and J. Bryan, 2009, Cartography, territory, property: postcolonial reflections on indigenous counter-mapping in Nicaragua and Belize. *Cultural Geographies* 16:153-178.

West's Encyclopedia of American Law, 2008, 2nd edition. The Gale Group, Inc., Farmington Hills, MI, USA.

Westholm, L., R. Biddulph, I. Hellmark, and A. Ekbom, 2011, *REDD+ and Tenure: A Review of the Latest Developments in Research, Implementation and Debate*. Focali Report 2011:02. University of Gothenberg, Sweden.

White, A., 2004, A framework for assessing tenure security, in L. Ellsworth, and A. White, *Deeper Roots: Strengthening Community Tenure Security and Community Livelihoods*. Ford Foundation, Washington, DC.

Wollenberg, E. and O. Springate-Baginski (eds.), 2010, *REDD, Forest Governance and Rural Livelihoods: The Emerging Agenda*. Bogor: CIFOR, Bogor, Indonesia.

World Bank, 2011, *Mexico: Forest Carbon Partnership Facility Readiness Preparation Grant Project*. The World Bank, Washington DC.

Wunder, S.S., 2005, *Payments for Environmental Services: Some Nuts and Bolts*. Occasional Paper No. 42. CIFOR, Bogor, Indonesia.

WWF, 2013, *WWF Guide to Building REDD+ Strategies: A Toolkit for REDD+ Practitioners Around the Globe*. WWF Forest and Climate Programme, Washington, DC.

Zavagli, M., 2011, *For Submission from the Ramsar Convention Secretariat at the 6th Meeting of the Bern Convention Group of Experts on Biodiversity and Climate Change*, Strasbourg, Austria, 10-11 October 2011. www.coe.int/t/dg4/cultureheritage/nature/bern/ClimateChange/Documents/102011/Presentations/RamsarConvention.pdf.

Legal Instruments (English title (AD) Official title (BS)):

Buffer Zone Management Regulations 1996
Canal Act 1963
Canal, Electricity and Related Water Resources Act 1967
Climate Change Policy 2011
Collaborative Forest Management Guidelines 2003
Community Forestry Guidelines 2008
Conservation Area Government Management Regulations 2000
Conservation Area Management Guidelines 1999
Conservation Area Management Regulations 1996
Environmental Policy 1997
Environment Protection Act 1996 (Batawaran Sanrakshan Ain, 2053)
Environment Protection Regulations 1997 (Batawaran Sanrakshan Niyamawali, 2054)
Environmental Management Act 2004
Forest Act 1993 (Ban Ain, 2049)
Forest Regulations 1995 (Ban Niyamawali, 2053)
Interim Constitution of Nepal 2007 (Nepalko Antarim Sambhidhan, 2063)
Irrigation Policy 2013
Irrigation Regulations 2000 (Sinchai Niyamawali, 2057)
Land (Survey and Measurement) Act 1963 (Jgga Naap Jaanch Ain, 2019)
Land Acquisition Act 1977 (Jgga Prapti Ain, 2034)
Land Act 1964 (Bhumi Sambandhi Ain, 2021)
Land Distribution Reform 1917
Land Policy 1995
Land Revenue Act 1978
Leasehold Forestry Guidelines 2006
Local Self Governance Act 1999 (Sthaniya Swayatta Shasan Ain, 2056)
Master Plan for Forestry Sector 1988
Mines and Minerals Act 1986 (Khani Tatha Khanij Padartha Ain, 2043)
Mines and Minerals Regulations 1999
National Biodiversity Strategy and Action Plan 2014
National Climate Change Strategy 2009
National Development Plan 2010-2014
National Environmental Policy 1997
National Forest Policy 1998
National Forestry Development Plan 2011-2020
National Land Act 1999
National Land Policy 1995
National Land Use Policy 2012
National Parks and Wildlife Conservation Act 1973 (Rastriya Nikunj Tatha Vanya Jantu Sanrakshan
National Wetlands Policy 2012
Nepal Petroleum Act 1983
Nepal Treaties Act 1990 (Nepal Sanhdhi Ain, 2047)
Protected Area Management Regulations 1996

Public Roads Act 1974 (Sarbajanik Sadak Ain, 2031)
Rangeland Policy 2012
Soil and Watershed Conservation Act 1982
Water Resources Act 1992 (Jal Srot Ain, 2049)
Water Resources Regulations 1993 (Jal Srot Niyamawali, 2050)

Annex I. FGD, Meetings and Consultations

Focus Group Discussions (FGDs)	• Buffer Zone Management Committee, Chitwan - 1 • REDD Pilot area (CFUG representatives) – Chitwan - 2 • REDD Pilot area (CFUG representatives) – Gorkha - 2 • Religious Forest Maulakali Gaidakot - 1 • Ecotourism Site Representatives CTHA, Sauraha -1 • Chautari CFUG in Nawalparasi – 1 • FECOFUN Chitwan – 1 • FECOFUN Kathmandu – 1 • FECOFUN Gorkha – 1 • BZCFUG, Chitwan -1 • Nepal Foresters' Association (NFA) – 1 • Collaborative Forest Management Committee, Nawalparasi - 1
Meetings and Consultation	• Chitwan National Park Authority - 1 • DFO Chitwan - 1 • DDC Chitwan - 1 • DFO Gorkha - 1 • Sector Office Chitwan – 1 • Range Post, Chitwan - 1 • Leasehold Forest User Groups Gorkha – 1 • DFO Nawalparasi – 1 • REDD IC – 1 • DFRS – 1 • Keshav Prasad Khanal, WWF - 1 • Shambhu Charmakar, ANSAB - 1 • Man Bahadur Khadka, REDD IC, Joint Secretary - 1 • Birkha Bahadur Shahi, FECOFON, Secretary - 1 • Dr Laxman Joshi, Payment for Ecosystem Services (PES) Specialist - 1 • Dhruba Prasad Acharya, REDD Expert - 1
Expert Consultation	• Bishwonath Oli, Joint Secretary, Foreign Aid Division, MoFSC • Mr Ananda Bhandari – Under Secretary, MoFSC • Ms Radha Wagle, Joint Secretary, Foreign Aid Division, MoFSC • Prof. Dr. Abhaya Kumar Das, Forestry Expert • Mr Dil Raj Khanal, REDD+ Expert • Dr Narendra Chand, REDD IC, MoFSC • Dr Mohan Poudel, REDD IC, MoFSC • Mr Bijaya Paudyal, Forestry Expert • Mr Ganesh Ganesh Kerki, FECOFUN • Mr Nawaraj Baral, Forestry Expert • Mr Rajendra Kafle, REDD IC, MoFSC • Mr Lila Raj Dhakal, Under Secretary, OAGN • Prof Tara Sapkota, Environmental Lawyer • Dr Dharam Upreti, Climate Change Specialist, MSFP

Annex II. Synthesis Report

Study of Forest Carbon Ownership in Nepal

1. Background

Reducing Emissions from Deforestation and Forest Degradation, conservation of forest carbon stocks, conservation and sustainable management of forests and enhancement of forest carbon stocks (REDD+) is evolving as a means to incentivize forest managers in reducing forest sector emissions from the tropical developing countries. Nepal is participating in REDD+ from 2008 with the support of international agencies particularly the World Bank so as to prepare and capacitate itself for receiving benefit. Among several preparatory actions, (i) defining forest carbon related concepts such as carbon offset, carbon credits, forest tenure, property rights and carbon rights; (ii) provisioning carbon rights in policies and legislations; and (iii) devising institutions to realize these rights in practice have been identified as some of the critical areas of intervention for achieving effective and equitable REDD+.

Defining carbon rights, a new and unprecedented type of property rights (Streck, 2008), that commoditize carbon as a form of property is crucial for devising incentive-based policy instruments aiming to safeguard forest-based public goods and services by valuing them and paying people to protect them (Bruce et al, 2010). It could be used to encourage forest managers to earn money by keeping their forests intact while selling carbon credit (Fletcher et al, 2009). Similarly, it is equally important for carbon buyers for security of their investment in REDD+ (Knox et al, 2012). Therefore, understanding the nature of carbon as property and the derivative rights associated with its trading are important to define the carbon rights legally (Peskett and Brodnig 2011). However, the concepts of carbon rights have been inadequately understood and open to different interpretations.

Carbon is inseparable with the forest and the land and therefore there is a possibility that (i) the owner of the forest/land owns the carbon, or (ii) carbon stock could be subjected to a separate, alienable property right, or (iii) the sequestered carbon may be treated as a publicly-owned asset regardless of forest and land ownership. As wide range of stakeholders, other than the land owner, may have different and overlapping forest tenure and usufruct rights (e.g., access, use, management, exclusion and alienation rights) in forest (Schlager and Ostrom, 1992), clarifying who is legally entitled to reap benefits from carbon under REDD+ is a complex process.

As the Nepal's Forest Act 1993 does not have any provision regarding forest carbon, there is an immediate need to define carbon rights and identify or devise authorized entity to trade carbon credits either in market or in non-market settings as the country is preparing for REDD+. This study aims to broaden the conceptual understanding of carbon rights and identify/devise regulatory and institutional framework for carbon trade under REDD+ in Nepal.

2. Method

An analytical model was prepared to guide the overall study in which analytical domains, REDD+ inputs and responsibilities, land and forest policies, conceptual and empirical inputs and outcome arena were spelt out. A combination of methods such as literature review (e.g.,

research papers, project reports, study reports, policy documents, legal provisions) and consultation with stakeholders (e.g. with government officials, NGO representatives, forest managing communities, academicians, and legal experts) were carried out to accomplish the study. Approximately 300 published and grey literature that capture the carbon-rights related knowledge available elsewhere and more than two dozen Nepal's national policy and legislations related to forest and allied sectors and multilateral environmental agreements (MEAs) such as the United Nations Framework Convention on Climate Change, and Convention on Biological Diversity were reviewed to identify the policy, legal and institutional provisions and gaps related to the forest management and/or carbon sequestration in Nepal. A total of 15 focus group discussions with forest managing communities in hill and Terai, 15 expert and key informant interviews at central and district levels and 16 stakeholder consultations at central and district levels were carried out to capture their perspectives on forest management, REDD+, carbon rights and views on policy and institutional frameworks for regulating carbon trade. A qualitative approach was used to analyze the data/information collected through different sources. Finally, the provisional findings were shared in the stakeholders' workshop at national level and bolstered the report with the feedback and suggestions received.

3. Forest Management and REDD+ in Nepal

The Forest Act 1993 distinguishes the forests as private and national on the basis of the land rights. While the forest in the private land is private forest, forest in the government land is national forest. The national forests are divided into different management modalities such as government-managed, community, leasehold, collaborative, religious, protection, protected areas, and conservation areas (GoN 1993). All these management regimes are supported by policy and/or legislative provisions that generally provide different levels of property rights to forest resources for land/forest owner, manager and/or users.

Nepal has been a part of REDD+ countries since 2008 and has prepared institutional structure (e.g., RWG, REDD IC) and RPP, a roadmap for developing and implementing strategy for REDD+. The newly emerging forest related policy, legislation, plan, programme and institutional frameworks now consider climate change and REDD+ as an innovative approach to forest management that bring unconventional benefits to forest management. A range of donor-funded REDD+ related projects are implemented in different parts of the country, which have been helpful in drawing lessons and building stakeholders' capacity for REDD+. So far, both opportunities (e.g., capacity to stop emissions from forest, sequester atmospheric carbon, possibility of collaboration and partnership between different actors, additional benefits gain) and challenges (e.g., emergence of conflict) have been observed.

4. Understanding of REDD+ Related Concepts

REDD+: REDD+ is a collaborative scheme that allows developed countries opportunity and flexibility to adopt emission offset options (Eliasch, 2008) and incentivize forest managers/owners either to maintain existing carbon stock or to generate additional carbon stock in the forest in developing countries (Kanowski, McDermott and Cashore, 2011). Ensuring additionality in carbon sequestration, preventing and controlling leakages and maintaining permanence of carbon stock, and ensuring social and environmental safeguards are critical to make REDD+ a success.

Forest tenure: Tenure systems are produced and characterized by economic, political and social systems of a country. Forest tenure covers the rights to hold and/or use forest and therefore can be equated with real property rights. It is often described as a "bundle of rights" reflecting the possibility of existence of multiple right-holders of the same piece of forest. It reflects the set of institutions and policies that determine how the forest and its resources are accessed; who can hold and use these resources; and for how long and under what conditions they may be used (Bruce et al, 2010).

Property rights: Property entails a "system of relations between individuals (…) that involves rights, duties, powers and privileges" (Hallowell, 1943). Property rights are characterized by exclusivity, inheritability, transferability, and enforceability of property and are usually registered to ensure security in transactions and clear allocation of responsibility. However, the nature of property (e.g., mobility, usability, etc.) and the sectoral policies (e.g., national security, development planning, public health, environment, etc.) that are linked with national sovereignty and broader development may pose restrictions on the full realization of property particularly in the case of natural resources (e.g., land, forest, waterbodies, etc.).

Carbon rights: Carbon rights, a new and unprecedented type of property right (Streck, 2008) created by legislative and contractual arrangements, 'commoditize' carbon and allow it to be traded in voluntary and regulatory markets. Both the association and inseparability of carbon from forest and land, and owning actually or potentially sequestered carbon makes defining carbon rights complex. The complexity is further aggravated by the governance of international carbon trade. Therefore, clarifying the owner of forest carbon rights under REDD+ is a challenging process as multiple actors have overlapping forest tenure and usufruct rights.

Carbon benefits: Carbon benefit is perceived as net social, economic and environmental gain received by forest managing communities against capital, time and labor investment in forest management, forgone alternative use of land, and exposure to social marginalization and risk due to the engagement in REDD+. Access to forest benefits is linked with clarity and strength of property rights (Ribot and Peluso 2003; Schlager and Ostrom 1992) - endowment of rights, entitlement to exercise these rights, and governance conditions (Mahanthy et al, 2009). Issues related to equity and fairness are also critical regarding carbon benefit-sharing.

Safeguards: Safeguards that could be preventive, mitigative, promotive and transformative (Arhin, 2014) are developed to ensure rights in both substantive and procedural dimensions (Ituarte-Lima et al, 2013). As the trade-offs caused by REDD+ between local livelihoods, biodiversity conservation and carbon sequestration is highly uncertain (Hiraldo and Tanner, 2011), social and environmental safeguards are important to help expand responsible forest management that reduce harm and increase benefits.

Payment of environmental service: As a way to internalize the historical environmental externalities and an incentive-based natural resource management, payment of environmental service (PES) has been receiving greater attention since last few decades. It can be either fully market-based or subsidy-based combined with user-fee (Engela, Pagiolab and Wunder, 2008) and has potential to contribute twin and often conflicting goals of achieving conservation and livelihood outcomes. However, it may not address the entire environmental problems as ecosystems may be mismanaged for many reasons and the payment may not guarantee the change in behavior of manager (Pagiola, 2003). The suitable response would be to ensure that

local ecosystem managers have appropriate property rights, capacity and financial and technical supports (Engela, Pagiolab and Wunder, 2008).

5. Empirical Knowledge Across the World

With an aim to draw lessons regarding opportunity and challenges regarding forest tenure, carbon rights and benefit-sharing, case studies that include current policy and institutional frameworks of four REDD+ countries *viz.* Tanzania, Indonesia, Costa Rica and Mexico are documented. It has been observed that the issues related to land and forest tenure that help define carbon rights and benefit-sharing arrangement are associated with historical social, cultural and economic dimensions of the country and therefore they are complex, ambiguous and power sensitive. Also, a range of sectoral policies and legislations including constitution of the country have significant role to play in defining and operationalizing the land/forest rights. Despite active engagement in the REDD+ and carbon trade initiatives since last few years, the existing policies and legislations are not adequate to (i) identify the carbon rights (except in Costa Rica, where carbon trade is being done as part of PES within the country), and (ii) deal the carbon trade at international level. Since they provide framework of forest tenure and benefit-sharing, they are considered as the critical foundation for framing required policies, legislations and institutions for REDD+ particularly specifying the carbon rights and benefit-sharing, and reducing deforestation.

It has also been observed that the communal land/forest tenure and/or usufruct rights have significant bearing in defining carbon rights and benefits sharing. Safeguarding communities' rights over forest and carbon is one of the prime concerns while defining and operationalizing carbon rights and benefit-sharing. Both substantive and procedural dimensions are important to assure safeguards. Therefore, provisioning in the policy and legislative instruments and participation of forest managing communities in all REDD+ activities could be complementing strategies for effective safeguarding of forest rights.

It has also been observed that all the countries, by adhering to existing governance structures at national, sub-national and local levels, made provisions to bring a range of government and non-government agencies from different sectors (e.g., forest, environment, energy, agriculture, land, and rural development) in the collaborative action for REDD+. Broader collaborations while increase the likelihood of success in curbing deforestation, may add complexity and ambiguity in framing institutional arrangements that include sharing roles, responsibilities, resources and authority. The efficiency and effectiveness of functioning of such institutional arrangements is yet to be examined. The institutional dynamics to REDD+ at national level has been fluctuating (e.g., Indonesia), stable (e.g., Costa Rica), and evolving e.g., (Tanzania and Mexico) indicating the institutional conflict, stability and evolution respectively.

6. Policy and Legal Frameworks Governing Forest and Forest Carbon Tenure

Multilateral environmental agreements*:* Nepal is party to a number of MEAs that are relevant to REDD+ such as UNFCCC, CBD and Ramsar Convention. It has so far been able to fulfill the commitments/obligations under these conventions to some extent. UNFCCC provides the space in terms of policy, strategy and institutional arrangements for REDD+ at international level that broadly inform national forest policy, strategy and institutional arrangements to accommodate REDD+. It also paved the way for different initiatives for

regulating GHG emissions and reducing emissions from forest and regulating carbon trade at international levels. As a result, different initiatives in REDD+ such as monitoring, reporting and verification (MRV), free prior and informed consent (FPIC), safeguards, and carbon trade mechanisms have emerged to suit different countries.

Like forest, wetlands play an important role in both carbon storage and the regulation of greenhouse gas emissions (Zavagli, 2011) and therefore governance and management of wetlands in developing countries have significant bearing in REDD+. The Ramsar Convention calls all relevant countries to take actions to maintain ecological functions, minimize the degradation, as well as promote restoration, and improve management practices of wetlands. The Convention also provides for support from the international community to those countries which require such support for necessary policy, legislation and institutional frameworks; capacity development and financial resources. It is very important that such supports complement and synergize REDD+ initiatives (and *vice versa*). This not only helps build trust between international and local actors in the field of natural resource management and emission reduction but also ensures the communities' rights to conserve, govern, manage and use the resources.

As studies have shown mix results about the relations between biodiversity and carbon fluxes in the forest, it is imperative to consider the biodiversity conservation initiatives while developing REDD+ framework. Since both REDD+ and CBD are UN's initiatives, collaborations, complementarities and synergies in policy, planning, regulations, institutions and actions at different levels between these two initiatives are warranted. Provisioning of environmental safeguards (e.g., protection of natural forest and stop displacement and reversal) in REDD+ addresses biodiversity concerns to some extent at international level. However, much more need to be spelt out and addressed at the national and local levels. Some of the issues such as equity and fairness in benefit-sharing have been identified as common in both initiatives. However, limited progress has been made to address these issues in both initiatives.

Carbon Fund Methodological Framework (CFMF): This framework requires any country selling emissions reductions under REDD+ to secure carbon rights through either legal framework or government formal decision (e.g., through REDD+ entity/ focal point) before entering into an Emission Reduction Purchase Agreement (ERPA) (Baker and McKenzie, 2014). The REDD+ entity also needs to demonstrate the ability to transfer the title of emission reductions (ER) to carbon fund and institute equitable and/or fair benefit-sharing mechanism in the country. Effective and equitable REDD+ programme may target the particular benefits to the most relevant stakeholders at any given level (Lutrell et al, 2012) that can create compelling value propositions for them by tailoring their interests, needs, burdens, tenure and abilities to tolerate risk (Kelly et al, 2012; Maderia et al, 2012). For example, land management schemes (e.g., REDD+) could provide benefits more fairly by a declining reward for each additional unit of land (or emission reduction) while distributing the costs of, and benefits from, participation (Schwarte and Mohammed 2011) so as to ensure that small elite groups are not over-compensated and as many as possible small landholders (who are usually poor) are involved in the scheme (Mohammed, 2011). Consideration of methods and procedures that are required to identify and address issues, challenges and grievances related to carbon rights and benefit-sharing are also equally important to be incorporated into ERPA.

National policy and legislation: There are a range of policy, legal and institutional frameworks in the field of forestry and allied sectors that are influential to shape carbon rights

under REDD+ directly and/or indirectly. Examining these frameworks provides an understanding to identify the legitimacy, credibility, eligibility and ability of actors to claim or acquire rights to carbon benefits that constitute the foundation for required regulatory and institutional frameworks. A total of 6 policies, 3 plans and 19 legal instruments are reviewed to accomplish this study.

Policy: Forest and related policies (e.g., wetland, climate change, rangeland, land use, irrigation) are focused to maintain environmental balance and sustainable development through promoting conservation and strengthening governance by using variety of approaches (e.g., coercive, moral, incentive-based) and instruments (e.g., regulations, institutions, information). They provide directions and flexibility for formulating legal, regulatory and institutional frameworks for achieving policy objectives. While most of them have accommodated the local/national public interests, they have generally complied with MEAs' obligations. All the reviewed policies have indicated range of programme areas specific to their respective sector in which livelihoods, socio-economic development, equity and fairness in benefit-sharing, institutional framework, and research and knowledge generation are emphasized. These programme areas are closely related to the management of basic resources and rights of resources-managing communities, and therefore their participation has been crucial. The protection of local communities' rights, particularly while emphasizing the obligation of broader/global environmental concerns such as climate change, loss of biodiversity, unsustainable development and land degradation, have been indicated in policies. This clearly provides the space and direction for REDD+ initiatives to explore appropriate regulatory and institutional set up for defining carbon rights and ensuring carbon benefits to the communities. While forest and climate change related policies provide space, other sectoral policies support through collaboration in planning and implementation.

Plan: All the reviewed plans (e.g., biodiversity, 13th Plan, MPFS-1988) provide a policy background and planning strategy for forestry sector by setting medium-and long-term objectives. They provide clear space for REDD+ initiatives including carbon rights and benefit-sharing. While the National Biodiversity Strategy and Action Plan and 13th Plan directly mentioned the need to conserve forest for ecosystem/environmental services at local to global scale (e.g., local use, climate change mitigation, and biodiversity conservation) through incentive-based approach (e.g., PES), the MPFS, which is ground-breaking plan in forestry sector in Nepal, officially prioritized the devolution of key forest tenure rights to local communities.

Legal and regulatory frameworks: All the reviewed legal and regulatory frameworks are formulated to make people comply and behave in a certain manner in their sectors so as to ensure efficiency, justice and use of fair means while achieving their individual and sectoral objectives. There are both hierarchies (e.g., constitution, act of parliament, regulations) and horizontal (e.g., sectoral acts) connections of the legal frameworks. The Constitution guarantees the rights of every person to acquire, own, sell and otherwise dispose of property, subject to the existing laws. It also guarantees the right of every person to live in a clean environment as a fundamental right implying far-reaching effects in promoting conservation of biodiversity and addressing the disproportionate distribution of environmental hazards (Belbase and Thapa, 2007). While mobilizing natural resources and heritage in the interest of the nation, the state is required to give priority to local people including identifying and protecting traditional knowledge, skills and practices.

All the laws directly related to forest management (e.g., forest, national park and wildlife conservation) vest the ownership of forest land with government (forest act 1993, section 67). Even the government can acquire any private property that falls within the boundary of national forest by paying compensation (forest act 1993, sections 3-17). However, Forest Act 1993, though silent about the rights over some ecosystem services such as carbon, extends the rights of access, manage, use, exclude, and duly process compensation of forest resources (e.g., timber, fuelwood, leaves, fiber, fruits, flower, charcoal, catechu, rosin, wood-oil, bark, lac, Pipla, Pipli, herbs, medicinal plants and different parts or organs thereof) to communities under certain conditions (e.g., community forestry, leasehold forestry). The silence of the Act about carbon might perhaps be due to the absence of realization of carbon as marketable resource while formulating the Act in early 90s. Even more strict conservation law, the National Park and Wildlife Conservation Act 1973 (NPWCA 1973), recognizes the local peoples' rights over resources and therefore allows local communities to use forest products in certain condition albeit under the strict supervision of conservation personnel. Since last two decades, government expanded the NPWCA 1973 to make it more people-friendly by amending the Act and also introducing Buffer Zone Management Regulations 1996. For example, the Regulations was issued to facilitate local communities' participation in the conservation and development of the area around protected areas, and allow them for benefit-sharing even which were not conventional to the communities such as revenue generated from tourism, and Conservation Area Management Regulations 1996 was also issued to help implement community development activities and balance utilization of natural heritage (Rule 8).

There are a range of sectoral legal frameworks to regulate ownership, governance and management of land and their effective, productive and sustainable conservation and management such as Soil and Watershed Conservation Act 1982, Land Act 1964, Land (Survey and Measurement) Act 1963, Land Revenue Act 1978, and Land Acquisition Act 1977. These legislation directly and/or indirectly affect the land use incentives for the owners/managers (e.g., people, communities, corporations, institutions, and government) and therefore their management actions that affect carbon cycle in the soil. However, these legislation do not contain any provisions explicitly mentioned about the management of carbon cycle in the land perhaps due to the fact that these acts were formulated before the awareness that soil carbon achieved through land management could be salable product.

The Local Self Governance Act 1999, though slightly contradicts in certain aspect with Forest Act 1993, vest the rights over the natural resources available in the village that are not owned by individual, communities, corporations, institutions and government with the local/village government. Similarly, other sectoral legal framework include Environment Protection Act 1996 which defines the "environment" progressively as it includes economic, human and social dimensions (Belbase, 1998), also institutionalizes the need and conduction of environmental impact assessment for development project that significantly affect the environment, land use and/or ecological systems. Different acts that regulate development and supply of resources such as Public Roads Act 1974, Mines and Minerals Act 1986, Water Resources Act 1992, Irrigation Regulations 2000, Town Development Act 1988, Electricity Act 1992 and Nepal Petroleum Act 1983 also affect the forest and land resources directly/indirectly and therefore carbon cycle in Nepal. However, these legislation have not explicitly spelt out carbon as a resource. Therefore, there is a need to coordinate with related sectors to make synergy and/or tradeoff as per need while planning and implementing REDD+ schemes.

Issues and gaps: Range of issues have been surfaced related to REDD+, carbon rights and benefit-sharing. They are related to conceptual understanding of tenure and property rights in different context that are often complex due to socio-cultural values and overlapping sectoral legal framework, carbon dynamics at different temporal and spatial scales, and practical problems associated to institutional practices of resource uses and benefit-sharing (e.g., conflict, elite capture, inefficiency). Despite the enforcement of the Forest Act and Forest Regulations for the past 20 years, idea of conservation and sustainable use of forest is yet to be mainstreamed and integrated in other relevant sectors (e.g., energy, infrastructure development, irrigation, mining, and roads). If this trend continues during the implementation of REDD+, it might be impossible to fulfill the contractual obligations under ERPA. Also, there is a gap of appropriate institutional arrangement for resolving conflict and handling grievances.

7. Institutional Frameworks for REDD+

This study recommends the following points to define carbon rights, formulate/amend policy, devise/revise institutions, and implement and monitor carbon rights in Nepal.

A. Understanding Carbon and Carbon Rights

1. **The government should consider forest carbon as an ecosystem service**. Scholars and stakeholders refer carbon as the credit for carbon sequestration or emission reduction from the forest. Generally, carbon has been a part of ecosystem services bundle where payment of ecosystem services is in practice. Nepal's policy and legal framework also provide ample space to consider carbon as ecosystem service and this study suggests carbon as an ecosystem service.
2. **The government should distinguish the carbon rights into two parts – carbon ownership rights and carbon credit (or emission reduction title) transfer rights**. This distinction helps understand the nature of forest carbon and its trade on national/international markets. These two parts of carbon rights can be attributed to different persons/agencies that are crucial to manage forests and carbon trade. However, these rights and their relationships should be clearly spelt out in the legislation, and appropriate institutional arrangements should be made to implement the legislative pronouncement/arrangement.
3. **To facilitate the process of transfer or handover of carbon credits by forest-managing communities by the MoFSC, through the DFO, the process should be clearly mentioned either in the forest Regulations or in the Guidelines (or both)**. A resolution to this effect should be passed by the majority vote of the Board of the forest-managing communities. (Forest managing communities include CFUGs, LFUGs, collaborative forest management groups, and similar community-based forest management groups, buffer zone user groups, and conservation area management councils or committees.)

B. Provisions in Policies, Legislations and Plans

1. **The government should amend relevant policies and laws, rather than creating new ones**. As most of the existing forest policies and legislative frameworks have been proved to be effective and efficient to restore the degraded forest landscapes and continue conservation efforts in Nepal, it is commendable to revise those frameworks to accommodate the provisions for carbon rights and trade. It would be cost-effective,

compatible with existing institutional practices, and therefore acceptable to many stakeholders.

2. **The government's forest policies and legislation should clearly define carbon ownership right, carbon credit (or emission reduction title) transfer rights, and benefits sharing mechanisms to be accrued from carbon trade**. The government, particularly the MoFSC, should duly consider the implication of new carbon policies and legal provisions (either newly introduced or amended in current policy and laws) to society. This is important, for as the Nepalese society already experiences vastly unequal and the policies and laws, such new legislationi should focus on improving the quality of affected peoples' life. Considering usufruct rights, traditional forest use practices, existing legal forest rights, forest and land tenure practices, this study suggests that the forest-managing communities should hold the carbon ownership rights while the MoFSC should hold the carbon credit (or emission reduction title) transfer rights. This also implies that the primary right holders of the carbon benefits are the forest-managing communities while the carbon credit transfer right holders (often MoFSC) get certain incentives that are primarily required for the management and facilitation of carbon trade.

3. **The government, utilizing this legislative authority, should formulate appropriate legislation for defining forest carbon, carbon ownership rights and usufruct rights discretely stating that usufruct rights also entail environmental services such as carbon.** It is within the legislative authority of the federal government to make laws in relation to international treaties and agreements; national and international environment management; national parks and reserves; national forest policy, and carbon service (Constitution of Nepal 2015, Schedule 5).

4. **The government's new REDD+ related policy, legal provisions and institutional mechanisms should be designed to strengthen and/or safeguard the existing forest rights of forest-managing communities**. The communities managing forests, conservation areas and buffer zones have different bundles of rights over forests including the right to enter, access, manage, harvest, utilise and sell timber and non-timber forest products (NTFPs). While entrusting carbon credit transfer rights to national entities or focal points (i.e., REDD IC of MoFSC), relevant policies, laws and institutions should ensure that the communities' existing forest rights (both procedural and substantive) are not curtailed but are safeguarded and strengthened further as long as communities' forest management practices contribute to reduce deforestation and forest degradation, conserve and manage forest sustainably, and enhance carbon stocks. Through such provisions and mechanisms, carbon ownership rights should be clearly added to their "bundle of forest rights." They also should ensure that benefits and co-benefits generated from forest management and obtained from the sale of carbon credits under REDD+ scheme are fairly and equitably shared with, and among, forest-managing communities.

C. Institutional Mechanism and Implementation

5. **The government's Ministry of Forests and Soil Conservation (MoFSC) holds the enforceable rights to use forest, transfer carbon credit (or emission reduction title) and explore/receive carbon benefits from international communities**. The MoFSC

determine and own the forest lands; conserve, utilize, promote and manage forests; conserve and manage forest products; conserve, utilize and share forest benefits; and implement international agreement and therefore plays the principal role in REDD+ such as determining carbon/emission baseline; maintaining scale, permanence and additionality in carbon conservation; and controlling leakage and preventing double counting. Holding the enforceable rights to forest use and carbon credit (or emission reduction title) transfer by MoFSC is crucial in the sense that it is congruent with the mandate of the Cancun Agreement to coordinate the REDD+ activities at the national level, and with the mandate of the Warsaw Framework to liaise with the secretariat and the relevant bodies under the Convention, as well as the provision of CFMF (Carbon Fund Methodological Framework) in designating a national entity or focal point to serve as a liaison for carbon trade. These situations provide an opportunity to the MoFSC to explore and receive monetary and non-monetary carbon benefits from the international communities. In addition, the MoFSC has the authority to devise required policies and procedures (e.g., through forest laws or the REDD+ strategy) to distribute benefits equitably among the forest managers/users within the country. However, the MoFSC should be able to delegate/devolve the carbon credit transfer rights or emission reduction title and/or benefit receiving authority to the forest manager/REDD+ project developer/forest-managing communities, particularly if Nepal opts for a project-based REDD+ scheme such as ER programme in Terai Arc Landscape.

6. **The government should make necessary policy and institutional arrangements for meeting the requirement of CFMF**. To fulfill Indicator 36.1 of CFMF, the GoN may amend Forest Act 1993 or Forest Regulation 1994 as there are no provisions to deal with carbon credit. As an interim arrangement to fasten the REDD+ preparation, the GoN should make a clear decision at ministry level (i.e., minister level) to ensure that the ER programme entity (i.e., REDD IC) has the legal authority to enter the ERPA (Emission Reduction Purchase Agreement) with the carbon fund. Similarly, in order to facilitate the process of transfer or hand over of carbon credits to the MoFSC by community-based forest management groups (e.g., CFUGs, LFUGs, collaborative forest management groups, buffer zone user groups, and conservation area management councils or committees) so as to fulfil the Indicator 36.2, the government should include/mention the provision in the forest regulations or in the guidelines that "the forest-managing groups can transfer carbon credit to the MoFSC through its field offices such as DFO (or its field offices) and/or park/conservation area authorities." Until the regulation is amended or guideline is prepared, a ministry level decision can be made. Such decision should delegate the authority "to get a contract signed from the community-based forest management groups that they transfer the carbon credit to the MoFSC" to the DFO and/or park/conservation area authorities. For this, a standard form can be made, which should later be institutionalized as part of forest operational plan, and it can be enforced while approving the new and/or amending the old forest operational plans. A resolution to this effect should require a decision of community-based forest management groups to participate in the ER programme.

7. **The government's MoFSC delegates adequate decision-making authority and provide sufficient human and financial resources to REDD IC** to carry out required activities for REDD+, including (i) entering into an Emission Reduction Purchase Agreement (ERPA), (ii) transferring emission reductions titles, (iii) receiving results-

based payments, (iv) coordinating with line agencies to carry out required forest management activities to demonstrate emission reduction result, (iv) realizing carbon rights, and (iv) distributing benefits gained from carbon trade. The delegation of authority to the REDD IC needs to include at least two dimensions – authority and resources (financial and human) so that it can function independently as decision-making body to perform its duties. This would make REDD IC more accountable and efficient in its functioning. However, the REDD IC should be the sole authority to deal with carbon ownership, management, and title transfer so as to maintain integrity with the provisions made under Convention (e.g., according to the Warsaw Framework of REDD+, government is required to designate a national entity for REDD+, which in Nepal is the MoFSC that can delegate only procedural authority).

8. **The government, through the REDD IC, establishes inclusive multi-stakeholder entities that include representatives of the scientific community, forest-managing communities, civil societies, and other relevant stakeholders in the governance and decision-making regarding REDD+ activities including reducing deforestation and forest degradation, carbon monitoring, carbon trade and benefit distribution**. Establishing such an entity would help increase ownership, legitimacy, credibility and acceptability of overall REDD+ initiatives by the stakeholders in the long-run. The current (or revised if needed) Apex Body and REDD-Working Group can be considered as such an inclusive entity. However, the vibrant mobilization of such body is very important.

9. **The government, through the REDD IC, should lead collaboration with forestry and other sectoral agencies at national, sub-national and local levels to reduce emissions**. Despite the increased awareness among different development agencies to follow a low-carbon development path to reduce carbon emissions, legal provisions of those sectors do not explicitly mention carbon as a resource. Therefore, there is a need of coordination to devise the sectoral guidelines and methods that would be practical to reduce emissions and adapt climate change. The REDD IC should take a lead and active role to make different development sectors (i.e., energy, infrastructure development, industry, irrigation, mining, and roads) sensitive to follow the low-carbon development path particularly through reducing the pressure in the forest and land-use change. It is essential to address drivers of deforestation as well as to mainstream and integrate REDD+ objectives in economic development sector policies and programmes.

10. **The government should mobilize existing relevant institutions (e.g., MoFSC, DFRS, DNPWC, DoF, and REDD IC) to handle the affairs related to carbon trade and carbon rights as much as possible**. Existing institutions (e.g., government, non-government, and research) that are compatible to existing policies, could be cost effective, and accommodative to emerging conflicts and contradictions. However, a certain level of revision could/should be done as per the emerging need. More decision-making authority should be delegated; and adequate human and financial resources should be provided. A new institutional set up may need to be created at national to sub-national and local levels to implement and monitor the REDD+ programme properly, such as regional REDD+ units, district REDD+ working groups, district level REDD+ multi-stakeholder forums and district level REDD+ CSO and IPO alliances, protected area REDD+ units, and local level social and environmental networks. It is

equally important that the role of collaboration, planning, implementation and monitoring are clear for these institutions so as to make sure that there are no conflicting mandates and overlapping jurisdiction of different agencies over the same institutional roles and resources.

The government should also prepare appropriate governance systems to ensure transparency, accountability, and participation in REDD+ processes. These systems need to be duly integrated not only in national and sub-national level policies, legislation, and institutional arrangements, but also in forestry programmes and projects, and carbon trades. Different operational guidelines should be developed to increase the effectiveness of governance.

11. **The government should create a separate fund (e.g., Forest Carbon Fund-FCF) for the management of carbon finance**. The FCF manages benefit flows and prioritizes REDD+ activities at the grass-root level. The operating guidelines that include both procedural and substantive criteria should be developed in an inclusive, transparent and democratic way so as to make FCF initiatives equitable in addressing the special needs of, and reward to, the poor, women, *Dalits*, *Adivasi Janjati* and other marginalised groups. Different strategies including participatory well-being ranking could be adopted to target the beneficiaries.

12. **The government should consider effectiveness, efficiency and equity as standard operating principles while developing legal and institutional frameworks for carbon rights**. These are important to contribute to the global initiative to reduce emissions while benefiting the forest-managing communities. They help craft detailed and substantive policy, and legal and institutional provisions, to achieve multiple societal goals from managing forest to contributing to maintenance of a sustainable environment.

D. Monitoring and Compliance

1. **The government, through the REDD IC, should make monitoring mechanisms to assess the efficiency and effectiveness of policy and legal provisions and institutional practice periodically**. The objectives of monitoring could be clearly spelled out, that range from controlling, facilitating actions, and/or documenting learning. Monitoring and compliance are equally important to control mis-interpretation and mis-application of policy and legal provisions, reduce corruption and bribe, and ensure fair operations of institutional mechanism. Different methods such as expert-led, self, participatory, and/or joint monitoring could be applied based on the objectives and resource availability. This study also points out the need to form a committee at the district level to monitor and assure that the benefits flow to the lowest level forest-managing communities. It is also advisable to include wider stakeholders monitoring process.

References

Arhin, A.A., 2014, *Safeguards and Dangerguards: A Framework for Unpacking the Black Box of Safeguards for REDD+*. Department of Geography, University of Cambridge.

Belbase, N. 1998. *The Environment Protection Act 1996 of Nepal*. *APJEL*, 3: 65-77.

Belbase, N. and L.B. Thapa, 2007, Environmental Justice and Rural Communities, Nepal, in P. Moore and F. Pastakia (eds.) *Environmental Justice and Rural Communities, Studies from India and Nepal*. IUCN International Union for Conservation of Nature and Natural Resources, Bangkok, Thailand and Gland, Switzerland.

Bruce, J., K. Wendland, and L. Naughton-Treves, 2010, *Whom to Pay? Key Concepts and Terms Regarding Tenure and Property Rights in Payment-Based Forest Ecosystem Conservation*. Land Tenure Center Policy Brief 15. http://www.nelson.wisc.edu. Accessed February 20, 2015.

Eliasch, J., 2008, Climate change: Financing global forests. *Eliasch Review*. https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/228833/9780108507632.pdf. Accessed 30/12/2014.

Engela, S., S. Pagiolab, and S. Wunder, 2008, Designing payments for environmental services in theory and practice: An overview of the issues. *Ecological Economics*, 65: 663-674.

Fletcher, L.S., D. Kittredge, Jr., and T. Stevens, 2009, Forest landowners' willingness to sell carbon credits: A pilot study. *Northern Journal of Applied Forestry*, 26(1): 35-37.

GoN, 1993, *Forest Act 1993*. Ministry of Forest and Soil Conservation, Kathmandu, Nepal.

Hallowell, A.I., 1943, The Nature and Function of Property as a Social Institution. *Journal of Legal and Political Sociology* 1: 115-138.

Hiraldo, R. and T. Tanner, 2011, Forest Voices: Competing Narratives over REDD. *IDS Bulletin* 42(3): 42-51.

Ituarte-Lima, C., M. Schultz, T. Hahn, and S. Cornell, 2013, *Discussion Paper: Safeguards for Scaling-Up Biodiversity Financing and Possible Guiding Principles.* Based on first discussion paper on: Safeguards For Scaling-Up Biodiversity Financing And Possible Guiding Principles–UNEP CBD/COP/11/INF7 (2012). Stockholm, Stockholm Resilience Centre.

Kanowski, P.J., C.L. McDermott, and B.W. Cashore, 2011, Implementing REDD+: lessons from analysis of forest governance. *Environmental Science & Policy* 14 (2): 111–117.

Kelley, L., Madeira E. M., Blockhus J. and Ganz D., 2012, *Synthesis of Benefit-sharing Mechanisms from the Natural Resource Sector: Lessons for REDD+*. The Nature Conservancy, Washington, DC. https://www.conservationgateway.org/Documents/BenefiSharing2012_Backgrounder.pdf

Knox, A., D. Vhugen (Landesa), S. Aguilar, L. Peskett, and J. Miner, 2012, *Forest Carbon Rights Guidebook: A Tool for Framing Legal Rights to Carbon Benefits Generated Through Redd+ Programming.* Tetra Tech ARD, Burlington, Vermont, USA.

Luttrell, C., L. Loft, M.F. Gebara, and D. Kweka, 2012, Who should benefit and why? Discourses on REDD+ benefit-sharing, in A. Angelsen, M. Brockhaus, W.D. Sunderelin, and L.V. Verchot (eds.), *Analysing REDD+: Challenges and Choices*.

CIFOR, Bogor, Indonesia. http://www.cifor.org/publications/pdf_files/Books/BAngelsen1201.pdf.

Maderia, E.M., L. Kelley, J. Blockhus, D. Ganz, R. Cortez, and G. Fishbein, 2012, *Sharing the Benefits of REDD+: Lessons from the Field*. The Nature Conservancy, Arlington, VA, USA.

Mahanthy, S., J. Guernier, and Y. Yasmi, 2009, A fair share? Sharing the benefits and costs of collaborative forest management. *International Forestry Review*, 11(2): 268-280.

Mohammed, E.Y., 2011, Pro-Poor Benefit Distribution in REDD+: Who Gets What and Why Does It Matter? *REDD Working Paper*. IIED, London, UK.

Pagiola, S., 2003, Farmer responses to land degradation, in K.D. Wiebe (ed.), *Land Quality, Agricultural Productivity, and Food Security: Biophysical Processes and Economic Choices at Local, Regional, and Global Levels*. Edward Elgar, Cheltenham, UK.

Peskett, L., and G. Brodnig, 2011, Carbon Rights in REDD+: Exploring the Implications for Poor and Vulnerable People. World Bank and REDD-Net.

Ribot, J. and N. Peluso, 2003, A theory of access. *Rural Sociology* 68 (2): 153-181.

Schlager, E. and E. Ostrom E., 1992, Property rights regimes and natural resources: a conceptual analysis. *Land Economics* 68 (3): 249-263.

Schwarte, C. and E.Y. Mohammed, 2011, *Carbon Righteousness: How to lever Pro-Poor Benefits from REDD+*. IIED Briefing.

Streck, C., 2008, *Climate Change and Forests: Emerging policy and Market Opportunities*. Brookings Institution, Washington, DC.

Zavagli, M., 2011, *For Submission from the Ramsar Convention Secretariat at the 6th Meeting of the Bern Convention Group of Experts on Biodiversity and Climate Change*, Strasbourg, 10-11 October 2011. www.coe.int/t/dg4/cultureheritage/nature/bern/ClimateChange/Documents/102011/Presentations/RamsarConvention.pdf.

Legal Instruments (English title (AD) Official title (BS)):

- Buffer Zone Management Regulations 1996
- Conservation Area Management Regulations 1996
- Electricity Act 1992 (Bidyut Ain, 2049)
- Environment Protection Act 1996 (Batawaran Sanrakshan Ain, 2053)
- Forest Act 1993(Ban Ain, 2049)
- Interim Constitution of Nepal 2007 (Nepalko Antarim Sambhidhan, 2063)
- Irrigation Regulations 2000 (Sinchai Niyamawali, 2057)
- Land (Survey and Measurement) Act 1963 (Jgga Naap Jaanch Ain, 2019)
- Land Acquisition Act 1977 (Jgga Prapti Ain, 2034)
- Land Act 1964 (Bhumi Sambandhi Ain, 2021)
- Land Revenue Act 1978
- Local Self Governance Act 1999 (Sthaniya Swayatta Shasan Ain, 2056)
- Master Plan for Forestry Sector 1988
- Mines and Minerals Act 1986 (Khani Tatha Khanij Padartha Ain, 2043)

- National Parks and Wildlife Conservation Act 1973 (Rastriya Nikunj Tatha Vanya Jantu Sanrakshan Ain, 2029)
- Nepal Petroleum Act 1983
- Public Roads Act 1974 (Sarbajanik Sadak Ain, 2031)
- Soil and Watershed Conservation Act 1982
- Town Development Act 1988
- Water Resources Act 1992 (Jal Srot Ain, 2049)