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

***for Country: Republic of Liberia***

***Approved: Resolution PC/9/2011/2***
***Date: March 19, 2012***

**Forest Carbon Partnership Facility (FCPF)**

**United Nations REDD Programme (UN-REDD)**

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# General Information

## Contact Information

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## R-PP Development Team

| Name | Organization |
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| | |
|---|---|
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| Abdulai Barrie | World Conservation Union, (IUCN) |
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| Bernice Paye | National Climate Change Secretariat (NCCS) |
| YurfeeShaikalee | Action Against Climate Change (AACC) |
| Sienne Abdul-Baki | Ministry of Gender and Development (MGD) |
| Tamba Boikai | Ministry of Agriculture (MoA) |
| Samuel E. Taylor | Ministry of Lands, Mines, and Energy (MLME) |
| Ekema Witherspoon | Ministry of Internal Affairs (MIA) |
| Laurence Satia | Ministry of Finance (MoF) |
| Thomas Davis | Liberian Institute of Statics & Geo-Information Services (LISGIS) |
| Francis Colee | Green Advocates (GA) [1] |
| Wollor Torpor | University of Liberia (UL) |
| Jonathan Yiah | Sustainable Development Institute (SDI)[1] |
| Prince Korvah | Federation of Liberian Youths (FLY) |

**Summary of the R-PP**

| | |
|---|---|
| Dates of R-PP preparation (beginning to submission): | 18/05/09 to 25/01/11 |
| Expected duration of R-PP implementation (month/year to month/year): | 04/12 to 03/16 |
| Total budget estimate: | $7,730,000 USD |
| Anticipated sources of funding: | **FCPF**: $3,400,000 USD<br>**World Bank** (non-FCPF): $1,290,000USD<br>**GEF Biodiversity Fund:** $205,000USD<br>**UNCCD:** $520,000USD<br>**FFI, CI, IUCN** – to be determined (tbd)<br>**Other Agriculture Fund** (tbd): $555,000 USD<br>**National Government** contribution: $320,000 USD |
| Expected government signer | Hon. Augustine K. Ngafuan, Minister of Finance |

[1]Although Green Advocates and Sustainable Development Initiative both participated in consultation workshops and attended Technical Working Group meetings periodically as observers, they have indicated that this should not imply their endorsement of the views expressed in the R-PP.

| | |
|---|---|
| of R-PP grant request (name, title, affiliation): | Ministry of Finance, Broad Street, Monrovia <libfinancemin@yahoo.com> |
| Expected key results from the R-PP implementation process: | Outcome 1) National, county and local capacity sufficient to understand and engage in R-PP implementation process;<br><br>Outcome 2) Key knowledge for REDD+ gained and shared among stakeholders, including legal context, carbon (biomass) and socio-economic baselines, and reference emission levels (REL);<br><br>Outcome 3) Key systems for REDD+ (Monitoring, Reporting and Verification, FPIC, tenure arrangements, benefit distribution systems and M&E) explored and developed<br><br>Outcome 4) All stakeholders fully aware of and participating in REDD+ / R-PP and consulted on each component, activity and phase during planning and implementation |

# Executive Summary

Liberia is well placed to undertake the programme of activities required to prepare for REDD+, a performance-based payments for emission reductions. As outlined below, many crucial activities are already in process. Furthermore, the countries unique history of community based development and unique political and developmental situation make it an ideal model for the application of REDD+ at a country level.

**Component 1: Organize and Consult**

a) Management Arrangements

b) Information Sharing and early dialogue

c) Consultation and Participation

**Current status:**

Significant actions have been taken by the government of the Republic of Liberia, with support from Non-Governmental Organization (NGOs and INGOs) and Civil Society Groups (CSOs), towards putting in place the architecture for REDD+ and ensuring that all stakeholders are participating in REDD+ planning (e.g. R-PP) and implementation. There exists a REDD+ Technical Working Group with the specific role of leading and monitoring REDD+ actions, in addition to numerous existing frameworks and institutions which are now mobilized and tasked with supporting REDD+ development. The government, with support from NGOs, has already undertaken several rounds of participatory workshops and produced awareness raising materials (including radio and print media) to increase understanding of REDD+ and allow for active engagement at all political and social levels. In additional, there have been consultation on the R-PP within these REDD+ dialogues, plus specific consultations with all stakeholders on the R-PP process itself.

**Expected results from component activities:**

All stakeholders – from national government and ministries, to local community members – will be fully aware of the R-PP and REDD+ processes, including opportunities, challenges and the rights of refusal, participation and shared benefits. Government institutions will also receive the necessary support and training to raise capacity and knowledge on REDD+, to be able to lead a successful programme.

**Component 2: Prepare the REDD-plus Strategy**

a) Assessment of Land Use, Forest Law, Policy and Governance

b) REDD-plus Strategy Options

c) REDD-plus Implementation Framework

d) Social and Environmental Impacts

**Current status:**

The forest of Liberia is extremely rich in biodiversity, being a recognized global hotspot and priority for conservation – containing charismatic, rare mega-fauna such as chimpanzees, elephants and forest cats, as well as a raft of lesser-known but endemic species including the pygmy hippopotamus, zebra duiker and extraordinary diversity of other primates. Liberia also holds the majority, with around 43%, of the remaining Guinea Forest Ecosystem, far more than the other countries in the region. However, Liberia is also a post-conflict nation, with wide-spread poverty, and yet rich in natural minerals – especially gold, diamonds and ore.

At present, Liberia has in-place the necessary institution, laws and political will to develop a successful REDD+ strategy. However, the threats and competing interests outlined above are compounded by a lack of resources and capacity, at all levels of society.

**Expected results from component activities:**

The R-PP describes a process that will address the gaps in knowledge, data and capacity, providing the necessary skills, research and mechanism needed to fully explore and develop REDD+ at the project, sub-national and national level.

**Component 3: Develop a Reference Level or Scenario**

**Current status:** Preliminary studies have been conducted reporting on forest coverage (2004 and 2010) and estimating deforestation rates. Degradation and future emissions have yet to be assessed.

**Expected results from component activities:**

- Roles and Responsibilities and current capacity and gaps defined. Forest Management Units (FMU) and staffing established and capacity built.
- Activity data for deforestation, degradation, and reforestation in Liberia from 1990-2005 collected and collated.
- IPCC Reporting Tier Selected and emission factors for deforestation, forest degradation, and forestation developed.
- Historical emissions and removals developed. Uncertainty in this data assessed.
- Predictive spatial models developed for various socio-economic scenarios.
- Linkages with site-level initiatives considered.

**Component 4: Design a Monitoring System**

**Current status:** As with component 3 above, some limited capacity exists within the FMU to undertake development of the monitoring system. However, system design cannot be finalized without guidance from the UNFCC.

**Expected results from component activities:**

The MRV system will build on activities undertake as part of component 3. The overall aim is a functional MRV system that meets the needs of the national REDD+ program and complies with the UNFCCC guidelines.

Additional results will include:

- A trained and resourced FMU with the capacity to undertake the necessary monitoring and continue to develop methodology.
- A working definition of forest that can be applied to the Liberian context.
- An assessment of the current MRV.
- An effective data base system to facilitate centralization of data and data management.
- International collaborative relationships established and developed via MRV workshops
- Testing and refinement processes in place.

**Component 5: Schedule and Budget**

In response to the Resolution from the Participants' Committee (no.9) held at Oslo in June 2011, the R-PP has been thoroughly reviewed and revised. The total estimated cost now stands at US$6,290,000 over four years, 2012-15. The total funding requested from the FCPF is US$3,400,000. A further US$2,890,000 will be sought from development partners, including the World Bank, Fauna and Flora international (FFI), Conservation International (CI), the World Conservation Union (IUCN), UN REDD andthe International Fund for Agriculture and Development (IFAD). A Government contribution of US$320,000 over four years has been assumed, mainly for seconded staff.

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

A comprehensive M&E system is outlined in the R-PP. This is to be further developed with funding to cover the costs of consultancy support and training of key stakeholders to develop and maintain effective M&E throughout the 4 year during of the REDD+ readiness preparation process (and REDD+ strategy as a whole).

# Acronyms used by Liberia in this R-PP

AACC: Action Against Climate Change
BDS / BSM: Benefit Distribution System / Benefit Sharing Mechanism
CARI: Center for Agriculture and Research Institute
CBOs: Community-Based Organizations
CCBA: Climate Community and Biodiversity Alliance
CDM: Clean Development Mechanism
CER: Certified Emission Reduction
CFDCs: Community Forestry Development Committees
CFM: Community Forest Management
CI: Conservation International
CoP: Conference to the Parties
DBH: Diameter at Breast Height
DFS: Deutsche Forstservice GmbH
DNA: Designated National Authority
EIA: Environmental Impact Assessment
EPA: The Environmental Protection Agency of Liberia
ESMF: Environmental and Social Management Framework
FAO: Food and Agriculture Organization of the United Nations
FCPF: Forest Carbon Partnership Facility
FDA: Forestry Development Authority
FFI: Fauna & Flora International
FLEG-T: Forest Law Enforcement, Governance & Trade
FLY: Federation of Liberian Youth
FMU: Forest Management Unit
FPIC: Free, Prior and Informed Consent
FRA: FAO Forest Resource Assessment
FRM: Forest Resources Management
GHG: Green House Gas

GIS: Geographic Information Systems
INGO's: International Non GovernmentalOrganisations
IUCN: International Union for Conservation of Nature
IPCC: International Panel on Climate Change
LCM: Land Change Modeler
LFR: Liberia Forest Reassessment
LISGIS: Liberia Institute of Statistics and Geo-Information Services
MMU: Minimum Monitoring Unit
MRV: Monitoring, Reporting and Verification
NAPA: National Adaptation Plan of Action
NCCS: National Climate Change Secretariat
NRWS: National Rural Women Structure
NGO: Non GovernmentalOrganisation
NOCOL: National Oil Company of Liberia
PRS: Poverty Reduction Strategy
REDD: Reducing Emissions from Avoided Deforestation and Forest Degradation
RL/REL: Reference Level/ Reference Emission Level
R-PIN: Readiness Project Identification Note
R-PP: Readiness Preparation Proposal
RTWG: REDD+ technical working group
SADS: Skills and Agricultural Development Services
SDSU: South Dakota State University
SEA: Strategic Environmental Assessment
SESA: Strategic Environmental and Social Assessment
SGS: SociétéGénérale de Surveillance
ToR: Terms of References
TWG: Technical Working Group
UN-REDD: The United Nations REDD Programme
VER: Voluntary Emission Reduction
WB: World Bank

# Component 1: Organize and Consult

## 1a. National Readiness Management Arrangements

### Introduction

Establishing an effective management and regulatory framework for REDD+ readiness and implementation is critical for REDD+ in Liberia. Currently, Government of Liberia (GoL) operational structures at national, sub-national and local levels have, and will continue to support REDD+ ma$_n$agement where possible, however, additional structures will have to be established where gaps are evident. Although, some of the existing structures were not designed principally for managing REDD+, their functions and activities provide incremental support for managing REDD+ in country. Most notably there exists structures for key REDD+ components, including forest allocation, protection, and management planning, monitoring and linking forestry to livelihood improvements. As such, REDD+ management will be integrated into these existing structures, including cross cutting elements that overlap existing legislation and/or authorities, as well as facilitating new ones.

The overall responsibility for the implementation of REDD+ enabling activities and governance rests with the Forestry Development Authority while the National Climate Change Steering Committee gives policy guidance. The REDD Technical Working Group, which is chaired by the Forestry Development Authority (FDA) and co-chaired by the Environmental Protection Agency (EPA), will be the platform for bringing together all stakeholders and channeling technical support to the FDA for all REDD+ activities.

### National Readiness Management Arrangements for REDD+

The 1986 Constitution of Liberia encourages bilateral and regional co-operation with international and regional organizations for the attainment of the global protection of the environment and the promotion of sustainable use of natural resources. Liberia is a party to the Kyoto Protocol and the three Rio Conventions; the UNCBD, UNFCCC and the UNCCD and is committed to meeting her obligation under those Conventions. However, institutional and capacity constraints have reduced the capability of the GoL to carry out appropriate national actions to implement these Conventions including the response to Climate Change. Despite these constraints, the establishment of the EPA in 2002, the launching of the National Climate Change Secretariat in 2010 and the establishment of the Land and Governance Commissions, in 2010, shows that Liberia has been building institutions and capacity to ensure compliance with the different multilateral environmental agreements.

TheREDD Technical Working Group (RTWG), an off-shoot of the Carbon Consultative Group established in 2007 and supported Liberia to engage internationally on REDD issues, is one of such multi-stakeholders structures that have emerged as an interim arrangement, to provide technical support to the FDA for REDD+ readiness. Under the national arrangements, the FDA is the designated authority for managing forest issues and will implement and manage the REDD+

Program. However, due to the cross cutting nature of the REDD program, the National Climate Change Steering Committee will provide the necessary policy support to FDA at the highest level of Government.

REDD+ management in Liberia will take place at three different levels. One aspect will be through policy formulation and coordination at the National Climate Change Policy Advisory level provided by the National Climate Change Steering Committee (NCCSC). The other aspect of REDD+ management will be addressed directly through the REDD+ Implementation arrangement/ structure; the REDD+ Secretariat which considers the overall implementation strategy and platform for REDD+ through the RTWG.

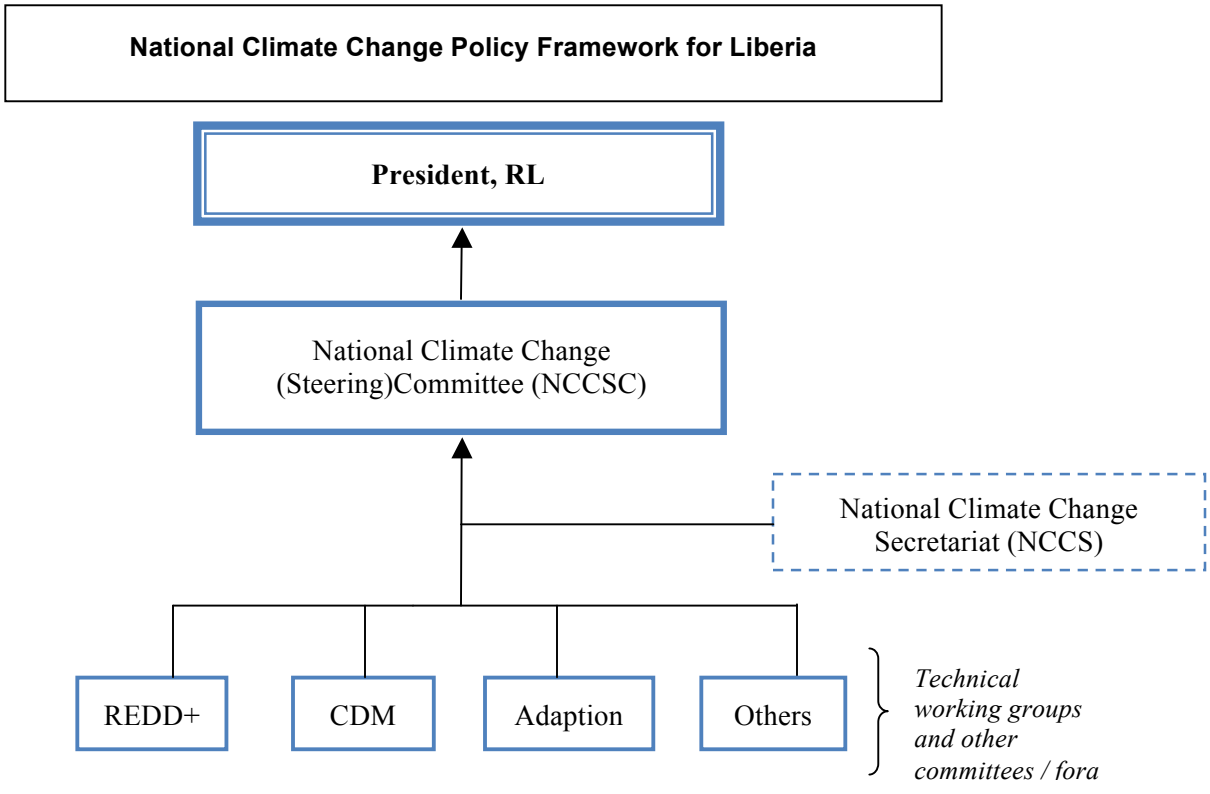
**REDD+ management in Liberia will take place at three different levels.**

A) Policy Formulation and Coordination
B) Consultation and Advisory
C) Implementation

### *A) Policy Formulation and coordination*

It will be crucial for the implementation of REDD strategies that those sectors that would be impacted or whose activities will have implication for REDD should respond to the challenges in a coordinated and synergistic way. Ensuring this outcome will require that the sectors fully understand their role in addressing climate change.

National Climate Change Policy level is spearheaded by the National Climate Change Steering Committee (NCCSC). The overall coordination and momentum required will need inter sectorial leadership, expressed through the NCCSS which is chaired by the Minister of Planning and Economic Affairs, while the President is ex-officio.



***National Climate Change Steering Committee (NCCSC)***

In September 2010, the President, through the members of Cabinet, endorsed the establishment of the National Climate Change Steering Committee (NCCSC); which was subsequently launched in October 2010. The NCCSC is a high-level policy coordination committee and is responsible for overall climate change policy in Liberia. It comprises of the President of Liberia, Ministers of Government, Directors of Governmental Agencies, National Energy& Climate Change Adviser to the President, private sector, civil society and international partners (see Table 2 below). This advisory body will serve as the policy-clearing house for the REDD+ and all other Climate Change related issues. Consequently every policy will be reviewed and approved by this high-level policy committee to secure political will. All functions of the NCCSC will be facilitated through the National Climate Change Secretariat (NCCS).

***The primary roles of the NCCSC are as follows****:*

- Set overall climate change policy in Liberia and ensure that such policy is carried out
- Create/Dissolve Working Groups (WGs) on an ad-hoc basis to assist in addressing technical issues related to Climate Change that may arise.
- Establish credible consultative processes, which shall provide input to the REDD+ program among others
- Supervise, Support and when necessary recommend training for the efficient and effective functioning of the NCCS
- Provide overall Supervision, advice and assist in inter-sectoral coordination of the REDD+ Program
- Adopt measures and take appropriate actions necessary for achieving the mandate and goals of the NCCSC, including and in particular:
    - To approve the work plan of the NCCS;
    - To approve the budget of the NCCS;
    - To authorize and/or approve the solicitation of external assistance;
    - To recruit and have the power to dismiss the Head of Secretariat of the NCCS;
    - To hire or approve the engagement of an independent auditor to perform audits of the NCCS financial transactions
    - The NCCSC is an advisory and policy body for all Climate Change activities in Liberia, and implementation of programs will be carried out by relevant GOL Ministries and Agencies. For instance, REDD+ program will be implemented by FDA.

Table 1 Current Composition of the NCCSC

| |
|---|
| President of the Republic of Liberia-ex-officio |
| Energy, Environment and Climate Change Advisor to the President of Liberia |
| Minister of Planning and Economic Affairs(MPEA) |

| |
|---|
| Minister of Land, Mines and Energy (MLME)<br>Minister of Agriculture(MoA)<br>Minister of Finance (MOF)<br>Minister of Gender and Development<br>Managing Director of the FDA<br>Executive Director of the EPA<br>Chairman, National Investment Commission<br>Commissioner of Liberia Maritime Authority<br>Ministry of Internal Affairs<br>Donor Community ( TBD)<br>University Of Liberia<br>Civil society, SADS<br>International NGO, Fauna & Flora International<br>NCCS- Head of Secretariat |

***The National Climate Change Secretariat (NCCS)***

The NCCS has been set up as a supportive arm of the NCCSC. The NCCS provides coordination, monitoring of programs and ensuring the implementation of policies as well as carrying out the administrative supervision functions on relevant climate change matters, as the operational arm of the NCCSC. It is technically supported by various experts to include: Climate Change Adaptation Specialist, Mitigation/REDD+ Specialist, GIS/Mapping Specialist, Climate Change Policy Specialist, Communication /Information Specialist. However it should be noted that these specialists are not necessarily housed in the same office as the NCCS; but rather are located in various agencies/ ministries responsible for programs implementation; for example, the REDD+ specialist will be in the FDA, the Adaptation specialist in the EPA etc.

The Secretariat shall be hosted by the Office of the President and comprise: Head of Secretariat, Administrative Coordinator, Communications and Liaison Manager, Information Manager, , Monitoring and Evaluation Manager, Secretary, Driver and Office Assistant. These staff members are located in the Presidency at the Executive Mansion and are under the direct supervision of the Energy, Environment and Climate Change Advisor to the President who also heads the NCCS. The creation of the NCCS at the Presidency is indicative of the high level support given to climate change in the Country and REDD+ promises to be further demonstration that Liberia is ready to join global efforts to mitigate GHG emissions.

**The specific roles of the NCCS are as:**[2]

- Operationalize/integrate Climate Change Policies into the GoL development agenda

[2] The Secretariat role may be broadened to maintenance of a **Transactions Register** to record, collect, collate, document and store information on carbon rights, transactions and benefit accrual,

- Propose domestic policies relating to climate change
- Coordinate national adaptation and mitigation strategies
- Raise national awareness on climate change
- Serve as liaison between the office of the President, the NCCSC, input from the various technical working groups, and other relevant national stakeholders and platforms regarding action required for policy review
- Engage in appropriate programs to strengthen national capacity in addressing climate change
- Cooperate with international organizations, regional centers, institutions and experts in developing programs of action to mitigate and adapt to climate change in the region
- Collate, document and store data, record and disseminate climate change information to the public and media
- Maintain full records of the proceedings of the Climate Change Steering Committee, issue citations, inform all stakeholders about emerging issues on a regular basis
- Collaborate closely with the WGs to ensure regular and timely reporting on the progress of activities and ensure timely presentation of reports to the NCCSC
- Ensure that WGs give proper attention to all cross-cutting issues in the design and implementation of climate change interventions

### *B) Consultation and Advisory*

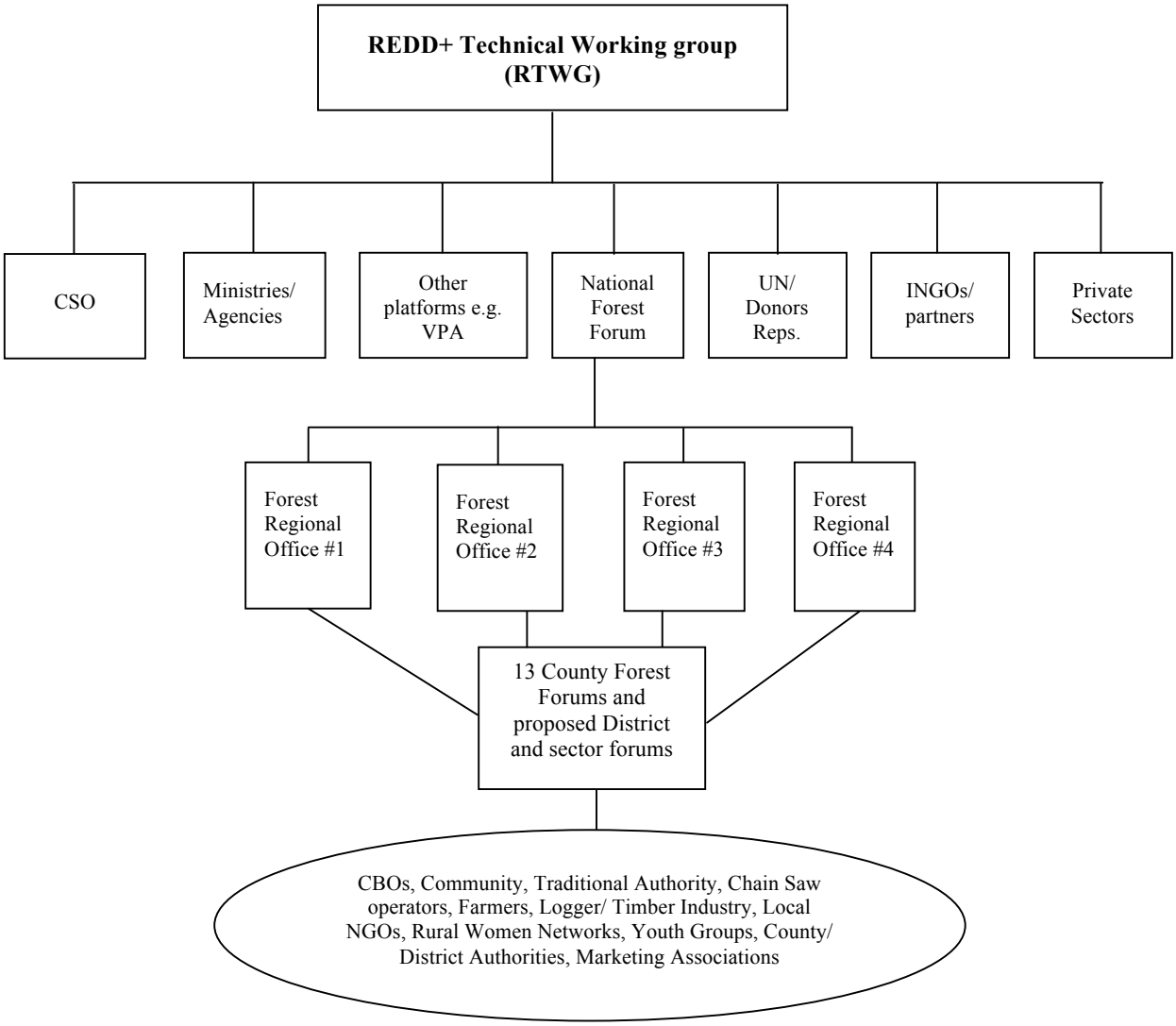
REDD+ activities will be managed at the advisory level by the REDD Technical Working Group; the RTWG is a platform for all stakeholders, including other sector agencies, civil society, development partners and the private sector. Most importantly, it reaches down through the National and County level forest forums to stakeholder and communities closer to the forest and directly affected by REDD+ issues. Based on this, the REDD TWG will provide technical advice to inform and guide decisions about the program development in Liberia. Civil Society Organizations (CSOs) are represented on the RTWG and fully participated in the development of the R-PP. While Skills and Agriculture Development Services (SADS) represents CSO officially on the RTWG, the participation of Federation of Liberian Youth (FLY), Action Against Climate Change (AACC), Sustainable Development Institute (SDI) and Green Advocates (GA) gives CSO an added representation in the entire process. This was to ensure that the R-PP process captures concerns and views from diverse stakeholders. Also, in order to make the R-PP process inclusive and participatory, comments from CSOs in the initial informal submission made at the Vietnam meeting in March 2011 were integrated during the final drafting stages of the proposal.

**Table 2 Membership of the Climate Change Consultative Framework**

| Category | Stakeholders |
|---|---|
| National Government | Ministries:<br>• Health and Social Welfare |

| | |
|---|---|
| | • Education<br>• Lands, Mines & Energy<br>• Agriculture<br>• Gender and Development<br>• Youth & Sports<br><u>State Agencies</u><br>• Forestry Development Authority<br>• Environmental Protection Agency<br>• Standing Committees on Forestry & Agriculture;<br>• FDA (FMAC & FDA Board)<br>• Lands Commission |
| Forest Dependent Peoples | • Town Chief/ Elders<br>• Hunters Groups<br>• Community Forestry Development Committees (CFDCs)<br>• District Forest Forums<br>• County Forest Forums<br>• National Forest forum |
| Civil Society Groups | • Press Union of Liberia<br>• Liberia Media Initiatives (LMI)<br>• Federation of Liberian Youth (FLY)<br>• National Paramount Chiefs &Traditional Rulers (Council)<br>• National Religious Councils<br>• National Rural Women Structure<br>• National Non-Governmental Organizations (NGOs)<br>• International NGOs<br>• Community-Based Organizations (CBOs) |
| Research and Academia | • University of Liberia<br>• Cuttington University<br>• Forestry Training Institute (FTI)<br>• Center for Agriculture and Research Institute (CARI) |
| Trade Associations | • National Transport Union<br>• Liberia Marketing Association<br>• National Teachers association<br>• National Charcoal and Fuel Wood Producers Association<br>• Cooperative Development Agency |
| Private Sector | • Small Scale Carpenters<br>• Liberia Timber Association<br>• Liberia Loggers Association<br>• Forest Concessionaires & Oil palm Producers<br>• Cottage Industries<br>• Mining Companies (large and artisanal)<br>• Traders in pit-sawn lumber<br>• Pit Sawyers Association |

***The REDD+ Consultative Platform***




***The REDD+ Technical Working Group (RTWG)***

In June 2009, the Government of Liberia set- up a National REDD+ Technical Working Group composed of representatives from Government including the Energy, Environment and Climate Change Advisor to the President, NGOs, civil society, private sector, and academia. The Technical Group replaced the Carbon Consultative Group (CCG) established in 2007, and has the mandates of advising the FDA, building the capacity of the Authority and serving as a platform for multi-stakeholders to meet on REDD+ issues. Under the leadership of the FDA, the RTWG lead the drafting process of the Readiness Preparation Proposal (R-PP). The RTWG current membership comprises institutions and individuals that participated in the preparation

and submission of Liberia's R-PIN in 2008. The main functions of the Working Group are as follows:

The main functions of the RTWG will include:[3]

1. Facilitate and advise on the implementation of REDD+ policies and activities;
2. Review and approve terms of reference for studies, consultancies and assessments, ensuring that stakeholder views are taken into account;
3. Facilitate a national consensus on REDD+ policies and activities through stakeholder engagementwhich will be augmented through Services Contract carried out in sub-component 1c;
4. Advise and assist in the development of data base and information system for REDD+ activities;
5. Identify capacity needs in governmental climate change policy and activities, and participate in their solutions;
6. Provide input into other climate change mitigation proposals that have fiscal consequences for the Government;
7. Advise on monitoring and validation systems of terrestrial carbon stock, including the potential to establish independent or parallel monitoring in an advisory capacity;
8. Develop additional taskforces as needed to advise and assist the FDA in particular subject or technical areas.

**Table 3 Suggested membership for the RTWG**

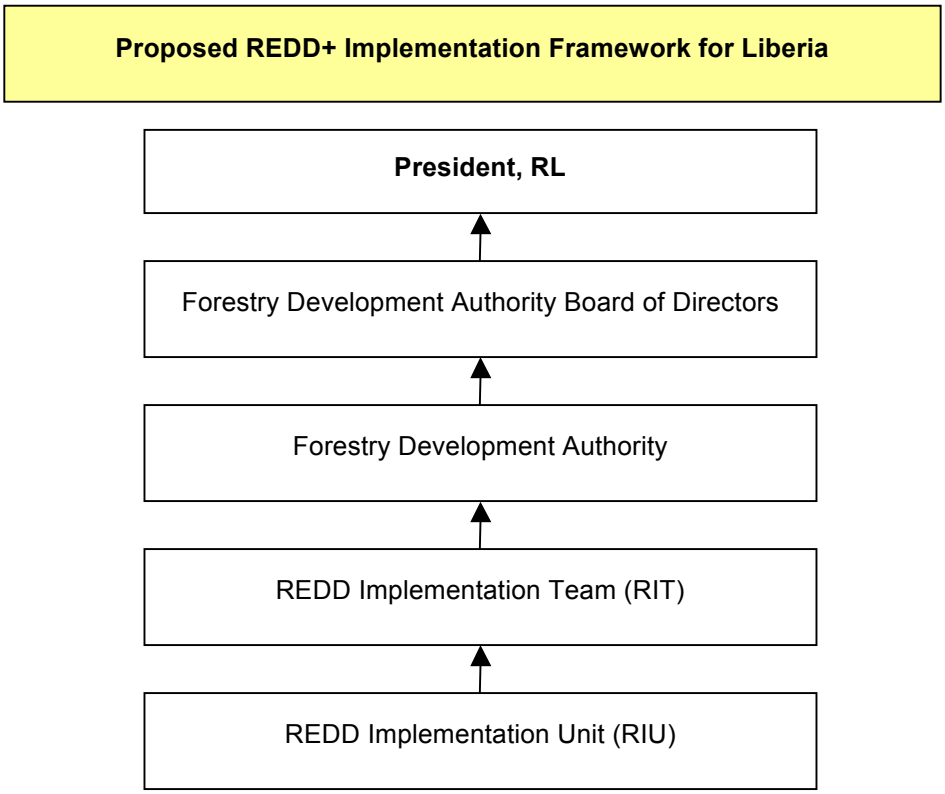
| Category | Stakeholder |
|---|---|
| Ministries/ Agencies | - Office of the Energy, Environment and Climate Change Advisor to the President<br>- Lands, Mines & Energy<br>- Agriculture<br>- Gender and Development<br>- Youth & Sports<br>- Forestry Development Authority<br>- Environmental Protection Agency<br>- Bureau of Maritime Affaires<br>- Lands Commission |
| CSO | - NGO Coalition representative<br>- Other local NGO wishing to participate directly – SDI, GA, AACCL |
| National Forest Forum | - Elected representative for the 4 regional forums representing CBOs, Community, Traditional Authority, |

[3]The work of the RTWG will depend upon consultations of members of Table 1.

| | |
|---|---|
| | Chain Saw operators, Farmers, Logger/ Timber Industry, Local NGOs, Rural Women Networks, Youth Groups, County/ District Authorities, Marketing Associations etc. |
| Private Sectors | |
| Academia | University of Liberia |
| Other platforms | VPA |
| NGOs/ partners | CI, FFI, IUCN |
| UN/ Donors Reps | UNDP, World Bank |

### *C) Implementation Arrangements*

REDD+ in Liberia will be implemented through a REDD+ Implementation Group (RIG), supported by a REDD+ Implementation Unit (RIU). The RIG will report administratively to the NCCSC.



***REDD+ Implementation Group (RIG)***

The RIG will comprise key implementing agencies and ministries including:

| Ministry / Agency | Represented by |
|---|---|
| • Forestry Development Authority (Chair) | Managing Director (FDA) |
| • Environmental Protection Agency of Liberia (co-chair) | Executive Director (EPA) |
| • Liberia Institute of Statistics and Geo-information Services (LISGIS) | REDD Project Officer - Forest Monitoring Unit (FMU) |
| • Lands Commission | REDD Project Officer – rural land registry |
| • Ministry of Planning and Economic Affairs (MPEA) | REDD Project Officer = planning |
| • Ministry of Lands, Mines and Energy (MLME) | REDD Project Officer –wood energy |
| • Ministry of Agriculture (MOA) | REDD Project Officer – agricultural modernizationand tree crop development |
| • FDA | REDD Project Officer – forestry sector |
| • National Climate Change Secretariat (NCCS): | REDD Project Officer – EPA |

Within the RIG, a number of REDD Implementation Task Forces (RITF) will be set up to harness relevant talents and synergies, and will be led by the appropriate agency of ministry. These task forces will align with project implementation components in the FCPF Project Appraisal Document. It is important to note that actual implementation may be contracted to a national or internal service provider, under the supervision of the RITF. Currently, the following Task Forces are proposed, but may be amended or augmented.

| REDD Implementation Task Forces (RITF) | R-PP Components | Lead Agency |
|---|---|---|
| **1. Consultation & Participation and Social & Economic Assessment (SESA)** | 1(b)Information Sharing and Early Dialogue with Key Stakeholder Groups<br>1(c) Consultation and Participation Process<br>2(d) Social and Environmental Impacts during Readiness Preparation | EPA |

| | | |
|---|---|---|
| **2. Prepare the REDD-plus Strategy** | 2(a) Assessment of Land Use, Forest Law, Policy and Governance (Activities 1,2,3,4 &5) | MPEA |
| | 2(b) REDD-plus Strategy Options for Forestry, Agriculture and Wood Energy - leading to: **Overall National REDD Strategy** | |
| **3. Reference Scenario** | 3) Development of a Reference Level or Scenario | FDA |
| **4. Carbon rights, transactions and Benefits** | 2(a) Assessment of Land Use, Forest Law, Policy and Governance (Activities 6.1, 6.2 & 6.3)<br>2(c) REDD+ Implementation Framework<br>4(b) Design a Monitoring System for other Multiple Benefits and Impacts | MIA |
| **5. MRV (Measurement Reporting and Verification)** | 4(a) Design a Monitoring System for Emissions and Removals | LISGIS |

The functions of the different project officers within the RIG include:

- Perform all technical functions required of the sector line ministry/agency for the REDD+ activity;
- Perform liaison roles between the different operation entities;
- Ensure inter-sectoral coordination within the REDD+ framework;
- Report project activities, progress, challenges and updates to the highest level within the sector ministry/agency
- Work, as appropriate, as members of respective REDD Implementation Task Forces (RITF)

***REDD+ Implementation Unit (RIU)***

The REDD+ Implementation Unit (RIU) will be based in the Forestry Development Authority and will support the REDD Implementation group (RIG) and its constituent task forces (RITF). The RIU will be headed by an REDD National Coordinator who will be supported by four seconded National Specialists in: (i) Administration; (ii) Financial Management; (iii) Procurement; and, (iv) Communications and website maintenance. The Financial Management Specialist will be located in the PFMU, subject to agreement. The staff list in RIU is not prescriptive and more may be recruited if the need arises.

**The REDD National Coordinator**, who will be competitively selected on an international basis, with preference given to Liberians, will:

(i) Act as the administrative head of the RIU

(ii) Serve as a REDD Adviser to the National Climate Change Steering Committee (NCCSC).

(iii) Provide technical leadership to the RIG and its constituent task forces;

**The RIU will be responsible for**:

(i) Providing secretariat, administrative and management services to the REDD Implementation Group (RIG);

(ii) Providing procurement and financial management services for FCPF Grant funded activities in Liberia, including those implemented by sister agencies and by the National Climate Change Secretariat;

(iii) Organise and support the constituent task forces (RITF) of the RIG, and ensure that they recognize cross-cutting issues in the design and implementation of REDD+ interventions;

(iv) Prepare work plans and budgets for RIG and its RITFs for endorsement by the RIG and submission to NCCSC for approval;

(v) Oversee and ensure that REDD+ activities are fully implemented according to the workplan and budget;

(vi) Prepare reports, draft TOR for consultants on a needs basis, and manage all information relating to the R-PP implementation

(vii) Submit regular and timely monthly reports on all RIG activities to the M&E Unit located in the National Climate Change Secretariat (NCCS);

(viii) Provide high-quality support to the REDD+ process in Liberia, regionally and internationally coordinate domestic and international policies relating to the REDD mechanism; and, act as point of contact for the Forest Carbon Partnership Facility (FCPF).

(ix) Design, launch, maintain and populate a REDD+ website for Liberia which is linked to the FDA Corporate Website;

(x) Provide and disseminate high-quality, understandable and reliable information and data on all activities of the RIG and REDD+ activities;

(xi) Promote and enhance the active engagement of the top hierarchy in all line Ministries and Agencies, businesses and industries, the scientific community and other relevant stakeholders in REDD+ processes, through effective coordination and communication;

***Other existing Management Arrangements***

Several other existing management structures working on forest management and forest governance will contribute to the successful management and implementation of REDD+

readiness. Although these structures work outside of the REDD arrangement frameworks, their activities support current and future REDD management. It will be critical to ensure that these structures communicate with each other and the RTWG (etc.), via holding regular meetings and workshops where research and the production of guidelines, and so forth, related to REDD+ will be advanced.

***The Forestry Development Authority (FDA)***

The Forestry Development Authority was created in 1976, to manage all forests and forest resources in Liberia. The FDA is also responsible for ensuring that forest resources benefit the local communities and the entire country. This mandate allows the FDA to negotiate issues related to forest management, wildlife conservation, and biodiversity protection. Due to this central role in forest management, the FDA was assigned as the agency responsible to lead the development of the REDD+ readiness activities in Liberia. The FDA chairs the REDD+ Technical Working Group (RTWG) and will implement the REDD+ program in Liberia.

***The Environmental Protection Agency (EPA)***

The Environmental Protection Agency of Liberia is the Designated National Authority (DNA) for the CDM of the UNFCCC/Kyoto Protocol and the environment. National Environmental Policy Council oversees policy formulation at the EPA and sets priorities for national goals and objectives for the protection of the environment. The Minister of Lands, Mines and Energy heads the Policy Council of the EPA. The EPA also has a Board of Directors that is the supervisory body of the Agency. The Minister of Planning and Economic Affairs serves as the head of the Board of Directors of the EPA. The EPA has now completed the National Adaptation Plan of Action (NAPA) of Liberia. The EPA co-chairs the REDD Technical Working Group and coordinates with the FDA to manage the process of the REDD+ preparatory activities.

***The Benefit Sharing Working Group (BSWG)***

This framework could be used during the next phases of REDD readiness and piloting. The BSWG has created guidelines and procedures for distributing benefits within the forestry sector especially in relation to commercial forestry. This multi-sector arrangement, when proven successful (because it is yet to be tested, since commercial forestry has just started again after the lifting of the UN ban), can be easily replicated to the REDD arrangements.

***Liberia Forestry Initiative (LFI)***

In 2006, the LFI was created by a group of key international partners in conjunction with FDAto address the increasing level of mismanagement and corruption existing within the forestry sector. The LFI was created as a platform where development partners, donors, government line ministries and agencies, and forest communities can interact and share ideas to sustainably manage the Liberian forest. The LFI initiated the forestry reform process which led to many reforms within the forestry sector including the enactment of the National Forestry Reform Law (NFRL) in 2006. LFI reforms provided enormous input into the government national strategy formulation on forest management and natural resource planning. The management provided by the LFI resulted in the international community lifting the ban on the sale of Liberia timber.

***Community Forestry Development Committee (CFDC)***

The NFRL (2006) gives exclusive rights to the Forestry Development Authority as the principal "manager" of national forest endowment in Liberia and mandates it to established Community

Forestry Development Committees to assist in administering control and effectiveness in the management of forest resources, especially those within communities. CFDCs have been established in all forest regions in the country and are inclusive stakeholder arrangements involving chiefs, elders, youth groups, women groups and community-based organizations. The committee has participated in many national and community level forest management processes including the development of the benefit sharing mechanism scheme, the R-PP information sharing workshops, consultation to establish the Community Rights Law, etc.

**Summary of Main Activities and proposed Budget**

The FCPF will support the three key entities involved in A) Policy Formulation, B) Consultation and Advisory, and C) Implementation through:

1) Support to REDD Implementation Unit (RIU)
2) Support to Implementation Group (RIG) and Task Forces (RITF)
3) Support to the National Climate Change Committee Secretariat (NCCSC)

This support will include the hiring of a REDD Coordinator in the REDD Implementation Unit and of Head of Secretariat in the National Climate Change Steering Committee, procurement of equipment, setting up and operating of various specialist Units, including a Carbon Transaction Register. Besides the two posts above, other specialist posts are expected to be filled on a secondment (no-cost) basis from other GoL agencies, or by NGOs.

**Implementation Capacity Development**

The FCPF will also support Capacity Development within the key entities. Technical members of the for NCCC, NCCSC, REDD TWG and RIU will receive Inception Training of the FCPF project and REDD+. This training will be undertaken in-country – either by the REDD Coordinator, or by an International Consultant. This will also involve a Training Needs Assessment, leading to targeted training through external courses.

To enhance Fiduciary Capacity in the RIU, the FCPF will recruit two specialists for Procurement and for Financial Management, for one year each, to start up the project and provide on-the-job training for seconded staff. This will be supplemented by short term external training in the region. The Financial Management Specialist will be based with his local counterpart in the PFMU, subject to agreement.

| **Budget 1a: Summary of National Readiness Management Arrangements and Activities** | | | | | | |
|---|---|---|---|---|---|---|
| **Main Activity** | **Sub-Activity** | **Estimated Cost (in thousands US$)** | | | | |
| | | **2012** | **2013** | **2014** | **2015** | **Total** |
| **1) Support to REDD Implementation Unit (RIU)** | 1-1) Recruit REDD Coordinator | $65 | $65 | $0 | $0 | **$130** |
| | *1-2) Four core staff as listed above seconded from GoL (at GoL cost)* | *$80* | *$80* | *$80* | *$80* | **$320** |
| | 1-3) Vehicle and Office equipment | $60 | $5 | $5 | $5 | **$75** |
| | 1-4) Other set-up costs (e,g, website and communications unit) | Budget in 1(b) | | | | **$0** |
| | 1-5) Preparation and dissemination of reports , incl. website and other media | $5 | $5 | $5 | $5 | **$20** |
| | 1-6) Operational Costs | $10 | $10 | $10 | $10 | **$40** |
| **2) Support to Implementation Group (RIG)and Task Forces (RITF)** | 2-1) Meeting costs and op. costs | $30 | $30 | $30 | $30 | **$120** |
| **3) Support to Technical Working group (RTWG)** | 3-1) Meeting costs for TWG | $5 | $5 | $5 | $5 | **$20** |
| | 3-2) Preparation and dissemination of reports , incl. website and other media | $5 | $5 | $5 | $5 | **$20** |
| **4) Support to the National Climate Change Committee Secretariat (NCCSC)** | 4-1) Head of Secretariat | $65 | $65 | $0 | $0 | **$130** |
| | *4-2) Four core staff as listed above seconded from GoL (at GoL cost)* | *$80* | *$80* | *$80* | *$80* | **$320** |
| | 4-3) Meeting and Secretariat costs for NCCC (2 /yr) | $10 | $10 | $10 | $10 | **$40** |
| | 4-4 Liaison Units | $5 | $5 | $5 | $5 | **$20** |
| | 4-5) Planning Unit | $5 | $5 | $5 | $5 | **$20** |
| | 4-6) Set up Communications and Information Units | $25 | $5 | $5 | $5 | **$40** |
| | 4-7) Set up and operation of Carbon Transactions Register | $25 | $5 | $5 | $5 | **$40** |
| | 4-8) Set up and operation of M&E Unit for FCPF programme | Budget under component (6) | | | | **$0** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **4) Capacity Strengthening and related Technical Assistance** | 5-1) Inception Training in REDD+ and FCPF project for NCCC, NCCSC, REDD TWG, RIU members | $15 | $0 | $0 | $0 | **$15** |
| | 5-2) Training needs assessment for above based on Inception Training | $5 | $0 | $0 | $0 | **$5** |
| | 5-3) Follow-up targeted technical training for above | $15 | $15 | $15 | $0 | **$45** |
| | 5-4) Financial Management Specialist for RIU (Regional or national TA) | $60 | $0 | $0 | $0 | **$60** |
| | 5-5) Procurement Specialist for RIU (Regional or national TA) | $60 | $0 | $0 | $0 | **$60** |
| | **Total** | **$630** | **$395** | **$265** | **$250** | **$1,540** |
| | *Domestic Government* | *$160* | *$160* | *$160* | *$160* | **$640** |
| | *Other Development Partner* | *0* | *0* | *0* | *0* | **$0** |
| | ***Sub-total Non-FCPF*** | *$160* | *$160* | *$160* | *$160* | **$640** |
| | **FCPF** | **$470** | **$235** | **$105** | **$90** | **$900** |

# 1b. Information Sharing and Early Dialogue with Key Stakeholder Groups

## Introduction

Liberia's legal and regulatory framework supports community participation in REDD+. The 2030 National Vision highlights the importance of broad participation in achieving sustainable economic development and inclusive growth. In 2006 Liberia adopted a new Forest Policy which seeks to harmonize Community, Conservation and Commercial uses of her forest resources, known as the 'Three C's approach'). Significant information sharing and dialogue with the population was conducted at national, regional, district and local levels when seeking the views of stakeholders in the design and adoption of this law. In relation to REDD+ specifically, the government of Liberia recognizes the importance of inclusion and stakeholder engagement in the R-PP process. It has further recognized that the multi-sectoral nature of REDD+ calls for a more inclusive and participatory process that takes into consideration the interest and realities of relevant stakeholders, particularly the forest dependent communities (Liberia National Vision, Ministry of Planning and Economic Affairs)

The Community Rights law provides absolute rights to forest communities to access forest resources and to use them in a sustainable way. This law provides a mandate for the concessionaries to develop social agreements contracts with communities highlighting how they will adequately and equitable benefit from operation of concessionaires in the utilization of their forest resources.

The Liberia Voluntary Partnership Agreement (VPA) process has put in place a multi-stakeholder VPA platform that has conducted several stakeholder consultations with affected forest communities, timber associations/companies civil society, and others, to inform the public and raise awareness on the threats and dangers the illegal timber trade poses on their economic and social development. The VPA has called for an independent forest monitoring initiative to be conducted by the forest dependent communities and civil society to report on illegal timber harvesting. The National Adaptation Plan of Action (NAPA) calls for a robust stakeholder consultation and participation during its implementation (Annex 2). During the development of NAPA extensive consultations with forest communities were also conducted throughout the country to seek inputs.

The VPA and NAPA stakeholders consultation processes were carryout at the national levels through which individual were identified from keys and relevant institutions and cross- section of Liberia to participate, and the outcome was then use to organize a national validation workshop for the document vetting. The R-PP information sharing dialogue (processes) bridge these gaps by increasing local participation through regional workshops,

The Consultation and Participation Taskforce intend to build on the National Forest Program Facility, which has facilitated the establishment of fora at national, regional, county and community level to ensure that all stakeholders including forest-dependent people are well inform, consulted and actively participating. Table below demonstrates the composition of consultation at all levels of governance.

Table 4: Consultation levels and representation

| Consultation Levels | # of Representatives | Interest group/ organization |
|---|---|---|
| National | 15 persons | Private sector, NGOs, Networks, association, traditional authority, relevant Government agencies/ ministries, Academia |
| Regional | 25/region | Legislative caucus, traditional Authority, Relevant Government Agencies and Ministries, Private sector, Associations, Academia, Religious council, NGOs, VPA platform |
| County | 35/county | Legislative caucus, traditional Authority, Relevant Government Agencies and Ministries, Private sector, Associations, Academia, Religious council, NGOs, VPA platform |
| District | 25/district | Traditional Authorities, CBOs, NGOs, Associations, Traditional Societies, schools, Local Network, SMEs, Private Sector |
| Clan | 40/clan | Traditional Authorities, CBOs, NGOs, Associations, Traditional Societies, schools, Local Network, SMEs, Private Sector, hunters, farmers, fishermen, |
| Town | 50/town | Traditional Authorities, CBOs, NGOs, Associations, Traditional Societies, schools, Local Network, SMEs, Private Sector, hunters, farmers, fishermen, land lords, video club, |

**Rationale**

Liberia herein presents the R-PP, through a multi-stakeholder process strongly committed to building on the lessons learned from stakeholder engagement and consultations highlighted above. The R-PP document calls for a transparent, accountable and inclusive process. The government has conducted a social mobilization campaign that shares information and raises awareness on REDD+ and the R-PP + to all the relevant stakeholders. The campaign will also capture their views, concerns, and expectations on this issue. Information sharing and dialogue with Stakeholders will be integral to the process. This enables the participation of all relevant stakeholders, particularly those who will be affected or whose activities will have an impact on REDD+ implementation going forward.

The need for adequate care in handling the expectations of forest-dependent people cannot be overemphasized. As a post conflict country, Liberia faces serious challenges and potential hindrances to the REDD+ process.

These include:

- limited confidence reposed by forest dependent people in government and concessionaires;

- uneven bargaining power between different interest groups;
- hijacking of concessions negotiations by powerful interests;
- differing perceptions of participation process;
- misunderstanding and exaggerated expectations of REDD+;
- insufficient sharing of knowledge;
- poorly planned processes;
- limited resources for a genuine information sharing and dialogue process; and

During the formulation phase extensive information sharing and sensitization campaign on REDD+ and the R-PP process was conducted with the relevant stakeholders based on the mapping exercise below. Furthermore participatory structures and conflict resolution and management mechanisms were discussed and identified. These will be elaborated further below in the text.

**R-PP Consultation and Participation Activities**

- A consultation and participation task force was established under the national REDD+ technical working group to be primarily responsible for driving the information sharing sensitization awareness campaign on REDD+ and the R-PP process (Annex 3). The composition of the task force consists of representatives from civil society, IUCN, FFI, youth organization, the Ministry of Gender and Development, EPA and FDA. This taskforce recognizes the major capacity gaps and other challenges faced in Liberia. Furthermore, the taskforce realizes that early stakeholder engagement in the R-PP process is crucial to overcome the challenges. Stakeholder engagement is essential so as to; inform understanding of the issues; get stakeholders adequately prepared for the implementation phase of REDD+; ensure that the all the relevant stakeholders are consulted; stakeholders' rights to clear and simplified information is respected.
- Stakeholder Mapping/analysis exercise: Before the commencement of the information sharing process, the REDD+ technical working group together with the C+P taskforce, conducted a vigorous stakeholder mapping exercise. This process identified the key stakeholders contributing to the drivers of deforestation, stakeholders who have an interest or stake in REDD+, and those that are mostly likely to loose from this initiative. The following were mapped in the various categories as seen below:

**Table 5: Results of stakeholder mapping (stakeholders)**

| Category | Stakeholders |
|---|---|
| **National Government** | Ministry of Health and Social Welfare<br>Ministry of Education<br>Ministry of Lands, Mines & Energy<br>Ministry of Internal Affairs;<br>Ministry of Agriculture<br>Ministry of Gender and Development<br>Ministry Planning and Economic Affairs<br>Ministry of Justice |

| Category | Stakeholders |
|---|---|
| | Ministry Labor<br>Ministry of Culture, Information and Tourism<br>Ministry of Finance<br>Ministry of Foreign Affairs<br>Ministry of Youth & Sports<br>Ministry of Industry and Commerce<br>Forestry Development Authority<br>Environmental Protection Agency<br>Standing Committees on Forestry &Agriculture; FDA (FMAC & FDA Board)<br>National Investment Commission; Lands Commission |
| **Forest Dependent People** | Town Chief/ Elders<br>Hunters Group<br>Community Forestry Development Committees (CFDCs)<br>District Forest Forum<br>County Forest Forum<br>National Forest forum |
| **Civil Society Groups** | Press Union of Liberia<br>Liberia Media Initiatives<br>Federation of Liberian Youth (FLY)<br>National Paramount Chiefs &Traditional Rulers (Council)<br>National Religious Councils<br>National Rural Women Structure<br>National Non-Governmental Organizations (NGOs)<br>International NGOs<br>Community-Based Organisations (CBOs) |
| **Research and Academia** | University of Liberia<br>Cuttington University<br>Forestry Training Institute<br>Center for Agriculture and Research Institute (CARI) |
| **Trade Associations** | National Transport Union<br>Liberia Marketing Association<br>National Teachers association<br>National Charcoal and Fuel Wood Producers Association;<br>Cooperative Development Agency |
| **Private Sector** | Pit Sawyers Association<br>Traders in pit-sawn lumber<br>Small Scale Carpenters<br>Liberia Timber Association<br>Liberia Loggers Association<br>Forest Concessionaires & Oil palm Producers<br>Cottage Industries<br>Mining Companies (both large and artisanal) |
| **Other potential groups include** | Women&Female heads of household<br>Extreme poor |

**Strategic planning for information sharing and dialogue with stakeholders:** following the stakeholder mapping exercise the taskforce convened a series of working sessions to plan the process and procedures for the overall information sharing exercise this included: setting up objectives for the information sharing and dialogue campaign; categorizing counties into regional sectors; identify venues for meetings and develop content (Annex 4).

**Information sharing and stakeholder dialogue to date:** The C+P taskforce implemented a series of regional, national and civil society workshops with the aim of sensitizing relevant stakeholders on REDD+ and the R-PP process. Furthermore stakeholders were provided with the opportunity to have meaningful discussions on information provided and come up with initial ideas on REDD+. Due to budget constraints the government was not able to implement targeted information sharing with forest dependent communities and other relevant stakeholders onsite; instead, concerted efforts were made to convene the stakeholders at regional workshops. In order to ensure that each stakeholder groups concerns, suggestions and recommendations were fully captured, the C+P task force had focus group discussions at each regional workshop. Below is a synopsis of information sharing and dialogue to date:

- Regional Workshops: The C&P taskforce used the existing FDA regional forestry sectors structures which categorise the 15 counties within the country into four regions. A two day workshop was organised in each region (Grand Gedeh, Bong, Bomi and Montserrado) (Annex 5) bringing together 120 participants from a broad cross-section of stakeholders identified in the stakeholder mapping carried out earlier. The workshop methodology consisted of presentations, focused group discussion per stakeholder group; and plenary discussions. Please refer to annex 5 for detailed information on these workshops.
- Information sharing and dialogues with Civil Society: this took place on July 22, in Monrovia involving 50 participants from over 30 civil society organizations and traditional councils (Annex 6).
- National information sharing Workshop: the issues and concerns from the above workshops were further discussed and agreed upon to inform the R-PP formulation at the national multi stakeholder (including women and youth) workshop held on August 10 2010, in Monrovia (Annex 7).

**Issues discussed during the information sharing dialogue processes**

1. ***Topics presented during information sharing exercises***
   - Overview of Climate Change;
   - Climate Change Mitigation and Adaptation;
   - Reducing Emission from Deforestation and Forest Degradation (REDD) in Liberia;
   - Stakeholders Concerns and Expectations about REDD+;
   - Drivers of Deforestation and Forest Degradation in Liberia;
   - REDD+ Readiness Arrangement in Liberia;
   - Initial concerns on the environment and social implication of REDD+;
   - The Role of Stakeholders in REDD+;
   - Policy Options (low carbon green economy and risks involved in REDD);

- Consultation and Participation of Forest dependent Communities (lessons learned);
- Economic Development and Resources Tenure Security;
- Oil Palm Best Practices, Rights and Community forestry;
- Benefit Sharing (IUCN Global Best Practices on Benefit Sharing for REDD+ National Standards, Voluntary Partnership Agreement, Local Governance Structures);
- Monitoring, Reporting and Verifications (lessons learned from a training of FDA personnel in community engagement in Ghana)

2. ***Questions discussed with Stakeholders*** during the information sharing and dialogue processes
   - How can communities collaborate? – What is the best way by which communities and local people can participate in the design and implementation of REDD+ activities?
   - What is the best way to consult people to get them to participate in REDD+?
   - Benefits from REDD+? – How can we increase the chances that forest dependent people will benefit from REDD and what could be the benefits? List different forms of practical benefits to the communities?
   - Capacity needs for empowerment? – How can forest dependent people be empowered to contribute to decision making by providing their experiences and ideas; what can be done to empower them?
   - How can we control our forest? – How can we make our forest better and control deforestation and forest degradation; list possible methods.
   - Policy Options (low carbon green economy and risks involved in REDD);
   - Consultation and participation - lessons learned?
   - What are economic development and resources tenure security issues?
     i. What is the role oil palm best practices, rights and community forestry?
   - Links to Economic Development Corridors and Poverty Reduction Strategy?
   - Benefit Sharing (IUCN Global Best Practices on Benefit Sharing for REDD+ National Standards, Voluntary Partnership Agreement, Local Governance Structures)?
   - Monitoring, Reporting and Verifications – application of lessons learned from a training of FDA personnel in community engagement in Ghana?

**Outcomes and Stakeholders Expectation/ Concern from different stakeholders**

Participants in the all of the information sharing and dialogues workshops/ meetings expressed concerns and expectations about key issues ranging from concerns over recent threats to forests from deforestation activities perpetrated mainly by youths, to rights of forest dependent people in REDD+ projects. The stakeholders' concerns/expectations will be(further) addressed during the Consultation and Participation process and are detailed in component 1c., summarized below:

- Is REDD+ not another way to further prevent forest communities from adequately using forest resources for their livelihood?

- How does REDD+ influence rural communities especially when it is perceive that they will not have access to the forest?
- Stakeholders expressed lack of adequate information regarding how the forest can sustainably be used to ensure that it remains intact for future generations;
- What can communities do to positively reduce the impact of climate change from deforestation and forest degradation in Liberia?
- What can communities practice as alternative to shifting cultivation, clear felling of forest bush burning?
- What means does the government have to disseminate information to other forest dwellers that are not in workshops?
- The C&P Task force should be able to go to their villages and towns to sharing information with more people, especially those whose livelihood have been identified as driver of deforestation and degradation;
- What will FDA do to mechanism to discourage charcoal producers and pit-sawyer from destroying the forest?
- Can REDD+ really help to stop climate change or are developed countries using REDD+ to shy away from their responsibility to reduce green house gas emissions?
- That benefit sharing mechanisms in the current forest concessions agreement are not clear yet, how would REDD+ benefit sharing be different?
- Would there be issues of resettlement under REDD+?
- Sufficient time should be given to village and local level consultation;
- Hard copies of presentations and information should be sent to localities prior to consultation for internal discussions and more active participation;
- Will private deeded land be considered under the REDD+ Regime?
- What will the government do any land owner that refuse for their forest land to use for REDD+ activities?
- Some people are coming into our communities talking about REDD+ and Carbon Credit, are they the same or not?
- What additional plans REDD+ have to consider the voices of women, youth and vulnerable forest dependents?

**Methods and tools used during the early information sharing and dialogue on REDD+ and R-PP**

1. ***Methods:***
   - Town hall meetings / Palava huts discussions
   - Workshops
   - Interviews
   - Focus Group Meetings with stakeholder groups

- Self-administered questionnaires
- Expert consultations

2. ***Communication Strategy***:
   - Prior information on REDD+ and the R-PP process was disseminated to all stakeholders in order to prepare them for meaningful discussions during regional workshops. The following communication and outreach strategies were initiated:
   - Information Leaflet: An Information leaflet on REDD+ has been finalised and printed. This was used extensively prior to and during all workshops.
   - Local FM and Community Radio
   - Theatre (plays, sketches, drama)
   - Skits and documentaries at cinemas and video centers
   - Websites
   - Town crier
   - Print and Electronic media

**Other Information Sharing and Dialogue Activities:**

- A bi-monthly radio talk show on REDD+ and Climate Change dubbed Green Forum, has also been initiated by Skills and Agricultural Development Services (SADS);
- Video documentary demonstrating challenges and impacts of Climate Change;
- Design and finalization of REDD+ Liberia website;
- The IUCN and FFI have supported an extensive national outreach programme through various local dialects in Liberia conducted by Media Initiative (LMI); and
- Newspaper articles on REDD+ and Climate Change are issued by SADS and Action Against Climate Change (AACC) regularly.

**Summary of Main Activities and proposed Budget**

This sub-component 1b (*Information Sharing and Early Dialogue with Key Stakeholder Groups)* along with sub-component 1c (*Consultation and Participation Process)* will be undertaken through a contract with a national or international firm which will implemented through local service providers and NGOs to the maximum extent.

**1) Information Sharing**

a) The project will make arrangements to second to the RIU an additional staff member in information and communications - from an NGO partner, FDA, or other ministry at no-cost to FCPF;
b) Design a communication and Information sharing strategy targeted at KSGs and their constituencies;
c) A local service provider will :
   i) Develop best practice key messages
   ii) Prepare programmes and materials in support of the strategy in appropriate local language and accessible media for broad use and accessibility by stakeholders;

d) Promote awareness of the REDD strategy at National, County and Stakeholder levels through newspaper, radio and TV;
e) A local Service Provider will develop and manage a REDD+ website for Liberia:
   i) Make hosting arrangements;
   ii) Design and develop the website;
   iii) Populate and launch the website;
   iv) Train members of the RIU to upload and maintain the site;
   v) Transfer the site to RIU and provide site maintenance support.
f) Prepare and disseminate reports, and update FDA website accordingly for REDD activities.

**2) Key Stakeholder Engagement And Dialogue**

a) A national NGO will assist the RIU technically in engagement with Key Stakeholder Groups, including meetings at a national level;
b) Identify and, if necessary, set up separate Key Stakeholder Groups (KSG) as listed in Table (5) above:
c) Convene a series of three sector-specific meetings (Forestry, Agriculture and Energy) each year in Monrovia, each focused on relevant REDD strategy options , to inform about REDD+ and debate broader issues, especially Land Tenure and Benefits, arising from REDD implementation;
d) Convene a series of County-level "town hall" meetings to debate between (relevant and applicable) Key Stakeholder Groups and others on the opportunities, potential benefits and impacts and implementation challenges of REDD;[4]

3) **Capacity Strengthening and related Technical Assistance**

a) A specialist in Information Management, Dissemination and Communication will be recruited and assigned for one year to the RIU to:
   i) Provide continuous on the job training supplemented by formal training session;
   ii) Assist RIU to design the communications strategy for engaging with stakeholders;
   iii) Otherwise support and assist the RIU in related matters;
b) One (1) seconded RIU staff will receive short term training (two months) from a Regional Institution in Information and Communication;
c) Conduct awareness training workshops on REDD+ readiness strategy and the implementation of the RPP

| **Budget 1b. Information Sharing and Early Dialogue with Key Stakeholder Groups** | | | | | | |
|---|---|---|---|---|---|---|
| **Main Activity** | **Sub-Activity** | **Estimated Cost (in thousands US$)** | | | | |
| | | **2012** | **2013** | **2014** | **2015** | **Total** |

[4] Some counties may be combined; budget for 8 such meetings.

| | | | | | | |
|---|---|---|---|---|---|---|
| **1) Information Sharing** | Design a communication and Information sharing strategy targeted at KSGs and their constituencies | $15 | $0 | $0 | $0 | **$15** |
| | Prepare and produce appropriate local language and accessible media for this strategy, including best practice key messages | $10 | $5 | $5 | $5 | **$25** |
| | Conduct media campaign to promote REDD awareness at National, County and Stakeholder levels through newspaper, radio and TV; | $15 | $15 | $15 | $15 | **$60** |
| | Develop and manage a REDD+ website for Liberia, | $15 | $5 | $5 | $5 | **$30** |
| | *Information & Communications counterpart seconded to RIU from GoL (at GoL cost)* | *$20* | *$20* | *$20* | *$20* | ***$80*** |
| | Information Management & Communication TA | $54 | $0 | $0 | $0 | **$54** |
| **2) Key Stakeholder Engagement And Dialogue** | Consultation meetings with KSGs at national level | $15 | $15 | $15 | $15 | **$60** |
| | Convene a series of three national level sector-specific meetings (Forestry, Agriculture and Energy) each year | $15 | $15 | $15 | $15 | **$60** |
| **3) Capacity Strengthening and related Technical Assistance** | Conduct awareness training workshops on REDD+ readiness strategy and the implementation of the RPP | $15 | $15 | $15 | $15 | **$60** |
| | Short term training for RIU staff in Information & Communications | $15 | $0 | $0 | $0 | **$15** |
| | Information Management & Communication (Regional or national TA) | $54 | $0 | $0 | $0 | **$54** |
| | **Total** | **$243** | **$90** | **$90** | **$90** | **$513** |
| | *Domestic Government* | *$20* | *$20* | *$20* | *$20* | **$80** |
| | *Other Development Partner* | *0* | *0* | *0* | *0* | **$0** |
| | ***Sub-total Non-FCPF*** | *$20* | *$20* | *$20* | *$20* | **$80** |
| | **FCPF** | **$223** | **$70** | **$70** | **$70** | **$433** |

# 1c. Consultation and Participation Process

## Introduction

The objectives of consultation and participation in Liberia is to conduct nation-wide consultation on issues of REDD+; establishment a channel through which impacted communities can access information and participate in the design and implementation of REDD+ activities; improve the quality of decision-making about REDD+ processes by giving voice to and capturing the experiences of civil society organizations, forest-dependent peoples and local communities and other relevant stakeholders; encourage the development of regulatory frameworks that are socially inclusive, transparent and reportable; strive towards equitable outcomes of REDD+ policies and activities, and increase the chances that forest-dependent peoples benefit from the revenues from REDD as well as improving forest governance.

During the preparation phase of the R-PP Liberia will undergo extensive consultations with relevant stakeholders on the various components of the R-PP by building on the early information and social mobilization campaign and dialogue conducted. Participatory mechanisms and structures identified in the initial stage of information sharing will also be used to enhance the active engagement and inclusion of stakeholders most especially the forest dependent communities.

## The Consultation and Participation Process for the R-PP

The Consultation & Participation (C&P) Taskforce, in collaboration with UN-REDD, implemented a series of regional, national and civil society workshops with the aim of informing relevant stakeholders about REDD+ and the R-PP process. Stakeholders were also provided with an opportunity to have meaningful discussions on the information provided and to present their own ideas, hopes and concerns about REDD+.

Concerted efforts (see below) were made to converge forest dependent communities and other relevant stakeholders at regional workshops. In order to ensure that each stakeholder groups concerns, suggestions and recommendations were fully captured, the C+P task force convened focused groups discussions at each regional workshop. Below is a synopsis of information sharing and dialogue carried out to date:

## Information sharing and dialogue to date

1. ***Regional dialogue and information sharing workshops***– Lead by the Consultation and Participation (C&P) Taskforce of the REDD+ TWG (Liberia), included specific information on the R-PP development process (dates and participants –Annex 3)
   - Tubmanburg, Bomi County;
   - Gbangar, Bong County;
   - Zwedru, Grand Gedeh County; and
   - Monrovia, Montserrado County

2. ***National Stakeholder Workshop –*** All relevant stakeholders for REDD+ development and implementation, including: civil society groups, private sector, religious and traditional council, forest dependent people and government agencies (Annex 3)
3. ***National Civil Society Dialogue –*** Workshops held with representative all civil society groups (NGO, academia, media, youth groups, etc. – see Annex 3) to develop a road map for CS engagement in REDD+ and the R- PP process itself, including the nomination of representatives for the CSO's to be present at and engage with the NCCS and RTWG.
4. ***Nationwideradio campaign for REDD+ and R-PP awareness raising*** – Dissemination of REDD+ and R-PP (FCPF) information in both Liberian English and translated into 16 local Liberia languages, and broadcast via 54 local radio stations in the 15 counties of Liberia
5. ***Mainstreaming REDD+ information into on-going REDD+*** project development and implementation in forest communities, including awareness raising and FPIC testing in pilot REDD+ sites (for example, in Sinoe County).
6. ***Best practice in engaging stakeholders –*** research undertaken by FDA (with support from FFI and the RTWG) to highlight in REDD+ and FPIC consultation mechanisms[5]
7. ***R-PP multi-stakeholder proposal writing team meetings*** – participants: FFI, CI, FDA, EPA and SADS:
   - RTWG meetings on R-PP preparation – bi-monthly (from October 2010)
   - R-PP progress review and planning meeting – Tuesday, 4th January, 2011
   - R-PP draft review meeting – Friday, 7th January, 2011
   - R-PP review session with key government partners (Moses Wogbeh- FDA and Annya Vohiri - EPA) – Saturday, 8th January, 2011
   - R-PP final draft presentation, final review and submission meeting; all stakeholders – 10th January, 2011
8. ***Additional leaflets and radio programs –*** (see 1b) for REDD and R-PP awareness raising.

## Consultation and Participation Plan

1. ***Goals of the C&P Plan***
   - Increased Awareness
   - Participatory Decision Making
   - Involvement in Implementation
   - Integration with safeguard measures (SESA)

2. ***Objectives of C&P Plan***
   - Collective ownership of the process to develop strategies that reduce emissions through deforestation & forest degradation and to support conservation, sustainable

[5] Potential for establishing as REDD programme based upon community co-management – with particular focus of consultation and participation mechanism required for REDD+, E. B. Jones, 2010, Fauna and Flora International

forest management and the enhancement of forest carbon stocks
- Better understanding of REDD+ by all stakeholder groups

### *3. Specific Objectives*

- Establish a channel through which beneficiaries can access information and participate in the design and implementation of REDD activities
- Improve the quality of decision-making processes
- Promote the development of regulatory frameworks that are socially inclusive and transparent
- Promote equitable outcomes of REDD policies
- Increase the chances that forest-dependent & other forest dwellers benefit from the revenues from REDD

**Key Stakeholders**

- Government agencies (national, county, local)
- Law enforcement agencies such as police & prosecutors
- Private sector (loggers, energy producers, industry, etc.)
- Civil Society Organisations
- Vulnerable groups (women, youth, etc.)
- Local communities, farmers who depend on forests for livelihoods
- Development Partners

***List of Ministries and Public Agencies***

- Ministry of Health and Social Welfare; Ministry of Education; Min of Lands, Mines & Energy; Ministry of Internal Affairs; Ministry of Agriculture; Ministry of Gender and Development; Ministry of Planning and Economic Affairs; Forestry Development Authority; Environmental Protection Agency; Ministry of Justice; Ministry of Labor; Ministry of Information; Ministry of Finance; Ministry of Foreign Affairs; Ministry of Youth & Sports; Ministry of Commerce; Standing Committee on Forestry & Agriculture; FDA (FMAC & FDA Board); Investment Commission; Lands Commission
- Research and Academia

***Civil Society Groups***

- Media ; Federation of Liberian Youth (FLY); Paramount chiefs &Traditional Rulers (Council); Religious Councils; National Rural Women Structure; National NGOs; International NGOs; Community-Based Organisations

***Trade Associations***

- Transport Union; Marketing Association; Teachers Association; Charcoal and fuelwood Producers Association; Agriculture cooperatives

***Private* Sector**

- Pit Sawyers; Traders in pit-sawn lumber; Small Scale Carpenters; Liberia Timber Association; Liberia Loggers Association; Forest Concessionaires; Oil palm Producers; Cottage Industries; Mining Companies (both large and artisanal)

**Stakeholders to be consulted**

Table (6) outlines the key stakeholders who will be consulted and prioritized for participation as part of this plan. It also outlines those categories of stakeholders who will require additional support in order to be able to effectively participate in the process.

**Table 6: Support required, by different stakeholders, to enable participation.**

*(Details of the stakeholders within categories are given in in Component 1b).*

| Stakeholder Category | Support required for participation |
|---|---|
| National Government | Technical support to support drafting and implementation of the R-PP<br>Financial commitments for drafting and implementation of the R-PP<br>Capacity building for lead agencies at nationals and county levels that will be involved in implementing R-PP processes and managing REDD+ on the ground |
| Forest Dependent People | Logistical support (including transport, lodging etc.) to attend R-PP workshops<br>Financial support to be able to allow sustained participation in both R-PP dialogue and REDD+ activities in their communities<br>Capacity building / training on technical REDD+ activities (participatory carbon stock/ biomass assessment, MRV, BSM, training of trainers and forest protection) |
| Civil Society Groups | Logistical support (including transport, lodging etc.) to attend R-PP workshops<br>Financial support to be able to allow sustained participation in both R-PP dialogue and REDD+ activities in their communities<br>Capacity building / training on technical REDD+ activities (participatory carbon stock/ biomass assessment, MRV, BSM, training of trainers and forest protection) |
| Research and Academia | Ensuring that academic institutions have the necessary knowledge of REDD+ and R-PP to promote engagement of faculty, students and the communities where they live |
| Trade Associations | Training / awareness raising on the value of REDD+ and R-PP |

| Stakeholder Category | Support required for participation |
|---|---|
| | procedures to ensure participation and eventual behaviour change post the R-PP |
| Private Sector | Training / awareness raising on the value of REDD+ and R-PP procedures to ensure participation and eventual behaviourchange post the R-PP |
| Other possible groups | As for forest dependent people, above |

**Key issues to address during consultation and participation**

***1. Fundamental REDD+ issues; impacts and risks***

Based on the REDD Strategy options and already identified issues affecting land use, benefit sharing and forestry, the following issues will be key discussion topics (Annex 8):

- Current status of national forests
- Previous and current policies to halt deforestation and forest degradation
- Main causes and drivers of deforestation and forest degradation
- Proposed REDD strategies

The economic, social and environmental impacts of REDD and the mitigation of risks:

- Land tenure and land use rights
- Ownership of carbon and trees
- Equitable distribution of revenues
- Issues of forest governance
- Institutional, policy and regulatory frameworks
- Opportunity costs of land use
- Interest of forest dependent people and forest dwellers
- Existing and future monitoring systems to keep track of forests and forest emissions
- Inclusive participation in the design and implementation of REDD strategies

Additionally,the consultation and participation process will address the following issues which emerged during previous information sharing and dialogues workshops / meetings detailed in component 1b:

**Some Key Concerns raised by Stakeholders**

- Is REDD+ another way to further prevent forest communities from adequately using forest resources for their livelihood?
- How does REDD+ influence rural communities especially when it is perceive

that they will not have access to the forest?

- Stakeholders expressed lack of adequate information regarding how the forest can sustainably be used to ensure that it remains intact for future generations;
- What can communities do to positively reduce the impact of climate change from deforestation and forest degradation in Liberia;
- What options can communities practice as alternative to shifting cultivation, clear felling of forest, bush burning in their farming system;
- What means does the government have to disseminate the information to other forest dwellers that are not presence in these workshops?
- The C&P Task force should be able to go to their villages and towns to sharing information with more people, especially those whose livelihood have been identified as driver of deforestation and degradation;
- What will FDA do to mechanism to discourage charcoal producers and pit-sawyer from destroying the forest;
- Can REDD+ really help to stop climate change or are developed countries using REDD+ to shy away from their responsibility to reduce green house gas emissions?
- That benefit sharing mechanisms in the current forest concessions agreement are not clear yet, how would REDD+ benefit sharing be different?
- Would there be issues of resettlement under REDD+?
- Sufficient time should be given to village and local level consultation;
- Hard copies of presentations and information should be sent to localities prior to consultation for internal discussions and more active participation
- Will private deeded land be considered under the REDD+ Regime?
- What will the government do any land owner that refuse for their forest land to use for REDD+ activities?
- Some people are coming into our communities talking about REDD+ and Carbon Credit, are they the same or not?
- What additional plans REDD+ have to consider the voices of women, youth and vulnerable forest dependents?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- What additional plans REDD+ have to consider the voices of women, youth and vulnerable forest dependents?

2. ***For Information Sharing***
   - What is REDD-plus
   - Incentives from REDD
   - Forest Governance
   - Potential REDD projects and activities
3. ***Consultation on REDD+ Strategies (Policy level – linked to SESA)***
   - How to address deforestation and degradation?
   - What policies and in which sectors should be implemented?
   - What is working and what is not presently?

- How to address governance challenges?
- Who is benefitting from current forest uses?

4. ***Consultation on Specific Activities (linked to EIA)***
   - How benefits and costs of a specific activity will be distributed
   - How to mitigate eventual negative impacts
5. ***Institutional Arrangements for C&P - Use existing structures and processes at***
   - Community level, e.g. Community Assembly as provided for by the Community Rights Law, Coalition of CBOs
   - County level, such as County Forestry Development Committees (CFDCs), County Law Makers Caucus, County Development, County Forestry Forums, Local NGOs
   - Regional level and National levels such as National Forestry Forum, Benefit Sharing Trust Committee, NGO Coalition, Liberia Media Initiative, Traditional Councils and Councils of Religious Bodies, INGOs, National Parliament,
6. ***Responsible agencies*** **(in reverse order of authority)**
   - C&P Task Force
   - REDD Technical Working Group
   - National Climate Change Secretariat

**Steps for Consultation and Participation**

Different Consultation Groups may be constituted for specific issues:

***Synthesis and Consultation***

1. Analysis, Preparation and Consultation to define Strategy
   - Awareness Raising
   - Analysis of Existing Knowledge
   - Expert Consultations
2. Preparation of a Synthesis of the proposed aspects of REDD+ Strategy
3. Broad Stakeholder Consultation and Inputs
4. Resulting increased awareness of REDD+, its challenges and opportunities
5. Final Selection of:
   - REDD+ Strategy and
   - Pilot Projects

***Piloting and Testing***

6. Goal: Establishment of Institutions, Legislation and Operational Plan
7. Proposed Steps/Activities
    - Continued awareness raising
    - Pilot Projects
    - On-going Review of Pilot Projects
    - Stakeholder-led & Focus Group Consultation on Legal and Institutional Changes

***Becoming 'REDD Ready'***

- Consultation and Validation of Comprehensive National REDD+ Strategy
- Broad stakeholder consultations on Policy Design and Implementation
- Mechanisms for Conflict Resolution
- Monitoring and Evaluation Mechanisms

**Grievance and complaints handling mechanism**

- Standard operating procedures will be developed for a grievance and complaints handling mechanism for the project.
- A complaints handling system will be established based on input from key stakeholders about the most appropriate mechanism to be established. Options include: postal systems. SMS messaging call centre, hosted call centre, email system.

**Mechanisms for Conflict or Dispute Resolution**

1. ***Local (community) level:***
    - Palava hut discussions (Chiefs, Landlords, Zoes and Elders)
    - Poro and Sande Societies levels (Zoes and Chiefs)
    - Family to family (Heads of family)
    - Religious Institutions (Churches and Mosques)
    - Community Police
2. ***County level:***
    - Magisterial courts
    - Religious Institutions (Churches and Mosques)
    - Palava hut discussions (County Officials, Chiefs, Landlords, Zoes and Elders)
    - National level (involving head of national institutions / ministries as mediators and decision makers
    - Legal (Court) system
    - Mediations through Traditional and Religious Councils/Groupings
    - Lands Commission
    - NCCS
    - RTWG

1. ***National level***
   - Legal (Court) system
   - Mediations through Traditional and Religious Councils/Groupings
2. ***Lands Commission***
   - NCCS
   - RTWG

These systems relate to already established mechanisms for resolving disputes in Liberia. However, there is a need to further explore ideas for how grievances will be handling, including: How do these existing systems function? Are there specific processes which could be established to resolve grievances related to REDD+ in particular?

Possible actions to be developed as part of the national REDD+ strategy and implementation:

- In order to ensure independence a legal aid organization could be supported to handle disputes at the first instance.
- Capacity building may need to be provided to the legal aid organization.
- As local communities tend to trust traditional dispute resolution mechanisms, these should be prioritized for the resolution of intra or inter-community disputes.

**Ensuring meaningful participation**

Table 7 summaries key activity of decision making stages and which stakeholder category(s) will be involved in which activity or decision making stage.

**Table 7: Project activity and stakeholder involvement**

| | **Stakeholder group** | | | | | | |
|---|---|---|---|---|---|---|---|
| **Key activity or decision** | Community | Local GoL | Country level GoL | National GoL | CSO | NGO | Private sector |
| a) Establishing baselines (carbon inventory and socio-economic) | **X** | **X** | **X** | **X** | | **X** | |
| b) Setting up the MRV | **X** | **X** | **X** | **X** | | **X** | |
| c) Impact assessments/ SESA | **X** | **X** | **X** | **X** | **X** | **X** | |
| d) Designing the BSM | **X** | **X** | **X** | **X** | **X** | **X** | |
| e) Land tenure arrangements | **X** | **X** | **X** | **X** | **X** | **X** | |
| f) Legal review and provisions | | | **X** | **X** | **X** | **X** | **X** |
| g) REDD+ market and management plan(s) | **X** | **X** | **X** | **X** | **X** | **X** | **X** |

During national and regional multi stakeholder information sharing and dialogue processes, participants were able to identify the most appropriate participatory structures to be used during the next phase of the R-PP to allow for a more inclusive and participatory process. Based on this input the following are the existing structures and processes will be utilised:

- **Community level** - e.g. Community Assembly as provided for by the Community Rights Law, Coalition of CBOs, Community Youth and Sport clubs, Community Based Forest Forums, Rural Women Structures.
- **County level** - County structures such as County Forestry Development Committees (CFDCs), County Law Makers Caucus, County Development Officers (CDOs), County Forestry Forums, Local NGOs.
- **National levels** - such as National Forestry Forum, Benefit Sharing Trust Committee, NGO Coalition, Liberia Media Initiative, Traditional Councils and Councils of Religious Bodies, INGOs, National Parliament, Association of Female Lawyers of Liberia (AFELL), Liberian BAR Association, Association of Liberian Journalists, VPA Platforms.

**Monitoring Mechanisms**

1. There are a number of existing mechanisms that will be used to measure the effectiveness of REDD strategies and good practices, including this plan. Existing laws and regulations include:
    - Community Rights Law (CRL)
    - National Forestry Reform Law (NFRL, 2006)
    - Community Forestry Development Committee (CFDC)
    - County Forest Forum
    - Benefit Sharing Trust Committee
2. New structures that may have to be established to monitor the process include:
    - National R-PP Multi-stakeholder Monitoring and Evaluation Committee
    - National Climate Change Steering Committee
    - Local R-PP Multi-stakeholder Monitoring and Evaluation Group (County level)

**Table 8:Roles and responsibilities for monitoring**

| **Stakeholder group** | **Roles / responsibilities** |
|---|---|
| Community Leaders (Local Government Officials, Chiefs, women, Youths, Elders) | Mobilisation of the community for monitoring (etc.) activities |
| Religious and Traditional Leaders | Provision of moral and behavioural guidance |
| Civil Society | Independent viewpoint and monitoring |

| | |
|---|---|
| | equitability of monitoring process |
| Trade Unions | Support to forestry workers involved in REDD+ monitoring |
| Consultants | Provision of international best M&E practices |
| REDD Technical Working Group (including FDA and EPA representatives), NCCSC | Oversight and coordination of monitoring activities (nationally) |

**Lessons learned**

Lessons learned from the consultation and participation processes implemented to date (Annex 9):

- Consultation was made difficult by a lack of clarity over membership of, and coordination among, R-PP drafting team
- Delays on logistical decisions effecting the draft team meant that members of the team experienced scheduling issues and conflicting priorities
- A high level of capacity and REDD+ competency is essential to be able to facilitate consultation effectively – skills that require further development in key government institutions
- Wider consultation, facilitated by great clarity of process and time available for drafting, would have resulted in a broader and richer input from a variety of additional stakeholders
- Consultations held early on in the R-PP process highlighted the need to avoid land grabs and make sure sufficient (equitable) benefits reach local communities – as such, the land commission and CSOs / forest dependent community representatives need to be (more) involved in the REDD+ / R-PP process
- With greater time made available for drafting the R-PP, the level of transparency, inclusion and consultation would have been (and should have been) greater. For example, wider consultations with more stakeholders over each successive draft of the R-PP would be preferable. This would have allowed for the inclusion of more varied voices in the R-PP and its preparation process, especially from marginal groups (defined by gender, ethnicity and poverty). However, despite the challenges, the R-PP drafting team did include community CSOs, NGOs and government representatives

**Summary of Main Activities and proposed Budget**

This sub-component 1c (*Consultation and Participation Process)* along with sub-component 1b (*Information Sharing and Early Dialogue with Key Stakeholder Groups)* will be undertaken through a contract with a national or international firm which will implemented through local service providers and NGOs to the maximum extent.

1) **Stakeholder Consultation, Monitoring and Feedback Forums**

a) Design a consultation, participation and monitoring strategy at KSGs and their constituencies;
b) Creation of National and County level Multi-stakeholder Monitoring and Evaluation Committees under the umbrella of the NFP National and County level forest forums, or similar arrangements; this will
c) Stakeholder consultation, participation and feedback through:
   i) Community level forums (x100)
   ii) County level forums (x 8)
   iii) National level meetings (x4)
   iv) Industry actors meetings (x4)
   v) Legal review meetings (x4)

2) **Grievances and Response Mechanism**

a) Develop dispute resolution system;
b) Establish & manage local phone system,
c) Publish and disseminate grievance information
a) A national NGO will assist the RIU technically in the engagement with Key Stakeholder Groups, including meetings; – already listed and budgeted under Component 1(b);

3) **Capacity Strengthening activities and related Technical Assistance will include**:

a) A specialist in Consultation and Participation processes will be recruited for one year to the RIU to:
   i) Provide continuous on the job training supplemented by formal training session;
   ii) Assist RIU to introduce mechanisms to ensure participation and feedback from stakeholders;
   iii) Assist RIU to design and implement a Grievance Mechanism for REDD+
   iv) Otherwise support and assist the RIU in related matters;
b) Three RIU staff (seconded, either agency or NGO) will receive short term training (two months) training from a Regional Institution in Participation and Consultation;
c) Training courses for stakeholders (government agencies, forest dependent peoples civil society) on potential REDD benefits, sharing, leakages, roles and responsibilities

| **Budget 1c: Summary of Consultation and Participation Activities** | | | | | | |
|---|---|---|---|---|---|---|
| **Main Activity** | **Sub-Activity** | **Estimated Cost (in thousands US$)** | | | | |
| | | **2012** | **2013** | **2014** | **2015** | **Total** |
| **1) Stakeholder Consultation and Feedback Forums** | National and County | $10 | $25 | $25 | $25 | **$85** |
| | County | $15 | $0 | $0 | $0 | **$15** |
| | Local forums | $15 | $15 | $15 | $15 | **$60** |
| | Industry actors | $10 | $10 | $5 | $5 | **$30** |
| | Legal reviews | $0 | $5 | $0 | $5 | **$10** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **2) Grievances and Response Mechanism** | Develop a dispute resolution policy | $20 | $10 | $5 | $5 | **$40** |
| | Establish & manage local phone system | $5 | $5 | $5 | $5 | **$20** |
| | Disseminate grievance information | $3 | $3 | $3 | $3 | **$12** |
| **3) Capacity Enhancement and related Technical Assistance** | Short term training in Participation and Consultation | $15 | $15 | $0 | $0 | **$30** |
| | Training courses for stakeholders on all aspects of benefit monitoring | $15 | $10 | $10 | $10 | **$45** |
| | Participation and Consultation Specialist (Regional or national TA) | $60 | $0 | $0 | $0 | **$60** |
| | **Total** | **$168** | **$98** | **$68** | **$73** | **$407** |
| | *Domestic Government* | *$0* | *$0* | *$0* | *$0* | **$0** |
| | *Other Development Partner* | *0* | *0* | *0* | *0* | **$0** |
| | ***Sub-total Non-FCPF*** | *$0* | *$0* | *$0* | *$0* | **$0** |
| | **FCPF** | **$168** | **$98** | **$68** | **$73** | **$407** |

# Component 2: Prepare the REDD-plus Strategy

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

### Introduction - The Liberian Context

Liberia is a forest-rich country, which is "infested with diamonds in the North West and contaminated by gold in the South East".[6] Her modern history has been conditioned by the plunder of these natural resources, during which time the themes of Land Use, Forest Law, Policy and Governance have interplayed to the detriment of her people. The outcome has been the ever-present 'Resource Curse', punctuated by violent episodic conflict.

The ongoing forest reform process, which has been strongly supported by the international community through the Liberia Forest Initiative, has put in place new forest law, policy and governance instruments which will be required for REDD, including specific work undertaken to guide Liberia towards a Low Carbon Economy. However, land use and tenure remain contentious, and REDD will be weighed against other land uses and opportunity costs. The assessments undertaken to date (partly under the umbrella of the R-PP preparation process), together with further assessments proposed in this document, identify the most promising opportunities for REDD in Liberia to address drivers of deforestation and forest degradation (D&FD), which will lay the ground for selected REDD Strategy Options in component 2b.

This section describes key drivers of deforestation, including an explanation of the need for REDD+ that qualifies that while deforestation rate in the past has been low, due to Liberia's extraordinary history, current drivers (ironically, partly as a result of peace) are leading to mounting and more potent threats. Further work that will be done to analyze projected deforestation rates in the future are proposed as activities to be undertaken during R-PP implementation.

### Forest Cover of Liberia[7]

Liberia contains approximately 4.3[8] million hectares (Mha)[9] of lowland tropical forest that comprises 43% of the remaining Upper Guinea forests of West Africa, which extend from

[6]Statement by Augustine Johnson, GIS Manager, FDA at a REDD workshop, Monrovia, March 2009.

[7]Annex 11 contains the definition a of forest cover classes currently used in Liberia. These should not be confused with the recommendation in Component 3 for a 30% threshold when interpreting piel images as forest.

[8]The figure of 4.3Mha is contained in the FAO GFRA tables for 2010 and is consistent with the estimate of 4.5Mha in 2004 (Bayol et al, 2004), adjusted by an annual deforestation rate of 0.7%. However, it is acknowledged that different estimates have arisen owing to the treatment of areas obscured by cloud, assessment of the forest element in shifting cultivation and discrepancy in estimates of Liberia's surface area.

[9]Mha is used throughout as an abbreviation for "million hectares"

neighboring Guinea to Togo. These forests have been identified as one of 35 such critical areas for global biodiversity conservation[10]. They are immensely important for their biological diversity which encompasses the last long-term viable populations of several endemic species, ecosystem service provisioning, and potential to contribute to the country's development goals.

Whilst the overall extent of the Upper Guinea Forest has dwindled to an estimated 14.3% of its original extent, Liberia still hosts two massifs of forest including evergreen lowland forests in the southeast and the semi-deciduous mountain forests in the northwest. Liberia's forest resources were assessed in 2004 and classified by canopy and use.[1112]This forest classification was subsequently used to stratify forest cover in a National Forest Inventory which provided a volumetric and species assessment of Liberia's forests.[13]

The intent of these two interlinked studies was to identify those areas which had previously been over or recently exploited, and thus inform the process of restoring commercial forestry production in Liberia. Despite this, a later study in 2009 suggested that new forest concessions had been poorly sited in areas of previous exploitation which were lacking sufficient productive resources.[14] This later study, although cursory and not definitive, was highly suggestive that information on forest resources in Liberia was imprecise and, possibly, biased statistically. As a result, the World Bank will support an in-depth review of this report early in 2011. Beyond that, more thorough investigation of many aspects of forest resource assessment will be required for REDD.

**Land Use and Trends**

The classification of forest cover into classes (2.3 through 3.3), reported in Annex 11a and 11b,reflected agricultural dynamics and previous logging history. [615] Thus, Class 3.3 (2.42 Mha) has not been logged in the recent past or at all, and is relatively unaffected by intensive shifting cultivation. Class 3.2 (1.0 Mha) is differentiated by the presence of visible forest roads and tracks, which is taken to indicate recent logging history. Classes 3.2 & 3.3 (3.42 Mha) therefore correspond to those areas where forestry has not yet been challenged by the agricultural dynamics. Class 3.1 (0.96 Mha) comprises forest in transition to agriculture, where undertaking sustainable forest management operations would entail a more complex socioeconomic component. Lastly, Class 2.3 (1.32 Mha) is mainly converted to agriculture with forest islands over 20 to 50% of their surface, and such areas are dominated by agricultural dynamics.

Using the above cover classification, the predominant land uses are shown in table (8) to be forestry and shifting cultivation:

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[10]Bakarr, M., Bailey, B., Byler, D., Ham, R., Olivieri, S. &Omland, M. Eds., *From the Forest to the Sea: Biodiversity Connections from Guinea to Togo.* Washington, D.C.: Conservation International., 2001

[11]Nicolas BAYOL & Jean-François CHEVALIER, *Current State of the Forest Cover in Liberia: Forest information critical to decision making*, World Bank, 2004

[12]For an area classification and assessment, see table in Annex 11

[13] P. Hess, S. Trainer *Forest Inventory in Liberia* , World Bank, 2006

[14]Sherman, P.L. An Assessment of Liberian Forest Area, Dynamics, FDA Concessions Plans, and their Relevance to Revenue Projections. Green Advocates, 2009

[15]See appendix of forest class definitions

**Table 9: Land Use (%) in Liberia (2004)**[16]

| Land Use | Area (%) |
|---|---|
| Forests | 45.2 |
| Extensive shifting cultivation | 19.4 |
| Intensive shifting cultivation | 33.1 |
| Plantations, tree crops, small holding | 1.7 |
| Other cultivated areas | 0.2 |
| Savanna grass with shifting cultivation | 0.2 |
| Towns and settlements | 0.2 |
| Water and Marsh | 0.2 |
| **Total Area by Cover Class** | **100.0** |

During the study period 2000-2002, there were 42 forestry concessions operating over an area of 5.95 Mha[17]. Anomalously, this area exceeds by a large margin the productive area owing to overlapping areas. United Nations timber sanctions halted commercial forestry in 2001[18], and government annulled all existing concession contracts in 2006, which marked the beginning of the national forest reform process involving a new forest policy, a new forestry law and stricter forest governance.[19]

Following the lifting of UN timber sanctions in 2006, the roll-out of new concessions has been much slower than planned by FDA and proposed in the Poverty Reduction Strategy.[20] Currently, there are 1,008,179 ha issued under seven forest management concessions (FMCs), 45,000 ha under nine Timber Sales Contracts and 201,253 ha under eight Private Use Permits. However most of this area is not yet in operation and production in 2009-10 was a mere 25,687m3.[21] Whilst the 25 year felling cycle under long term forest concessions envisages that on average 96% of land should be idle in any one year, the actual rate is currently 99.77%.

Future plans are for a further 1.3 Mha planned for concession by year 2014 as an addition to the already existing 1.01 Mha. Given the unpredictable impact of the Community Rights Law (CRL),[22] it is possible that a considerable part of this future production area, particularly in the northwest, could take place in forest claimed as Private Land or recognized as Community Forest Lands under the CRL. Already, it is noted that interest in Private Use Permits as an alternative to public concessions is growing.

[16]Bayol& Chevalier, op cit.
[17]Bayol& Chevalier, op cit., table (3)
[18]UNSC 1343, 2001
[19]Executives Order #1, Liberia, 2006.
[20]Poverty Reduction Strategy, Republic of Liberia, 2008
[21]Provisional production figures for 2010-11 suggest that production will rise to around 40,000 m3.
[22]Community Rights with respect to Forest Lands, Republic of Liberia, 2009

Timber Sales Contracts are intended for conversion of degraded forest (Class 3.1) to plantations or permanent agriculture, and allow the exploitation of all commercial species exceeding 50 cms, in a three year period. This amounts to destructive felling of land in which up to 80% of biomass may be removed.

Even forest cover not under active production or management is termed in table (8) as being in Forestry use. This includes those areas reserved as Protected Areas (PAs), Parks and Reserves, as well as the Proposed Protected Areas (PPAs).

The National Forest Reform Law (NFRL) requires that 30% (approx 1.3 Mha) of Liberia's forest estate shall be placed under protected area status.[23] Currently, Liberia has just two formally designated PAs – Sapo National Park (SNP, 180,000 ha) and East Nimba Nature Reserve (ENNR, 13,500 ha). There is currently GEF funding under two projects, COPAN and EXPAN, to assist in the creation of five new PAs (229,000 ha), which leaves a funding shortfall for 894,000 ha against the legally mandated target.

Affected communities have generally acquiesced to the alienation of forest for protection purposes, although there have been border skirmishes and, in the case of Sapo, substantial encroachment by artisanal miners and hunters, which arose out of the breakdown of civil order during and after the war years. Recently, government has reached agreement with local communities on the boundaries of ENNR and succeeded to evict illegal occupants from Sapo National Park.

The third land use by area size is Plantations, tree crops, small holding, (159,831 ha) which is appears to be far less than other land uses. However, this figure is deceptively low owing to the low rate of planting of plantation tree crops on agricultural concession areas (1.25M ha)[24]. Consequently, a large extent of area formally designated agricultural concessions is in fact "idle" and presently covered by forest.

Plantation-oriented privately owned commercial estates or concessions of rubber, and to a lesser extent coffee, cocoa and oil palm, have been promoted for several decades in Liberia. From the late 1970s the strategy for agricultural development included support for small holder coffee, cocoa and rubber farmers and the establishment of large-scale nucleus plantation estates of oil palm and coconut. These plantations were operated by public corporations and supported by smallholder out-growers.

Recently, and in the pipeline, there are substantial investment proposals in Oil Palm amounting to $2.95 billion and covering 494,500 ha, with 56,000 ha of out-grower areas. If approved, these will become legal commitment to convert forest lands to plantations.[25] However, RSPO principles and criteria (7.3) emphatically emphasis the need for planting to avoid conversion of primary forest but rather seek cleared or degraded land. Monitoring and compliance will be incorporated under REDD Implementation.

Implicit is the formal allocation of forest land for commercial forestry, protection areas and for plantation development are the possibilities of overlapping tracts of land and competing land

[23] National Forestry Reform Law, Republic of Liberia, 2006

[24] Land Acquisition Study for large scale Agricultural Projects, World Bank, 2009

[25] Liberia Sustainable Oil Palm Study, Fauna and Flora International (FFI), Sustainable Palm Oil and Biofuels Programmes, Indonesia, 2010

uses. Although mineral extraction has a relatively small area footprint, it can and does sometimes conflict with conservation goals. Along with its review of forest resources mentioned above, the World Bank will support a technical review in 2011 of land use allocations to date, which should reveal the level of RSPO compliance.

Informal land use is more difficult to assess. The main agricultural land use identified in table 8 is shifting cultivation (5.1 Mha) which occurs extensively in closed forest without forest tracks, but becomes intensive when farmers enter recently logged areas. Concomitant, therefore, with the expected expansion of logging areas, is the threat of increasing encroachment of shifting cultivation into forest areas as rural security improves and farmers return to traditional livelihoods. This will impact on assumptions concerning the underlying rate of deforestation in Liberia. Whereas a recent estimate of Liberia's underlying deforestation rate by the CI-SDSU (Christie and al., 2007) was as low as 0.35% p.a., this is likely to be exceeded for a number of years until the influx of new farmers stabilizes. Consequently, farming is considered a major driver of deforestation and forest degradation and will need to be monitored accordingly.

In the forest sector, Chainsaw Logging is informal, unmanaged, unregulated and unlicensed, yet employs up to 4000 people and supplies all domestic timber in Liberia, estimated to be as much as 200,000 m3 of sawn timber annually. Estimates of timber recovery rates vary from below 20% to as much as 31%; whichever figure is applicable, the log off take by the chainsaw industry far exceeds that from formal concessions.[26] Apart from the degrading effects on forests, the activities of this production model have become synergetic with shifting cultivation, thus enabling the clearance of larger farms than would be possible without,

## Policy and Governance

### *Forestry*

Liberia's revised Forest Policy of 2006 turns the page on her past. It places the Liberian people centre-stage as beneficiaries of the nation's forests, and its central theme is a balanced and integrated approach between the Commercial, Community and Conservation uses of forests – the so-called 3C approach.[27] Although carbon sequestration is not explicitly mentioned, it fits well under both ecosystem services (Conservation) and forest products (Commercial).

In the context of the integrated 3-C policy, revenue from Commercial forestry is the financial driver of Conservation (through PA funding mechanism) and Communities (through community benefit sharing and social agreements).

The NFRL provided the enabling legislation of this policy. Whilst the law was primarily aimed at Commercial Forestry in order to secure the lifting of UN timber sanctions, it required follow-up legislation within 12 months on community rights and conservation as part of the policy balance between the 3Cs.

[26] Hugh Blackett, Dr. AiahLebbie& Dr. Emanuel Marfo ; Chainsaw Logging In Liberia: An Analysis of Chainsaw Logging (Pit-Sawing) In The Natural Forests Of Liberia Towards A More Sustainable Production, FDA, 2009
[27] Forest Policy, Republic of Liberia, 2006

The CRL was eventually enacted in October 2009, and the National Wildlife Conservation and Protected Area Management Law is currently awaiting ratification. But, the extended delay before enactment of this subsequent legislation has fostered a widespread perception that Liberia's 3Cs are of different priority and size, with Commercial as the big C. This notion has been reinforced by maps which misinterpret the relative areas of forest suitable for Commercial, Conservation and Community uses.

The Forest Suitability study which was undertaken as part of the National Forest Management Strategy (NFMS,) [28] initially identifies 3.41, 1.14 and 0.052 Mha of forest suitable for Multiple Sustainable Use, Protected Areas and pilot Community Forests, respectively[29]. But, the study goes on to state that the management modality for Multiple Sustainable Use (MSU) area may be either by commercial firms or community forest management, with at least 1.09 Mha of forest suitable for community forest management. Thus, the NFMS identified forest areas suitable for: (i) Conservation in Proposed Protected Areas; (ii) permanent MSU – i.e. mainly for long term production forestry; and, (iii) temporary MSU for short term production forestry and potential for conversion to agricultural use.

Of the 4.3 Mha of Liberia's forest, it is FDA's intent to work towards 30% of forests under protection (approx. 1.3 Mha) and up to 54% (approx.2.4 Mha) under commercial production, whilst the area under community forest lands is currently amorphous owing the uncertainty surrounding the impact of the Community Rights Law.

Although this Forest Suitability study was developed through stakeholder consultation with other land-based sector ministries, it does not represent an agreed land suitability statement for Liberia. This is because land was classified by reference to its forest value in isolation from alternative land uses such as agricultural plantations or mineral extraction. Consequently, there exists unresolved contention between the sector ministries (forestry, agricultural and minerals) regarding land use which, in some cases, has led to overlapping land use proposals. This lack of a credible Land Use Policy needs to be addressed in the context of REDD during R-PP implementation.

Even in terms of suitability for forest production, the Study did not include any analysis of access infrastructure, such as primary roads and port facilities, which are principal determinants of f.o.b. log export costs and economic viability.

***Agricultural***

The Food and Agricultural Policy and Strategy (FAPS) [30] lists forestry, natural resources management and climate change as key action areas which serves to commit the Ministry of Agriculture (MOA) to REDD.

[28] National Forest Management Strategy, Forestry Development Authority, 2007
[29] Mha is used as an abbreviation for million hectares'
[30] Food and Agricultural Policy and Strategy, Republic of Liberia, 2008

Table 10. FAPS: Selection of Key Policies and Strategies

| ACTION AREA | KEY POLICY | MAIN STRATEGY |
|---|---|---|
| Forestry | Ensure sustainability of Liberia's forestry resources. . | Balancing conservation, community and commercial utilization of forest resources; undertaking environmental impact assessment, and designing and implementing environmental conservation plans in agriculture projects. |
| Natural Resource Management | Effective transition from shifting cultivation to sedentary farming | Providing technical support and best practices for sustainable land use, organic and integrated farming; participatory management of forest resources |
| Climate Change | Monitored sector activities to prevent contribution to climate change; reduced impact of climate change in sector | Providing farmers information on climate change; implementing programs on climate change adaptation |

The policy explicitly recognizes that: (i) Liberia's agriculture sector is dominated by traditional subsistence farming systems on uplands that are characterized by labor intensity- shifting cultivation, low technologies, and use of rudimentary inputs, resulting in low productivity; (ii) the farming systems are primarily forest based; and, (iii) account for almost half (50%) of the total land area and almost 90% of arable land.

The policy also recognizes that agricultural projects should not undermine the sustainability of forest resources which implicitly endorses the application of RSPO Criteria to oil palm development in Liberia. Recommendations on policy implementation are provided by a recent study tour which would strengthen collaboration between the forestry and agricultural sectors in this challenging area. A National working group has been set up involving GoL, NGOs and industry.[31]

***Energy***

The National Energy Policy (NEP) [32] fully recognizes the important role of wood fuel in climate and that 95% of Liberians rely on the inefficient use of wood fuels for domestic purposes. The policy envisages a Rural and Renewable Energy Agency which would administer a Rural Energy Fund to receive, inter alia, carbon finance. The policy includes more efficient wood fuel utilization but stops short of energy planning for wood fuel.

**Forest Ownership and Use Rights in Liberia**

[31] Liberia Sustainable Oil Palm Study, Fauna and Flora International (FFI), Sustainable Palm Oil and Biofuels Programmes, Indonesia, 2010

[32] National Energy Policy, Republic of Liberia, 2008

In Liberia, the legal framework of land ownership and tenure comprises three elements: public, private and customary land. Duality between customary and statutory land rights is not unusual in Africa but special circumstances apply in Liberia owing to acquisition by the State and Settlers of customary land, the inadequate legal recognition of customary land rights and the sometimes corrupt administration of private land deeds and titles which can flourish in the absence of a functioning deeds repository. These factors have in the past been a cause of conflict in the past and remain "work-in-progress" under the auspices of the new Lands Commission, set up in 2009.

Government has administered rural land – so-called "hinterland" - through a customary system based on Clans and Chiefdoms. Implicitly, it has asserted public ownership of (and the right to alienate) large areas of land occupied by traditional communities, who regard this land as in some sense their own. Despite this, government has transferred farm and forest land to become Private Land through the award to private individuals, business entities and cooperatives of Public Land Deeds, despite overlapping customary claims. Similarly, large tracts of land have been alienated as concessions for agriculture and forestry[33], as well as for national forests, reserves, parks and other protected areas

Owing to its unique settler history and subsequent conflicts, Liberia avoids reference to indigenous peoples, but many are certainly forest-dependent. There is unanimity of perception or views amongst rural Liberians that they "own the forest, in their communities, and everything that is in it". [34] Currently, in regard to timber use rights, communities have acquiesced to eminent domain. The Land Commission's work will be critical in clarifying forest ownership and providing an equitable basis for benefits from carbon revenues.

**Forest Governance and Stakeholder Benefits**

The key issues pertaining to forest governance are legality of origin, compliance with laws and guidelines, taxation collection and its equitable distribution. The national forest reform in Liberia has addressed all of these with remarkable alacrity and success. This law's associated regulatory structure provides for Public Participation under Regulation 101-7.[35] This sets out the requirements for a list of recognised stakeholders, procedures for their transparent participation and public access to and dissemination of all laws and regulations.

Thus, the law provides open doors for stakeholder engagement in forest governance. This has not precluded direct engagement with and lobbying of legislators by civil society and the private sector when vital interests are at stake. However, communities have been passive stakeholders reliant on the articulation of their interests by civil society organisations, largely funded from external sources.

This representation through NGOs has been inevitable pending the extension of democratic structures down to District and Community levels, which is the eventual aim of the Governance Commission. In order to broaden the channels of communication on forestry matters between communities, clans, districts counties and the government at large, FDA is participating in the FAO-managed National Forest Programme Facility. This has established 15 county level forums

[33]Bruce J, et al, Insecurity of Land Tenure, Land Law and Land Registration in Liberia, World Bank, 2007
[34]Strategic Environment Assessment of the Forestry Sector, FDA, 2010

[35]Ten Core Regulations, FDA, September 2007

as well as a national one which will provide more opportunity and bandwidth for dialogue with stakeholders.

Furthermore, Chapter 4 of the Community Rights Law (2009) strengthens considerable community governance on community forest lands through the establishment of Community Assemblies, Executive Committees, Community Forestry Management Bodies and mechanisms for the management of funds derived for their forests. The regulatory structure has been drafted and publically discussed. The potential flow of significant funds to communities is a powerful incentive for them to engage with community forest governance. The role of civil society will continue to be needed to assist capacity building and guard against corruption and misappropriation

In the commercial sector, the bedrock of legality and revenue collection is the Chain of Custody (CoC) which has been built, tested and operated by SGS under contract to government over the past three years. During these early phases it has been supported financially by the US government and through WB Donor Trust Funds. The CoC is also an important contribution towards a Voluntary Partnership Agreement which Liberia is currently negotiating with the EU. In addition, the CoC is a strong instrument for addressing unsustainable commercial logging and represents and important element of forest certification.

The CoC ensures near 100% revenue capture, which forms a solid foundation for benefit sharing. These revenues which government receives from forestry taxes and charges contribute towards general government spending, including upkeep of the Forestry Development Authority (FDA). But significant portions of basic land rental taxes are earmarked under the NFRL for distribution to County Development Funds (30%) and Community Forestry Development Funds (also, 30%).

Revenue transparency in commercial forestry has been embedded in the public domain by the inclusion of forestry in the Liberia Extractive Industries Transparency Initiative (LEITI), currently, this applies to commercial logging but could be expanded to carbon revenues.

Communities also benefit directly through Social Agreements with forest production contract holders which include a mandatory timber production levy, as well as an agreed list of infrastructure, employment opportunities and other services. However, implementation delays have meant that the benefit sharing mechanism is not yet in place, although it should have been before logging commenced. This has resulted in discontent among communities which are affected by logging. These have been further exacerbated by shortcomings in the processes leading to Social Agreements, which have generally not satisfied the test of free, prior, informed consent. The FDA has received support from EU-ACP funds through FAO to conduct a thorough assessment of Social Agreements with a view to addressing their deficiencies for communities and companies.

In line with the 3C policy, part of commercial logging revenues (10% of Stumpage fees and 10% of Forest Products fees) is earmarked to support the operational costs of Protected Areas. The mechanism for this is currently under development. Again, there are delays in setting up the mechanism for transferring this share of logging revenues to a protected areas fund. This funding shortage is severely impacting on the operational maintenance of the integrity of Sapo National Park, which is a national asset.

During the immediate years after the lifting of UN Timber Sanctions in 2004, and particularly as a result of ambitious projections for logging revenues in Liberia's Poverty Reduction Strategy

(2008), FDA was under cabinet pressure to roll out its concession programme, despite objections from civil society that the Community Rights Law was not yet in place, and that there were legal irregularities in concession awards. These claims were reviewed by the Supreme Court which upheld the contested awards, albeit without a full hearing.. The current issue is the apparent lack of will and capacity of current contract holders to operate their concessions and pay taxes. The award of any further concessions will be strongly influenced by lessons learnt.

During the past two years, it has been proposed that Liberia should be compensated under bilateral funding arrangements for not logging her forests. The underlying calculus has been based narrowly on forest taxes forgone, but has failed to encompass the direct and indirect (multiplier) impacts of value added and employment creation on rural development.

Despite the positive environment for good Forest Governance which has been created through the reform process in Liberia, there remain two areas of concern. Firstly, FDA's implementation capacity and ability to maintain regulatory oversight needs to be strengthened. Secondly, the role of civil society in providing independent "watchdog" monitoring over forest operations is emerging as envisaged in forestry regulations.

Liberia has developed a solid framework for good forest governance but mixed success in implementing it, which has attracted both domestic and international criticism. Whist the causes may encompass elements of maladministration and weak implementation capacity, much of these governance arrangements could be adapted to carbon. In order that the negative forest governance experiences described above should not undermine REDD+ in Liberia, the implementation strategy should have a major focus on forest governance.

**Deforestation and forest degradation (D&FD)**

Deforestation rates have been held relatively low in Liberia during the past two decades due to the civil conflict. This forced many to leave the countryside and immigrate to the capital and elsewhere explains much of the low historical deforestation rates. This was also a period of relatively low international timber and agricultural exports.

Table11: Deforestation in Liberia over two decades[36]

| **Forest area (1 000 ha)** | | | | **Annual change rate (000 ha/yr and %)** | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| 1990 | 2000 | 2005 | 2010 | 1990-2000 | | 2000-2005 | | 2005-2010 | |
| 4,929 | 4,629 | 4,479 | 4,329 | -30 | -0.63% | -30 | -0.66% | -30 | -0.68% |

Now that peace has been restored, there is a general return of the population to rural areas, assisted by extensive infrastructure rehabilitation of road and bridges. These domestic factors, coupled with expanding global markets for tropical agricultural products, bio-fuels and timber will exert considerable pressure on land use conversion from forests.

Recent clearing activity is mostly concentrated in ten or so sectors of the country. Most places that showed clearing from 1986 to 2000 showed continued clearing after 2000. Almost all

[36] Global Forest Resource Assessment, FAO 2010

clearing is in the form of numerous small (<10 hectare) clearings around towns and roads near towns in Liberia's forest regions. This indicates the strong relationship between patterns of settlement, road access and forest clearing in Liberia.[37]

Generally, in the Liberian context, forest degradation arises as collateral damage from poorly implemented selective logging, and from shifting cultivation conducted too intensively for forest gaps to be replenished. In terms of forest cover in table 8, forest degradation corresponds to classes 3.1 & 3.2. Deforestation arises from forest clearance leading to land use change, which may be initiated through chainsaw logging or clearance logging and followed by intensive shifting cultivation, semi-permanent or permanent agriculture, or plantation development.

Mineral exploitation is not listed as a surface land use in table 8. In regard to artisanal mining, there scant evidence of widespread impact on D&FD, which is unlikely. In regard to formal mineral exploitation, this tends to have a small footprint in comparison with agriculture and forestry. Owing to the relatively high economic value of mineral resources, there is a presumption that this use would override other uses, even areas of high biodiversity value, such as PPAs or potentially existing PAs. However, recent mining concession agreements include mitigation offsets, and are unlikely to be significant in terms of REDD balances. What should be noted is that Liberia is rich in mineral resources, including gold, diamond and iron ore. Pre-war, Liberia was among the world's 3 highest producers of iron ore, and at present several companies are under taking scoping studies. While the numerous concessions (see preceding sections) granted to logging companies are the most significant threat to mature forest, implementation of the R-PP must include on-going research into, and monitoring of, mining leases, at county and national levels.

In many sub-Sahel African countries, wood energy, particularly charcoal, is a major driver of deforestation after initial forest degradation from logging, which provides access to logged areas. In Liberia's case, wood energy production is a corollary of intensive shifting cultivation and smallholder farm clearance.

**Key Drivers of Deforestation and Forest Degradation**

From the above assessment, it is clear that Deforestation and Forest Degradation (D&FD) arise from driving forces within the forest, agricultural and energy sectors. In terms of impact significance, seven principal driving forces are tabulated below.

Table 12 Direct Drivers of Deforestation and Forest Degradation.

| Sector | Direct Drivers of D&FD |
|---|---|
| **FOREST SECTOR** | **1) Commercial Logging,** categorized as:<br>a. **Extensive logging** - without area regulation (i.e. allocated commercial sector too large and failure to abide with periodic felling cycle), resulting in eventual timber shortages, reduced felling intervals, progressive canopy degradation, unsustainable logging and industry. (*This practice facilitates chainsaw logging and ingress of shifting cultivation – see below)* |

[37] Bayol and Chevalier, op cit

| Sector | Direct Drivers of D&FD |
|---|---|
| | b. **Over logging** – without selection control of species or diameter limits; and, resulting in creaming of species (genetic impoverishment), removal of undersize trees (future shortage of canopy trees), harvesting of all species (degraded canopy cover)<br>c. **Hi-impact logging** – the antithesis of Reduced Impact Logging, arising from a failure of site planning of extraction, roading and landing areas for minimal impact and cost; and, resulting in degraded canopy cover and collateral tree damage. |
| | **2) Chainsaw logging** – unregulated forest logging with similar results as for Over-logging, characterized by low recovery rate but mitigated by lower extraction damage. Studies show that chainsaw logging can reach into forest over 5 km from access roads *(Synergistic with shifting cultivation – see below)* |
| **AGRICULTURAL SECTOR** | **3) Shifting cultivation** – unregulated clearance and farming on forest land for a temporary period (2-3 yrs) followed by a fallow period (5-12 yrs) by the same or another farmer. Opportunistic on forest road accessibility and chainsaw logging operations. May be intensive involving larger forest clearing assisted by chainsaw operatives, resulting in deforestation. |
| | **4) Plantations and Permanent Agriculture -** higher economic value land use than forest, resulting in complete forest conversion with deforestation liability on the REDD balance sheet, even if actual clearance and planted may be delayed for several years. Replacement crops may comprise trees, especially oil palm as a biofuel, but do not provide a full range of forest services nor sequester comparable carbon stocks.<br>The emergence of palm oil as a bio-fuel has contributed to a raise in global prices for the commodity and so driven further expansion of plantation, including into areas where previously competing land use values (commercial, subsistence and/or service based) may have prohibited it. As such, while palm oil produced from plantations on barren or highly degraded (forest) land, may provide for a 'green' fuel and potentially generate REDD credits, there is also a risk that this increase in value may drive further D+FD in Liberia – resulting in a potential and significant risk for REDD. |
| **ENERGY SECTOR** | **5) Charcoal Production** – most charcoal production is a bi-product of agricultural clearance for shifting cultivation or small holder farms. It may have a significant impact on deforestation of degraded areas. |
| | **6) Oil** –Oil companies have moved into Liberia relatively recently and while current activities appear to be focused off-shore, there needs to be communication between relevant ministries, the FDA and RTWG on any plans to develop on-shore wells and pipelines |

| Sector | Direct Drivers of D&FD |
|---|---|
| **MINING SECTOR** | **7) Mineral extraction and mining** –Although not regarded as a significant driver of D&FD at present, it is possible that artisanal mining might be more damaging than currently recorded and that large scale mining (e.g. open cast gold mines currently under pre-scoping) will become a major driver. |

Evidence on the relative strengths of the deforestation and degradation drivers is not directly available. But, noting that logging is often the precursor to shifting cultivation, areas of 1.0 Mha of recent logging in otherwise undisturbed forest were reported by Bayol, who also identified 0.95 Mha of shifting cultivation and 1.3Mha of extensive cultivation.[38] During REDD implementation, studies will be conducted to provide reliable evidence.

These direct drivers of D&FD arise from a combination of five underlying causes, described in Table 13 and categorised by sector in Table 14:

**Table 13Underlying causes of drivers leading to D&FD**

| Underlying cause | Description |
|---|---|
| 1. Policy and Institutional | - Policies relating to the extractive industries (including mining and forestry) that conflict with efforts to conserve (carbon rich) mature forest.<br>- Possible conflict between ministries where more powerful ministries or those which relate to higher revenues for the national purse are able to dominate or veto the interests / decisions made by forestry / environmental officials and agencies |
| 2. Economic & Market Factors | - Forestry / REDD revenues will be valued in relation to competing land uses and opportunity costs. Market forces, especially related to palm oil, and timber, and potentially mining, may directly conflict with efforts (public or private) to secure land for sustainable REDD payments |
| 3. Landlessness & Unclear Allocation Rights | - REDD, at the ground level, will fail unless there is absolute clarity of land rights and allocation. Different land uses need to be identified, zoned and demarked, using participatory process and resulting in clear boundaries, rules and beneficiaries. There are risks here that competing allocations or unclear boundaries will result in conflict, leading to forest loss and a failure to receive eventual REDD funds / credits. |
| 4. Demographic Factors | - Population pressure and its effects on land use, together with tribal locations / lands effecting ancestral rights and land allocation, may result in conflicts over rights to forest, carbon and subsidiary benefits of REDD (payments) |

[38]Bayol& Chevalier, op cit.

| | |
|---|---|
| 5. Other socio-economic & cultural factors | - The past conflict in Liberia, which had a significant tribal /cultural manifestation, may lead to further conflicts over land and benefits, once it become clear that certain forests will eligible for (potentially high levels of) REDD revenue |

**Table 14Underlying causes of Deforestation and Forest Degradation by Sector**

| Category | Underlying causes of D&FD | Category |
|---|---|---|
| **FOREST SECTOR** | • Overemphasis on commercial forest use vis-à-vis conservation and non-destructive uses<br>• Ineffective regulatory supervision<br>• Corruption of forest service<br>• Lack of capacity to implement sustainable forest management and prevent unsustainable or unregulated logging<br>• Lack of forest monitoring, evaluation and certification processes | Policy and Institutional |
| | • High international demand and prices<br>• Unsatisfied local markets (inadequate supplies at wrong prices)<br>• Excess processing capacity<br>• Unregulated cross border trade in forest products | Economic & Market Factors |
| | • Overemphasis on commercial forest use vis a vis conservation and non-destructive uses | Landlessness & Unclear Allocation Rights |
| **AGRICULTURAL SECTOR** | • Impermanent agriculture comprising small plots without fixed investment in productivity | Landlessness & Unclear Allocation Rights |
| | • Access to forest land enabled by forest roads and capacity for land clearance enhanced by chainsaw logging | Economic & Market Factors & Policy and Institutional |
| | • Lack of accessible markets to justify investment in productivity and larger production units | Economic & Market Factors |
| | • Conversion to higher economic value land use | Economic & Market Factors |
| | • Need to provide subsistence food requirements, particularly in response to internal migration and resettlement after war | Demographic Factors |
| | • Need to meet deficit in domestic food | Economic & Market |

| Category | Underlying causes of D&FD | Category |
|---|---|---|
| | production | Factors |
| | • Lack of coordinated land use planning | Policy and Institutional |
| **ENERGY SECTOR** | • Need to provide cooking fuel for food preparation | Demographic Factors |
| | • Income generation | Economic & Market Factors |

**Past and Ongoing Efforts to tackle drivers of D&FD**

During the war years and before commercial logging was blocked by the imposition of UN timber sanctions, FDA practiced a weak regulatory oversight which sanctioned unsustainable logging. The underling economic and market factors which provide short term incentives for unsustainable commercial logging cannot be directly addressed in a free market economy. But, the forest reform process, which was strongly supported by the international community through the Liberia Forest Initiative, has set in place the policy, legal and institutional environment to combat these direct drivers of D&FD on the supply side. One of the key instruments is the Chain of Custody for commercial forestry.

Concomitant with the past rampant overexploitation of forest resources was an absence of equitable benefits and, also, growth without development, typified as the "Resource Curse", which went unchallenged in forests characterized by landlessness & unclear allocation rights. The Community Rights Law (2009) now lays the ground for formalization of greater clarity.

During the past two years, in-depth socioeconomic assessment of chainsaw logging has been undertaken, resulting in proposals for management and regulation (currently awaiting FDA Board approval),

**Emerging Opportunities under REDD to address drivers of D&FD**

***Policy, governance and land use***

The recent reform of forest policy, legal and governance framework provides a focus on balancing the economic, social and environmental roles of Liberia's forests. This can serve as a basis for incorporating a REDD strategy to address drivers of D&FD; for example, forest use suitability has been provisionally mapped, and a benefit sharing mechanism is ready for application.

***Commercial Logging***

With the policy and institutional framework is in place for sustainable commercial forestry and the mitigation of its associated drivers of D&FD, there is an opportunity to reduce its negative role through a number of possible measures which would raise forest logging standards.

Whilst commercial logging may be done on a sustainable basis under Forest Management Concessions, the current under-utilization of forest concessions offers an opportunity to review and cap Liberia's commitment to commercial forestry at a lower level, and switch forest use to carbon sequestration, conservation and non-destructive utilization. This could be achieved

through reduced allocation of new production concessions and/or by allowing switching within existing concessions

The retroactive imposition of improved forest management on areas which were severely and extensively over-logged prior to the imposition of timber sanctions would represent a one-off opportunity to enhance Liberia's current carbon stocks. At a rough estimate, this could amount to one million hectares in Open and Dense Forest classes (3.2 & 3.1) where agricultural dynamics have not irreversibly come into play.[39] This potential would be quantified more precisely during REDD implementation

***Community Forestry***

It has been suggested that up to 500,000 ha of community forest land, designated and recognized under the Community Rights Law, might be managed as Carbon Concession. By this, it is meant that commercial forestry operations would take place according to the raised logging standards which have been identified as possible under Commercial Forestry. This would represent an alternative ownership modality for forest areas which might not be offered by government as concession areas, but would not be additional.

***Chainsaw Logging***

With a new regulatory structure for chainsaw logging about to be set in place, there is an opportunity to reduce its negative role through a number of possible measures which would reduce the scale and impact of chainsaw logging.

***Conservation and Protected Areas***

Whilst Liberia has committed through policy and legislation to allocate 30% of forest area to protected areas, there is a shortfall of 894,000 ha and no current plans to fill this gap. Much will depend on donor funding in the future. This represents a potential additional opportunity for REDD though a unified approach to the provision of eco services.

***Shifting Cultivation***

Moving to a more efficient agricultural system can be an extremely cost-effective way to generate carbon credits. By replacing shifting cultivation with either conservation agriculture or irrigated lowland rice cultivation, or by subsidizing fertilizer inputs, Liberia can reduce amount of forest lost to slash-and-burn practices each year. Under these systems there would be enough land available to both produce Liberia's food needs and assign large areas to regenerate the natural forest cover.

These policies require significant set-up costs, but would then be profitable for farmers on an ongoing basis, even without carbon credits. However, the challenges in changing the dominant mode of agriculture should not be understated: land tenure is often insecure; access to capital, knowledge, and appropriate land is often absent; and mindsets are difficult to change.

***Plantations and Permanent Agriculture***

[39] Bayol et al (2004)

Given the large area of land available for agriculture in Liberia, it would make economic sense to limit new concessions to degraded agricultural land that has lower carbon content. There do not seem to be major limitations to doing so, given the new agricultural policy is highly supportive.

***Capacity Weaknesses***

The ongoing forest reform process, involving new laws and regulations, has stretched FDA's ability to implement them. The suggested opportunities to address the drivers of deforestation and forest degradation will add to the challenges already faced. There is no assessment of whether Liberia has the capacity to manage such a complex and demanding set of forest management arrangements. There is virtually no trained or experienced forestry staff available to hire in Liberia and the current FDA staff need extensive training in order to be ready for such tasks. These constraints will be addressed during REDD implementation.

**Current Information gaps**

***Chainsaw logging***

Despite recent studies, there remains considerable variation in estimates of some key parameters affecting chainsaw logging and, therefore, potential REDD impacts. Further field research is required to determine more precise recovery rates for log and sawn timber production, and absolute levels of sawn timber production.

***Slash & burn agriculture***

Although prevalent in some regions, its extent and impact is only roughly known. Further field research is required to determine its area extent and location, its productivity and role in family livelihoods, average field sizes, cultivation intensity and cycle.

***Land useand Ownership***

There is a presumption that land use values are highest for minerals, followed by tree crops, annual crops and then forestry. However, a full study of economic returns from alternative use would include the value chain, multiplier effects, environmental mitigation and carbon footprint.

Building of the forest land use suitability study, there also needs to be a broadened approach to land suitability undertaken collaboratively between mineral, agricultural and forestry sectors. Based on the above values, there is also a need to develop decision tools for land use allocation in cases of overlapping land use potential.

As noted in table 12, the uncertainty attached to tenure and land use rights potentially generates several "unknowns" relating to the allocation of potential benefits from REDD, and in regard to land management responsibilities. The Lands Commission was set up in August 2009 to propose, advocate and coordinate reforms in land policy and laws. Shortly afterwards, in October 2009, the Community Rights Law (CRL) was enacted, but its regulatory structure has not yet been approved. The intent of the CRL is to empower communities to seek recognition of their rights over relatively small areas of forest lands (maximum of 50,000 hectares, but intended to be much smaller), but a domino effect is conceivable which could excise substantial areas proposed for concession forest areas, as well as for proposed protected areas. In an extreme case, communities might seek redress for past alienation by government of community lands.

Paradoxically, recognition of community land rights on larger areas may be less problematic than landlessness and insecurity at a micro level which would deter investment and adoption of alternatives to shifting cultivation. This is because the separation of use from ownership is foreseen under the CRL.

***Plantations and Permanent Agriculture***

The identification of potential TSC areas needs to be based on demand form the agricultural sector for large scale forest conversion to Plantations and Permanent Agriculture. The extent of this demand is currently indeterminate and needs more reliable quantification

***Effects of logging on biomass reduction, and biomass recovery rates***

There is considerable uncertainty about the rate of biomass reduction as forest degradation becomes deforestation – i.e. for the forest class 3.3 downwards to agricultural class 2.1. More robust estimates of biomass factors for each land use class would strengthen assessment of REDD effects and policies.

Closely related, is the need for better understanding of the rate of biomass recovery following logging operations in order to ensure sustainable forest management.

**International Cooperation in Liberia's forest sector**

In 2004, the Liberia Forestry Initiative (LFI) was formed to assist Liberia to reach sufficient standards of forest governance and management to enable the lifting of UN Timber Sanctions. The LFI, which was led by the US Government, included UN agencies (FAO, UNEP), bilateral partners (EU), funding institutions (World Bank), international NGOs (Environmental Law Institute, Conservation International, IUCN, Fauna & Flora International) and local NGOs (Green Advocates, Sustainable Development Initiative).

The LFI is an informal arrangement but provides a forum for consensus on development priorities and for programme coordination in the forest sector. The advent of REDD has seen a number of new initiatives by development partners which are summarized below:

Table15: LFI Initiatives

| Funding Source | Implemented by | Interventions | Status |
|---|---|---|---|
| UN-REDD | UNDP | UNDP is a lead partner in the UN-REDD Program in collaboration with FAO and UNEP.<br>The UNDP has added a new climate change initiative called "Boots on the Ground" program simed to assist Least Developed Countries (LDCs) in dealing with climate change. For Liberia, this | Although Liberia is not yet a focus country for UN-REDD., the UNDP has actively assisted technically and financially in the R-PP process, especially in regard to the active involvement of all stakeholders, including forest-dependent communities. The UNDP |

| | | | |
|---|---|---|---|
| | | will translate into more involvement of UNDP in all climate change activities including REDD+ and other such schemes that will attract finance for development while mitigating climate change | continues to provide technical support in the drafting of the R-PP Component 1 and 2d (SESA). |
| NORAD | Fauna and Flora International | Capacity building at all levels of government through training, lessons learned and support to policy dialogues; Project willalso raise awareness and empower grassroots institutions to inform national REDD strategy development in Liberia through REDD demonstration Projects in Sinoe County | Phase I included National REDD workshop and creation of enabling environment for pilots; Phase 2 included pilot implementation n and support to RSPO process in Liberia. |
| Various | CI | Extensive work on Low Carbon Economy in Liberia. Project to support REDD Implementation capacity gaps and one or more REDD+ pilots in Lofa and Nimba Counties | |
| EU | RSPB and Bird Life International | Preparation of a carbon finance facility for Gola Trans boundary Peace Park - | Operational project – activities not yet commenced |
| Government of Norway | Bilateral discussions | Possible grant funding to compensate lost revenues caused by a complete of partial logging moratorium | Concept stage and on hold until REDD strategy in place and GoL clarifies proposals for commercial logging |

In addition these developmental initiative which aim to strengthen REDD directly, there continue to unsolicited expressions of interest from external investors in the voluntary market. These seek opportunity from the hiatus before formal trading comes to Liberia. Some of these proposals may have merit and include due consideration for community benefit; others, maybe less so. However, the demonstration effect of investors making profit from carbon credits and communities benefiting would enliven public interest and support for REDD initiatives. During the R-PP implementation, government will need to develop a regulatory framework for carbon concessions, linked to Chapter 6 of the Liberian Revenue Code.

**Summary of Main Activities and proposed Budget**

1) **Land use assessment** – FCPF

1-1) Full economic evaluation of mineral, agricultural and forestry land uses, including value chain, multiplier effects, environmental mitigation and carbon footprint.

1-2) Full integrated land use suitability mapping covering all sectors
1-3) Technical review of concession allocations for minerals, agriculture and commercial forestry in respect to forest type and conservation areas; [WB – non FCPF]
1-4) Monitoring of new mining and agricultural leases at county and national levels. (GoL and NGOs)

2- **Forest Resources Assessment**

2-1) Validation of forest resource assessments of proposed and existing commercial forestry concessions, including standing volumes, areas previously logged, opportunities for carbon recovery etc.
2-2) Assessment of mangroves (carbon) based on existing source materials
2-3) Determination of current deforestation rates – see Component 3, Activity 2
2-4) Assessment of biomass factors for each land use class, including degraded forest and agricultural lands; see Component 3, Activity 3

3- **Chainsaw logging recovery study**

3-1) Studies to estimate recovery rates for log and sawn timber production

4- **Forest Management Impact studies**

4-1) Assessment of biomass loss and recovery following logging
4-2) Assessment of forest carbon stock enhancement potential on degraded forest areas,
4-3) Asessment of reduced impact logging techniques on forest carbon losses

5- **Agricultural Impact Assessments**

5-1) 4 x regional studies (2 per yr) to study all aspects of shifting cultivation in Liberia, including their linkage to commercial logging
5-2) Assessment of potential demand from the agricultural sector for large scale forest conversion to Plantations and Permanent Agriculture.to determine demand for forest conversion, and selection of TSC areas

6- **Wood energy market survey**

6-1) Update previous wood energy demand studies for demographic increase focused on Monrovia

7- **Forest Governance**[40]

7-1) Design of equitable benefit sharing arrangements for carbon revenues based on recognized land right
7-2) Arrangements for independent verifiable monitoring of carbon benefit sharing

[40]The budget review process determined that activities relating to Forest Governance are also addressed under Components 1c and 2c and are therefore not included in the Budget 2a.

7-3) Adaptation of revenue transparency arrangements, including LEITI
7-4) Creation of a special "REDD Task Force" within the National and County level forest forums
7-5) Training courses for government agencies, forest dependent peoples civil society on potential REDD benefits, sharing, leakages, roles and responsibilities

| **Budget 2a: Summary of Assessment of Land Use, Forest Policy & Governance & Activities** | | | | | | |
|---|---|---|---|---|---|---|
| **Main Activity** | **Sub-Activity** | **Estimated Cost (in thousands US$)** | | | | |
| | | **2012** | **2013** | **2014** | **2015** | **Total** |
| ***1) Land use assessment*** | *1-1) Full economic evaluation of mineral, agricultural and forestry land uses* | *50* | *$25* | | | ***$75*** |
| | *1-2) Full integrated land use suitability mapping covering all sectors* | | *50* | *$50* | | ***$100*** |
| | *1-3) Technical review of concession allocations for all land use sectors* | | *35* | | | ***$35*** |
| | *1-4) Monitoring of new mining and agricultural leases* | *$5* | *$5* | *$5* | *$5* | ***$20*** |
| ***2) Forest Resources Assessment*** | *2-1) Validation of forest resource assessments of proposed and existing commercial forestry concessions* | | *$50* | *$50* | | ***$100*** |
| | *2-2) Assessment of mangroves (carbon) based on existing source materials* | | *$50* | *50* | | ***$100*** |
| | *2-3) Determination of current deforestation rates* | *To be undertaken in Component 3, Activity 2* | | | | |
| | *2-4) Assessment of biomass factors for each land use class* | *To be undertaken in Component 3, Activity 3* | | | | |
| ***3) Chainsaw logging recovery study*** | *3-1) Studies to estimate recovery rates for log and sawn timber production* | | *$25* | | | ***$25*** |
| ***4) Forest Management Impact studies*** | *4-1) Assessment of biomass loss and recovery following logging* | | *$35* | *$35* | *$35* | ***$105*** |
| | *4-2) Assessment of forest carbon stock enhancement potential on degraded forest areas,* | | *$35* | *$35* | *$35* | ***$105*** |
| | *4-3) Assessment of reduced impact logging techniques on forest carbon losses* | | *$35* | *$35* | *$35* | ***$105*** |
| ***5) Agricultural Impact Assessments*** | *5-1) Regional studies on shifting cultivation in Liberia, including linkage to commercial logging* | | *$35* | *$35* | *$35* | ***$105*** |
| | *5-2) Assessment of potential demand from the agricultural sector for large scale forest conversion* | | *$35* | *$35* | *$35* | ***$105*** |
| ***6) Wood energy market survey*** | *6-1) Update previous wood energy demand studies for demographic increase focused on Monrovia* | *$35* | *$35* | *20* | *15* | ***$105*** |
| **7) Forest Governance** | 7-1), 7-2) and 7-3) | To be undertaken in Component 2c | | | | |
| | 7-4) and 7-5) | To be undertaken in Component 1c | | | | |

| | | | | | |
|---|---|---|---|---|---|
| **Total** | **$90** | **$450** | **$350** | **$195** | **$1,085** |
| *Domestic Government* | *0* | *0* | *0* | *0* | **$0** |
| *Other Development Partner (forestry)* | *$55* | *$345* | *$260* | *$110* | **$770** |
| *Other Development Partner (agriculture)* | *$0* | *$70* | *$70* | *$70* | **$210** |
| *Other Development Partner (energy)* | *$35* | *$35* | *$20* | *$15* | **$105** |
| ***Sub-total Non-FCPF*** | *$90* | *$450* | *$350* | *$195* | **$1,085** |

**SUMMARY**

| **Sub-Activity** | **Estimated Cost (in thousands US$)** | | | | |
|---|---|---|---|---|---|
| | **2012** | **2013** | **2014** | **2015** | **Total** |
| **1) Land use assessment** | 55 | 115 | 55 | 5 | **230** |
| 2) Forest Resources Assessment | 0 | 100 | 100 | 0 | **200** |
| 3) Chainsaw logging recovery study | 0 | 25 | 0 | 0 | **25** |
| 4) Forest Management Impact studies | 0 | 105 | 105 | 105 | **315** |
| 5) Agricultural Impact Assessments | 0 | 70 | 70 | 70 | **210** |
| 6) Wood energy market survey | 35 | 35 | 20 | 15 | **105** |
| **TOTAL** | **90** | **450** | **350** | **195** | **1085** |

# 2b. REDD-plus Strategy Options

## Introduction

In component 2a, the key drivers of deforestation and forest degradation (D&FD) in Liberia were identified as:

Table 16 Summary of the Direct Drivers of Deforestation and Forest Degradation

| FORESTRY SECTOR | AGRI SECTOR | ENERGY SECTOR |
|---|---|---|
| 1) Commercial Forestry – extensive, over-intensive, & hi-impact;<br>2) Chainsaw logging; | 3) Shifting cultivation.<br>4) Plantations and Permanent Agriculture | 5) Wood energy production |

Liberia is fortunate to have been assisted in an economic analysis of REDD strategy options for a Low Carbon Economy which constitutes a major contribution to the preparation of a REDD-plus strategy to address D&FD.[41] This component – 2b – selects the most promising of these strategies, which were presented in Monrovia on 25 November 2009 for stakeholder feedback. It also adds an additional strategy – *Enhancement of Carbon Sinks in degraded forest* – as a means to increasing Liberia's carbon sink capacity.

A summary of activities is listed for each strategic option, and these are elaborated in Annex 12. The potential benefits from these activities are listed in Table (17) for each in terms of CO2 emissions.

**Table 17Summary of REDD Strategy Options**

| FORESTRY SECTOR | AGRI SECTOR | ENERGY SECTOR |
|---|---|---|
| 1) Raising commercial logging standards;<br>2) Reducing logging area footprint;<br>3) Regulating and managing chainsaw logging<br>4) Integrating of Conservation and Protected Areas into REDD and acceleration of | 6) Transforming shifting cultivation into permanent or semi-permanent agriculture to reduce land use and forest degradation<br>7) Ensuring that plantation and permanent agriculture development is located on degraded forest lands<br>8) Carbon stock enrichment of barren land through | 9) Regulating and managing wood fuel energy<br>10) Introducing more efficient kilns and cooking stoves |

[41] Keith Lawrence, Eduard Niesten, Eric Werker; Economic Analysis of a Low Carbon Economy for Liberia, Conservation International, 2009.

| FORESTRY SECTOR | AGRI SECTOR | ENERGY SECTOR |
|---|---|---|
| the timeline<br>5) Enhancement of carbon loading in degraded forest areas, focusing on indigenous species / forest rehabilitation | timber crop planting (tree crops instead of other agricultural products), including commercial tree species (linked to forest sector) | |

It will be crucial for the implementation of these REDD strategies that those sectors involved should respond to the challenges in a coordinated and synergistic way. Ensuring this outcome will require that sectors fully understand their significance and role in addressing climate change. A series of sector level presentations will aim to convey that message and secure buy-in. The overall coordination and momentum required with need inter-sectoral leadership, expressed through the National Climate Change Steering Committee which is chaired by the President.

The strategy options presented below are based on current knowledge and understanding of the socio-economic, governance and environmental context in Liberia. During implementation, there will be further assessments carried out under subcomponent 2(a) and, importantly, an assessment in subcomponent 2(d) of social, economic and environmental impacts of strategy options. Also, of course, there will be informed feedback from stakeholders generated through dialogue, consultation and participation in subcomponents 1(b) and 1(c). This new information, generated through formal studies and the consultation process will necessarily affect the substance and nature of REDD strategy options, which may need to adapt accordingly during the preparation phase.

## FORESTRY SECTOR

### Strategy Options for REDD

With the policy and institutional framework is in place for sustainable commercial forestry, potentially on two million and three hundred thousand hectares (2.3 Mha)[42] of long term concessions and two hundred thousand hectares (0.2 Mha) of short term contracts, the REDD strategy will address unsustainable logging by:

1. **Raising commercial logging standards** – by improving the technical capacity of all actors in the commercial forestry sector through outreach and training to:
   1.1. Assess economic viability of forest resources at forest management unit (FMU) level;
   1.2. Prepare and implement effective forest management plans,
   1.3. Implement Reduced Impact Logging (RIL) and also reduce production costs;
2. **Reduce the area footprint of commercial logging** - by supporting FDA policy decision-making with studies and socio-economic analysis of the implications of capping commercial forestry at:

[42]Mha is used throughout to denote “million hectares”

2.1. the current level of one million hectares (1.0 Mha);

2.2. an increased level of approximately one million and six hundred thousand hectares (1.6 Mha);

2.3. Reducing by one hundred thousand hectares (0.1 Mha) the area under Timber Sales Contracts, that would be restricted to conversion of degraded forest to an identifiable and specific higher value use. [43]

3. **Regulating and managing chainsaw logging** - by improving the technical capacity of all actors in chainsaw logging through outreach and training to:

3.1. Create a regulatory environment for chainsaw logging according to the provisions of the new regulations;[44]

3.2. Introducing sustainable chainsaw logging through area control, harvesting rules and a chain of custody for chainsaw timber;

3.3. Improving the productivity, quality and profitability of chainsaw logging;

Whilst Liberia has committed through policy and legislation to allocate 30% (1.3Mha) of forest area to protected areas, there is a shortfall of approximately 20% (0.894 Mha) and no current plans to fill this gap. This represents a potential **additional** opportunity for REDD by:

4. **Integrating of Conservation and Protected Areas into REDD** and acceleration of the timeline by supporting FDA and affected communities in developing a:

4.1. A unified approach to forest ecosystem services that combines sequestration with conservation and non-destructive uses, and enables funding of PA management and operational costs;

4.2. An acceleration of the timeline for protection of these forest areas which, by retaining a higher percentage of forest cover, would augment the benefits;

5. **Enhancement of carbon sink in degraded forest areas**, focused efforts in forest category 3.2 (Open Dense)

5.1. Identify suitable sites for reforestation and afforestation, as well as forest restoration.

5.2. Define the role of reforestation, afforestation and restoration in the REDD+ strategy development in Liberia.

**5.3.** As for protected area conservation, areas selected for enhanced restoration would require protection.

**Estimating the expected costs and benefits[45]**

[43] See also Plantations and Permanent Agriculture strategy option.(6)
[44] New chainsaw logging regulations are expected to be approved early in 2011
[45] Figures quoted are from Keith Lawrence, Eduard Niesten, Eric Werker , op cit

The expected baseline annual loss of $CO_2$ from unimproved logging in Liberia is 2.64 t/ha/year.[4647]With the introduction of raised commercial logging standards, it is likely that biomass reduction arising from logging, as well as collateral logging damage, will be less.[48] Studies will determine the extent of the savings to be made in Liberia, which is provisionally assumed at a conservative level of 25% on forest management concessions, which would reduce annual $CO_2$ loss to, say, 2.0 t/ha/year.

Applied to a full concession programme of 2.3 Mha, this would yield annual $CO_2$ savings of approximately 1.47 Mt. The possible capping of forest area committed to FMCs at 1.6 Mha or 1.0 Mha would reduce annual $CO_2$ losses by around 1.85 or3.43 Mt, respectively. In turn, the unallocated commercial forest would earn credits as carbon concessions.

Noting that Timber Sales Contracts involve over logging, the effect of reducing their usage would be expected to reduce $CO_2$ losses on those areas by a factor significantly greater than for FMCs – for example, by around 50% on, say, 100,000 hectares taken out of forest clearance.

With the possibility of better machinery and techniques, it is likely that recovery rates from chainsaw logging operations will gradually increase. For example, an increase in recovery rate from 31% to 40% would reduce the high-end estimate of total annual $CO_2$ loss by 23%, or nearly 3 Mt, holding total production constant.[49].

The benefits from enhancement of carbon stocks in degraded forests (mainly in category 3.2) would mirror the protective effect in conservation areas. Assuming a degraded stock level of 263Mt/ha (i.e. 50% of base level 527M/ha), and a carbon appreciation rate of 0.375% p.a. (i.e. the same incremental rate as for protected areas) the annual enhancement of $CO_2$ is likely to be 0.88 million tonnes for 0.894 Mha. The "care costs" may be assumed equivalent to those of areas under protection (i.e. $2.38 per ha per year).

Whilst better techniques and machines will generally be cost effective and not incur a cost for saving $CO_2$, a reduction of the area footprint of commercial logging would render that unused land vulnerable to other driving forces of D&FD. As with proposed protected areas, this forest set aside for carbon sequestration would incur annual protection costs which are provisionally assumed to be $2.38 per hectare.[50]

Most critically, not logging commercial forest would incur opportunity costs of foregone logging revenues, restriction on employment and value added, and absence of associated multiplier effects. These have been conservatively estimated, on a per 100,000 hectare basis, as:

[46]t is used throughout to denote (metric) "tonne" and Mt is used to denote "million tonnes".
[47]The rate quoted ia an annualized rate over a 25 year cycle.
[48] Studies have shown that best practice removes as little as 20% of standing biomass, whilst poorly planned or implemented logging operation on unsuitable sites can lose as much as 80%. - based on Keith Lawrence, Eduard Niesten, Eric Werker , op cit
[49] Hugh Blackett, Dr. AiahLebbie& Dr. Emanuel Marfo ; Chainsaw Logging In Liberia: An Analysis of Chainsaw Logging (Pit-Sawing) In The Natural Forests Of Liberia Towards A More Sustainable Production, FDA, 2009
[50]FDA. 2006. A Business Plan for the National Protected Area Network Of The Republic of Liberia Draft Report of the Working Group on Liberia' s Protected Area Network..

**Table 18Opportunity Costs of reducing logging by 100,000 hectares**

| Benefit per 100,000 ha FMC | Directly | Indirectly |
|---|---|---|
| Employment generated (no.) | 99 | 248 |
| Value-added (M$/yr) | 5.19 | 8.83 |
| Taxation incl, Corporate Income Tax (M$/yr) | 2.47 | |

With the recognition that carbon sequestration would be additional in the proposed protected areas, excepting the existing and funded pipeline areas, the introduction of forest protection in those areas would make a significant contribution to REDD in Liberia. Assuming a $CO_2$ stocking of 527 t/ha, and deforestation rates of 0.125% and 0.5% with and without protection, respectively, the annual reduction in $CO_2$ loss is likely to be 1.8 million tonnes for 0.894 Mha under protection, at an assumed cost of $2.38 per ha per year.[51]

Whilst carbon payments would contribute towards operational costs of forest protection in PPAs, there may arise opportunity costs may from displaced livelihoods which will be carefully calibrated through studies of the socio-economic impacts of protection. Whilst it is likely that carbon credits will constitute a viable source of compensatory payments for displaced livelihoods of a subsistence nature, higher value activities such as artisanal mining will need careful review. Partial leakage arising from effective protection therefore represents a risk to be assessed.

Overall, the cost estimates associated with each forestry strategy option are not yet precisely quantified, in part due to the uncertainties attached to the baseline scenario of full commercial logging of 2.3 Mha. During REDD implementation, further cost studies will be required.

**Sustainability and integration with other sector policies and strategies**

The option to reduce the area footprint of commercial forestry is contrary to the role of the forestry sector in the Poverty Reduction Strategy as a prime mover of economic revitalization in rural Liberia. The upcoming development of Vision 2030 provides an opportunity to review the role of forestry backed by convincing evidence of the opportunity costs in order that REDD should not be perceived as anti-development.

Whilst the PRS explicitly recognizes forest conservation, it is important that such areas be seen as contributing to national economic recovery, which conjoining with REDD would provide. There may arise contention with other major alternative land uses (e.g. mining and agriculture), which is best countered by a positive income stream associated with REDD. It would be very advantageous to target agricultural strategy (5) to address shifting cultivation in forest areas proposed as carbon concessions..

The option to reduce the area committed to TSCs would require close coordination with the Ministry of Agriculture and agricultural concession holders (see section on Plantations below).

**Feasibility and Risks**

[51]See FDA 2006 op cit

The main constraint to raising standards in commercial logging is a widespread lack of technical capacity in the industry. FDA also lacks sufficient resources to provide regulatory oversight, and it will face difficulties in introducing a regulatory system for chainsaw logging where none has previously existed. The scattered and dispersed nature of chainsaw logging presents immense challenges to FDA in exercising its regulatory role. The clear risk is that those operators unable or unwilling to adjust to a legalized production system will carry on as before, with no benefit to emissions reduction.

Whilst FDA has already committed substantial areas of forest to eventual protected area status, this remains aspirational on at least 0.894 Mha. Designation of such as areas as "multiple sustainable use" rather than strict protection would minimize overall impact on affected communities yet still provide legal protection against major drivers of D&FD such as commercial and chainsaw logging, plantation development and permanent agriculture.

**Assessing leakage risks**

The main risk in reducing the area footprint of commercial logging is that intense pressure could arise from business interests and political lobbies for unallocated areas of forest to be licensed for production under the guise of community or private forests ownership rather than as carbon concessions. However, the risk of this production gap being filled by illegal logging is negligible owing to the stringent requirements of the chain of custody.

Unless alternative livelihood solutions are offered, it is likely that some livelihood activities would be displaced and partial leakages would occur.

## AGRICULTURAL SECTOR

### Strategy Options for REDD

With a new and supportive Food and Agricultural Policy & Strategy (FAPS) in place which explicitly recognizes that shifting cultivation locks subsistence farmers into low productivity with a high environmental penalty, Liberia is well positioned to adopt a REDD strategy that would:[52]

1. **Transform shifting cultivation into permanent or semi-permanent agriculture to reduce land use and forest degradation** by supporting the Ministry of Agriculture (MoA) and subsistence farmers, especially within proposed protected areas, to:
   1.1. Switch away from upland rice cultivation to irrigated lowland ("swamp") production, which has a comparative advantage in productivity and does not rely on shifting cultivation;
   1.2. Expand fertilizer use in Liberia, which is currently minimal, as a means to boost productivity and prolong land occupation before resting for fallow.
   1.3. Scale up existing pilot introductions of Conservation Agriculture (CA) as a means to increasing productivity without inorganic fertilizers, and prolong land occupation before resting for fallow.

[52]Food and Agricultural Policy and Strategy, Republic of Liberia, 2008

Agricultural tree crops sequester carbon in their own right and often represent a higher land use value than forest. The FAPS envisages improvements in many social and environmental aspects of plantation development including the developing an appropriate land utilization policy for concessions that addresses environmental needs.. This represents and opportunity for a REDD strategy to:

2. **Ensure that tree crop plantation and permanent agriculture development is located on degraded forest lands** by supporting the MoA, FDA and agricultural concession holders to:
   2.1. Identify and site new plantation development according to forest quality criteria;
   2.2. Within existing agricultural concessions, focus on degraded forest and negotiate forest swops to achieve this aim;
3. **Carbon stock enrichment of barren land through timber crop planting (tree crops planted on unused land and instead of other agricultural products, where appropriate)**
   3.1. Define areas of barren or degraded land where pastures, crops and silviculture are options, as part of national land-use/forest inventory
   3.2. Develop a synergized, cross-sectoral and holistic land-use / land-management strategy and system that maximizes carbon sequestration and storage, through a balancing of the various costs and benefits to each strategy option
   3.3. Increase carbon sequestration in landscapes/ecosystems through afforestation, reforestation, agro-forestry and tree management on non-forested land that is compatible with high environmental standards in forestland, cropland and pastures
   3.4. Sustainable land management for multiple ecosystem services from non-forest land, through: Conservation (of remnant forest patches); afforestation, agro-forestry and soil carbon enhancement through the aforementioned.

**Estimating the expected costs and benefits** [53]

Adoption of permanent or semi-permanent agriculture by subsistence farmers would free up land for forest regrowth and carbon sequestration. In the case of CA, carbon would also be sequestered in the soil.

While currently most households (63%) currently grow their rice on the uplands through shifting cultivation, it is conservatively estimated that irrigated lowland sites can boost yields by between 50 - 300% without fallow. If, for example, an area of 30,000 ha of irrigated lowland farming were to be developed over 25 years, this would free up 150,000 ha of land for forest regrowth, with a saving of 41.0Mt CO2 over 25 years at a cost of $1.16/tonne.

Recent success with targeted fertilizer subsidies (e.g. Malawi) suggests that such a policy in Liberia could boost yields and permit more intensive agricultural practice. For example, a program that subsidizes fertilizer over 60,000 ha, together with appropriate land use policies that would free up at least 120,000 ha of land for forest regrowth, which would represent around one quarter of all upland rice areas in Liberia, with a saving of 44.1 Mt $CO_2$ over 25 years, at a cost of $1.02/tonne

[53] Figures quoted are from Keith Lawrence, Eduard Niesten, Eric Werker , op cit

In theory, all other upland agriculture in Liberia could be converted to CA (with some inorganic fertilizer potentially necessary), thus freeing up the degraded land used in extensive agriculture to sequester carbon. In practice, CA conversion would likely require scaling up over a decade or more as pilot and demonstrations schemes matured. For example, if 48,000 ha were converted to CA over a ten year period, this would contribute savings of 43.0Mt CO2 over 25 years, at a cost of $1.44/tonne.

Selection of degraded forests or cleared land for plantation (mono-crops and/or afforestation/restoration) development and permanent agriculture would ensure that this agriculture poses no threat Liberia's carbon stock since tree crops have significant carbon content - far more than that of short-fallow agriculture. If, for example, 100,000 ha of new tree-crop concessions were limited to degraded agricultural land instead of forest, nearly 53 million tons of CO2 emissions would be avoided at zero cost per tonne.

**Sustainability and integration with other sector policies and strategies**

The new FAPS strongly supports a collaborative approach with the forestry sector and is synergetic with the Forest Policy of Liberia.

Given the immensity of the challenges posed by shifting cultivation, it would be advantageous to link option (5) to the possible displacement effects arising from active protection of forests under option (4). The productivity boots from transforming shifting cultivation would provide a powerful basis for programme sustainability and the provision of fertilizer inputs, improved seeds, extension and outreach.

The selection of degraded forest for conversion to plantations is attractive owing to a minimal cost (assumed zero here). This strategy option (6) would need to be coordinated with FDA's review of its TSC programme under option (1), and would require close cooperation between MOA and FDA.Various technical working groups including Oil Palm Sector Technical Working Group (OPSTWG) are formed in MoA under the Agricultural Council Committee (ACC) and meet monthly to share their experiences. The RTWG will collaborate closely with these working groups, as well as LEITI and line-ministries, where necessary, to ensure that best practice are adopted for large scale plantation development in Liberia.

**Feasibility and Risks**

Whilst empirical evidence on fertilizer use and lowland cultivation is persuasive, that for CA may be unconvincing and would require pilot development and demonstrations to ensure adoption.

The sectoral responsibility for options (3) & (4) rests with the Ministry of Agriculture, which has limited capacity to work with subsistence farmers, although a policy priority. Success would be contingent on working through NGOs which have a demonstrable track record.

In regard to plantation development, there exists a slight risk exists that existing agricultural concession holders may have factored the revenues from forest clearance into their business plan, but this is less likely in the older established concessions which remain heavily forested.

**Assessing leakage risks**

The main leakage risk emanates from replacing shifting cultivation with swamp rice cultivation which is know to emit methane, another greenhouse gas that is around 21 times more potent than

CO2. For the increased methane to be offset, an additional 0.5 ha of land used in extensive agriculture would need to be freed up (i.e. 165,000 rather than 150,000 ha in the example used), which could be achieved through a modest fertilizer application.

## ENERGY SECTOR

### Strategy Options for REDD

With explicit recognition in the National Energy Policy that 95% of Liberians rely on the inefficient use of wood fuels for domestic purposes, there is an opportunity to launch a REDD strategy that would:[54]

1. **Regulate and manage wood fuel energy** by supporting the MLME and FDA to:
    1.1. Carry out peri-urban planning of wood energy supply and demand;
    1.2. Identify and prepare an appropriate licensing and permit system;
    1.3. Develop feasible options for utilization of bi-products of primary forest log breakdown as fuel stock substitute for fossil fuels in power generation,
2. **Introduce more efficient kilns and cooking stoves** by supporting MLME and NGOs to:
    2.1. Acquire and test demonstration models from other countries
    2.2. Develop production options.

Note there is also scope for investigation into the role that increased yields and domestic use of bio-fuels from palm oil (grown on previously un-used / barren land) under the energy sector review, with links to wood fuel / wood chip energy, and also to both forest and agriculture sector research and planning.

### Estimating the expected costs and benefits [55]

The potential savings in CO2 emissions from using efficient stoves could be as much as 28.5Mt over 25 years if all Liberians were to use them instead of open fires, at costs for charcoal or wood stoves of $2.67 or $3.20 per ton CO2, respectively. Improved kilns can typically increase conversion efficiency to around 25%, which could yield comparable savings in CO2.

The planning and regulation of the charcoal industry would ensure sustainability without ever increasing transport costs, whilst linkage to commercial logging and conversion sites would lower costs, but not qualify for CDM.

### Sustainability and integration with other sector policies and strategies

Wood energy lies outside the remit of the FDA to manage. Whilst the National Energy Policy fully recognizes the important role of wood fuel in climate change, it is not at the centre of the policy stage. Additionally, the initial acceptance and willingness to foster Energy-Plus by GoL, an initiative to promote increased access to energy and low carbon development, will strengthen REDD+ integration with the energy sector. Collaboration between FDA and MLWE will be essential to maintain these programmes, and implementation may need to be delegated to NGOs.

[54] National Energy Policy, Republic of Liberia, 2008
[55] Figures quoted are from Keith Lawrence, Eduard Niesten, Eric Werker , op cit

However, stove improvement programmes in other countries have floundered when external assistance ceases.

**Feasibility and Risks**

Government capacity to regulate the wood energy supply chain is limited, and any interventions that restrict supplies or increase prices may spark protests.

**Assessing leakage risks**

The wood energy industry is driven by costs in which transport is the major factor. Government attempts to restrict supplies or impose taxes may be circumvented without strong monitoring of distribution points.

**Summary of Costs and Benefits**

**Table 19Summary of Estimated Costs ($) and Expected Benefits (tonnes CO2) and Breakeven Price of CO2 per tonne to compensate costs of opportunities foregone**

| FORESTRY SECTOR | Costs ($ /yr) | CO2 reductions (t/yr) | Breakeven CO2 price (US$/t CO2) |
|---|---|---|---|
| **1) Raising commercial logging standards over total area of 2.3 Mha;** | Cost effective (zero incremental cost) | 1.47Mt (at 0.64 t/ha/yr) | Any price |
| **2) Reducing area footprint of commercial logging** | | | |
| (i) To 1.6 Mha ; | $36.33M value added[56] and $17.29M tax revenues | 1.85Mt | $9.35 (taxes only); $28.99 (taxes +value-added) |
| (ii) To 1.0 Mha ; | $67.47M value added and $32.11M tax revenues | 3.43Mt | $9.38 (taxes only); $29.05 (taxes +value-added ) |
| 3) **Regulating and managing chainsaw logging** | Cost effective (zero incremental cost) | 3.0Mt (33% increase in recovery rates) | Any price |
| 4) **Integrating of Conservation and Protected Areas into REDD and acceleration of the timeline for extra 0.894Mha)** | $2.23M protection costs (at $2.38/ha/yr) | 1.77Mt (at reduced deforestation rate by 0.375% and base level 527t/ha) | $1.26 |
| 5**) Enhancement of carbon** | $2.23M | 0.88Mt | $2.53 |

[56]Value-added represent the economic benefit from forestry – e.g. wages, rents, salaries, profits etc

| FORESTRY SECTOR | Costs ($ /yr) | CO2 reductions (t/yr) | Breakeven CO2 price (US$/t CO2) |
|---|---|---|---|
| **sink in degraded forest areas (category 3.2) over an assumed area of 0.894Mha)**[57] | protection costs (at $2.38/ha/yr) | (enhancement at annual rate of 0.375% from degraded level of 50% of base level 527t/ha) | |

| AGRI SECTOR | Costs ($ /yr) | CO2 reductions (t/yr) | Breakeven CO2 price (US$/t CO2) |
|---|---|---|---|
| 6) **Transforming shifting cultivation into permanent or semi-permanent agriculture to reduce land use and forest degradation** | | | |
| (i) 30,000 ha irrigated farming | $1.16 /t CO2 | 1.64Mt/yr (average of 25 yrs for 150,000 ha forest regrowth) | $1.16 |
| (ii) 60,000 ha subsidized fertilizer + improved farming practices | $1.02/t CO2 | 1.76Mt/yr (average of 25 yrs for 120,000 ha forest regrowth) | $1.02 |
| (iii) 48,000 ha under CA over 10 yrs | $1.44/t CO2 | 1.72Mt/yr (average of 25 yrs) | $1.44 |
| 7) **Ensuring that plantation and permanent agriculture development is located on degraded forest lands** | (zero incremental cost) | 2.12Mt/yr (average of 25 yrs for 100,000 ha forest) | Any price |
| 8**) Carbon stock (C-stock) enrichment** | | | AS ABOVE |

[57]Actual area in category 3.2 is estimated at 1.0Mha, but 0.894Mha assumed for easier comparison with protected area strategy.

| ENERGY SECTOR | Costs ($ /yr) | CO2 reductions (t/yr) | Breakeven CO2 price (US$/t CO2) |
|---|---|---|---|
| **9) Regulating and managing wood fuel energy** | (zero incremental cost) | TBC | |
| **10) (i) Introducing more efficient cooking stoves** | $2.67 - $3.20 /t CO2 | 1.14Mt/yr (average of 25 yrs for 100% households) | $2.67 |
| **10) (ii) Introducing more efficient kilns** | (zero incremental cost) | 1.14Mt/yr | Any price |

On the basis of the breakeven prices for CO2 tabulated above, this summary clearly suggests that the "low hanging fruits" are to be found in the agricultural and energy sectors, with some also present in raising logging standards (formal and informal sectors), forest conservation and enhancement of degraded forest stocks. On the contrary, commercial logging per se has the potential to generate considerable levels of taxation and value-added, and would require higher compensatory CO2 prices than currently prevail.

**Summary of Main Activities and proposed Budget**

**FORESTRY SECTOR – four outputs**

1.1) Raised Commercial Forestry Standards
1.2) Reduced area footprint of commercial logging
1.3) Regulation and management of chainsaw logging
2.1) Integration of Conservation and PAs into REDD & acceleration of the timeline

Capacity Strengthening

- Capacity building in management planning, operational management and reduced impact logging
- Capacity building for improving the productivity, quality and profitability of chainsaw logging;
- Protected Area Management

**AGRICULTURE SECTOR – two outputs**

3.1) Transform shifting cultivation into permanent /semi-permanent agriculture
3.2) Plantations and permanent agriculture sited on degraded forest lands

Capacity Strengthening

- Capacity training for MoA field staff in improved small farm cultivation;
- Extension outreach to target subsistence farmers within two selected areas proposed as possible carbon concessions

## ENERGY SECTOR – two outputs

4.1) Regulate and manage wood fuel energy
4.2) Introduce more efficient kilns and cooking

Capacity Strengthening

- Capacity training for charcoal producers in improved kiln construction and management

**Budget 2b: Summary of REDD+ Strategy Options, Activities and Results Framework**

| Output (major activity) | Activities or Sub-activities | Estimated cost in US$000 | | | | |
|---|---|---|---|---|---|---|
| | | 2012 | 2013 | 2014 | 2015 | Total |
| **Outcome 1: Mitigation of Logging as a driver of D&FD** | | | | | | |
| ***Output 1.1) Raised Commercial Forestry Standards*** | *1.1.1 Assess economic viability of forest resources for commercial logging* | | *$50* | | | ***$50*** |
| | *1.1.2 Capacity building in management planning, operational management and reduced impact logging* | | *$30* | *$20* | *$20* | ***$70*** |
| ***Output 1.2) Reduced area footprint of commercial logging*** | *1.2.1 Full socio-economic assessment of applying caps at various levels of commercial logging* | | *$30* | | | ***$30*** |
| ***Output 1.3) Regulation and management of chainsaw logging*** | *1.3.1 Create a regulatory environment for chainsaw logging according to the provisions of the new regulations* | | *$10* | *$10* | | ***$20*** |
| | *1.3.2 Introduce sustainable chainsaw logging through area control, harvesting rules and a chain of custody for chainsaw timber;* | | *$25* | *$25* | *$10* | ***$60*** |
| | *1.3.3 Capacity building for improving the productivity, quality and profitability of chainsaw logging;* | *$15* | *$20* | *$20* | | ***$55*** |
| **Outcome 2: REDD integrated with Conservation** | | | | | | |

| | | | | | | |
|---|---|---|---|---|---|---|
| ***Output 2.1) Integration of Conservation and PAs into REDD & acceleration of the timeline*** | *2.1.1 Consult and develop a unified approach to forest ecosystem services* | | *$25* | *25* | *10* | ***$60*** |
| | *2.1.2 Consult and propose an accelerated timeline for proposed protected areas* | *5* | *$20* | *20* | *20* | ***$65*** |
| ***Forestry - Capacity Strengthening*** | *Training for FDA staff and key technicians from private sector in Reduced Impact Logging* | *$20* | *$20* | *$20* | *$20* | ***$80*** |
| | *Training for FDA staff and lead trainers for chainsaw logging* | *$20* | *$20* | *$20* | *$20* | ***$80*** |
| | *Training in techniques for alternative livelihoods in protected areas* | *$20* | *$20* | *$20* | *$20* | ***$80*** |
| **TOTAL (Forestry Sector)** | | **80** | **270** | **180** | **120** | **$650** |
| | *Domestic Government* | *0* | *0* | *0* | *0* | **$0** |
| | *Other Development Partner - forestry* | *$55* | *$205* | *$115* | *$70* | **$445** |
| | *Other Development Partner (Biodiversity)* | *$25* | *$65* | *$65* | *$50* | **$205** |
| | ***Sub-total Non-FCPF*** | *$80* | *$270* | *$180* | *$120* | **$650** |
| | **FCPF** | **$0** | **$0** | **$0** | **$0** | **$0** |

**AGRICULTURE -**

| Output (major activity) | Activities or Sub-activities | Estimated cost in US$000 | | | | |
|---|---|---|---|---|---|---|
| | | 2012 | 2013 | 2014 | 2015 | Total |
| **Outcome 3: Mitigation of agricultural practices as drivers of D&FD** | | | | | | |
| ***Output 3.1) Transform shifting cultivation into permanent /semi-permanent agriculture*** | *3.1.1 Extension outreach to target subsistence farmers within two selected areas proposed as possible carbon concessions* | | *$30* | *$30* | *30* | ***$90*** |
| | *3.1.2 Rehabilitate rice ponds for target groups* | | *$50* | *$50* | *50* | ***$150*** |
| | *3.1.3 Provide fertiliser and seed inputs for target groups* | | *$50* | *$50* | *$50* | ***$150*** |
| | *3.1.4 Introduce CA to target groups* | | *$30* | *$30* | *$30* | ***$90*** |
| ***Output 3.2) Plantations and permanent agriculture sited on degraded forest lands*** | *3.2.1 Carry out assessments of forest quality within existing and proposed new plantation areas* | | *$35* | | | ***$35*** |
| | *3.2.2 Carry out review of suitability of proposed TSC areas and match to conversion needs* | | *$20* | | | ***$20*** |
| ***Agriculture - Capacity Strengthening*** | *Capacity training for MoA field staff - Improving small-scale and subsistence agriculture* | *15* | *15* | | | ***$30*** |
| | *Extension outreach to target subsistence farmers - Improving small-scale and subsistence agriculture* | | *15* | *15* | *15* | ***$45*** |
| **TOTAL (Agriculture Sector)** | | **15** | **245** | **175** | **175** | **$610** |
| | *Domestic Government* | *0* | *0* | *0* | *0* | **$0** |
| | *Other Development Partner _ agriculture (1)* | *$15* | *$190* | *$175* | *$175* | **$555** |
| | *Other Development Partner - agriculture (2)* | *$0* | *$55* | *$0* | *$0* | **$55** |
| | ***Sub-total Non-FCPF*** | *$15* | *$245* | *$175* | *$175* | **$610** |
| | **FCPF** | **$0** | **$0** | **$0** | **$0** | **$0** |

**ENERGY**

| Output (major activity) | Activities or Sub-activities | Estimated cost in US$000 | | | | |
|---|---|---|---|---|---|---|
| | | 2012 | 2013 | 2014 | 2015 | Total |
| **Outcome 4: Mitigation of wood energy as a driver of D&FD** | | | | | | |
| ***Output 4.1) Regulate and manage wood fuel energy*** | *4.1.1 Planning wood energy supply for Monrovia* | | *$50* | *$5* | *$5* | ***$60*** |
| | *4.1.2 Prepare wood energy permit and licensing system* | *$45* | | | | ***$45*** |
| ***Output 4.2) Introduce more efficient kilns and cooking*** | *4.2.1 Acquire and test demonstration stoves and kilns, with focus on logging waste* | *$25* | *$25* | *$25* | | ***$75*** |
| | *4.2.2 Develop viable production proposals and secure startup funds* | | *$50* | *$10* | | ***$60*** |
| ***Energy - Capacity Strengthening*** | *Capacity training for charcoal producers* | *$45* | *$45* | *$45* | *$45* | ***$180*** |
| **TOTAL (Energy Sector)** | | **115** | **170** | **85** | **50** | **$420** |
| | *Domestic Government* | *0* | *0* | *0* | *0* | **$0** |
| | *Other Development Partner - Enegy* | *$115* | *$170* | *$85* | *$50* | **$420** |
| | ***Sub-total Non-FCPF*** | *$115* | *$170* | *$85* | *$50* | **$420** |
| | **FCPF** | **$0** | **$0** | **$0** | **$0** | **$0** |

# 2c. REDD-plus Implementation Framework

## Introduction

All policy or economic decisions regarding REDD+ development in Liberia must ensure compatibility with efforts to stabilize the country's political situation and promote its transformation from a fragile post-conflict state to one on the path to sustainable development. In Liberia, a REDD+ program must be aligned with the country's economic planning, such as is outlined in the Poverty Reduction REDD+ must add value, beyond than financial value, to existing programs and initiatives.

An effective national REDD+ program will include roles for multiple institutions at a range of levels of government and society. Monitoring, reporting and verification as well as compliance and enforcement mechanisms must also be established and will require human and technical resources, political will, and good governance.

Successful implementation of a REDD+ program will require meaningful capacity building from the central government to local beneficiaries and monitors. REDD+ objectives and co-benefits can only be achieved with a coordinated effort to build governance capacity and a coherent program designed with clear standards and processes that embrace equity and prevent corruption.[58] Any REDD+ law(s) and enabling regulations must set rules that are clear, comprehensive, and harmonized with other legal provisions. Additional national structures and capabilities that would need to be developed for REDD+ implementation have the potential to improve forest governance, as a REDD+ program must establish mechanisms for monitoring and enforcement, as well as identifying and addressing drivers of deforestation.[59]

While the specific criteria that Liberia would need to follow will depend on the outcome of ongoing international negotiations, the broad outline of REDD+ is established and the general considerations outlined below reflect the necessary elements of a REDD+ program. The major legal, institutional and policy issues recommended by the R-PP are summarised as follows:

## Legal framework for REDD+

Certain key aspects of REDD+ can, consistent with Liberian law, be implemented administratively, without the need for new legislation. However, because Liberian laws now on the books do not contemplate the uses of forest land envisioned under REDD+, there is a risk that a REDD+ program established under current law could be vulnerable to a court challenge. Certainly, a REDD+ program enacted by way of new legislative amendments would be on much

[58] Concerns around poor governance and corruption in REDD systems are not unfounded, as evidenced by recent investigations into a carbon deal in Liberia. In June 2010, the City of London police arrested the CEO of the UK-based Carbon Harvesting Corporation on suspicions of bribery relating to a carbon deal in Liberia. This deal, between Carbon Harvesting Corporation and Liberia's FDA, would involve payments of $1 million per year for a 400,000 hectare land concession (Peel and Harvey 2010).

[59] The process of establishing ownership of carbon rights could also help to motivate governments to clarify in the land rights.

surer legal footing than a program established solely through agency regulations under existing law. Legislative enactment would provide an opportunity for comprehensive program design and allow lawmakers to give clear guidance to implementing agencies, affected communities, and other stakeholders. Also, the legislative and executive imprimatur carried by a new law could help to build public knowledge about and confidence in a REDD+ program for Liberia. New legislation could also be expected to provide greater confidence to donors and international investors.

It is critical that, at a minimum, any REDD+ program be designed and implemented to reflect fundamental elements of the reformed forest management program—especially because that program operates within the larger context of post-conflict reconstruction and restoration of the rule of law in Liberia. Key to REDD+ readiness is the establishment of a national REDD+ program and development of laws, regulations, and policies that will ensure that REDD+ projects demonstrate that the carbon emission benefits resulting from the project are *additional* (i.e, that the project results in real, measurable, and long-term carbon emissions reductions that would not have occurred without the project) and *permanent,* and that *leakage* is minimized (i.e., that emissions reductions resulting from a REDD+ project in one geographical area do not lead to an increase in emissions in another geographical area).

In a general sense, a REDD+ program will include international, national, and sub-national policies and players. Under REDD+, international buyers or funders will make payments, through offset markets or a financial transfer from a global fund, for actual reductions in emissions from deforestation and degradation, or measures likely to deliver such reductions. At the national level, individual governments will develop REDD+ programs that put into place broad policies to address deforestation at a national scale and establish a national system for monitoring, reporting, and verification. A national approach to REDD+ will help to minimize leakage by developing policies to ensure that preventing deforestation in one area does not cause deforestation in another. National programs will also include policies to control corruption, ensure equitable benefit sharing, and provide other social and environmental co-benefits. Through these forest related policies, which are further discussed - were relevant - in following sections, a national REDD+ program has the potential to improve forest governance.

**Managing REDD+ revenue, classification and funding structures**

The REDD+ program will need to establish a unit to manage revenues, including developing a REDD+ fund at the national level, disbursing funds to support development and implementation of REDD+ policies, programs, and projects; instituting revenue policy measures; establishing a payment system to carbon rights holders; providing a legitimate benefit-sharing system (see benefit sharing below); and establishing a transaction registry. Options for a national REDD+ funding structure include - each option entails tradeoffs with respect to governance, coordination, effectiveness, efficiency, equity, and co-benefits:

- **Projects** – Payments from international sources (carbon market or fund) are made directly to local project proponents.
- **Independent fund** – Carbon payments are made to an independent fund outside the government with independent administration and decision-making authority.
- **State-administered fund** – Payments are made to a REDD+ fund within the central government, and funds are distributed through a REDD+ board.

- **State agency budgets** – Payments are made to existing government institutions (e.g, the Forestry Development Authority).

REDD+ requirements have much in common with traditional forest management activities. Thus, much of the financial structure and procedures, as well as institutional structure, needed to initiate a REDD+ program already exist in Liberia. They are found in land, forest sector, and business legislation including the 2006 National Forestry Reform Law (NFRL), the 2009 Community Rights Law (CRL), the Liberia Extractive Industries Transparency Initiative Act of 2009, the 2005 Public Procurement and Concessions Act (PPCA), and the Investment Incentives Code of 1973. While the legislation does not explicitly include REDD, the objectives and general structure of the 2006 NFRL are supportive of a carbon sequestration framework designed to protect the global environment from climate change as long as there is a meaningful benefits-sharing structure and the program benefits the Liberian people.[60]Moreover, under the NFRL, REDD+ could be conducted through a commercial license or through the protected area program, with the commercial approach more likely and the law on this is more developed.

### Clarifying and securing carbon rights

Land tenure is a delicate and unsettled subject in Liberia. The 1956 land law established a formal tenure system, but this applied primarily to the settled coastal areas. Customary tenure has prevailed in the interior where tenure is established by customary use. Under the customary system, individuals have rights to use but not own land; land is under the control of the chief, who holds a communal deed.[61] Liberia enacted a Title Registration Law in 1974, but its implementation was precluded by the brewing civil conflict.[62] As a consequence, clouded and contested land titles remain a legacy of Liberia's extended civil conflict, with the courts apparently clogged by a significant backlog of disputes[63] (it is revealing that the LFI concession review found that almost two and a half times the entire surface forested area of Liberia had been granted as forest concessions during the period of civil disturbance).[64] The salient fact about tenure in post-conflict Liberia is that ongoing conflicts and confusion concerning land claims based on customary law have not been systematically reconciled with land and resources ownership under the formal law.

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[60] The National Forest Management Strategy (2007) does, however, include exploring REDD as a program goal. The Strategy would have to be updated in light of the finalized details of a REDD+ program or the validation of any area designated for REDD+ (2006 NFRL § 4.5). To reinforce the pervasive importance of environmental assessment in the prevention-oriented forest management reform scheme, the forest regulations require the FDA to "identify adverse environmental impacts" of proposed decisions and actions under the National Forest Management Strategy. Elaborating their environmental assessment requirements, the regulations require the FDA to work with all stakeholders to minimize or mitigate adverse environmental impacts (FDA Regulation 102-07, secs. 63 (a) and 63 (b)). REDD+ would also have to be added to the National Forest Policy (2006 NFRL S 4.3).

[61] Unruh JD (2009) Land rights in postwar Liberia: the volatile part of the peace process. Land Use Policy 26: 425-433.

[62] Administration of the title registration system is lodged in the Ministry of Lands, Mines and Energy.

[63] The lack of data that characterizes land disputes in Liberia extends to ignorance of how many cases have been mooted through abandonment of claims or unrecorded settlements.

[64] Forest Concession Review Committee (FCRC) 2005, Forest Concession Review Report: Phase III and Appendices, Monrovia, *available at* http://www.fao.org/forestry/site/29659/en

To add to the complicated land picture in Liberia, Article (7) of the Constitution is quite clear that the State shall manage the natural (forest) resources of Liberia, with caveats to ensure equitable participation of Liberian citizens and the use of those resources for the general welfare and economic development of Liberia. The Constitution does not actually claim ownership. [65]As the section 2.1 of the 2006 National Forest Reform Law (NFRL) makes clear, the State holds forest resources "in trust", with such exceptions as forested land in communal forests.[66]On alienated state land, government may allocate forest concessions for forest resources (including sequestered carbon), but not on privately deeded of community forest lands. [67]However, under the NFRL, government has the authority on all forest lands to license and raise royalties on sequestered carbon as well as timber.

As long as the current distinction between state and non-state forest land which currently applies to timber resources is maintained for sequestered carbon, the lack of clarity of land ownership should not affect development of a REDD+ program in the short to medium term. However, in the longer term, it is likely that the Lands Commission will review the provisions of the National Forestry Reform Law and Community Rights Law on Forest Lands, which could lead to a major realignment of state, private and community forest lands,. The incentive of the benefits from REDD+ projects may provide additional leverage in efforts to reform land tenure policy.

### *1. Alienability of Carbon Rights*

Under a REDD+ program, the government would exchange the right to the forest resource, sequestered carbon, in a commercial transaction. A similar transaction is also permissible on community forest land (CRL §1.3).

### *2. Commercial Considerations*

The Public Procurement and Concessions Act (Concessions Act) outlines the basic process all agencies must follow for granting concessions in Liberia.[68] In order to enter into any REDD+ arrangements, FDA must prepare and submit to the Public Procurement and Concessions Commission a Concession Procurement Plan that meets the Commission's requirements. The legal framework governing investment in Liberia is provided by the Investment Incentives Code of 1973.[69]

The fact that foreign investors may not own property in Liberia makes it especially important that any REDD legislation define the foreign investor's legal interest in carbon credits, which may not take the form of a property interest such as a carbon estate or property right. There are no restrictions in Liberia, however, on the repatriation of profits or dividends.[70] An array of

[65]Republic of Liberia, Making Democracy Work in Liberia: The Constitution, University of Liberia Press, 2000. (Thus, the categorization of tradeable carbon credits as a personal property forest resource is critical. There are significant restrictions on real property ownership by foreigners in Liberia. The Constitution of Liberia forbids foreign ownership of real property. Chap. III, Art. 22 of the Constitution of Liberia. Foreign investors, however, may lease property for specified periods (21 years, except for 99 years for undeveloped land) with an option for renewal. See Investor's Guide at 34.)

[66]National Forestry Reform Law, sec. 2.1(hereinafter Forestry Reform Law).

[67] Unruh JD (2009) Land rights in postwar Liberia: the volatile part of the peace process. Land Use Policy 26: 425-433.

[68]Public Procurement and Concessions Act, as amended. The authors have not yet had the opportunity to review the 2010 Public Procurement and Concessions Act.

[69] An Act Amending the Investment Incentive Code of the Republic of Liberia (Investment Code) (March 6, 1973)

[70] See Investor's Guide at 35.

approaches may be used to establish marketable carbon rights. To establish long-term carbon rights, project proponents may:

- *Acquire* forest concession rights.
- Enter into *agreements with* ***landowners*** (or communities with common property ownership) who possess existing carbon rights to develop carbon projects and share the credits produced.
- Enter into an *agreement with* ***land users*** (or communities with common property rights) who possess existing carbon rights to develop carbon projects and share the credits produced.
- Enter into *an agreement with the local or national* ***government***, who possesses carbon rights, to develop a forest project. Though these actors (e.g., NGOs) lead the development and implementation of a REDD project, they do not seek any carbon rights or benefits for themselves.

**National accounting and nesting**

Under a national REDD+ program, credits for emissions reductions could be generated through national level policies that address deforestation generally or through sub-national projects that preserve forests in a single location. International credit could be given for sub-national projects directly (current international REDD+ debates consider this possibility as only an intermediate step in the development of a national REDD+ program because these projects may occur outside of the safeguards developed under a national program) or through a system to allocate national credits to project proponents and local communities for projects that reduce carbon emissions (i.e., payment for ecosystem services). All projects should be developed within the framework of a transparent, equitable, and effective national REDD+ program. A set of criteria will need to be developed for identifying, approving, and implementing REDD+ projects under the national program. Revenues generated from the sale of REDD+ credits will be collected in a national REDD+ fund and distributed according to a transparent and equitable benefit sharing structure.

A national REDD+ program will establish roles for multiple institutions across sectors and scales, including broad participation from national and local governments, civil society, and NGOs. The roles and jurisdictions of each institution need to be clearly defined, and coordination among institutions will be critical. A REDD+ coordinating body could be established in a division within the central government, a division within a central government agency (e.g., FDA), a task force within the central government with representatives from several agencies or offices, or a combination of these approaches.[71]

[71] In Liberia, a carbon working group has already been established. The National Climate Change Steering Committee, headed by the Special Advisor to the President on climate, includes Technical Working Groups on agriculture, energy, the Kyoto Protocol's Clean Development Mechanism (CDM), and REDD. The REDD Technical Working Group is co-chaired by the FDA and EPA, with strong technical assistance from international partners. Other government members, civil society representatives, international NGOs, and development partners also sit on the working group. In addition, a separate entity, the National Carbon Working Group, is responsible for developing a strategyfor carbon activities in Liberia. This structure should maintain involvement in development and management of a REDD+ program.

The REDD+ program will require entities to oversee funding distribution, monitoring and reporting, benefit sharing, and verification tasks. Specifically, the national program will need to:

- develop and implement REDD+ strategies;
- link REDD+ institutions into regional and local plans or development policies, including climate change and poverty reduction strategies;
- ensure high-level government commitment as well as commitment within all relevant sectors, including forestry, finance, agriculture, mining, etc.;
- identify responsibilities and delegate authority;
- identify and engage stakeholders;
- ensure coordination within government agencies, including between climate change strategies and forest policy, and among government and non-government organizations;
- design mechanisms for participation and benefit sharing;
- establish monitoring, reporting, and verification systems;
- assess implementation; and
- report to international bodies.

While recent legislation has decentralized some forest governance authority, the limited technical capacity in Liberia suggests the need for central government action to realize effective carbon reductions. The central government may also need to assume liability for carbon reversals (i.e., when avoided deforestation projects fail or permanence is not achieved) for local REDD+ projects. As the entity with legal authority to regulate forest activities, it seems the FDA is a likely candidate to be the institutional home for a REDD+ program. Furthermore, for national accounting and nested systems Liberia will work with The Institute for Conservation and Sustainable Development of Amazonas (IDESAM), Brazil.

**Addressing drivers of deforestation**

Liberia's reformed forestry laws have begun to address the drivers of deforestation. The law requires the FDA to develop and act on a national strategy to address deforestation.[72] The deforestation strategy must include protection of wetlands and areas with fragile soils on forest lands and require industry to promote forest enrichment planting and improved forest quality through employment of best practices in silviculture.[73]

The FDA's on-going efforts to sustainably manage forests and protect against deforestation basically consist of two parts: first, by controlling commercial yields through the various types of forest concessions (called licenses or contracts); and second, by severely limiting or prohibiting the extraction of timber and non- timber products, mining, and consumptive uses (including farming in some areas) in designated protected areas that are part of the Protected Areas Network that the FDA must develop and administer. The National Forestry Reform Law

[72] Sec. 8.3 a., Forestry Reform Law.
[73] *Op. cit.*, Sec. 8.3 b. and d.

establishes the following categories of protected areas with specific prohibitions and occasional exceptions (for example, allowing non-commercial resource extraction in communal forests) attached to each category: 1) Strict Nature Reserve; 2) National Park, Nature Reserve, or Game Reserve; 3) Communal Forests; 4) Cultural Sites; and 5) National Forest.[74] The law also allows FDA to establish other protected forest area categories including, but not limited to, Game Reserves, Controlled Hunting Areas, Communal Forests, and other Buffer Zones, as Conservation Corridors to facilitate sustainable protected forest management and Biodiversity protection.[75] The FDA regulations specifically require that no commercial forestry use be allowed in a designated or proposed Protected Area.[76]

**Establishing the MRV system**

Liberia's existing forest monitoring systems may serve as a basis upon which to build an effective REDD+ MRV program and the primary responsibility for monitoring and reporting could be assigned to the FDA. Under the 2006 NFRL, license holders must report annually, (§ 18.13) and FDA must monitor lands to ensure use of forest resources is lawful (§8.2(a)). The FDA is also required to collect and maintain a forest land use database, containing all available socio-economic, biological, and physical data on forest land in Liberia (FDA Regulation 102-07, sec. 22 (d)).[77]

Existing community forest monitoring or management programs could also provide structure for and inform the development of a national REDD+ MRV structure. Communities are explicitly responsible for transparency and reporting on community forest lands (CRL §3.2) and also have a role in monitoring commercial forest activities (NFRL §20.10). Local monitoring may help the REDD+ program to achieve the principles of transparency and accountability and improve the overall efficiency and effectiveness of the program. Local monitoring could, for example, help to verify where forest degradation is taking place as opposed to deforestation, which can often be verified remotely. In fact, a recent study shows that local people can collect forest condition data of comparable quality to trained scientists, at half the cost.[78] Incorporation of local monitoring can also help to build support for the REDD+ program among the local population.

**Designing a pro-poor resource distribution system**

REDD+ requires the development and implementation of careful and effective benefit-sharing structures, funds channelled through the central government could be misdirected. Lack of legal and political clarity regarding land ownership and carbon rights claims could lead to a land grab. These situations could foster resentment and conflict among indigenous and rural populations,

[74] Sec. 9.10 (b), Forestry Reform Law.
[75] Sec. 9.9, Forestry Reform Law
[76] FDA Regulation 102-07, sec. 61 (c) (1).
[77] FDA database(s) when compared with land use categories including protected areas can be used to help identify and prioritize REDD+ projects for maximum forest protective impact.
[78] F. Danielsen, M. Skutsch, N.D. Burgess, P.M. Jensen, H. Andrianandrasana, B. Karky, R. Lewis, J.C. Lovett, J. Massao, Y. Ngaga, P. Phartiyal, M.K. Poulsen, S.P. Singh, S. Solis, M. Sørensen, A. Tewari, R. Young & E. Zahabu (2010) At the heart of REDD+: a role for local people in monitoring forests? Conservation Letters DOI: 10.1111/j.1755-263X.2010.00159.x

and ultimately undermine the efficacy of a Liberian REDD+ program and the sustainable forest program more generally.[79]

The NFRL contains a robust and progressive structure for benefits sharing. Holders of FMCs and TSCs must pay stumpage fees, land rental fees, and forest product fees, which will be distributed in legally established percentages to the central government, communities, and counties, and to the protected areas network, respectively (NFRL §14.2). In addition, the holder of a FMC or TSC must establish a social agreement with affected communities.[80]

On community forest lands, a benefits-sharing structure would have to be developed as part of the REDD+ regulation as none of the existing categories of commercial activities apply to REDD+ (CRL §§6.1 – 6.3). Communities do have the authority to direct benefits from community forest management (CRL §3.2). Funds from REDD+ activities on community forest land could be channelled through the community forest fund (CRL §4.3).

**Strengthening law enforcement**

The National Forestry Reform Law prescribes the array of direct remedies for legal violations typical of a modern environmental enforcement program. It gives the FDA the administrative power to issue notices of violation and to suspend or terminate concessions for non-compliance.[81] The NFRL also empowers the FDA in its discretion to bring enforcement actions for civil penalties, equitable relief (injunctions), and criminal penalties. Importantly, given the lawless nature of Liberia's concessions in the recent past, FDA is given the authority to suspend and debar persons from eligibility to bid on forest concessions.[82] One notable feature of the National Forestry Reform Law's enforcement regime is the mandate it imposes on FDA to prepare and make available to the public an annual enforcement report specifying all violators it identified and all enforcement actions it brought in the preceding year.[83]

The National Forestry Reform Law adds teeth to the enforcement provisions by making the FDA's requirements legally enforceable by private damage suits against concession holders, citizens' lawsuits against the government, and citizens' lawsuits directly against the violator in cases of inaction by the government (after notice to the government and opportunity to cure).[84]

However, while the comprehensive enforcement provisions of the National Forestry Reform Law secure Liberia's ability to enforce its REDD+ program, operational structures for improving the effectiveness of law enforcement are required. Forestry enforcement provisions are central to any REDD+ program to the extent they are required to ensure the bases of the program, such as maintaining the integrity of protected areas and preservation requirements. Critically, effective law enforcement is required for performance-based payments (distribution), at the heart of the REDD+ mechanism, to be effective. Forest protection also needs examine and make

[79] For example, the Baka, Bagyeli, and Bakola communities in Cameroon have stressed their mistrust of REDD+ projects, because of concerns regarding the impact of REDD+ projects on their rights and livelihoods.
[80] The requirement for social agreements for TSCs is imposed by Regulation 105-07.
[81] See, e. g., sec. 6.1, Forestry Reform Law.
[82] Another basis of enforcement under Liberia's reformed forest management regime – one not automatically associated with enforcement – is provided by the rigorous bidder prequalification requirements in the National Forestry Reform Law. The pre-qualification procedures are designed to weed out those with lack of capacity or intent to conduct commercial forestry in a legally compliant and sustainable manner.
[83] Forestry Reform Law, sec. 20.11.
[84] *Op. cit.*, sec. 20.11

improvements to both community-based law enforcement, translating these into national regulations, and existing state-run institutions / agencies, including the police and forest ranger forces.

**Access to information, public participation, and access to justice**

Liberia's reformed forest management regime is exemplary in its pervasive provisions for mandated public participation, which are properly focused on local communities. Communities now have guaranteed access to information concerning forest concessions and the operation of the forest management program. In particular, communities must be given notice and provided with the opportunity to comment before title to forest land is granted to private parties. In its forest land use planning, the FDA is directed to allocate sustainable land uses through a detailed "participatory process, based on local validation."[85] Before the FDA may adopt its Forest Management Strategy – the basis of its land use planning process – it must serially hold a national level and a regional level meeting according to prescribed criteria. Moreover, proposed FDA actions related to forest land are subject to at least one prior public meeting in the immediate community or communities potentially affected by the action.[86] The reformed forest management regime gives legal teeth to its public participation requirements by broadening legal standing to challenge decisions of the FDA and authorizing citizens' lawsuits.[87]

**Ensuring free prior and informed consent**

The expansive public notice and opportunity to comment and expanded standing provisions of the National Forestry Reform Law, essential as they are to a democratic and transparent process, do not by themselves guarantee results favourable to the public or particular communities. But the National Forestry Reform Law and the regulations therefore go further to require that timber companies directly negotiate a social agreement with communities affected by their operations. The social agreement is designed to provide benefits to compensate communities for burdens or restrictions the forest concessions may impose on community access to or use of forest resources that arise directly or indirectly from the forest concession.[88]

**Existing institutions and frameworks for REDD+**

**1. REDD+ Structure: Three tiered approach to REDD Structure**

1.1. National Climate Change Steering Committee: Multi-sectoral committee responsible for formulating and aligning climate change policies with national development programs

1.2. National Climate Change Secretariat: Operational Arm of the Steering committee providing coordination, monitoring and evaluation (CC A&M, REDD+, CDM etc)

1.3. Working groups:

1.3.1. REDD Technical Working Group: providing technical guidance on the development and implementation of a national REDD Strategy. The REDD TWG

[85] FDA Regulation 102-07, sec. 21 (a).
[86] *Op. cit.*, sec. 62.
[87], sections 3.1, 4.5, 5.8, 8.2, 18.5, 20.10, and 20.11, FDA Regulation 101-07.
[88] FDA Regulation 104-07.

will also review and approve the terms of reference for consultancies, studies and assessments, taking into account stakeholder viewpoints.

1.3.2. C&P/SESA Working group: providing guidance on the development of consultation and participation plans

2. **Voluntary Partnership Agreement:** Governance platform for legally sourced timber including strong stakeholder engagement and community forest monitoring platform which could be used for REDD+
3. **National Forest Program Facility/ Community Forest Forum:** two level structure operating at the national andcounty level- forums for forestry consultation and multi stakeholder engagement
4. **Community Forestry Development Committee:** Community initiatives established in NFRL (2006) to assist in administering control and effectiveness in the management of forest resources
5. **Liberia Extractive Industry Transparency Initiative (LEITI)**: LEITI monitors the agriculture, timber and extractive industries to ensure they follow laws and pay taxes etc, via the "publish what you pay" principle in Liberia
6. **PRS/ National Visioning for 2017:** Next iteration of Liberia's development agenda originating from the county for which REDD+ needs to be included in
7. **Land and Governance Commissions**: Commissions working to resolve land rights and governance issues across Liberia, which will be critical in clarifying carbon ownership rights in the longer term.
8. **Liberia Forestry Initiative:** Collaboration of donors and implementing partners addressing forestry issues in Liberia
9. **Key Government Agencies:** EPA, FDA, MOA, MIA, MLME, MPEA, MOF and MOJ
10. **Civil Society Networks:** FPIC processes are institutionalized within the national REDD Regulations
11. **Private Sector:** logging, agriculture, marketing associations
12. **National Traditional and Religious Councils:** Networks of traditional and religious leaders

**Proposed activities**

These activities which are presented here in approximate order of implementation, although most will overlap, will form the REDD+ strategy work Plan:

1.1. **Identify and address the drivers of deforestation -** In order to determine how to reduce deforestation, Liberia must determine what is driving it, as addressing the underlying causes of deforestation is necessary to achieve actual, lasting emissions reductions. Although international rules for REDD+ are still being developed, real, quantifiable, and lasting reductions in deforestation will certainly be required. An effective and transparent system will be needed to identify the drivers of deforestation and develop appropriate policies to reduce deforestation.

1.2. **Develop and implement monitoring, reporting, and verification structures and capabilities -** To meet the international requirements for a reliable and credible national REDD+ program, monitoring, reporting, and verification (MRV) will be critical. An effective and transparent MRV system is needed to identify and develop appropriate policies to reduce deforestation, determine the effectiveness of and enforce such policies, reduce the likelihood of leakage, determine the emissions reductions from specific REDD+ projects, determine the long-term sustainability (permanence) of REDD+ projects, and track REDD+ transactions. Existing forest monitoring systems may serve as a basis upon which to build an effective REDD+ monitoring program.

1.3. **Establish REDD+ program institutional and fund management structures -** A national REDD+ program will need to establish roles for multiple institutions across sectors and scales, including broad participation from national and local government, civil society, and NGOs. The roles and jurisdictions of each institution need to be clearly defined, and coordination among institutions will be critical. Liberia will need to establish a REDD+ coordinating body. The national program may also integrate sub-national projects. All projects, however, should be developed within the framework of a transparent, equitable, and effective national REDD+ program. Liberia will need to develop criteria for identifying, approving, and implementing REDD+ projects under the national program. The REDD+ program will also need to establish a unit to manage revenues, including disbursing funds to support development and implementation of REDD+ policies, programs, and projects; establish a payment system to carbon rights holders; secure legitimate benefit sharing; and establish a transaction registry.

1.4. **Clarify carbon ownership rights -** Any REDD+ program will be premised upon the exchange of rights to carbon, likely in the form of volume of trees preserved, for a credit. This exchange can only be accomplished by an individual or institution with rights to the carbon or forest in question. While ownership of the land is not necessary to possess a right to use of the land or its carbon, resolving questions of forest ownership will be critical to development of a REDD+ policy. Carbon rights must be clarified in order to determine who has what rights, who can make REDD+ agreements, and who is eligible for benefits.

1.5. **Develop a transparent and equitable benefit sharing structure for the REDD+ program** A REDD+ program must have an effective system for sharing any benefits from REDD+ projects. Benefit sharing in the REDD+ context will entail not simply equitably sharing the profits of any REDD+ project or policies, but compensating certain defined communities that do not already own or possess other rights to the trees or the carbon that they may lose through an agreement not to harvest such resources. The benefit sharing provisions under the 2006 Forestry Law offer one model, with implementation challenges from that model providing lessons to consider in developing a REDD+ benefit sharing regime.

1.6. **Develop an effective enforcement system for REDD+ –** A system is needed to ensure that national REDD+ policies are enforced and that benefits are equitably distributed to affected communities. Enforcement for REDD+ should include strengthened enforcement within Liberia's broader forestry policies as well as improved anti-corruption policies.

1.7. **Ensure that access to information, participation, and justice are integral components of Liberia's REDD+ program –** Involvement of the public will be critical at all stages of developing a national REDD+ program, as well as for specific projects. This includes

providing public access to information, facilitating public participation in decision-making, including comprehensive outreach to local communities, and ensuring a public role in monitoring and enforcement of REDD+ requirements.

**1.8. Develop national accounting system –** A national carbon accounting system will be developing once the MRV is in place and it had been agreed how project level, sub-national and national carbon emission reductions will be rationalised and harmonised into a nested system – this be largely based upon external, international decisions by the UNFCCC post-Kyoto agreements and the emerging bilateral and sub-national markets for compliance level REDD+ carbon credits (CERs).

**Summary of Main Activities and proposed Budget**

**1) Institutional Arrangements**

1-1) Study on carbon ownership and tenure in the context of Liberia
1-2) Assessment of financial instruments to create a REDD+ fund
1-3) Review of the enabling legislative context for REDD+ and issues relating to law enforcement
1-4) Design of equitable benefit sharing arrangements for carbon revenues based on recognized land right

**2) Review and Improve Monitoring and Evaluation**

2-1) Review current monitoring processes
2-2) Assessment of monitoring needs and costs
2-3) Arrangements for independent verifiable monitoring of carbon benefit sharing
2-4) Arrangements for revenue transparency, including through LEITI
2-5) Workshop for key government agencies, NGOs and CSOs

**3) Capacity Strengthening and related Technical Assistance**

3-1) Training courses for government agencies, forest dependent peoples civil society on potential REDD benefits, sharing, leakages, roles and responsibilities

These activities mirror closely those listed in Component 2(a) regarding Forest Governance:

| **Budget 2c: Summary of Implementation Framework Activities** | | | | | | |
|---|---|---|---|---|---|---|
| **Main Activity** | **Sub-Activity** | **Estimated Cost (in thousands US$)** | | | | |
| | | **2012** | **2013** | **2014** | **2015** | **Total** |
| **1) Institutional Arrangements** | 1-1) Study on carbon ownership and tenure in the context of Liberia | | $15 | | | **$15** |
| | 1-2) Assessment of financial instruments to create a REDD+ fund | | $25 | | | **$25** |

| | | | | | | |
|---|---|---|---|---|---|---|
| | 1-3) Review of the enabling legislative context for REDD+ and issues relating to law enforcement | $0 | $15 | | | **$15** |
| | 1-4) Design of equitable benefit sharing arrangements for carbon revenues based on recognized land rights | $0 | $40 | $20 | $0 | **$60** |
| **2) Review and improve M&E system(s)** | 2-1) Review current monitoring processes | $10 | | | | **$10** |
| | 2-2) Assessment of monitoring needs and costs | $10 | | | | **$10** |
| | 2-3) Arrangements for independent verifiable monitoring of carbon benefit sharing | | $10 | $5 | $5 | **$20** |
| | 2-4) Arrangements for revenue transparency, including through LEITI | | $5 | $5 | $5 | **$15** |
| | 2-5) Workshop for key government agencies, NGOs and CSOs | | $15 | | | **$15** |
| **3) Capacity Strengthening and related Technical Assistance** | | To be undertaken in Component 1c | | | | |
| | **Total** | **$20** | **$125** | **$30** | **$10** | **$185** |
| | *Domestic Government* | *0* | *0* | *0* | *0* | **$0** |
| | *Other Development Partner* | *$0* | *$0* | *$0* | *$0* | **$0** |
| | *Other Development Partner* | *$0* | *$0* | *$0* | *$0* | **$0** |
| | ***Sub-total Non-FCPF*** | *$0* | *$0* | *$0* | *$0* | **$0** |
| | **FCPF** | **$20** | **$125** | **$30** | **$10** | **$185** |

# 2d. Social and Environmental Impacts during Readiness Preparation and REDD-plus Implementation

## Introduction

A Strategic Environmental and Social Assessment (SESA) is a range of analytical and participatory approaches that aim to integrate environmental and social considerations into policies, plans and programs (PPPs) and evaluate the inter linkages with economic and institutional considerations.

Often, environmental and social considerations are not incorporated in PPPs in Liberia; economic considerations being the overriding objective. Session 37 (1) and (2) of the Environmental Protection and Management Act (2002) calls for environmental impact assessment of all projects deemed by the EPA to have negative impact on the environment; The Agency shall require that an environment impact assessment be undertaken on all projects, policies, programs and activities specified by the Agency in consultation with relevant ministries and agencies and published by notice; and in part (2); A developer, or project proponent, shall not commence, carry out, execute, implement or conduct a project or activity for which an environmental impact assessment is required unless an environmental impact assessment has been concluded and an environmental regulations made there under.

These legal requirements are often ignored by project proponents but the relevant GoL Agencies are up in arms with their scarce resources to reverse this trend. SESA seeks to safeguard and manage risks and potential impacts associated with REDD strategy options, ensure that stakeholders are engaged throughout the REDD readiness process including identification, prioritization and management of potential risks and likely impacts associated with REDD readiness, and ensure compliance with World Bank Safeguard Policies, among other benefits.

## Context

Activities that reduce emissions from deforestation and forest degradation (REDD) and contribute to conservation, sustainable management of forests and enhancement of forest carbon stocks (REDD+) have the potential to deliver significant social and environmental co-benefits. Yet many have also highlighted the serious risks, particularly for forest-dependent communities. Strategic environmental and social issues which must be considered at the REDD readiness stage includes biodiversity and ecosystem services loss; disruption of micro-climate; reduction in water services and quality; soil degradation; food insecurity, displacement of people and fauna, cultural erosion and social conflict as result of migration and immigration, loss of land ownership, land tenure insecurity, loss of access to land and energy supply.

There is growing awareness at both international and national levels of the need for effective social and environmental safeguards, R-PP aims to define and build support for a higher level of social and environmental performance from REDD+ policies. Liberia as a country will benefit in

terms of gaining greater recognition for the high social and environmental performance that is achieved by conducting SEA, the SESA are expected to build support for a more effective, equitable and sustainable approach to REDD+.

**Justification of the Strategic Environmental and Social Assessment**

The purpose of this component is to assess the likely impacts of the REDD strategy options and implementation framework identified in Sections 2b and 2c or that will be identified in the course of the preparatory work. The spirit is that REDD, starting with the preparation for REDD readiness to implementation, should 'do no harm' and, instead, should 'do good'. Apart from The Bank's Safeguard Policies that are designed to avoid, limit and/or mitigate harm to people and the environment, and strive to achieve benefits instead, Liberia has the legal framework that provide directives for conducting EIA/SESA to various projects and programmes.

The legal Frameworks are provided under Environmental Protection Act of 2002 and National Forest Reform Law of 2006. Both of these instruments specify projects and programs that are mandatory for Environment Impacts Assessment which also covers social aspects. Social and environmental assessments help minimize, mitigate, or duly compensate negative consequences if these are inevitable, and shed light on ways to create benefits for people and the environment. The SESA is a tool that seeks to integrate social and environmental considerations into the policy-making process, leading to sustainable policies and programs. It is a tool to address issues of injustice in benefit sharing, exclusion of forest dependent people and various conflicts arising from resource allocation.

**Why is the social and environmental assessment useful?:**

- Safeguarding and managing risks and potential impacts associated with REDD strategy options that will be selected for implementation;
- Ensuring that stakeholders are engaged throughout the REDD readiness process including identification, prioritization and management of potential risks and likely impacts associated with REDD readiness, particularly in the development of REDD readiness to ensure long term sustainability of the selected options;
- Ensuring compliance with World Bank Safeguard Policies;
- REDD has the potential to increase incentives for sustainable forest management. The Government of Liberia in collaboration with bi-literal partners and donors are expected to undertake program in order to address issues identified in the SEA. REDD schemes do not automatically guarantee a capacity to link carbon sensitive policies with pro poor and environmental policies (for income, employment generation, for asset/rights/biodiversity preservation and for social/cultural cohesion). REDD induced changes to legal frameworks that regulate incentives, rights, financing options (including taxation) and practices do not necessarily ensure environmental safeguards and possible impacts on the environment as well as livelihoods and rights of communities.

**TOR for SESA**

Liberia is facing challenges related to deforestation and reducing forest resources from various drivers of deforestation and forest degradation. Most of the forest resources are depleted due to shifting cultivation traditional agricultural practices and plantation establishment that are already

stressed due to various factors including inadequate management regimes. The Government intends to embark on the REDD+ policies that will improve such situation in collaboration with other stakeholders. It is within this context that SESA is seen as an important component in the implementation of REDD+ policy.

The Strategic Environmental and Social Impact Assessment (SESA) is a tool that seeks to integrate social and environmental considerations into the policy-making process, leading to sustainable policies and programs. Liberia has a detailed Environmental protection Act and regulations which guide the conduct of environmental activities, assessments, impacts and audits. The development of SESA will be informed by an analysis of the current environment policies and regulations, World Bank Safeguards and any foreseen social and environmental impacts as a result of REDD implementation.

The SESA ToR will include findings from the national Strategic Environmental Assessment (SEA) conducted in the forestry sector, all initial diagnostic work, including an initial analysis of the environmental and social context of the legal aspect by the Environmental Law Institute (ELI), institutional activities, stakeholder analysis designed to map out the expected outcomes, opportunities and risks related to the REDD and REDD readiness, consultations with key stakeholders and interest groups, including forest-dependent peoples in a transparent manner. The SESA will give special consideration to livelihoods, rights (including those of forest dependent Peoples), biodiversity, cultural heritage, gender, the special protection of vulnerable groups in society, capacity development and governance.

There exist very limited national capacities and tools for conducting SESA at the moment. There will have to a capacity building initiatives undertaking at national and local levels. The Environmental Protection Agency which is responsible for enforcement of environmental policies and regulations will coordinate SESA activities at national and sub-national levels, and will help in capacity building for SESA. There are no REDD pilots currently ongoing, so it is still early days yet to determine its impacts. The following terms of reference are intended to guide the SESA process for the proposed Liberia REDD+ policy.

**Objectives**

The objective of these Terms of Reference (ToR) is to ensure a comprehensive and participatory Strategic Environmental and Social Assessment (SESA) for the proposed REDD+ scheme. The Terms of Reference outlines activities, methodology to be followed and expected outputs.

**Activities to be undertaken**

The SESA team will undertake the following activities:

1. Must consult with all key stakeholders including, indigenous people/forest- dependent communities vulnerable segment of society in order to capture their views and concerns regarding the proposed REDD+ policy
2. Provide detailed baseline condition covering all key social, economic, cultural, institutional and legal issues that may have potential negative and positive impacts arising from the proposed REDD scheme.

3. Consider all alternatives including the " no REDD policy alternative"
4. Ensure adequate stakeholder participation throughout the EIA process and show stakeholders views and concerns in the EIA report
5. Identify all possible negative and positive impacts and propose mitigation and enhancement measures
6. Prepare Social and Environmental Management Plan (EMP) for the all the negative and positive impacts and clearly define responsibilities for the implementation of the EMP;
7. Carry out cost benefit analysis of the proposed REDD+ scheme;
8. Assess the viability of the proposed development also to benefit from CDM arrangement considering current Kyoto Protocol provision on carbon trade and national policies.

**Methodology**

A SESA is an exclusive participatory process; it is therefore required to ensure that appropriate methods that would ensure maximum participation of all key stakeholders are followed. Methods such as consultations with key stakeholders, interviews, meetings, and focus group discussions are encouraged. Other methodologies will also be employed to conduct this baseline assessment. The CCB standards will provide useful additional options and best practice guidelines.[89] These additional methods should include the Nested Sphere of Poverty Approach (NESP), providing quantitative data on community wellbeing.[90] This approach enables analysis through a sustainable livelihoods lens taking into account socio-economic, cultural and institutional issues. It could be implemented in specific areas or across scale.

Furthermore, the team should strategically visit the potential REDD areas/sites and consult with relevant stakeholders for detailed information. Other methods include literature review. The team should also use relevant techniques in data analysis. The SESA team may propose the best methods as deemed necessary.

**Expected Output**

The SESA should produce A Strategic Environmental and Social Impact Statement /framework that should ensure REDD+ policy/REDD+ scheme 'do no harm' and, instead, should 'do good' to all environmental and social aspects.

**Expertise to be involved**

This assignment requires a multidisciplinary team consisting of experts from various filed of specialization. The minimum qualification is Masters degree in respective specialization and over 5 years in similar experience. The proposed expertise may include but not limited to:

1. Land use expert
2. Forest ecologist and forest management expert
3. Lawyer in human rights

[89] http://www.climate-standards.org/standards/index.html
[90] http://www.cifor.cgiar.org/nc/online-library/browse/view-publication/publication/3286.html

4. Economist
5. Sociologist /Social Anthropologist
6. Energy expert
7. Market specialist

**Indicative REDD+ Interventions**

1. NATIONAL FOREST REFORM LAW, 2006 (3Cs):
   1.1. Commercial: 4 FMCs & 7 TSCs ( A & R to be undertaken by concessionaires, Chain of Custody)
   1.2. Conservation: GOL plan to set aside 30% as PAs (1.5 million ha)
   1.3. Community: CRL – empowering communities to have exclusive forest management rights for timber concessions, conservation and environmental services (including carbon sequestration)
2. Low Carbon Development Strategy:
   2.1. More efficient agricultural systems
   2.2. Ensure tree crop plantations are located on degraded lands
   2.3. Reduce the number of TSCs
   2.4. Energy efficient stoves for charcoal and fuelwood
   2.5. Replace some timber concessions with carbon concessions
   2.6. Increase the number of protected areas
   2.7. This compliment s the 3Cs

**Summary of Main Activities and proposed Budget**

**1. Stakeholder Consultation and Participation**

1-1 Consult with all key stakeholders including, indigenous people/forest- dependent communities vulnerable segment of society in order to capture their views and concerns regarding the proposed REDD+ policy

1-2 Ensure adequate stakeholder participation throughout the EIA process and show stakeholders views and concerns in the EIA report

2 **Assessment of Baseline and REDD+ Options** participation throughout the EIA process and show stakeholders views and concerns in the EIA report

2-1 Provide detailed baseline condition covering all key social, economic, cultural, institutional and legal issues that may have potential negative and positive impacts arising from the proposed REDD scheme. (Consider all alternatives including the "no REDD policy alternative")

3 **Environmental Management Plan (EMP)**

3-1 Prepare Social and Environmental Management Plan (EMP) for the all the negative and positive impacts. (Identify all possible negative and positive impacts, propose mitigation and enhancement measures and clearly define responsibilities for the implementation of the EMP;

4 **Socio-Economic Analyses**

4-1 Carry out cost benefit analysis of the proposed REDD+ scheme;
4-2 Assess the viability of the proposed development also to benefit from CDM arrangement considering current Kyoto Protocol provision on carbon trade and national policies.

## 5 Capacity Strengthening and related Technical Assistance

**5-1** National stakeholders workshop for sharing results
**5-2** Training at national and sub- national level
5-3 Support EPA and other organizations to implement SESA

| **Budget 2d: Summary of Social and Environmental Impact Activities** | | | | | | |
|---|---|---|---|---|---|---|
| **Main Activity** | **Sub-Activity** | **Estimated Cost (in thousands US$)** | | | | |
| | | **2012** | **2013** | **2014** | **2015** | **Total** |
| **1. Stakeholder Consultation and Participation** | Consult with all key stakeholders and ensure stakeholder participation | To be undertaken in Component 1c | | | | |
| **2. Assessment of Baseline and REDD+ Options** | Studies to assess baseline and potential impacts | $25 | $25 | | | $50 |
| **3. Environmental Management Plan (EMP)** | Consultants and technical assistants | $25 | $25 | $10 | | $60 |
| | Coordination and support to EPA and FDA | $10 | $10 | $10 | | $30 |
| **4) Socio-Economic Analyses** | 4-1) Cost benefit analysis of proposals | | $25 | | | $25 |
| | 4-2) Assess eligibility of proposals for CDM | | | $10 | | $10 |
| **5. Capacity Strengthening and related Technical Assistance** | National stakeholders workshop for sharing results | | | $15 | | $15 |
| | Training at national and sub-national level | $40 | $20 | $20 | | $80 |
| | Support EPA and other organizations to implement SESA | $10 | $10 | $10 | | $30 |
| | **Total** | **$110** | **$115** | **$75** | **$0** | **$300** |
| | *Domestic Government* | *0* | *0* | *0* | *0* | $0 |
| | *Other WB projects* | *$0* | *$0* | *$0* | *$0* | $0 |
| | *Other Development Partner* | *$0* | *$0* | *$0* | *$0* | $0 |
| | ***Sub-total Non-FCPF*** | *$0* | *$0* | *$0* | *$0* | $0 |
| | **FCPF** | **$110** | **$115** | **$75** | **$0** | **$300** |

# Component 3: Develop a Reference Levelor Scenario

## Objective

A REDD reference scenario is defined here as a combination of recent historical data on emissions from deforestation and/or forest degradation and other relevant land uses, and estimations of future emissions and removals, to produce a national scenario over time of GHG emissions, without additional REDD+ incentives. The reference scenario will be developed by combining emission factors with activity data to model quantity/location of forest change as well as future emissions/removals over different time periods and under various socio-economic scenarios.

## Activities

The Terms of Reference below outline the proposed activities needed to accomplish the objective of Component 3, developing a reference scenario. The list of activities follows the recommendations inferred from numerous consultations and assessments. Many of these activities and steps were introduced to a FCPF/NORAD mission to Liberia in March 2010.

A technical working group created under the NCCSC (See Component 1 and Annexes - Institutional Structure) will oversee the development process of the reference scenario and MRV system. The working group will be composed of relevant inter-ministerial representatives and various governmental and non-governmental research institutions providing technical assistance and support during the development and implementation phases.

The steps used to define and develop the reference scenario need to bedefined prior to developing the reference scenario: these are:

### *Step1: Forest Definition*

The definition of forest is a key component to the reference scenario and MRV system. Liberia has not established a definition of forest, but proposes a definition that takes in account the forest landscape of Liberia, what is possible to map with Landsat-type remote sensing imagery data, eligible activities, and the level of importance that a carbon pool contributes to the overall inventory. Liberia is proposing a forest definition that consists of a minimum canopy cover of 30%, trees greater than 5 meters, and a minimum mapping unit of 1 hectare.

The forest landscape of Liberia is mainly composed of tropical moist forest with minimal woodland, and shifting cultivation. By maintaining a threshold of 30% and greater, this will effectively eliminate inclusion of short to medium period fallows as forest, which are capable of reaching canopy cover of less than 30% due to Liberia's intensive rainfall and long growing seasons. "Closed canopy" forest in Liberia also contains significant carbon pools of below- and above-ground biomass, as well as soil. Any change in canopy cover below 30% will have a substantial impact on carbon stock inventory. It is important to understand that shifting cultivation is a practice that clearcuts forest, essentially transitioning from high percent canopy cover to low percent canopy cover (i.e., forest to non-forest). However, fallows are part of an agricultural cycle, or agroforestry system, in which many older fallows can exhibit sparse tree

cover < 30% canopy cover. Therefore, this land cover type is correctly classified as non-forest. If the definition criteria are too broad, fallow would be classified as "forest" and any clearing of these areas would be classified as deforestation when in reality it is not.

The transition from forest to non-forest is easily detectable with relatively high accuracy using Landsat-type imagery data. A wall-to-wall forest cover change map developed from Landsat imagery between the time period of 1990 and 2000 and was assessed with a map accuracy of 87% after applying a 0.5ha MMU. There is high confidence that detecting shifting cultivation related deforestation of ≥ 1ha MMU can be achieved with acceptable accuracy (≥ 90%).

A preliminary spatial analysis was conducted to test the proposed forest definition criteria using existing forest cover data and the MODIS VCF (i.e., percent tree cover product). The first criterion examined was percent canopy cover. The CI Forest Cover Change map and the LULC map produced by FRM include a "closed canopy" forest class, meaning that when in full leaf, neighboring trees are in contact. In terms of remote sensing, "closed canopy" is associated with a strong vegetative signature with minimal background soil albedo or reflection. The forest classes derived from the map products were applied as an analysis mask in GIS to extract percent tree cover from the MODIS VCF product. The threshold of the extracted product was adjusted to provide areal proportions of percent tree cover that fall above or below 30% within the mapped forest areas. Results of the analysis concluded that "closed canopy forest" derived from remote sensing interpretation was composed almost entirely of tree canopy > 30%. The land cover below this threshold was considered degraded or nonforest in terms of remote sensing classification. Details are below:

a. FRM Map – 96.7% of the "dense canopy forest" area was composed of > 30% tree cover.
b. CI Map – 96.6% of the "forest" area was composed of > 30% tree cover.

The second analysis compared various MMU thresholds and concluded that there was only a 0.01% difference between a 0.5 hectare and 1 hectare MMU. Given that the difference between the upper and lower MMU thresholds are insignificant, applying a larger MMU threshold will eliminate patchy artifacts, thus improving map accuracy and reducing spectral confusion among (1) other cover types (such as scrub/fallow etc.) and (2) secondary forests.

In summary, applying a cover rate of >30%, a MMU of ≥1ha, and a tree height of ≥ 5m is optimal for Liberia for the following reasons:

a. Changes in forest cover associated with shifting cultivation and fallow cycles are separated and classified correctly.
b. "Forest" captures the most significant carbon pool (i.e., tropical moist forest).
c. Changes in forest cover associated with shifting cultivation are easily and accurately detectable using Landsat-type imagery.
d. Fallow areas are not included by mistake in REDD+ activities.

Liberia does not face the issues of low quality and quantity of primary forest that other sub-Saharan African countries face. Liberia uniquely possesses a large area of primary forest and therefore significant carbon stores. The proposed threshold criteria also takes into consideration Liberia's current need to stimulate economic development in the country and therefore leaves room for some clearing of secondary forests for development and cultivation. Avoiding the

clearing of primary forest and allocating degraded/secondary forest to large-scale agricultural concessions meets Liberia's land-use planning and low carbon economy goals. In addition, developing a MRV system that monitors all small fallows that fit within a lower canopy cover threshold will not only be difficult, but extremely costly. Furthermore, 30% is already a very low threshold in which some portions of secondary/degraded forest are included in land-use/land-cover maps derived from remote sensing analysis.

Shifting cultivation cannot be easily detected with acceptable accuracy using Landsat or Landsat-type sensors. It belongs to a category of non-forest which includes degraded/secondary forest, old fallows, shifting-cleared agricultural lands, impervious surfaces, etc. Liberia's current strategy does not make any claims or infer that a specific land-use category called "shifting cultivation" can be identified from other non-forest categories. The section on "forest definition" describes that the land cover mapping technique that identifies broad categories of forest, non-forest, water, mangrove, and cloud can accurately map dense, primary forest with a canopy cover of $\geq$ 30% with reasonable and acceptable map accuracy.

***Step 2:Deforestation and degradation.***

Deforestation can be defined by a complete loss of canopy cover and carbon stocks, whereas degradation is a more subtle change in canopy cover and/or composition over time.

Two main studies have recently reported on historical deforestation rates in Liberia. Based on their objectives, they applied significantly different criteria and produced different results.

The first study conducted in 2004 by Forest Resources Management (FRM) estimated 4.5 million ha of forest cover and an average annual deforestation rate of 0.6%, or approximately 30,000 ha per annum. The deforestation figure was derived from a land use/land (LULC) cover change matrix derived from a digitized 1979 aerial survey and digitized circa 2000 Landsat imagery. It is noted that the base data and LULC classes were different for each map. These figures were recently published in the 2010 FAO Forest Resource Assessment (FRA)

The second study conducted by the Liberia Forest Reassessment (LFR) applied a standardized Landsat classification methodology to develop a multi-temporal map of forest cover change with a MMU of 0.5ha. The study reported an average annual deforestation rate of 0.22% between 1990 and 2000. A recent update to the LFR study using the same standardized classification methodology was conducted through a partnership with FDA, CI, and South Dakota State University (SDSU). The updated study reported a slight increase in the historical deforestation rate of 0.35% between 2000 and 2005. The unpublished results of these studies report 3.7 Mt C02e between the years of 1990 and 2000 and 4.8 Mt C02e between the years of 2000 and 2005. These figures relate to an IPCC Tier 1 estimates and do not include additional emissions from degradation or future emissions from deforestation and degradation.

Rates of historical forest degradation in Liberia have not been estimated. In terms of remote sensing, degradation mapping is technically more difficult. Annual time-series analysis of Landsat can be used to identify degradation, but the temporal resolution of Landsat combined with the excessive cloud-cover throughout most of the year in Liberia could make this approach impracticable. Other data such as MODIS meet the temporal collection frequency, but the data are too coarse to identify small scale degradation

***Activity 2-1. Defining deforestation and degradation***

This activity will be conducted with support from the relevant technical institutions identified by the NCCSC. The goal of this activity is to develop a definition of deforestation and degradation by determining the carbon stock and canopy cover thresholds in relation to Liberia's forest definition.

***Activity 2-2. Assess current activity data on deforestation and degradation.***

An intensive assessment of national historical deforestation data will be conducted to determine the applicability to the reference scenario. The data most relevant to developing a national reference scenario is the Landsat derived forest cover change map from 1990-2000-2005. The methodological process used to develop these data is standardized, transferrable, replicable, and applies the proposed forest definition of Liberia to determine non-forest from forest. An assessment will be conducted to determine the possibility of updating the forest cover map with circa 2010 data. Completion of an update will provide more recent estimates of deforestation during the post-conflict period of Liberia and can vastly improve the reference scenario development.

Liberia wishes to include degradation in a REDD reference scenario and MRV system, but research will be required to demonstrate credible measurements with clearly determined uncertainty. A feasibility assessment will initially concentrate on existing methodologies of direct and indirect forest degradation monitoring and determine the applicability to Liberia.

***Step3: Biomass***

Providing reliable and usable reference data on forest carbon stocks is a crucial step in developing a reference scenario and national REDD+ mechanism.

***Activity 3-1. Compile existing inventory data.***

In 2005/06, with the assistance of Deutsche Forstservice GmbH (DFS), the government of Liberia established permanent forest inventory plots as part of a ground-based monitoring strategy repeated every five years. The sample plots were systematically arranged in a 10 km x 10 km nation-wide grid and were stratified among 5 forest categories derived from the FRM land use/land cover map. The strata included three forest classes, and two agriculture-forest mosaic classes. A three cluster sampling methodology was applied to each inventory plot and divided into 1m - 3m radius circles for measuring small and large tree regeneration, and 6m and 12m radius circles for measuring small trees (dbh 10cm to 39.9cm) and large trees (dbh>40cm). A rapid forest inventory was implemented, but due to inaccessibility and poor infrastructure, only 167 of the required (SE + 10%) 405 sample clusters were collected. Below-ground biomass, liana, dead woody vegetation and litter were not measured. Error estimates were too high to provide an accurate database on biomass stocks.

***Activity 3-2. Evaluate and develop methodology to stratify and estimate carbon stocks.***

The first phase of this activity will evaluate the pre-established forest inventory and sampling strategy to determine its applicability to carbon stock measurement. In addition, the LULC map developed by FRM will evaluated for future application as a

forest stratification layer for sampling. The second phase of this activity will develop and finalize a standardized methodology for carbon accounting. This activity will be supported by the relevant technical institutions identified by the NCCSC working group, also taking in consideration external consultation.

***Activity 3-3. Select IPCC Reporting Tier.***

The IPCC GPG and AFOLU guidelines present three "Tiers" for reporting forest carbon stocks, with each Tier increasingly more costly and technically complex. In the effort to balance cost with accuracy and precision during the short to mid-term, Liberia will aim for Tier 2 carbon stock reporting and later assess the feasibility of meeting the demands of Tier 3 reporting.

***Activity 3-4. Identify key carbon pools to include in the historic estimate of emissions/removals.***

Five forest carbon pools are recognized by the IPCC: above ground biomass, belowground biomass, soil, litter and dead wood. Liberia will investigate and identify key categories of emissions and removals that have a significant contribution to the national inventory and/or uncertainty. By applying the principal of "conservativeness" in an effort to minimize the risk of overestimation as compared to the reference case, Liberia can omit or apply a lower reporting tier than required to carbon pools of lesser importance. For example, Tier 1 reporting using default transfers and decomposition rates can be applied if the soil, litter, and dead wood carbon pools represent less than 25% of emissions from deforestation.

Currently, above ground biomass remains the main carbon pool to be considered for the national carbon accounting. Below-ground biomass is also a significant stock and source of CO2 emissions following deforestation. Below-ground biomass will be estimated from an IPCC GPG recommended formula for above-below biomass ration from Cairns, et al. An assessment of the potential contributions from other carbon pools (i.e., litter, dead wood, soil) will be conducted and incorporated into the field inventory sampling strategy if found to be significant and cost-effective. Furthermore, a review of the IPCC framework will be conducted in order to best estimate past emissions from shifting cultivation.

***Step 4:Predictive Spatial Modeling***

Post-conflict Liberia is aggressively pursuing economic recovery by implementing policies that focus on natural resource extraction, agricultural expansion, and infrastructure restoration and development. The subsequent return of the population to rural areas combined with a potential global market trade in tropical agricultural products, biofuels and timber, will likely increase pressure on forest resources beyond historical trends. Therefore, the immediate and future pressures on forest conversion to alternative land use types is a key significant technical challenge in measuring Liberia's emissions from deforestation and degradation and Therefore, Liberia proposes developing a reference scenario from a combination of spatial analysis and econometric models rather than applying a standard linear trend.

***Activity 4-1. Collect additional spatial data to incorporate into scenario modeling.***

Liberia will likely develop multiple reference scenarios to understand how different policies will impact forest cover and associated emissions and removals. In addition to deforestation data, information such as population census, protected areas, agro-industrial plantations, timber concessions, infrastructure rehabilitation projects, and extractive industries will be required to develop the most representative models. The multiple scenarios are also meant to demonstrate how these processes can help guide policy and decision makers in an analytically robust manner. Most of these data are available and will be collected from LISGIS, FDA, and relevant ministries.

***Activity 4-2.Determining relevant driver variables.***

Historically, the main drivers of deforestation included:

a. shifting cultivation in the form of "slash-and-burn" agriculture
b. large-scale agro-industrial plantations
c. unsustainable commercial timber harvesting
d. commercial and artisanal mining
e. illegal pit-sawing operations supplying the local lumber market
f. post-conflict migrations.

Although many of the historical drivers have present and future relevancy, post-conflict economic recovery will influence patterns, quantity, and location of deforestation differently from the past. Recent studies have demonstrated that deforestation in Liberia is highly associated with proximity to roads and settlements. Revitalization and development of new infrastructure will increase accessibility to the forest and the following emigration to the rural countryside will increase conversion of forest to agricultural uses.

Investment in agricultural development such as large scale oil palm plantations could place pressure on forested lands in the absence of careful land use planning. Large agri-business companies are currently negotiating large tracts of land for oil palm concessions.

Regarding the "3C" forest management framework, 2.5 million ha have been placed under commercial forestry with over 2.3 million ha designated as Forest Management Concessions (FMC) and approximately 260,000 ha allocated to Timber Sales Contracts (TSC) which can be completely cleared and converted to other land uses. Forest degradation will be particularly relevant in FMCs which are sustainably managed on a 25-year rotation. Logging roads, landings, and selective cutting operations will contribute primarily to degradation. 1.3 million ha were designated to forest conservation, however only 164,000 ha are legally protected under current legislation, East Nimba Nature Reserve and Sapo National Park. Community forests, defined as areas set aside for sustainable use of forest products on a non-commercial basis, are designated the remaining 600,000 ha of forest. However, community forests are challenged by an unsettled land tenure policy in which Liberians have submitted claims to approximately 3.2 million ha of land, some of which overlap.

Mining and mineral extraction is planned to sharply increase. Mining development in general may indirectly lead to deforestation through infrastructure development and

increasing accessibility to otherwise remote forested areas. These areas include forested and non-forested lands. Artisanal mining continues to be practiced illegally in many forest regions.

Pit-sawing (or chainsaw logging) is an illegal, but traditional form of forestry in Liberia. It is given quasi-legal status by the practice of issuing official waybills for lumber transport to Monrovia. Studies have shown that forest within 5 to 10 km of a roadside is vulnerable to pit-sawing.

Geophysical constraint variables such as elevation and slope also determine areas at risk to deforestation.

A comprehensive assessment will be conducted to determine the most relevant and parsimonious driver variables.

***Activity 4-3. Developing reference scenarios and estimating emissions using spatial analysis software.***

Numerous spatial modeling tools exist to predict future trends and patterns of land use change. They typically have two requirements:

a. Estimate total amount of future change from econometric models and assumptions on expected future changes in population, markets, policy and infrastructure.

b. Estimate location and quantity of change using spatial modeling. Several GIS modeling tools exist for these analyses, the strongest being IDRISI, with the Geomod tool and the Land Change Modeler (LCM) tool. These models are based on the relationship between historical patterns of change and other features, such as soils, terrain, roads, infrastructure and market distance. The software creates outputs of transition potential and predicts the likelihood of future changes.

The following describes the general steps used to estimate future deforestation/degradation and emissions from spatial models under a *Business as Usual* scenario:

a. Apply model results and the total rate projections to map probable deforestation patterns.

c. Combine predicted deforestation and biomass maps to produce emissions estimates, the Business-As-Usual deforestation scenario (A)

d. Obtain best estimates of future demand for forest products at the national level, maps of planned logging concessions, data on logging extraction rates per hectare for Liberian forest types

e. Apply IPCC GPG and GOFC-GOLD Sourcebook on mortality from logging damage to surrounding trees and combine projected logging rate and biomass for each concession to estimate total logging emissions, the *Business-As-Usual degradation scenario (B)*

f. Define national goal for reductions in deforestation, and which regions will be focus areas for REDD

g. Combine planned lowered deforestation with biomass to estimate REDD emissions, the *REDD scenario deforestation baseline (C)*

h. Define national goal and focus areas for exclusion of logging and for reduced-impact logging

i. Combine planned excluded and reduced logging impacts with biomass to estimate REDD emissions, the *REDD scenario degradation baseline (D)*

j. Estimate REDD benefits: (A + B – (C + D)

***Activity 4-4. Consider linkages with site-level initiatives***

Potential REDD+ projects in Liberia are being supported by the Forest Trends Katoomba Incubator and the McCall-McBain Foundation. The regions of interest include the proposed protected area of Wolegizi-Wonegizi in Lofa County and the Lake Piso Multiuse Reserve in Grand Cape Mount County. Members of the Community Forest Partnership (CFP) participate in the national REDD discussions and are the primary organization responsible for collecting socio-economic and land use data at these project sites. Although the methodologies can differ between national and sub-national reference scenario development, the national model can be used as a first order proxy to estimate emission levels during the project feasibility stage. In turn, project level data can be used to improve national level reference scenario models.

***Capacity Assessment and Capacity Enhancement Arrangements***

***Step 5: Technical Capacity Assessment.***

The three main government institutions relevant to reference scenario development are the FDA, LISGIS, and the Ministry of Lands, Mines, and Energy. Long-term consultation and assessments have been conducted on the current capacity of government agencies responsible for implementing REDD at a national level. The current accessibility of data, technical capacity to collect, analyze and report data, and the availability of computer hardware and software required to develop a reference scenario and an associated forest monitoring, reporting, and verification system (MRV – Component 4) are very limited.

Although the FDA has the most institutional knowledge on REDD+ related issues, the FDA has very limited technical staff, and hardware/software to collect the activity data and emission factors required to develop a reference scenario and support a MRV system. The current GIS staff numbers less than three with some, but obsolete associated hardware. The hardware required to manage a functioning spatial database system is available at the FDA, but a truly knowledgeable IT staff required to setup network access and backup systems is lacking. Furthermore, funding has been available for several months to acquire the GIS and image processing software but the FDA procurement department lacks the capacity to obtain technically associated software in a timely and efficient manner.

In contrast, LISGIS has a higher number of capable GIS staff members with a functioning IT department in addition to adequate hardware and GIS software. The main technical limitations

at LISGIS are related to lack of image processing software and knowledge to process, analyze, and report activity data and estimate factors.

The Ministry of Lands, Mines, and Energy also has adequate GIS technical capacity, but major participation in REDD+ related issues in Liberia has been limited. Engagement with this ministry would be beneficial for both transparency in REDD+ and the extractive industry sector as well and exchange of technical capabilities.

There are no known non-governmental organizations with GIS capacity at the local level. Most of these organizations that have been engaged in REDD+ Liberia have very high capacity at the perspective home offices, but engagement at the country-level can be limited and not guaranteed.

### *Activity 5-1. Capacity building and training*

Technical analysis training and assistance has been provided to past members of the LFR, but many of the participants expressed concern that post-training follow-up has either been limited or non-existent. Furthermore, software provided during training sessions was not made available for follow-up. Conservation International responded by providing trial software and scheduled training sessions to technicians from FDA (Forestry Development Authority) and the Liberia Institute of Statistics and Geo-Information Services (LISGIS). Sessions cover the disciplines of remote sensing analysis and spatial modeling. However, the scale of training must increase exponentially across a number of disciplines as this marks only the beginning of building the capacity required for developing a reference scenario. In addition to the technical support provided by Conservation International, the governments of Norway, Brazil, and Liberia have discussed potential cooperation that would allow the technical support and knowledge transfer between institutions associated with REDD. Brazil has a long history of forest monitoring systems and has the greatest potential of providing long-term collaboration with Liberia's REDD initiatives. Woods Hole Research Center (WHRC) in Massachusetts, USA, has also expressed interest to assist Liberia in developing a nation-wide biomass density map using existing forest inventory data.

**Summary of Main Activities and proposed Budget**

1. Forest Definition
2. **Deforestation and degradation**
   - 2.1. Defining deforestation and degradation
   - 2.2. Assess current activity data on deforestation and degradation
3. **Biomass**
   - 3.1. Compile existing inventory data.
   - 3.2. Evaluate and develop methodology to stratify and estimate carbon stocks
   - 3.3. Select IPCC Reporting Tier.
   - 3.4. Identify key carbon pools to include in the historic estimate of emissions/removals.
4. **Predictive Spatial Modeling**
   - 4.1. Collect additional spatial data to incorporate into scenario modeling
   - 4.2. Determining relevant driver variables
   - 4.3. Developing reference scenarios and estimating emissions using spatial analysis software.

4.4. Consider linkages with site-level initiatives

## 5. Capacity Strengthening and related Technical Assistance

5.1. Capacity building and training

| **Budget 3a: Summary of Reference Scenario Activities** | | | | | | |
|---|---|---|---|---|---|---|
| **Main Activity** | **Sub-Activity** | **Estimated Cost (in thousands US$)** | | | | |
| | | **2012** | **2013** | **2014** | **2015** | **Total** |
| **1) Forest Definition** | | Completed | | | | |
| 2) **Deforestation and degradation** | 2-1. Defining deforestation and degradation | $10 | | | | **$10** |
| | 2-2. Assess current activity data on deforestation and degradation | $20 | | | | **$20** |
| **3) Biomass** | 3-1. Compile existing inventory data. | $20 | | | | **$20** |
| | 3-2. Evaluate and develop methodology to stratify and estimate carbon stocks | $20 | $20 | | | **$40** |
| | 3-3. Select IPCC Reporting Tier. | $10 | | | | **$10** |
| | 3-4. Identify key carbon pools to include in the historic estimate of emissions/removals. | $10 | $5 | | | **$15** |
| **4) Predictive Spatial Modeling** | 4-1. Collect additional spatial data to incorporate into scenario modeling | | $50 | | | **$50** |
| | 4-2. Determining relevant driver variables | | $15 | | | **$15** |
| | 4-3. Developing reference scenarios and estimating emissions using spatial analysis software. | | $40 | $40 | | **$80** |
| | 4-4. Consider linkages with site-level initiatives | | $45 | | | **$45** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **5) Technical Capacity Building** | 5-1. Capacity building and training | $50 | $50 | $50 | $0 | **$150** |
| | **Total** | **$140** | **$225** | **$90** | **$0** | **$455** |
| | *Domestic Government* | *$0* | *$0* | *$0* | *$0* | **$0** |
| | *Other Development Partner* | *0* | *0* | *0* | *0* | **$0** |
| | ***Sub-total Non-FCPF*** | *$0* | *$0* | *$0* | *$0* | **$0** |
| | **FCPF** | **$140** | **$225** | **$90** | **$0** | **$455** |

# Component 4: Design a Monitoring System

## 4a. Emissions and Removals

### Objective

The overall objective of Component 4a is to develop a MRV system that provides an operational and transparent approach to the monitoring, estimating, and accounting of emissions and removals of carbon in comparison to the projected reference scenario.

### Activities

The Terms of Reference below outline the proposed activities needed to accomplish the objective of Component 4a, Design a Monitoring System. A monitoring, reporting, and verification (MRV) system will be developed to monitor changes in forest area and carbon stocks by providing an operational data collection, synthesis, analysis, and reporting structure that meets the acceptable principals and procedures of estimating and reporting carbon emissions and removals. Given the abovementioned note by the FCPF, Liberia will not finalize the details of the MRV without definitive guidance from the UNFCCC policy process, but will likely develop the framework for data collection and analysis and refine as guidance is developed.

### 1. Roles and Responsibilities

Much of the structures and entities providing technical oversight and input in Component 3 will also have a participatory role in MRV development. The MRV system will be overseen by the NCCSC and relevant technical working group, in addition to technical input from a newly established Forest Monitoring Unit (FMU). The inter-ministerial and multi-institutional structure of the NCCSC is essential to maintaining a consistent national REDD+ strategy and to maintain awareness at their respective institutions.

***Activity 1-1. Establish the Forest Monitoring Unit and assigning staff.***

The purpose of establishing the Forest Monitoring Unit (FMU) is to ensure that there is a full-time and dedicated staff assigned to MRV development and implementation. The existing GIS and Remote Sensing lab at the FDA has similar attributes to the proposed FMU, but the staff is overburdened with other responsibilities and assigning operational priority to a MRV system is not guaranteed. Furthermore, the FMU would also be staffed by members from other governmental institutions to ensure transparency and objectivity.

CI has trained 12 persons from FDA and LISGIS over a six month period in remote sensing methodologies recommended by the GOFC-GOLD sourcebook. The trainings covered activity data development relevant to the reference scenario and MRV system. These trainees would be ideal for selection and permanent staffing of the FMU, but the continuation of extensive training is obligatory. A full-time technical coordinator will be assigned to the FMU for the duration of

reference scenario and MRV development. The main duty of the technical coordinator is to liaise with technical institutions on MRV development and to enhance the technical capacity of FMU staff.

**2. Data.**

Remotely sensed data are widely available, especially after the release of the Landsat archive. Landsat provides a globally consistent record of high resolution (30-meter) earth observation data over the last 30-years and is the subject of countless peer-reviewed articles on land use/land cover and forest specific mapping methods. Landsat meets the criteria of the IPCC Good Practice Guidelines (GPG) for LULUCF and is the recommended sensor for establishing "wall-to-wall" forest cover baselines used in developing a reference scenario and operational monitoring system. Landsat-7 ETM+ collects images over Liberia every 16 days. Although Landsat-7 suffers from a data gap artifact, algorithms have been developed to create lossless images. Liberia also benefits from the collection of Landsat-5 TM data, which continues to provide high quality imagery over major forested regions in Liberia. "Wall-to-Wall" national mapping can be achieved with six Landsat scenes with significant overlap into neighboring countries.

MODIS time-series data are also freely available. Although spatially coarse, > 250 m, MODIS data are useful for detecting large-scale change, fires, or "hotspot" anomalies in vegetation. Coverage is regional and collected on a daily basis. A +10-year MODIS NDVI (MOD13) time series dataset is freely available and preprocessed for Liberia. The preprocessing included maximum value compositing and temporal smoothing using a modified Savitsky-Golay filter to eliminate most cloud contamination. The dataset is updated by Conservation International at a monthly basis and is made available to the government of Liberia for large scale change detection. Integrating MODIS with Landsat imagery helps provide an analysis mask for identifying areas of change that deviate significantly from the historical variance in time-series values.

Mapping deforestation using remote sensing can be performed with high accuracies using freely available Landsat imagery. Individual Landsat scenes can be used to determine forest vs. non-forest with 90% to 95% classification accuracy, whereas national level mapping composed of multiple concatenated scenes are capable of slightly lower accuracies from 85% to 95% due to higher spatial variance. The current "wall-to-wall" forest cover change map of Liberia achieved 85% classification accuracy between 1990 and 2000. The map accuracy of forest cover change between 2000 and 2005 has yet to be determined.

Mapping forest degradation is technically more challenging than deforestation monitoring and will require further assessment to determine what is possible with current and planned capacity building. The FMU coordinator will be responsible for remaining current on emerging technologies that can be incorporated into Liberia's MRV system.

***Activity 2-1. Acquire software and hardware for national-scale mapping.***

Standard forest mapping methodologies have been developed using Erdas Imagine and See5 CART software. See5 applies a decision tree algorithm to create classified map outputs. The advantages of See5 include a non-parametric machine learning technique that accepts continuous and categorical spatial variables, an intuitive hierarchical decision process, and rapid processing

combined with accurate map outputs. The See5 algorithm is employed by the US Geological Survey, US Department of Agriculture, and the US Forest Service for much of their national-level image classifications. Erdas Imagine provides the interface for See5 as well as the tools required for standard image pre-processing. A single-user license of ENVI will be needed for any specialty processing such as RADAR interpretation, cloud/gap filling algorithms, and running IDL scripts. Idrisi Taiga, developed by Clark Labs, will provide the spatial modeling tools needed to develop a reference scenario. The Land Change Modeler (LCM) in Idrisi was developed under partnership with Clark Labs and CI with an emphasis on REDD scenario modeling (Annexs 5-9).

The FMU will require new Intel-based computers with dual processer capability. Hand-held GPS-linked PDAs such as the Trimble Juno SC will be acquired for the field technicians in addition to updated forest mensuration equipment (e.g., dbh tapes, clinometers, compass, etc.). Dedicated bandwidth is needed for higher download speeds. Current speeds at the institution's respective locations average 10kb/s. It would take several days to download one Landsat scene at this rate.

Renewable anti-virus software will be required for all computers.

***Activity 2-2. Develop standardized mapping methodology for developing activity data.***

Standardized mapping methods will adhere to "Forest Cover Mapping and Change Detection using Moderate-Resolution Satellite Imagery (Landsat, ASTER and MODIS)" by Steininger et al., 2006. Additional methodological resources include the GOFC-GOLD sourcebook on REDD.

Base maps developed from circa 1990, 2000, and 2005 Landsat imagery provide "wall-to-wall" coverage of forest area and change. Portions of the SE are missing from cloud-cover and data gaps, but assistance from CI will provide training in correcting these image artifacts. FDA has also expressed interest in updating the forest cover benchmark dataset using 2010 Landsat imagery where available. This exercise will be used to estimate deforestation in equal increments of 5 year periods. This may prove to be a valuable exercise in terms of defining a reference level; the time period from 1990 to 2000 may not provide the best representation of future deforestation since these activities were conditioned by the civil conflict. The time periods 2000-2005 and 2005-2010 may best represent the deforestation trends of post-conflict Liberia.

All data will be projected to Universal Transverse Mercator, Zone 29-North, Datum World Geodetic System of 1984 (UTM-29N, WGS84).

***Activity 2-3. Map land cover change with multi-temporal Landsat imagery.***

Land cover mapping follows a standardized flow of image pre-processing activities before applying map classification (Annex 13-17):

1. Images will be orthorectified using nearest-neighbor resampling and co-registered to an accuracy of at least half a pixel, or an RMSE of 0.5.
2. Images will undergo radiometric corrections such as haze removal and contrast stretching to enhance target materials in the imagery.
3. Spectral bands from two or more years will be aggregated into multi-temporal image stacks. Applying various band combinations from Time-1 and Time-2 of

the image stack can be used to enhance and locate significant changes in land cover.

4. Cloud and cloud-shadow can be classified directly from a multi-temporal image stack and used as an analysis mask. A gap filling algorithm available in IDL script has proven to remove Landsat-7 SLC-off data gaps successfully. The algorithm requires two cloud-free images within the same year.
5. Ancillary data will be developed to represent environmental or biophysical variables using image transformation techniques such as vegetation indices, principal components analysis, Kauth-Thomas, and spectral mixture analysis. Fraction images developed from spectral mixture analysis can also be applied to developing normalized difference fraction indices (NDFI) used for degradation mapping. This methodology is still in testing phases and must be assessed further for operational use..
6. Topographic variables such as slope and aspect will be derived from SRTM 90-meter digital elevation model.
7. Training site development for multi-temporal image classification will follow the methods provided in "Forest Cover Mapping and Change Detection using Moderate-Resolution Satellite Imagery (Landsat, ASTER and MODIS)". Land cover mapping is an iterative approach requiring training site and variable adjustment until the desired level of accuracy is achieved.
8. See5 CART algorithm will be used for supervised map classifications.
9. Final map products will be digitally filtered using a 3x3 majority filter and sieved to a minimum mapping unit (MMU) of 0.5 hectares to meet the national forest definition.

***Activity 2-4. Assess Map Accuracy.***

Overall map accuracy is an important step to developing uncertainties in carbon stocks. Map accuracy can be determined using sample scenes of fine resolution imagery (< 5m spatial resolution), field ground-truthing, or a combination of both. High resolution imagery is available from commercial satellites such as Quickbird and IKONOS, or available through aerial photography. Using fine scale remote sensing for validation is highly feasible for assessing inaccessible forest areas, but is generally expensive to acquire. Commercial satellite image providers also restrict usage to single-license agreements that limit the use of fine resolution imagery to single tasks and institutional use. Google Earth is a publicly available source of no-cost fine resolution data, but coverage can be limited for certain countries. The coverage for Liberia has increased significantly, but is not substantial enough to support national-scale map validation. However, Google has expressed interest in working with LISGIS to enhance mapping capabilities for the institution.

The 1990-2000 forest cover benchmark co-developed by CI and FDA applied aerial videography to assess accuracy. A final map accuracy of 86% was achieved.

Acquiring Quickbird or pan-sharpened SPOT imagery would be ideal for inaccessible regions, but the affordability of such imagery must be assessed during the MRV

development stages. A complimentary and statistically robust ground-truthing methodology will be also be determined during MRV development.

***Activity 2-5. Build technical capacity of FMU staff.***

Training and consultation from remote sensing and geospatial experts will be required to build the geospatial analytical capacity of the FMU. Training will be provided on spatial modeling and remote sensing analysis for forest cover mapping. Technical support will also be required to establish appropriate database routines and protocols for all field and spatial data related to the reference scenario and MRV. The assistance would include training in database structure, storage, and management.

Training can be provided by existing in-country partners such as CI and FFI, but support should be focused on developing the long term capacity of Liberian institutions. The FMU coordinator will be required to establish working relationships with technical institutions that can improve Liberia's capacity in MRV development and implementation, and strengthen ownership of the overall system.

Multi-institutional support will be crucial during both the REDD+ development stages in Liberia and future implementation. Research and development is an ongoing effort in MRV development, and applications of various data sources and methods are advancing rapidly. This support will ensure that REDD+ implementation in Liberia will remain current and parallel with programs worldwide.

New technologies include the integration of RADAR data and automated change detection systems. Like most tropical countries, imagery acquired over Liberia is plagued with cloud-cover. Active microwave sensors are available and can collect data regardless of cloud cover or time of day. For example, Guyana supplemented a Landsat derived land cover map with ALOS PALSAR, a synthetic aperture radar (APR) capable of penetrating cloud-cover and collecting land cover information in dual polarity. A freely available 50-meter mosaic product that collects PALSAR in HH and HV polarity began in 2008 and is programmed to support tropical forest carbon mapping efforts into the future. The annual continuity of this program potentially makes PALSAR and excellent supplemental activity data source for Liberia forest cover mapping. RADAR data is also used as an input in carbon stock mapping; an effort being conducted by Conservation International-Liberia's partner, NCRC Ghana, who works closely with local Liberian NGOs and government institutions in technical capacity building.

Google Earth Engine is another tool that was designed for detecting deforestation and mapping land use trends in a semi-automated environment. Google has already begun working with individual countries develop their own applications that can be applied to REDD MRV.

## 6. Emission Factors

Although forest cover can be detected using satellite image data, no remote sensing instrument can measure forest carbon stocks directly, thus additional and statistically robust ground-based inventory must be collected to accompany any remote sensing analysis.

The FDA is the government institution responsible for forest inventory data collection. Previous training in field data collection is a good starting point but staff will require additional training when the appropriate sampling scheme has been selected (See Component 3, Activity 3-2).

***Activity 3-1. Build FDA technical capacity in forest inventory data collection.***

FDA will require further capacity building in forest inventory collection that adheres to the IPCC GPG for assessing carbon stocks. Additional training-of-trainers workshops will be required to facilitate FDA engagement with forest community members in the data collection process. Other countries have demonstrated through research projects such as "Kyoto: Think Global Act Local" (K:TGAL) that forest community members are capable of using GPS equipment and collecting forest inventory data as accurately as experts, but at significantly lower costs. The benefits of community participation include raising the awareness of REDD at the community level, increasing transparency, providing incentive to maintain or regenerate forest, alleviating the burden of a national inventory collected solely by FDA, and creating jobs within the communities. Conservation International and the Land Rights and Community Forestry Partnership (LRCFP) have initiated the first training-of-trainers workshop and participatory GPS-GIS in the surrounding communities of the East Nimba Nature Reserve. Attending community members are capable of demarcating forest types, taking GPS inventory of non-timber forest products (NTFP), mapping threats to forests, and collecting data on community and forest assets.

Training is needed on field data analysis and relating these data to reference scenario development and the MRV system. Specialized training and/or workshops will be needed to facilitate interpretation of IPCC GHG manuals and methods.

***Activity 3-2.Estimating carbon stock from inventory data.***

Following implementation of Activity 3-1, training will be provided to the FDA staff on standard methods of estimating carbon stocks. A set of measuring protocols suitable will be established using available reference sources. These include the GOFC-GOLD Sourcebook on REDD, K:TGAL Field Guide, IPCC GPG LULUCF, and World Bank's BioCarbon Sourcebook for LULUCF. A Quality Assurance (QA) and Quality Control (QC) system following GPG2000 guidelines will be developed to provide routine checks on data quality, identify and address errors and omissions, and document and archive inventory material and QC activities.

***Activity 3-3. Assess uncertainty in carbon stock estimates.***

In order to develop conservative REDD estimates, inventories consistent with good practice neither significantly overestimate nor do underestimate, while uncertainties are reduced as much as practicable. Due to high spatial variability in tropical forests, assessing uncertainties in Liberia's carbon stock estimates can be more challenging than estimating uncertainties of area derived from activity data. Systematic errors leading to uncertainties in carbon stocks can be reduced by accounting for completeness of the included carbon pools and the representativeness of a particular estimate for a carbon pool.

Two methods of measuring uncertainty are described by the IPCC:

1. IPCC Tier 1 - error propagation
2. IPCC Tier 2 - Monte Carlo simulation

Tier 1 error propagation is a method of combining uncertainties in the activity data and emission factors using an error propagation equation described in Annex I of GPG2000 (Conceptual Basis for Uncertainty Analysis). Methods will be developed to identify correlation among input data and to provide the steps needed to modify equations accordingly.

Tier 2 Monte Carlo simulation demands more input data, but can manage varying degrees of correlation and assess uncertainty in complex models. Given that extensive country-specific data will be available, a statistical software package will need to be assessed and acquired to conduct a Tier 2 analysis.

Initial training will be provided on Tier 1 uncertainty calculation and later progress to Tier 2.

## Activity 4. MRV System Development

### *Activity 4-1. Assess current MRV systems*

A detailed assessment will be conducted on current monitoring systems to facilitate information exchange and capacity building. The assessment will provide helpful information during Liberia's MRV system development stage such as lessons-learned, methodologies, and possibly provide better integration of individual country's MRV systems. Communication on this activity between the governments of Brazil and Liberia has already commenced. The FMU technical coordinator will focus particularly on MRV systems that successfully monitor both deforestation/degradation and carbon stocks.

### *Activity 4-2. Develop MRV framework*

Members of the NCCSC and the FMU will ultimately be responsible for developing the MRV framework with contributions from established supporting partners and expert consultation, but an intensive assessment will be required to ensure that Liberia's MRV system will be able to monitor the proposed REDD+ strategy—this focuses on logging, fuelwood, and agricultural intensification. The MRV framework will consider the accepted principles and procedures of estimating and reporting the emissions and removals criteria specified by the IPCC. Additional resources to facilitate framework and design are made available through the 2006 IPCC GL AFOLU, 2003 IPCC GPG LULUCF and the COP-15 GOFC-GOLD Sourcebook on REDD.

The following components will be considered for the MRV framework:

a. Satellite imagery will be used to map forest cover and changes in areal extent. Liberia will apply "wall-to-wall" mapping using Landsat or similar resolution imagery that meets the mapping criteria required to classify Liberia's forest definition. Liberia proposes a mapping interval of five years using circa image dates of + 2 years to ensure cloud-free imagery. This interval may be adjusted according to the availability of PALSAR or similar RADAR data that can be used to alleviate the temporal and radiometric issues caused by extensive cloud cover. Maintaining high map accuracies with "wall-to-wall" mapping is very feasible for Liberia. The small geographic extent of the country limits the numbers of scenes required and therefore reduces the spatial variability that can lead to mapping error.

b. Forest base maps have been developed for 1990-2000-2005. A benchmark and reporting period will be established through the working group.

c. A field inventory system will need to be developed and evaluated, taking in consideration the pre- and post- training capacity, costs, feasibility, scale, timing, and data availability.

d. Liberia has expressed interest in creating a centralized data repository that can facilitate data accessibility and transparency. An assessment will be conducted on developing a database system that will store and maintain the most updated activity and emission factors data. QA/QC, data analysis, and reporting will also be incorporated into this open system.

e. Accounting and reporting of GHG emissions must be independently verified. Reporting periods will be defined and provided at various levels if appropriate (i.e., national and sub-national).

***Activity 4-3. Establish database system***

The development and implementation of a data storage system will be assessed. A data storage system will be designed to centralize and manage of data relevant to the MRV system. This system will facilitate data analysis and reporting, QA/QC of inventories, and increase transparency by openly providing source data. The system will be used to store and maintain updated activity and emission factors data such as satellite imagery and biomass inventory. Systematic updates to the database will include newly acquired and preprocessed satellite imagery (e.g., Landsat), field data, and geospatial drivers data.

***Activity 4-4. Attend and host workshops***

Select members of the FMU and the NCCSC will attend international workshops held on MRV systems. Recent workshops held by UN-REDD Programme such as "Measurement, reporting, and verification (MRV), a roadmap for implementation at the country level" are designed to bring representatives from pilot and partner countries together to share their experiences on the challenges and successes of implementing a MRV system. These venues are also conducive to developing collaborative relationships between international groups.

Any participants attending workshops overseas will also present their findings at a locally hosted workshop. This will provide an opportunity for multiple stakeholders to understand the function of MRV systems or remain updated on the latest developments.

***Activity 4-5. Test and refine MRV system***

The MRV framework developed in Activity 3-2, which includes monitoring activity data and changes in carbon stocks within a REDD+ strategy, will be tested at demonstration sites and revised as necessary to ensure that the finalized MRV plan is functional and of high quality. The monitoring system will ultimately allow for national-scale reporting of carbon emissions and removals achieved during the selected reporting period as compared to the reference scenario. During future monitoring periods, scheduled assessments will be conducted in order to refine the MRV system with the most up-to-date methodologies. Refinement will allow for improved performance monitoring of REDD+ activities at the national to regional scales. After this initial testing phase, appropriate carbon stock data will be collected during each monitoring period

following the methods established in Component 3. Results of each monitoring event will be documented and reviewed by national and international experts. A conceptual framework, to be completed as part of REDD+ readiness is provided as guidance, below:

**Table 20 Conceptual overview of developing the MRV work plan**

| Major Elements of MRV System | | | | | |
|---|---|---|---|---|---|
| **Time frame** | **National Forest Inventory** | **Remote sensing of land cover change and forest degradation** | **Carbon density data** | **Non-carbon multiple benefits** | **Governance and stakeholders participation** |
| Current country MRV capacity | Some technical capacity in forest inventories from previous studies but need to improve techniques and carry out a comprehensive re-census of the inventory | Forest base maps have been developed for 1990-2000-2005. A 2010 update is needed to improve and update the deforestation baseline estimation. | Preliminary estimations were conducted on existing data. This will need to be refined based on the proposed re-census of the forest inventory. | REDD+ SES have been introduced and adopted in principle but need locally-specific development and testing | MRV plans have been presented during national REDD workshop and validation but further efforts are needed to increase understanding and gain buy-in |
| Near-term MRV capacity objectives | Assess current comments on inventory gaps; determine reporting tier and significant carbon pools; determine options for updated forest inventory; determine appropriate protocols; funding needs and financing options | Establish FMU; develop appropriate partnerships for capacity building; Train staff; establish database | Develop inventory teams; carry out trainings in collaboration with the Katoomba Group PES Incubator in Ghana; incorporate information into MRV database | Work with SESA and REDD + SES teams to identify benefits and appropriate monitoring principles; methods of measurement and process | Develop appropriate communication materials, maps and information for consultation and stakeholder participation, carry out information as part of C&P |
| Longer-term MRV capacity | Carry out comprehensive forest | Apply wall to wall forest mapping in 2 | Develop national carbon density mapping | Integrate multiple benefit | Carry out regular C&P and ensure |

| | | | | | |
|---|---|---|---|---|---|
| objectives | inventory; ensure regular updates to these assessments | year intervals or scene based updates if data availability allows; develop mapping products and reports; maintain regular monitoring protocol and database | products using ground based data; build capacity in satellite imagery-based carbon mapping; validate products and maintain regular monitoring protocols and database | monitoring into overall MRV database or develop additional database as appropriate; maintain regular monitoring protocols and database | feedback mechanism included in MRV system |

## Summary of Main Activities and proposed Budget

1. **Forest Monitoring Unit (FMU)**

   1-1 Establish the Forest Monitoring Unit and assigning staff**.**

2. **Geographic Information Systems (GIS)**

   2-1 Acquire software and hardware for national-scale mapping.
   2-2. Develop standardized mapping methodology for developing activity data**.**
   2-3. Map land cover change with multi-temporal Landsat imagery.
   2-4. Assess Map Accuracy

3. **Emission Factors**

   3-1 Estimating carbon stock from inventory data.
   3-2. Assess uncertainty in carbon stock estimates.

4. **MRV System Development**

   4-1. Assess current MRV systems
   4-2. Develop MRV framework
   4-3. Establish database system
   4-4. Attend and host workshops
   4-5. Test and refine MRV system

5. **Capacity Strengthening and related Technical Assistance**

   5-1 Build FDA technical capacity in forest inventory data collection.
   5-2 Build technical capacity of FMU staff in GIS

| **Budget 4a - Summary of Emissions and Removals** | | | | | | |
|---|---|---|---|---|---|---|
| **Main Activity** | **Sub-Activity** | **Estimated Cost (in thousands)** | | | | |
| | | **2012** | **2013** | **2014** | **2015** | **Total** |

| | | | | | | |
|---|---|---|---|---|---|---|
| **1. Forest Monitoring Unit** | 1-1 . Establish the Forest Monitoring Unit and assigning staff. | $40 | 15 | | | **$55** |
| **2. Geographic Information Systems** | 2-1 Acquire software and hardware for national-scale mapping. | $40 | 35 | | | **$75** |
| | 2-2. Develop standardized mapping methodology for developing activity data. | $25 | 25 | | | **$50** |
| | 2-3. Map land cover change with multi-temporal Landsat imagery. | $25 | 25 | | | **$50** |
| | 2-4. Assess Map Accuracy | $40 | $40 | $40 | $40 | **$160** |
| **3. Emission Factors** | 3-1. Estimating carbon stock from inventory data. | $10 | $10 | $10 | | **$30** |
| | 3-2. Assess uncertainty in carbon stock estimates. | $10 | $10 | $10 | | **$30** |
| **4. MRV System Development** | 4-1. Assess current MRV systems | $25 | | | | **$25** |
| | 4-2. Develop MRV framework | $30 | $15 | $10 | | **$55** |
| | 4-3. Establish database system | $25 | $15 | $10 | | **$50** |
| | 4-4. Attend and host workshops | $10 | $10 | $10 | $10 | **$40** |
| | 4-5. Test and refine MRV system | | 10 | $20 | $10 | **$40** |
| **5. Capacity Strengthening and related Technical Assistance** | 5-1. Build FDA technical capacity in forest inventory data collection. | $20 | $45 | $35 | | **$100** |
| | 5-2 Build technical capacity of FMU staff in GIS | $25 | $25 | $25 | $10 | **$85** |
| | **Total** | **$325** | **$280** | **$170** | **$70** | **$845** |
| | Domestic Government | $0 | $0 | $0 | $0 | **$0** |
| | Other Development Partner | 325 | 280 | 170 | 70 | **$845** |
| | **Sub-total Non-FCPF** | $325 | $280 | $170 | $70 | **$845** |
| | **FCPF** | **$0** | **$0** | **$0** | **$0** | **$0** |

# 4b. Other Multiple Benefits and Impacts

## Introduction

Increased forest cover provides direct benefits that include wildlife habitat, ecotourism industry, soil conservation and sustainable agriculture, protection of water resources, and availability of non-timber forest products to local communities. Liberia's unique biodiversity, including rare and threatened species such as the western chimpanzee, the pygmy hippo, the forest elephant, zebra duiker, black and white colobus among others, is largely forest-based and is under threat due to the continued clearance and degradation of the country's remaining forest blocks. In addition, most of Liberia's rural population (roughly one third of the national population) is dependent on forests and their various products and ecosystem services for their livelihoods. Forests play an important role as safety net for vulnerable and marginalized people, especially those living around forest areas, and for the broader community during times of stress. An effective REDD+ strategy will have significant social and environmental benefits beyond climate change mitigation, both at a national and local level. However, individuals and/or interest groups could be negatively impacted by the proposed REDD+ strategies and these impacts must be identified and mitigated. For example, increasing forest cover area and stopping agricultural encroachment will leave less land available for food crop production, while addressing unsustainable use of forests will reduce the quantities of forest products available for harvest in the short term. Recognizing growing awareness at both international and national levels of the need for effective social and environmental safeguards, this initiative aims to define and build support for a higher level of social and environmental performance from REDD+.

## Existing social and environmental monitoring systems in Liberia

There are many NGOs in Liberia currently collecting socioeconomic data for their work. While the Ministry of Planning is working to understand the work of various NGO's through the NGO policy development and coordination meetings, little progress has been made to date to consolidate existing information into a centralized system. LISGIS currently houses the recent national census data and would therefore be an appropriate clearing house for all additional socio economic information. Most recent environmental and biodiversity information is being collected by the private sector as part of their ESIAs. While reports of this work do exist it would be useful to develop a consolidated information repository to ensure easy access to this information.

A multi-stakeholder committee will be created to oversee monitoring and assessment of the social and environmental impacts and also of the governance aspects of Liberia's REDD+ program, this group will work hand in hand with the Forest Monitoring Unit mentioned in REDD + Management arrangements in 1a to achieve synergies and ensure monitoring of all REDD+ benefits. The committee will include representatives of key stakeholder groups including government, community based organizations, social and environmental NGOs and private sector. This committee will approve the selection of indicators that will be used for monitoring, approve the assessment process and also approve the reports that assess performance against the

indicators. Liberia-specific indicators will be developed based on the framework of principles and criteria of the REDD+ Social & Environmental Standards through a participatory process prior to approval by the committee. This will involve workshops with local communities and outreach to NGOs and other stakeholders to facilitate input as well as a web-based consultation. Once the indicators have been defined, a draft report will be compiled of information relating to each indicator. The draft report will be reviewed by stakeholders through further workshops and web-based consultations prior to approval by the committee and publication. This multi-stakeholder assessment of performance against country-specific indicators will strengthen the quality and credibility of reporting on how safeguards are addressed and respected and how social and environmental benefits are being delivered.

**Objective**

Component 4b outlines development of a monitoring and reporting system for social, environmental and governance impacts of increased forest cover resulting from implementation of REDD+ activities. Component 4b builds on the Strategic Environmental and Social Assessment (SESA) described in component 2d. The SESA will use participatory processes and diagnostic tools to identify potential social and environmental impacts associated with reducing deforestation and degradation and feed back to help to strengthen the design of REDD+ activities. The SESA will help to identify likely positive and negative impacts which can guide the identification of indicators for on-going monitoring. The Environment and Social Management Framework (ESMF) elements of the SESA will provide the basis for defining and monitoring an action plan to mitigate risks related specifically to WB safeguard policies. Liberia has also indicated an interest in developing and applying the REDD+ Social & Environmental Standards (REDD+ SES) that have been developed with facilitation by CARE and the Climate, Community and Biodiversity Alliance (CCBA). These standards were developed through a series of stakeholder workshops including in Liberia and provide a framework of key issues to be addressed to ensure high social and environmental performance of REDD+ activities in Liberia. Using the REDD+ SES involves the definition of country-specific indicators through a participatory multi-stakeholder process and development of an assessment process including information collection, review by stakeholders and transparent reporting. The standards provide a framework and participatory process for monitoring of social and environmental benefits and impacts, including governance.

**Activity 1. Monitoring social and environmental impacts**

This activity will build upon the participatory processes and diagnostic tools described in 2d, and will also build upon the social, environmental and governance monitoring framework and participatory interpretation and assessment process provided the by REDD+ SES. A system for assessment of social, environmental and governance impacts, as well as additional multiple benefits of REDD will be developed and implemented through the following steps:

1. identify potential social and environmental impacts (positive and negative) of specific interventions through the SESA and country-specific interpretation of REDD+ SES, including identification of key national sustainable development, biodiversity and good governance priorities to clarify how REDD can deliver multiple benefits most effectively.

2. Identify stakeholders and their roles (individuals, groups, communities, institutions etc.) including any vulnerable and marginalized groups that may be at risk from REDD.
3. Select key principles and indicators
4. Identify capacities (including local capacities) and resources for monitoring and requirements (training, equipment, tools etc.)
5. Collect relevant baseline data based on selected indicators and assess.
6. Design a periodic data collection system to monitor change
7. Identify key stakeholder group and necessary communication mechanisms to ensure participation in monitoring processes

**Activity 2. Monitoring governance factors relevant to REDD implementation**

The SESA will provide a governance baseline using the analytical framework and indicators referred to in 2d. The monitoring system will need to go beyond governance indicators to include monitoring change in carbon stock resulting from governance interventions.

The monitoring function will be overseen by the NCCSC and implemented by LISGIS (with possible support from EPA). Design of the monitoring system, indicator selection, data collection and analysis will involve stakeholders in the form of a REDD Technical Working Group. Specialist data collection will be required to provide information to support community and other stakeholder assessments.

**Activity 3. Assessment and Refinement**

A participatory monitoring process (such as those promoted through REDD+ SES) involving all relevant stakeholder groups will be developed to monitor and evaluate the environmental, social and other impacts/benefits of the program to date. Stakeholders will be invited to review draft monitoring reports to strengthen the credibility of the results.

Flow = Technical institutions > REDD TWG > REDD+ SES stakeholder group> REDD TWG>NCSSC

**Summary of Main Activities and proposed Budget**

1. **Monitoring Social and Environmental (S&E) Impacts**

   1-1 Identify potential social and environmental impacts (positive and negative) of specific interventions through the SESA and country-specific interpretation of REDD+ SES, including identification of key national sustainable development, biodiversity and good governance priorities to clarify how REDD can deliver multiple benefits most effectively.

   1-2 Identify stakeholders and their roles (individuals, groups, communities, institutions etc.) including any vulnerable and marginalized groups that may be at risk from REDD.

1-3 Identify key stakeholder group and necessary communication mechanisms to ensure participation in monitoring processes
1-4 Select key principles and indicators
1-5 Identify capacities (including local capacities) and resources for monitoring and requirements (training, equipment, tools etc.)
1-6 Collect relevant baseline data based on selected indicators and assess.
1-7 Design a periodic data collection system to monitor change

2. **Monitoring Governance Factors**
   2-1 Design of the monitoring system, indicator selection, data collection and analysis
   2-2 Specialist data collection to provide information to support community and other stakeholder assessments
3. **Assess and Refine S&E Monitoring System**
   3-1 Develop participatory monitoring process involving all KSGs
   3-2 Generate S&E reports
   3-3 Stakeholder review of draft reports

**Budget 4b: Summary of Other Multiple Benefits and Impacts**

| Main Activity | Sub-Activity | Estimated Cost (in thousands US$) | | | | |
|---|---|---|---|---|---|---|
| | | 2012 | 2013 | 2014 | 2015 | Total |
| 1. Monitoring S & E Impacts | 1-1. Identify potential environmental and social impacts | $10 | | | | $10 |
| | 1-2. Identify stakeholders and roles | $10 | | | | $10 |
| | 1.3 Identify communication mechanisms needed | | | | | $0 |
| | 1-4. Select key indicators | $10 | | | | $10 |
| | 1-5. Identify capacities and technical resources | $10 | | | | $10 |
| | 1-6. Collect and assess baseline data | $10 | $10 | | | $20 |
| | 1-7. Design data collection system | | $20 | $10 | | $30 |
| 2. Monitoring Governance Factors | 2-1 Design of the monitoring system etc | $20 | | | | $20 |
| | 2-2 Specialist data collection etc | | $10 | $10 | $10 | $30 |
| 3. Assess and Refine S&E Monitoring System | 3-1 Develop participatory monitoring process involving all KSGs | | | $10 | | $10 |
| | 3-2 Generate S&E reports | | | $10 | $10 | $20 |
| | 3-3 Stakeholder review of draft reports | | | $10 | $10 | $20 |

| | | | | | |
|---|---|---|---|---|---|
| **Total** | **$70** | **$40** | **$50** | **$30** | **$190** |
| Domestic Government | $0 | $0 | $0 | $0 | **$0** |
| Other Development Partner | | | | | **$0** |
| **Sub-total Non-FCPF** | $0 | $0 | $0 | $0 | **$0** |
| **FCPF** | **$70** | **$40** | **$50** | **$30** | **$190** |

# Component 5: Schedule and Budget

In response to the Resolution from the Participants' Committee (no.9) held at Oslo in June 2011, the R-PP has been thoroughly reviewed and revised. The total estimated cost now stands at US$7,730,000 over four years, 2011-15.The total funding requested from the FCPF is US$3,400,000. A further $2,890,000 will be sought from development partners, including the World Bank, Fauna and Flora international (FFI), Conservation International (CI), the World Conservation Union (IUCN), UN REDD and the International Fund for Agriculture and Development (IFAD). A Government contribution of $320,000 over four years has been assumed, mainly for seconded staff.

The summary budget below, which brings together the budget tables from all components and sub-components, gives details of the annual schedule and breakdown by components. [91]

| Summary Budget over all Components | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| **Component** | **Sub-component** | **2012** | **2013** | **2014** | **2015** | **Total Cost** | **FCPF Budget** | **Planned Co-financing**[92] |
| **1) Organise and Consult** | 1a National Readiness Management Arrangements | $630 | $395 | $265 | $250 | $1,540 | $900 | $640 |
| | 1b Information sharing and early dialogue with key stakeholder groups | $243 | $90 | $90 | $90 | **$513** | $433 | $80 |
| | 1c Consultation and participation process | $168 | $98 | $68 | $73 | **$407** | $407 | $0 |
| **2) REDD strategy preparation** | 2a Assessment of land use, forest law, policy and governance | $90 | $450 | $350 | $195 | **$1,085** | $0 | $1,085 |
| | 2b REDD+ strategy options - forestry | $80 | $270 | $180 | $120 | **$650** | $0 | $650 |
| | 2b REDD+ strategy options - agriculture | $15 | $245 | $175 | $175 | **$610** | $0 | $610 |
| | 2b REDD+ strategy options - energy | $115 | $170 | $85 | $50 | **$420** | $0 | $420 |

[91] The budget tables are extracts from Annex 18 , which is an Excel Workbook version of the budget.

[92] Co-financing by donors and GoL contribution

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | 2c REDD+ implementation framework | $20 | $125 | $30 | $10 | **$185** | $185 | $0 |
| | 2d Social & Environment Impacts (SESA) | $110 | $115 | $75 | $0 | **$300** | $300 | $0 |
| | 2(e) Finalisation of National REDD Strategy document | $0 | $0 | $0 | $150 | **$150** | $150 | $0 |
| **3) Develop reference level or scenario** | Reference Level or Scenario | $140 | $225 | $90 | $0 | **$455** | $455 | $0 |
| **4) Design a Monitoring System** | 4a Emissions and removals | $325 | $280 | $170 | $70 | **$845** | $0 | $845 |
| | 4b Other multiple benefits & impacts | $70 | $40 | $50 | $30 | **$190** | $190 | $0 |
| **6) Design an M&E framework** | Monitoring & Evaluation | $95 | $75 | $55 | $55 | **$280** | $280 | $0 |
| | Contingency[93] | | | | | **$100** | $100 | $0 |
| **Total Funding** | | **$2,101** | **$2,578** | **$1,683** | **$1,268** | **$7,730** | **$3,400** | **$4,330** |

[93] Contingency of $100,000 applied for FCPF funding

# Component 6: Design a Program Monitoring and Evaluation Framework

## Introduction

The creation of the National Climate Change Steering Committee has provided a multi-sectoral body at the highest level to review all climate change related activities. As such this group will be able to oversee and review REDD+ activities and results as set out in the Program Monitoring and Evaluation Framework. Liberia already has several fairly robust monitoring systems in place such as: the Chain of Custody for Forestry which involves the independent monitoring of SGS; developing FLEG-T and Voluntary Partnership Agreement programmes; and a PRS monitoring unit within the Ministry of Planning and Economic Affairs- LRDC. This multi-sectoral group will also be able to advise on a practical approach to designing an M&E framework which will improve efficiency and transparency of the program without duplicating efforts. During this phase of implementation the RTWG will work with the NCCSC and the NCCS to review the various existing national M&E programs such as the ones developed for the forestry and the poverty reduction strategy and the national visioning process to evaluate the linkages that can be created. We will also evaluate the opportunity and need for hiring an M&E specialist within the NCCS to oversee this work.

Below we lay out an iterative plan for M&E of the REDD+ initiative in Liberia. This will be further refined during the next phase of work as described above. During this period we will also develop a set of guiding principles for REDD+ Monitoring and Evaluation including guidelines for baseline data gathering and reporting requirements for all REDD + activities. We will seek additional support from the Climate Community and Biodiversity Alliance team to help develop these principles.

**Table 21 Monitoring Framework**

| Expected Results | Indicators | Means of Verification | Risks and assumptions |
|---|---|---|---|
| *From country Results Framework or R-PP components* | *From Results Framework or R-PP components.*<br>*Baselines are an indicator at the start of the joint programme* | *From identified data and information sources* | *Summary of assumptions and risks for each result* |
| **1(a) National Readiness Management Arrangements** | 1. Secretariat fully established, staff recruited and operational<br>2. RTWG meeting regularly and providing appropriate guidance<br>3. Carbon consultative group established and meeting<br>4. REDD+ management arrangements (roles and responsibilities) are developed between various institutions | -Meeting minutes<br>-Staff Contracts completed<br>-Attendance lists<br>-MOUs for REDD management<br>-Quarterly and Annual reports<br>-NCCSC review meeting records | Roles and responsibilities are still very preliminary and will need agreement among various government entities. This also assumes appropriate funding will be sourced at the appropriate time for these actions |
| **1(b) Information sharing and Early Dialogue with key stakeholder groups** | 1. Target groups are fully identified<br>2. Platform established for continuous for dialogue<br>3. Opportunity for feedback and adjustment exists<br>4. Information sharing tools developed<br>5. awareness raised among stakeholder | -meeting minutes and attendance lists<br>-stakeholder mapping document<br>-informational materials: leaflets, posters, radio shows, banners etc.<br>- pre and post awareness survey | Assumes that Targets are appropriately identified to achieve successful implementation but there is a risk that key groups could be missed especially forest dependent communities. There is a risk of raising expectations at the local level without being able to deliver. |
| **1(c) Consultation and Participation Process** | 1. REDD Regulations drafted through a transparent consultative process, vetted among all stakeholders, and then sent for legislative review | -Consultation plan<br>-Consultation Reports freely available through various means; website, fliers etc. | Risk that opinions can be manipulated by various interest groups<br>Risk that local opinions could be |

| | | | |
|---|---|---|---|
| | 2. FPIC processes are institutionalized within the national REDD Regulations | -Community meeting minutes<br>-Draft Regulations | swayed towards REDD without full understanding of the mechanism<br>Consultations may slow or block implementation processes |
| **2(a) Assessment of Land Use, Forest Law, Policy and Governance** | 1. Joint land use suitability assessment by FDA, MLME and MoA, including land use valuation<br>2. 4x regional surveys of occurrence and impact of shifting agriculture<br>3. Survey of chainsaw logging recovery rates<br>4. Survey of biomass stocking and recovery rates after logging | - Validation at stakeholder workshop and endorsement by cabinet<br>- Published studies available on FDA website | These studies address key information gaps which desktop studies alone cannot fill.<br>Field work needs to be done when access is possible and forward planning will be essential. |
| **2(b) REDD-plus strategy option** | 1. Startup funding is sufficient to incentivize participants until market / fund mechanisms are in place to provide REDD+ payments<br>2. A commercial forest has become a demonstration model for adoption of reduced impact logging<br>3. FDA regulations and chain of custody effective in one forest area supplying Monrovia<br>4. One carbon concession established on set-aside production forest<br>5. At least 25% transfer away from shifting cultivation in target area<br>6. All plantation | - Quarterly reports by sectoral ministries (FDA, MoA, MLME), independently verified by three specialist NGOs | Although the policy environment and political will are conducive, implementation capacity and technical know-how are weak.<br>Engagement and motivation of shareholders are preconditions of success (commercial loggers, chainsaw loggers, subsistence farmers, plantation holders, wood energy industry) |

| | | | |
|---|---|---|---|
| | development sited on degraded forest<br>7. Wood energy licensing and permit system effective in Monrovia | | |
| **2(c) REDD-plus Implementation Framework** | 1. Implementation framework for REDD+ developed and approved<br>2. Laws and regulations are compatible or adapted to facilitate REDD+ implementation<br>3. Stakeholder capacity needs are identified and plans are in place to address these needs<br>4. Funding for REDD+ implementation is achieved | -Framework document<br>-Draft laws and regulations<br>-Capacity needs report<br>-Training materials<br>-Additional funding commitments | Successful REDD + implementation is dependent on achieving appropriate capacity and funding which is not yet secured or in place. There are currently many laws in place that facilitate REDD but there may be gaps or loopholes in these legislations that could create complex issues.<br>There is a risk that is frameworks are not robust enough Carbon projects and accounting could end up managed inappropriately |
| **2(d) Social and Environmental Impacts** | 1. FPIC processes are institutionalized within the national REDD Regulations<br>2. REDD+ Framework and regulation appropriately identifies and addresses Social and Environmental impacts<br>3. SEIA are being carried out<br>4. SEIA recommendations are being included in REDD Management<br>5. Impacts of REDD are well integrated in to landscape | -EIA and SEA reports<br>-draft regulations<br>-adaptive management processes in place | SEIA does not identify key Environmental and social issues.<br>Adaptive management is not properly addressing issues identified<br>Expectations may not be fully met by REDD+ implementation and could lead to social conflict if not appropriately addressed |

| | | | |
|---|---|---|---|
| | management | | |
| 3**. Develop a reference Level or Scenario** | 1. Data on forest areas, land cover change and carbon density is collected<br>2. Reference scenario is being refined as REDD + strategy is developed | -GIS databases<br>-maps<br>-scenario approved by 3rd party verifiers | Scenario models overestimate carbon amounts and removals<br>Scenarios are dependent on national land use decision making which is not coordinated as of yet |
| **4(a) Emissions and Removals** | 1. Biomass plots established and being regularly monitored and measured<br>2. Sufficient satellite imagery acquired and synthesized<br>3. Forest cover/monitoring database established<br>Capacity built to analyze data appropriately | -maps and documents produced<br>-verification process taking place and peer reviewed<br>-training program in place and ongoing | Assumption is that capacity will be sufficient to conduct MRV<br>Technical infrastructure is in place for MRV including acquisition of cloud free remote sensing data |
| **4(b) Other Multiple Benefits and Impacts** | 1. Other benefits are appropriately identified by stakeholders<br>2. Appropriate monitoring system established<br>3. Training provided<br>4. Partnership initiated with CCBA with National Social and Environmental Safeguards program<br>5. Costs/benefit analysis refined for various land use options | -monitoring plan for additional benefits<br>-Social and Environmental safeguards assessment reports<br>-stakeholder meeting minutes/attendance etc.<br>-CCBA meeting minutes/ draft national principles | Risk that unforeseen impacts are missed by monitoring system<br>REDD funding may not be sufficient to sustain multiple benefits |

| | | | |
|---|---|---|---|
| **5. Schedule and Budget** | 1. Implementation plan in place and being adhered to<br>2. Budget being appropriately allocated and monitored<br>3. Procurement procedures are clarified and easily addressed in a timely fashion<br>4. METT developed for implementation | -work plans<br>-regular performance and financial reports<br>-receipts verified<br>-METT system I place | Complicated procurement procedures limit implementation<br>Risks of financial mismanagement or misuse of REDD funds<br>Consultations and adaptive management may require changes in implementation |

**Summary of Main Activities and proposed Budget**

Several of the preceding components of the R-PP address the need for monitoring of R-PP interventions and impacts. These include:

1c Stakeholder Consultation and Feedback Forums

2c REDD-plus Implementation Framework

2d Social and Environmental Assessment of Impacts (SESA)

4a Monitoring System for Emissions and Removals

4b Monitoring System for Other Multiple Benefits and Impacts (Social & Environment Impact monitoring)

Component 6 will provide a coherent framework for monitoring and the basis for evaluation through:

1) **Developing an M&E system to align with national M&E for other sectors**
2) **Developing specific indicators with stakeholders**
3) **Independent review/finalization**
4) **Carrying out M&E for R-PP**
5) **Capacity Strengthening and related Technical Assistance**

5-1) One (1) RIU staff will receive short term training (e.g. 2 months) from a Regional Institution in PM&E;

5-2) One (1) specialist In monitoring and Evaluation will be recruited for 12 months to:

- Provide continuous on the job training supplemented by formal training session;
- Assist RIU with M&E and reporting;

| **Budget 6: Summary of Program M&E Activities** | | | | | | |
|---|---|---|---|---|---|---|
| **Main Activity** | **Sub-Activity** | **Estimated Cost (in thousands)** | | | | |
| | | **2012** | **2013** | **2014** | **2015** | **Total** |
| **1) Develop an M&E system to align with national M&E for other sectors** | Consultancy, Meeting, coordination, NCCSC review and workshops | $20 | | | | **$20** |
| **2) Develop specific indicators with stakeholders** | Consultancy and stakeholder consultations | | $20 | | | **$20** |
| **3) Independent review/finalization** | Consultancy and stakeholder consultations | | $20 | $20 | $20 | **$60** |
| | External Auditing | | $5 | $5 | $5 | **$15** |
| **4) Carry our M&E** | Consultancy and reporting | | $30 | $30 | $30 | **$90** |
| 5) **Capacity Strengthening and related Technical Assistance** | Short tem training in M&E | $15 | $0 | $0 | $0 | **$15** |
| | M & E Specialist for NCCSC (Regional or national TA) | $60 | $0 | $0 | $0 | **$60** |
| | **Total** | **$95** | **$75** | **$55** | **$55** | **$280** |
| | Domestic Government | $0 | $0 | $0 | $0 | **$0** |
| | Other Development Partner | 0 | 0 | 0 | 0 | **$0** |
| | **Sub-total Non-FCPF** | $0 | $0 | $0 | $0 | **$0** |
| | **FCPF** | **$95** | **$75** | **$55** | **$55** | **$280** |