

Republic of Liberia

LIBERIA FOREST SECTOR PROJECT

**ENVIRONMENTAL AND SOCIAL
MANAGEMENT FRAMEWORK (ESMF)**

FINAL DRAFT REPORT

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ACRONYMS

CFMA	Community Forest Management Agreement
CI	NGO Conservation International
COPAN	Consolidation of the Protected Area Network
CRL	Community Rights Law
CSO	Civil Society Organization
EA	Environmental Assessment
EPA	Environmental Protection Agency
EPML	Environmental Protection and Management Law
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
EXPAN	Expansion of the Protected Area Network
FCPF	Forest Carbon Partnership Facility
FDA	Forest Development Authority
FIFES	USAID funded project - Forest Incomes for Environmental Sustainability Project
FIP	Forest Investment Program
FLEGT	Forest Law Enforcement, Governance and Trade program
FTI	Forestry Training Institute
FUP	Forest Use Permit
GDP	Gross Domestic Product
GEF	Global Environment Facility
GoL	Government of Liberia
GoN	Government of Norway
IDA	International Development Association
IFC	International Financing Cooperation
IUCN	International Union for Conservation of Nature
LEITI	Liberia Extractive Industry Transparency Initiative
LISGIS	Liberia Institute of Statistics and Geo-Information Services
MLME	Ministry of Lands, Mines, and Energy
MRV	Measurement, Reporting and Verification
MSME	Micro Small Medium Enterprise
NCCS	National Climate Change Secretariat
NCCSC	National Climate Change Steering Committee
NFRL	National Forest Reform Law
NGO	Non-governmental Organization
NORAD	Norwegian Agency for Development Cooperation
NTFP	Non-timber Forest Product
OP	Operational Policy
PPP	Public Private Partnership
PRS	Poverty Reduction Strategy
PUP	Private Use Permit

REDD+	Reduced emissions from deforestation and forest degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks
RIU	REDD+ Implementation Unit
R-PP	REDD+ Readiness Preparation Proposal
RTWG	REDD+ Technical Working Group
SESA	Strategic Environmental and Social Assessment
SFM	Sustainable Forest Management
SIS	Safeguards Information System
USAID	United States Agency for International Development
VPA	Voluntary Partnership Agreement
WB	World Bank

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EXECUTIVE SUMMARY

The Liberia Forest Sector Project (LFSP) is part of the Liberia Forest Program supported by the partnership established between the Government of Liberia (GoL) and the Government of Norway (GoN) with respect to the (i) the proposed forest sector investment and technical assistance project (ii) a rubber plantations emergency operation jointly with IFC to support the renewal of rubber plantations and, (iii) a results-based carbon payment operation for verified emission reductions that will pay for the emissions reductions and carbon sequestered by the activities done in Phase III.

Specifically, the LFSP will support the following components:

- Component 1. Strengthened Regulatory and Institutional Arrangements for Implementation of REDD+
- Component 2. Strengthened Management of Targeted Forest Landscapes
- Component 3. Forest Monitoring Information System
- Component 4. Project Monitoring and Management

The relevant national policies related to the proposed project include the following:

- National Biodiversity Strategy and Action Plan, 2004;
- National Forestry Policy and Implementation Strategy, 2006;
- National Forest Management Strategy, 2007;
- Land Rights Policy, 2013;
- Land Administration Policy, 2015;
- Guidelines for Forest Management Planning in Liberia (2007);
- National Energy Policy, 2009;
- National Environmental Policy, 2003; and
- National Environmental and Occupational Health Policy, 2010.
- Draft Revised National Biodiversity Strategy and Action Plan, (2015), and
- Liberia Protected Areas Network Strategic Plan (2008)

The key activities for which mitigation actions will be required may comprise the following:

- Allocation and development of selected forest areas into protected area status
- Establishment of biological corridors
- Territorial demarcation
- Training of forest rangers
- Building of offices
- Pilot projects on alternative livelihoods
- Development of domestic market for charcoal and lumber business
- Capacity Building- Extension and Communications

Projects concerning capacity building and extension and communication are deemed to be 'soft projects' and may not be associated with any physical infrastructural development.

Mitigation measures have been provided to address all identified adverse impacts. This includes Environmental Rules for Contractors to follow during the construction of small buildings (such as protected area headquarters) and other project-supported small civil works.

The formal environmental approval and permitting processes will be guided by both the Liberia EIA procedures as given by the EPA Act (2003) and the World Bank safeguard policy OP4.01 which provides guidance on the environmental assessment procedures for WB funded projects. Overall, the FDA will ensure that the ESMF is implemented, however the EPA will play a significant role, and take the lead in ensuring that Liberian law is respected while the project also follows the required environmental and social standards and safeguards.

The ESMP has outlined mechanisms for the screening of proposed project interventions, and identified potential environmental and social impacts and their subsequent management. The Plan has also described the working arrangements between the FDA and EPA as well as other relevant institutions for the implementation of proposed safeguard measures and indicated requirements for institutional capacity building. The ESMP will be included in the project's Manual of Operations. EPA will play a key role in ensuring compliance to the Environmental Protection Act (2003) as well as the applicable World Bank safeguards policies.

Monitoring plans have been prepared to assist in determining the progress of implementation of the safeguard provisions. Verifiable monitoring indicators have been provided including the responsible institutions/ persons.

Institutions will need to be strengthened to be able to effectively participate in the project and their training needs as well as required logistics should be made available for the project to be successful. A training budget has been suggested and a total amount on average US\$249,200 per year will be required to implement the ESMF.

1.1 INTRODUCTION

The Forest Sector Program is a key step in the Government of Liberia's long standing commitment to reforming the forest sector following a "Three C's (3Cs)" approach that aims to balance and integrate community and commercial uses of forests as well as conservation methods and conduct efforts to Reduce Emissions from Deforestation and forest Degradation, and foster conservation, sustainable management of forests, and enhancement of forest carbon stocks (REDD+).

The proposed project is expected to have environmental and social impacts that are highly positive overall. Consistent with the intent and approach of the REDD+ program, this project seeks to reduce deforestation and forest degradation within Liberia. It would do this by promoting improved planning of forests and adjacent landscapes, long-term conservation of protected forest areas, and sustainable management of community forests and other wooded landscapes. The project would finance a variety of planning, capacity building, and on-the-ground interventions to promote the conservation and sustainable use of Liberian forests.

The project would support sustainable forest management and environmentally compatible agricultural activities that are intended to reduce the ongoing pressures for deforestation and forest degradation. It would not finance any large-scale civil works (such as roads) that could be environmentally problematic. From a social standpoint, the project is intended to benefit forest-based communities by strengthening their capacity to manage designated Community Forests, promoting improved benefits-sharing from different types of forest-based activities, and supporting the development of more sustainable forest-based livelihoods.

The project will finance technical assistance, works, goods, workshops, training, services, and operational costs to support the implementation of the REDD+ strategy; focusing on investments for early implementation of strategic land use options in targeted landscapes. The project will also support the development of institutional capacities, which will strengthen the enabling environment to sustain decentralized implementation of sustainable forest sector management, with the engagement of local communities. As part of the enabling environment, the proposed project will also include the implementation of a Measurement, Reporting and Verification (MRV) system to track the country's forest cover and progress made in the reduction or removal of greenhouse gas (GHG) emissions over time.

1.2 Development Objective

The development objective is to attain an improved management of and increased benefit-sharing in targeted forest landscapes.

It is expected that the project will lead to:

- More areas in targeted forest landscapes managed according to REDD+ strategy;

- Increased number of rural households in targeted forest landscapes earning more cash from forest utilization and management fees and royalties;
- More people in targeted forest and adjacent communities with increased monetary or non-monetary benefits from forest;
- Higher targeted beneficiaries satisfied with project interventions; and
- More direct project beneficiaries.

1.3 The Purpose of the ESMF

The purpose of the ESMF is to (i) establish clear procedures and methodologies for the environmental and social assessment, review, approval and implementation of interventions; (ii) specify appropriate roles and responsibilities, and outline the necessary reporting procedures, for managing and monitoring environmental and social concerns related to project interventions; (iii) determine the training, capacity building and technical assistance needed to successfully implement the provisions of the ESMF; and (iv) provide practical information on resources for implementing the ESMF.

1.4 Approach to the ESMF Study

The Consultant has actively engaged key stakeholders including the relevant government institutions (EPA, FDA, Land Commission, Ministry of Agriculture and Ministry of Lands, Mines and Energy) and also traditional authorities and Women Groups to prepare this report. The meetings with SESA national consultants working on the REDD+ who have also met with logging and mining companies have also been useful.

1.4.1 Baseline Information

The consultant collected and analyzed baseline information regarding:

- key components of the Project
- relevant existing environmental and social policies, laws and regulations related to the forestry sector in Liberia,
- existing conditions of the main environmental and social components,
- key environmental and social issues associated with the proposed interventions,
- key stakeholders in relation to the identified issues,
- requirements for the detailed analysis of potential effects:
 - Technical studies required,
 - Public participation and stakeholder involvement,
 - Available information resources, including the SESA studies currently underway.

1.4.2 Stakeholder Consultations

Key stakeholders were defined as those to be directly affected by the proposed interventions, i.e. those that may be expected to either benefit or lose from the proposed alternative/project, particularly among the poor and the marginalized.

The ultimate beneficiaries of this project are the communities in the Counties hosting the protected areas who manage land and forests for their livelihoods and will have access to new skills, opportunities and markets. They were therefore mostly the target for consultation.

Stakeholders at a National Validation Workshop on the SESA inception report, reviewed and agreed on six case studies to be conducted in six different counties with a focus on the drivers of deforestation and forest degradation. These case studies have served as the first level of the SESA engagement with local communities. The outcome of that engagement process has also contributed to the preparation of this report and provided in the **Annex 1**.

Table 1: SESA engagement focus at County level

No.	County	Impact issues
1.	Rivercess	Logging, community participation in forest governance and benefit
2.	Sinoe	Plantation expansion and concessions. Clash between community conservation initiative and oil palm plantations in Numopoh
3.	Nimba	Mining and related infrastructure on community conservation, community and private sector conservation initiatives and trade- offs
4.	Lofa	Protected areas, level of community involvement and factors influencing same, and community benefits distribution
5.	Bong	Shifting cultivation, smallholder plantations, tree crops and shifting cultivation as drivers of deforestation. Traditional agriculture and livelihoods
6.	Margibi	Fuelwood/charcoal. Biomass based energy sources. Economic benefits, potential impacts of REDD+ interventions

The key institutional stakeholders responsible for natural resources and environmental management which will also benefit from improved policies, capacity development programmes and outreach and communication programmes were also consulted to solicit their views. These have included the Environmental Protection Agency, Lands Commission as well as the host institution, the Forestry Development Authority.

1.4.3 Analysis of data and Preparation of Report

The Consultant has analysed the gathered information to produce the Environmental and Social Management Framework (ESMF) document.

2.1 DESCRIPTION OF PROJECT AND RELATED ACTIVITIES

2.2 Background

The project is part of the Liberia Forest Program supported by the partnership established between the Government of Liberia (GoL) and the Government of Norway (GoN). Three distinct yet interrelated projects included in the Forest Program are: (i) the proposed forest sector investment and technical assistance project (ii) a rubber plantations emergency operation jointly with IFC to support the renewal of rubber plantations and, (iii) a results-based carbon payment operation for verified emission reductions that will pay for the emissions reductions and carbon sequestered by the activities done in Phase III.

Liberia contains approximately 4.3 million hectares (Mha) of lowland tropical forest that comprise 43 percent of the remaining Upper Guinea forests of West Africa, which extend from Guinea to Togo. While the overall extent of these forests has declined to an estimated 14.3 percent of its original size, Liberia still hosts two massifs of forest including evergreen lowland forests in the southeast and the semi-deciduous mountain forests in the northwest. Upper Guinea Rainforest, whose part is in Liberia, is listed as one of 35 global biodiversity hotspots.

Most of Liberia's rural population is dependent on forests and their various products and ecosystem services. Forests play an important role as safety net for vulnerable and marginalized people, especially those living around forest areas. The country's forests are under threat due to the continued clearance and degradation of its remaining blocks for the expansion of agriculture and mining activities both at industrial and subsistence levels.

The proposed operation in the forest sector will be aligned with, and build on, the forest reform process and particularly the REDD+ efforts.

2.3 Project Description

As a project led by the Forest Development Authority (FDA) with cross-sectoral support from other line ministries, bilateral partners, non-governmental organizations (NGOs) and civil society organizations (CSOs), the Liberia Forest Sector Project (LFSP) is designed to contribute to a transformational change in the way in which Liberia's forest landscapes are managed and to increase the sharing of benefits. Supporting this shift will be an emphasis on ensuring that these changes deliver multiple benefits to host communities in terms of livelihood development, income generation through forests and agriculture-based enterprises, and climate change mitigation (emissions reductions) for sustainable forest management.

In addition, the LFSP represents a paradigm shift in forest resource management insofar as it includes using climate finance as a catalyst for forest conservation and continued carbon sequestration. Achieving the project objectives will allow for the improvement on forest management and increase the sharing of benefits accrued through forest use. This in turn will contribute to enable future investments linked to carbon sequestration and results-based payments.

The project will incorporate the landscape approach moving beyond single-sector interventions in order to take into account multiple interrelated interventions at the landscape level and considering improvements in both ecosystems and livelihoods. This innovative approach will strategically combine physical, institutional, and community responses for sustainable management of targeted landscapes.

The project will finance technical assistance, works, goods, workshops, training, services, and operational costs to support the implementation of the REDD+ strategy; focusing on investments for early implementation of strategic land use options in targeted landscapes. The project will also support the development of institutional capacities, which will strengthen the enabling environment to sustain decentralized implementation of sustainable forest sector management, with the engagement of local communities. As part of the enabling environment, the proposed project will also include the implementation of a Measurement, Reporting and Verification (MRV) system to track the country's forest cover and progress made in the reduction or removal of greenhouse gas (GHG) emissions over time.

The main beneficiaries of the proposed Liberia Forest Sector Project (LFSP) are the Liberian communities most directly dependent on forest resources. The direct beneficiaries will be the communities located in the targeted landscapes in: (i) Northwest region (Bomi, Lofa, Gbarpulo, and Grand Cape counties), and (ii) Southeast region (South section of Grand Gedeh county, and Sinoe county). Communities located in the North Nimba region will benefit from support provided by the project for regulatory and institutional strengthening.

Specifically, the LFSP will support the following components:

Component 1. Strengthened Regulatory and Institutional Arrangements for Implementation of REDD+ (US\$8 million): This component will finance technical assistance, consultants and non-consultant services, works, goods, training and workshops, and operational costs needed to reform and harmonize the existing legal regime and to strengthen institutional and professional capacities for improved management of forest landscapes including benefit sharing. The component will be divided in two subcomponents as follows:

1.1. *Strengthened capacity in institutions (public, private, CSOs) for improved management of forest landscapes* will support FDA and other key agencies (specifically EPA, Land Commission, Ministry of Agriculture, and LISGIS), at national and subnational levels, with an emphasis on building skills and knowledge, systems and procedures, and regulatory and enforcement capabilities needed for more sustainable and effective forest management and benefits sharing. It is also envisaged that this component will include the establishment of partnerships between the FDA and local service delivery providers (whether NGOs, CBOs, CSOs, vocational training institutes or small-medium enterprises) in order to augment government capabilities to engage and support local communities in their forest management activities. The projects will also support the strengthening the ongoing civil society initiatives to monitor forest law enforcement and governance. Support will also be provided to existing coordination mechanisms established as part of the REDD+ readiness process¹.

1.2 *Legal reform* to support the Government of Liberia in the process of legal reform and effective implementation of REDD+ related laws and policies (such as harmonization of the Community Rights Law (CRL)²; the National Forest Reform Law (2006); the Land Rights Policy (2013), and their

¹ This includes the REDD+ Climate Change Steering Committee, REDD+ Climate Change Secretariat and REDD+ Technical Working Group as well as the Community Forestry Working Group (CFWG) and the Community Forestry Development Committee (CFDC).

² The CRL was passed in 2009 (regulations in 2011) and it has been piloted. Up to October, 2015, 102 applications for

attendant regulations) in coordination with ongoing projects that are addressing similar issues.

Component 2. Strengthened Capacity for Management of Targeted Forest Landscapes (US\$23.7 million):

The component will finance technical assistance, works, goods, workshops, sub-projects and operational costs for land use planning, protected areas, community forestry, sustainable agriculture, and forest management to support local communities and collaborating organizations within the targeted landscapes to improve the sustainable management and conservation of natural resources and improve the economic and social benefits derived from them.

The component will be divided into four subcomponents:

2.1. Improved Land Use Planning. (i) Sub-component 2.1 will support the preparation of current land use map at the sub national (for the targeted landscapes) and at the national level. Together with results achieved and lessons learnt from the inclusive strategic planning processes and land use planning at the community level (Component 2.3), a roadmap report to scale up land use planning beyond the community level will be developed. The activities are aimed at advancing an integrated landscape management approach for sustainable management of natural resources and for carbon emissions scheme at landscape scale. Over time the products from these activities will be useful for national GHG accounting from the land use (forestry and agriculture) sector.

2.2. Strengthened Management of Protected Areas of Targeted Forest Landscapes will support the enlargement, improved performance and financing of Liberia's protected area network, detailing adequate resources necessary to safeguard selected existing and future protected areas within the targeted landscapes. The protected areas (PAs) identified for potential on-the-ground strengthening support from the LFSP are the existing Sapo National Park and Lake Piso Multiple Use Reserve, along with three PAs for which legal gazettelement is pending: Gola Forest National Park, Wonegizi Nature Reserve, and Grebo Forest National Park. The project would also support pre-gazettelement technical studies, stakeholder participation, and legal document preparation for several additional proposed protected areas (PPAs), namely the Foya and Kpo Mountains PPAs in the Northwest Forest Landscape and the, Grand Kru-River Gee, Cestos-Senkwehn, and Gbi PPAs in the Southeast Forest Landscape – at a minimum will be supported under the project. The project would also support Liberia's overall PA system through technical assistance and studies to establish a national-level Conservation Trust Fund, facilitate biodiversity offsets, identify eco-tourism options, and strengthen PA-related staffing in several FDA Regional Offices.

2.3. Support for Community Forestry in Targeted Forest Landscapes. The project will support activities on a demand-driven basis to assist at least 40 communities to: (i) strengthen community governance and institutions to manage community forest lands and common pool resources (in accordance with the CRL and the Land Rights Policy); (ii) promote and support productive natural resources management investments based on an integrated 3-Cs approach at the level of community lands, of which forest would be a significant land use component; and (iii) improve livelihoods by creating jobs opportunities, and improve income from the use of communities' customary lands and forest resources. FDA promoters/extension agents, working from local offices, would work directly with communities, on a regular basis to assist them in initiating a community forestry process during the life of the project. The activities in this subcomponent will be aligned with existing forest governance mechanisms and traditional or – statutory- community institutions and authorities, to prevent undermining, substituting or duplicating their structures or roles. The extent and type of support provided will be consistent

with the enabling national legal framework and will be adapted to suit specific community needs.

2.4. Strengthened Capacity for Sustainable Agriculture. The project will promote sustainable agricultural practices to help reduce slash-and-burn agriculture in the targeted landscapes. Using a demand-driven approach and structured economic interest groups within the targeted communities, agroforestry and food crop cultivation will be supported for farming households within the communities. For such beneficiaries, there must be proof of land ownership and evidence of support by the targeted landscape communities. The targeted communities will be encouraged to adopt sustainable land use and agricultural practices that will involve a mix of conservation agriculture practices, sustainable land use, value chain based partnerships, and effective use of degraded lands in mixed cropping models. Implementation of this subcomponent will build on two existing World Bank-supported projects implemented by the Ministry of Agriculture, specifically within Grand Gedeh and Bomi counties: The Smallholder Tree Crop Rehabilitation Project (STCRSP) and the West African Agricultural Productivity Project. The operational criteria and procedures established under the Smallholder Tree Crop Rehabilitation Project and the West African Agricultural Productivity Project—including for safeguards screening and follow-up environmental management—will be utilized for interventions under this sub-component.

Component 3. Forest Monitoring Information System (US\$2.3 million)

This component will finance technical assistance, works, goods, workshops, and operational costs to support an operational and successfully tested national system for Measurement, Reporting and Verification (MRV) systems, the establishment of an information system for safeguards, as well as capacity building of FDA and other implementing agencies on compliance with World Bank safeguards. The capacity building will include activities targeted both at the national-level staff as well as decentralized institutions working in the targeted landscapes.

3.1. Measurement, Reporting and Verification (MRV) and Reference Level Development. This subcomponent will finance technical assistance, goods, workshops, and operational costs for a functional and successfully tested national MRV system building on an existing roadmap (See Annex 8) and the results achieved by the national REDD+ Readiness Program supported by the FCPF readiness grant. The MRV system will need to comply with international best practice guidelines for operational data collection, synthesis, analysis, and reporting, allowing for the monitoring, estimation, and accounting of carbon emissions and removals of carbon in comparison to the projected reference scenario currently developed as part of REDD+ Readiness under FCPF support. FDA together with LISGIS will have the primary responsibility for monitoring information and reporting.

3.2. Development of an information system for safeguards. This subcomponent will finance the operationalization and update of an information system on safeguards³ being designed with the support of the FCPF. The LFSP will support the implementation in targeted landscapes of such system covering the measures proposed in the REDD+ Strategy, monitoring compliance with the World Bank Safeguard Policies (among other criteria and international best practice).

Component 4. Project Monitoring and Management (US\$3.5 million).

The component will support the operationalization of a Monitoring and Evaluation system that will report on the expected project's results, systematizing the project's lessons learned. The project

³ The safeguards information under this sub-component refers to a REDD+ inspired Liberian information system, which encompasses a range of project-related information that goes beyond the scope of the World Bank's Environmental and Social Safeguard policies.

level M&E will be integrated into Liberia's M&E Framework for the national REDD+ readiness process that has been designed to track readiness progress and be able to report comprehensively at national and international level including to the different donors and implementing partners supporting Liberia's REDD+ process. The component will also support the implementation of a communication strategy to inform different and diverse stakeholders about the project and its results, building on results achieved with FCPF support as well as through other projects. Support will also be provided for FDA's day-to-day project implementation and management including, procurement, financial management, M&E, preparation of annual work plans and organization of audit reports. The component will provide support for office operating costs for the existent FDA REDD+ Implementing Unit. The component also will provide resources for management and supervision of the World Bank environmental and social safeguards. Finally, the component will provide support for the preparation of the Mid-term and Project Completion reports.

4. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

LFSP will be a national-level project, particularly with respect to Components 1, 3, and 4. However, the project's site-specific interventions (especially under Components 2.2, 2.3, and 2.4) will be within three broad Target Forest Landscapes (TFLs), which were selected based on a spatial analysis of priority areas for REDD+ interventions conducted for the FDA during project preparation. Based on this assessment, the project's Target Forest Landscapes will be: (i) the Northwest TFL, encompassing Bomi, Lofa, Gbarpulo, and Grand Cape Mount counties; and (ii) the Southeast TFL, encompassing Grand Gedeh, Sinoe, River Gee, Rivercess and Grand Kru counties. On-the-ground protected area investments under Component 2.2 are expected to involve most, if not all, of the following PAs: (i) Lake Piso Multiple Use Reserve, Gola Forest National Park, and Wonegizi Nature Reserve within the Northwest TFL and (ii) Sapo National Park and Grebo Forest National Park within the Southeast TFL. Specific sites for project investments in Community Forests (Component 2.3) and smallholder agriculture (Component 2.4) will be selected within the TFLs during project implementation. The main beneficiaries of the proposed Liberia Forest Sector Project (LFSP) are the Liberian forest communities most directly dependent on forest resources.

3.1 POLICY, LEGAL AND INSTITUTIONAL FRAMEWORK

3.2 Relevant National Policies

The relevant national policies related to the proposed project include the following:

- National Biodiversity Strategy and Action Plan, 2004;
- National Forestry Policy and Implementation Strategy, 2006;
- National Forest Management Strategy, 2007;
- Land Rights Policy, 2013;
- Land Administration Policy, 2015;
- Guidelines for Forest Management Planning in Liberia (2007);
- National Energy Policy, 2009;
- National Environmental Policy, 2003;
- National Environmental and Occupational Health Policy, 2010
- Draft Revised National Biodiversity Strategy and Action Plan, (2015), and
- Liberia Protected Areas Network Strategic Plan (2008)

National Biodiversity Strategy and Action Plan, 2004

The overall goal of the National Biodiversity Strategy and Action Plan (2004) is to sustainably use biodiversity on a long-term basis to meet the needs of both the present and future generations. The plan comprises two components: the vision statement, the guiding principles, the goals and objectives on one hand; and the Actions for Biodiversity conservation, sustainable use and benefit sharing on the other. The goals and objectives were developed in consonance with the guiding principles. Six goals are developed upon which all the actions are based. Priority areas for immediate actions are Land Rehabilitation, Forestry Sector Reform, Timber Management, Poverty Alleviation, Food Security, Addressing Bush meat Crisis, Restoration of Electricity, Environmental Impact Assessment, Addressing Coastal Erosion and Mangrove Destruction and Providing Alternative Sources of Protein.

National Forestry Policy and Implementation Strategy, 2006

The policy sets sustainable forest management as an overriding goal and explicitly recognizes the need to move from a “one-sector” approach of sustained timber yields to a multi-sectoral approach where inter-sectoral coordination, policy integration, and effective participation and interaction of forest-sector stakeholders and their institutions are essential. The aim of the policy is to move away from the country’s historic focus on commercial aspects of forestry, and optimize benefits for all Liberians by conserving and sustainably managing all forest areas to ensure and maintain environmental stability, in keeping with Liberia’s commitments under international agreements and conventions. The policy seeks to integrate the “three Cs”—commercial, community, and conservation interests—in forest management.

National Forest Management Strategy, 2007

National Forest Management Strategy (2007) summarizes the FDA philosophy for managing the national forest endowment and outlines the FDA approach to forest management, its long-term end-states, or goals, and the authority's major management objectives. Its primary objective is to allocate and manage Liberia's remaining 4.59 million hectares of forest as either forest management contract areas, timber sales contract areas, community management areas, or protected areas. The strategy allocates these forest lands into the four land-use categories of Multiple Sustainable Use Management, Timber Sales Contracts, Community Management, and Protected Area Network.

Land Rights Policy, 2013

This Land Rights Policy concerns four land rights categories (Public Land, Government Land, Customary Land, and Private Land), and a cross-cutting sub-category called Protected Areas, which must be conserved for the benefit of all Liberians. For Public Land and Government Land, the Policy sets forth critical policy recommendations regarding: how the Government transfers such land, and how the Government acquires land, especially through the exercise of eminent domain (i.e. forced acquisition). With respect to the new category of Customary Land, there are several significant recommendations: Customary Land and Private Land are equally protected; and communities will self-define, be issued a deed, establish a legal entity, and strengthen their governance arrangements to make them fully representative and accountable. The Government also undertakes to support communities in implementing these recommendations. Finally, several Private Land issues are detailed, which include loss of ownership, leases, easements, and adverse possession.

Land Administration Policy, 2015 (Draft)

The Land Administration policy presents a framework for land administration in Liberia. It focuses on the main features of good land administration and those pertaining to the identification, ownership, use, and valuation of land, including information on all lands, as well as the identification of land and the determination of rights to the land, recording of those rights, valuation of land and the management of government and public land, coordination of land use planning, the establishment of the institutional framework at central and local government levels to carry out this mandate, and the broader issues of governance, policy development, and legislative and regulatory reform necessary to attain government's objectives, including the formation of dedicated land agency (Lands Authority), which will replace the Lands Commission and consolidate the land functions of several ministries and agencies with a dedicated focus on land, as well as implement the policy recommendations contained in the Land Administration Policy.

National Energy Policy, 2009

The objective of the National Energy Policy (2009) is "to ensure availability of modern energy services for all Liberians, in both the urban and rural areas." The policy recognizes access to modern energy services as an essential requirement for sustaining livelihoods and propelling communities living at subsistence levels to higher levels of prosperity. Estimates suggest that over

95% of the population relies on firewood, charcoal, and palm oil for their energy needs, which as noted above is one of the key drivers of deforestation.

National Environmental Policy, 2003

The overall policy goal is to ensure long-term economic prosperity of Liberia through sustainable social and economic development which enhances environmental quality and resource productivity on a long-term basis that meets the requirements of the present generation without endangering the potential of future generations to meet their own needs. The policy recognizes the need for maintaining ecosystems and ecological processes essential for the functioning of the biosphere; ensuring sound management of the natural resources and the environment; adequately protecting human, flora, fauna, their biological communities and habitats against harmful impacts, and to preserve biological diversity; integrate environmental considerations in sector and socio-economic planning at all levels; throughout the nation; and seeking common solutions to environmental problems at regional and international levels.

The Specific Objectives of the policy are as follows:

- a) To ensure a quality environment, good health, and a decent wellbeing for all residents in Liberia.
- b) To use the Liberian environment in such a way that will be beneficial to the present and future generations.
- c) To halt and reverse the current environmental degradation, manage the ecosystems in the biosphere for the maintenance of diverse biological diversity.
- d) To raise public awareness and promote understanding of the essential linkages between socio-economic development and environmental protection and to ensure that environmental knowledge becomes an integral part of the education system.
- e) To encourage the participation of the civil society, NGOs, CBOs, and private sector in the proper management of the environment.
- f) To foster communal management of the environment on common or customary land.
- g) To enact or promulgate environmental legislation and regulatory measure, which will be complemented by social and economic incentives and institutional arrangements to influence positive environmental management.
- h) To establish a resource inventory and environmental accounting for accurate monitoring of the state of the Liberian environment.
- i) To ensure that the actual costs for environmental use and abuse are borne by the user under the 'user pays' and 'polluter pays' principles.

The Policy further call for the harmonization and enforcement of the environment protection and management law and the implementation of national plan; as well as provision of a coherent framework for the various policy interventions necessary to safeguard the environment.

National Environmental and Occupational Health Policy, 2010

The main objectives of the National Environmental and Occupational Health Policy are:

a. **Environmental Health:** To develop new guidelines/standards and strengthen existing guidelines/standards in Basic sanitation, water quality control, food safety, vector control, port health, human habitat, waste management, communicable disease control for the *protection and promotion of public health services in Liberia*, in collaboration with key stake holders

b. **Occupational Health:** i) *To assess the working conditions in major work places, establish data base, plan and implement workers' wellness programs, for the purpose of protecting and promoting health in the workplace for all workers in Liberia*, ii) *TO provide guidelines and standards for the effective implementation and rendering of occupational health services.*

3.3 Relevant National Legislation

The relevant Liberian environmental and other statutory laws and regulations to guide the implementation and monitoring of the LFSP include the following:

- The Constitution of the Republic Of Liberia, 1986;
- The Forestry Development Authority (FDA) Act, 1976;
- Environmental Protection Agency (EPA) Act, 2002;
- Land Commission Act, 2010;
- National Forestry Reform Law, 2006;
- Environment Protection and Management Law, 2003;
- Liberia Extractive Industries Transparency Initiative (LEITI) Act, 2009;
- Public Procurement and Concessions Act, 2010;
- Community Rights Law (with respect to Forest Lands), 2009; and
- Minerals and Mining Law, 2000.

The Constitution of the Republic of Liberia, 1986

The Constitution of Liberia supports sustainable management of the natural resources. Article 7 of Chapter 11 states “The Republic shall, consistent with the principles of individual freedom and social justice enshrined in the constitution, manage the natural economy and natural resources of Liberia in such manner as shall ensure maximum possible participation of Liberian citizens under conditions of equality as to advance the general welfare of the Liberian people and the economic development of Liberia”. The constitution therefore provides for the protection of the natural resources including biological diversity. It also gives the right to every Liberian to fully participate in management of these resources.

The Forestry Development Authority (FDA) Act, 1976 (As Amended)

The Act (as amended) creates the Forestry Development Authority” as a corporate body pursuant to the Public Authorities Law. The primary objectives of the Authority are as follows:

- a. Establish a permanent forest estate made up of reserved areas upon which scientific forestry will be practiced;
- b. Devote all publicly owned forest lands to their most productive use for the permanent good of the whole people considering both direct and indirect values;

- c. Stop needless waste and destruction of the forest and associated natural resources and bring about the profitable harvesting of all forest products while assuring that supplies of these products are perpetuated;
- d. Correlate forestry to all other land use and adjust the forest economy to the overall national economy;
- e. Conduct essential research in conservation of forest and pattern action programs upon the results of such research;
- f. Give training in the practice of forestry; offer technical assistance to all those engaged in forestry activities; and spread knowledge of forestry and the acceptance of conservation of natural resources throughout;
- g. Conserve recreational and wildlife resources of the country concurrently with the development of forestry program.

They give the FDA the power to establish Government Forest Reserves, Native Authority Forest Reserves, Communal Forests and National Parks.

Environmental Protection Agency (EPA) Act, 2003

The Act creates the Agency as the principal authority in Liberia for the management of the environment and shall co-ordinate, monitor, supervise and consult with relevant stakeholders on all activities in the protection of the environment and sustainable use of natural resources. The functions of the agency include to:

- Review project documents for donor-sponsored environment-related projects to ensure and/or recommend to the negotiating ministry or agency, the inclusion of strategies and activities for capacity building of nationals;
- Identify projects, activities, policies, and programs for which environmental impact assessment must be conducted under this Act;
- Build the capacity of line Ministries, authorities and organizations through the exchange of data and information, and to render advice, technical support and training in environment and national resource management so as to enable them to carry out their responsibilities effectively;
- Ensure the preservation and promotion of important historic, cultural and spiritual values of natural resources heritage and, in consultation with indigenous authority, enhance indigenous methods for effective natural resource management;
- Promote public awareness through public participation in decision making and formal and non-formal education about the protection and sustainable management of the environment, and to allow at minimal or no costs, access to environmental information and records made in connection with this Act;
- Establish environmental criteria, guidelines, specifications and standards for production processes and the sustainable use of natural resources for the health and welfare of the present generation, and in order to prevent environmental degradation for the welfare of the future generations;
- Review and approve environmental impact statements and environmental impact assessment submitted in accordance with this Act;

The act further recognizes that all sectors of the population has the duty to protect the environment, and the Agency may in the performance of its functions under subsection (1) and by published notice delegate any of its functions to a Ministry, Agency, Organization, a Technical Committee or any public officer.

Land Commission Act, 2010

Land Commission Act, 2010 establishes the Land Commission with a five year mandate to propose, advocate and coordinate reforms of land policy, laws and programs in Liberia. The LC has no adjudicatory or implementation powers. The mandate of the LC extends to all land and land based natural resources, including both urban and rural land, private and public land and land devoted to residential, agricultural, industrial, commercial, forestry, conservation and any other purposes.

The following are objectives to be accomplished within the five-year life span of the Commission.

- (1) Equitable and productive access to the nation's land, both public and private;
- (2) Security of tenure in land and the rule of law with respect to landholdings and dealings in land;
- (3) Effective land administration and management; and
- (4) Investment in and development of the nation's land resources.

National Forestry Reform Law, 2006

National Forest Reform Law (NFRL 2006) is consistent with the Forest Policy and provides the legal framework needed to achieve the policy goal of sustainable forest management through balanced and integrated development. It proposes and supports the granting of user and management rights to local communities, as well as recognition that local communities must equitably participate in and benefit from sustainable management of forests. Section 3.1 of NFRL "Objectives" includes social and environmental aspects that charge FDA with: a) "sustainable management of the Republic's forest land, conservation of the Republic's forest resources, protection of the Republic's environment, and sustainable development of the Republic's economy, with the participation of and for the benefit of all Liberians, and to contribute to poverty alleviation in the nation," and b) "To protect the environment ... take a precautionary approach to ... threats of serious or irreversible damage to the environment, ...[and] not rely on a lack of full scientific certainty as a reason for postponing cost-effective measures to prevent environmental degradation."

Environmental Protection and Management Law, 2003

The law forms the legal framework for the sustainable development, management and protection of the environment and natural resources by the Environmental Protection Agency in partnership with relevant ministries, autonomous agencies and organizations as well as in a close and responsive relationship with the people of Liberia. It also provides high quality information and advice on the state of the environment and matters connected therewith.

The Law is intended as a comprehensive coordinating legal framework, to be implemented through collaboration between the Environment Protection Agency and line ministries and agencies (in the case of forest resources, the FDA), local authorities and the public. It provides the framework for formulation, reviewing, updating and harmonizing all environment-related sectoral laws. Further,

the Law anticipates stand-alone, sector-specific statutes, rules and regulations to facilitate implementation. It also addresses a wide range of environmental issues including environmental impact assessment, audit and monitoring; environmental quality standards; pollution control and licensing; guidelines and standards for the management of the environment and natural resources; protection of biodiversity, national heritage and the ozone layer; inspection, analysis and records; international obligations; information, access, education and public awareness; and offences.

Part III of the 2003 Law establishes a fairly comprehensive framework for EIA, including procedures and substantive standards for the approval and rejection of projects. It also provides for public participation and procedures for appeals against EPA decisions.

Liberia Extractive Industries Transparency Initiative (LEITI) Act, 2009

The Liberia Extractive Industries Transparency Initiative (LEITI) Act was passed in 2009, to establish a secretariat and steering committee for Liberia to enter the EITI process. Liberia became the first African country to be fully EITI compliant, and the first anywhere to go beyond the minerals and energy sectors to include forestry and agriculture under the EITI. LEITI focuses on improving transparency and promoting sustainable use of revenues generated from natural resources. Under this process, all revenues paid by operators and received by government are routinely published and reconciled. All concession agreements are also made available at LEITI office and online. In addition, LEITI is currently carrying out an audit of the processes to allocate/award concession agreements to ensure that these processes are in full compliance with Liberian legislation.

Public Procurement and Concessions Act, 2010

The regulates all forms of public procurement and Concessions, establishes the Public Procurement and Concessions Commission (PPCC), provides for institutional structures for public procurement and Concessions, and stipulates methods and procedures for public procurement and concessions and for purposes related thereto. The act defines concessions to include “Natural Resources” (Grants of the right to exploit for private benefit a depleting or renewable asset of the state) and states the objective of concessions to include the “development of the natural and renewable resources of Liberia consistent with other national goals”.

Community Rights Law (with Respect to Forest Lands), 2009

The Community Rights Law (CRL) with respect to forest lands gives statutory recognition to customary ownership of both forests and forest resources within community lands, provides for the management of community forests by community forest management bodies, and requires prior informed consent of the community for concessions to be made on community lands. The Community Forestry Management Body is appointed by the Community Assembly which is composed of county legislators and represents the highest authority over a community’s forest resources. The Law amends contradictory provisions of the National Forestry Reform Law (which implies that those resources are owned by the state) and establishes precedence over it.

Executive Order 66 of January 2015 extends the tenure of the Land Commission by one additional year, ending January 9, 2016. The order further requires that during the period of the extension, the Commission will work along other Government agencies to complete draft legislation and activities to facilitate the transition into a new land agency.

Minerals and Mining Law, 2000

Chapter 8 of the Minerals and Mining Law of Liberia (2000), administered by the Ministry of Lands, Mines and Energy (MLME), has defined requirement for protection of the environment. It requires each holder of minerals rights to take reasonable preventive, corrective and restorative measures to limit pollution or contamination of, or damage to streams, water bodies, dry land surfaces and the atmosphere as a result of exploration or mining. Section 8.4 states the need to prepare an Environmental Impact Assessment Study for a Class A and Class B Mining License as a condition precedent to the issue of mining license, with special attention on adverse impacts on nearby communities, and that Environmental Management Programs are required under Sections 8.5 and 8.6, respectively. Section 8.2 identifies the requirement for environmental restoration, which amongst other things states that every holder of a mining license must restore the site disturbed by exploration of mining to its original state. If this is not possible, then it is to be restored to a state that is environmentally and socially desirable. The law further requires reforestation if exploration or mining resulted in large scale felling.

3.4 Relevant Forestry Regulations and Guidelines

Guidelines for Forest Management Planning in Liberia (2007)

Guidelines for Forest Management Planning in Liberia (2007) provide instructions to help foresters and logging companies prepare the forest management plans required under the Forest Management Contracts (FMC), Timber Sales Contracts (TSC), or other FDA commercial contracts, including commercial logging in community forests.

FDA Ten Core Regulations (2007)

FDA Ten Core Regulations (2007) were essential to resuming commercial logging in Liberia. The 10 regulations are as follows: Public Participation; Forest Land Use Planning; Pre-qualification; Tender, Award and Administration; Pre-Felling Operations; Benefits Sharing; Forest Fees; Chain of Custody; Penalties; and, Rights of Private Land Holder.

Code of Forest Harvesting Practices (2007)

Code of Forest Harvesting Practices (2007) provides guidelines to help foresters and logging companies select practices to be followed when carrying out harvesting operations under FMCs and TSCs.

Regulation on the Commercial and Sustainable Extraction of Non-Timber Forest Products, FDA Regulation No. 111-08 (2009)

The regulation provides guidelines for the extraction of non-timber forest products in Liberia. In the provision of these guidelines the FDA aims to:

- a. Act as trustee of the Republic's Forest Resource, in a professional, transparent, and non-discriminatory manner, without personal interest or aim of self-enrichment.
- b. Provide social and economic livelihoods, cultural and religious benefits for forest-based communities and Liberia's populace in general.
- c. Assure sustainable development and conservation of the forest and its genetic resources for the present and the future generation.

Chain Saw Milling Regulation # 115-11, 2012

The purpose of this Regulation is to recognize and regulate chain saw milling in order to optimize its positive benefits and also mitigate its negative effects. The Regulation therefore establishes a structured process by which authorization for chain saw milling is requested, reviewed, and granted or denied. The object is to ensure that chain saw milling is carried out in an environmentally appropriate manner and through procedures and practices that promote the mutual interests of chain sawyers, communities and sustainable forest management in the Republic of Liberia.

3.5 Relevant International Conventions

The United Nations Convention on Biological Diversity

Liberia ratified the United Nations Convention on Biological Diversity on 8 November 2000 with the realization that it is the best international instrument to address conservation of biological diversity and sustainable use of its components.

The Convention on Biological Diversity provides a comprehensive framework for stopping biodiversity loss. It is a carefully balanced, legally binding international treaty that commits Parties to the triple objective outlined below:

- a) The conservation of biological diversity;
- b) The sustainable use of its components; and
- c) The fair and equitable sharing of benefits arising from the utilization of genetic resources.

Article 15 of the Convention addresses the terms and conditions for access to genetic resources and benefit sharing. It recognizes the sovereignty of states over their natural resources and provides that access to these resources shall be subject to the prior informed consent of the Contracting Party providing such resources. It also provides that access shall be based on mutually agreed terms in order to ensure the sharing of benefits arising from the commercial or other utilization of these genetic resources with the Contracting Party providing such resource.

Article 8(j) addresses knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant to the conservation and sustainable use of biological diversity. The Conference of the Parties (COP) has established that participation by indigenous groups cannot be achieved simply by issuing invitations. Parties must accept that this involves capacity-building and incentive measures, which require financial outlay and considerable political will. The Conference has called for the establishment of baseline indicators for the state of retention of traditional, local and indigenous knowledge.

United Nations Framework Convention on Climate Change (UNFCCC), 1992

The United Nations Framework Convention on Climate Change (UNFCCC) is an international environmental treaty negotiated at the United Nations Conference on Environment and Development (UNCED), informally known as the Earth Summit, held in Rio de Janeiro from 3 to 14 June 1992. The objective of the treaty is to "stabilize greenhouse gas concentrations in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system". With respect to national resource conservation, Article 4(1.d) of the convention requires all Parties to the conventions, taking into account their common but differentiated responsibilities and their specific national and regional development priorities, objectives and circumstances, to "Promote sustainable management, and promote and cooperate in the conservation and enhancement, as appropriate, of sinks and reservoirs of all greenhouse gases not controlled by the Montreal Protocol, including biomass, forests and oceans as well as other terrestrial, coastal and marine ecosystems".

Liberia ratified the United Nations Framework Convention on Climate Change (UNFCCC) in November 2002 and implemented an 18-month National Adaptation Programme of Action (NAPA) project in 2004. The national greenhouse gas (GHG) inventory report of Liberia has been prepared as part of Liberia's Initial National Communication (INC), fulfilling its mandatory obligation as a non-Annex I party to the UNFCCC in accordance with Article 4, paragraph 1(a), and Article 12, paragraph 1(a) of the Convention.

3.6 Institutional Framework

Biodiversity protection and management does not only depend on strong environmental laws and regulations, supported by scientific information. More importantly, it also depends on their effective implementation and enforcement on the ground.

Liberia has a number of government agencies, ministries and bureaus, along with municipal and state industry entities, whose mandate include natural resources management. Their efforts are complemented by a number of local and international NGOs, educational institutions and international financial organizations. The key government institutions and their responsibilities are indicated in the Table 2. The table also presents examples of NGOs and agencies of the United Nations who complement the efforts of the government agencies.

Additionally several private industries are operating in the Liberian natural resources related sector. While natural resource wealth provides important economic opportunities for Liberia, it is associated with major environmental challenges and benefit sharing obstacles. Some private industries include:

- Agricultural Development industries (with oversight from the Ministry Of Agriculture);
- Forestry Development industries (with oversight from the Forestry Development Authority);
- Minerals Development industries (with oversight from the Ministry of Land, Mine and Energy);
- and

- Oil Development industries (with oversight from the National Oil Company of Liberia).

Table 2 Institutions and their Mandates

Institution	Functions/Responsibility
Government Institutions	
Forestry Development Authority (FDA)	Responsible for sustainably management of the forest and its related resources. Provides long and middle-range planning in the forestry sector as well as preparing forestry policy, law and administration; supervises of adherence to forest legislation and concession agreements; calculates and determines forestry fees; evaluates investment proposals, executes reforestation and forest research and training; monitors activities of timber companies and executes protected area programmes and administers wildlife and national parks.
Environment Protection Agency (EPA)	Principal authority for the management of the environment, and mandated to coordinate, monitor, supervise and consult with relevant stakeholders on all activities in the protection of the environment and sustainable use of natural resources; promotes environmental awareness and implementation of the national environmental policy and the environmental protection and management law; oversees the implementation of international environment related conventions.
Ministry of Agriculture	Plans, executes, administers, manages and supervises agriculture programs and provides extension services; trains local farmers in improved cultural practices, and supplies farm inputs to enhance food security.
Ministry of Lands, Mines and Energy	Has the statutory responsibility for the development of mineral, water and energy resources of the country and the administration of its lands; in charge of land surveys in all parts of the country; coordinates the activities of miners of gold and diamonds, including granting of operation licenses; regulates beach sand mining and works along with the Ministry of Agriculture and the University of Liberia to conduct training and research on land rehabilitation.
Bureau of Rural Development	Integrates developmental activities with rural activities; is in charge of the development of farm to market and feeder roads; provides safe drinking water to rural communities; involved in rural planning, low-cost housing projects for the acceleration of rural development, including rural energy generating activities.
Ministry of Finance and Development Planning	<p>Ministry of Finance and Development Planning</p> <p>The Ministry serves as the direct link between implementing Ministries/Agencies, NGOs, PVOs, and the international community. In addition, MPEA is responsible to:</p> <ol style="list-style-type: none"> 1. Give technical guidance to all GOL Agencies in the preparation of development programs and projects; 2. Review proposals for new development programs and projects on changes in existing programs and projects under consideration in view of the resources available and make recommendation to the national planning council; 3. Review progress made on programs and projects, which have been adopted, initiating special investigation into the execution of those programs and projects, and report findings and recommendations to the national council
Ministry of Internal Affairs	Responsible to administer the affairs of all Government functionaries 'within local and urban areas of Liberia. The Ministry oversees the activities of local Government bodies such as the chiefdoms and clans; supervises all County Superintendents; guarded by the revised interior regulations of Liberia, which gives the Ministry custodianship over all private and public properties within the territorial confines of the country.

Institution	Functions/Responsibility
Ministry of Health	The Ministries coordinates and administers the general health services of the country; ensures the availability of drugs; collects health statistics and monitors events and conditions affecting the general public. The Ministry is in charge of preventive and curative services, and vital statistics for the registration of deaths and births.
National Bureau of Fisheries	The NBF is working to promote the sustainable development of the fisheries sector in Liberia, balancing the needs of ecosystem health, food security, economic growth and social development within a framework of good governance.
United Nations Agencies	
The United Nations Development Programme (UNDP)	The six (6) pillars of UNDP's mission are to fight poverty, build good governance, engage in crisis prevention and recovery, combat HIV/AIDS, gender mainstreaming in development and environmental sustainability and rational management of natural resources. Within the framework of the Convention on Biological Diversity, UNDP is one of the three implementing agencies for the Global Environment Facility (GEF) to assist countries to meet the challenges they face in conserving their various environments. The other two are the United Nations Environment Programme (UNEP) and the World Bank.
Food and Agriculture Organization (FAO)	The FAO is mainly responsible for promotion of agriculture, with emphasis on food security. FAO ensures that the quest for food security does not compromise sustainable development. FAO has been involved in a national forestry programme, and they served on the steering committee to the project. Assistance will be needed from FAO to enhance agriculture productivity and forestry reform.
United Nations Educational, Scientific and Cultural Organization	UNESCO is involved in the conservation of biodiversity by providing support to education and training on the importance of environment and biodiversity, which should incorporated in school curricula and research programmes.
Selected Educational Institutions	
University of Liberia	The University of Liberia attracts many hard-core professionals in the Colleges of Science and Technology, Agriculture and Forestry and the Business and Public Administration. College of Science and Technology offers bachelor's degree in biology, zoology, engineering, chemistry, geology, physics and mathematics; the College of Agriculture and Forestry offers bachelor's degree in agronomy, general agriculture, general forestry, wood science and technology, and home science and community development
Cuttington University	The Cuttington University College in Central Liberia offers bachelor's degree in general science, biology, chemistry, physics and mathematics. Colleges offering offered in the area of biodiversity are the College of Natural Sciences and the College of agriculture and Integrated Rural Development.
Forestry Training Institute (FTI)	The FTI is a technical vocational school that offers practical training in forestry and related areas towards an associate degree. During the LRCFP, FTI worked with Virginia Polytechnic Institute, and completed a self-assessment of their forestry programs to develop new, targeted strategies for program expansion and capacity building in the forestry section (USAID 2010).
Selected Liberian Non-governmental Organizations and Civil Society	
Action for Greater Harvest (AGRHA)	The Mission of AGRHA is to "Ensure Sustainable Food Security for Rural Liberian Households". The vision is "A Liberia where rural Liberian households create sustainable food security for themselves".

Institution	Functions/Responsibility
Association of Environmental Lawyers (Green Advocates) ¹⁷	Founded in 2001, Green Advocates is Liberia's first and only public interest environmental law organization. It is dedicated to protecting the environment, advancing human rights protection and advocacy through sound environmental policies, and giving voice to rural, indigenous, and tribal peoples who have been denied the benefits of natural resource extraction from their tribal and ancestral lands.
Environmental Relief and Development Research Organization (ERADRO)	ERADRO promotes rural extension services to address health problems linked to environmental factors. Its activities include environmental research, community organization, public education on health and hygiene, and waste disposal programs in schools and communities.
Farmers Associated to Conserve the Environment (FACE)	Mission is to help empower local farmers to engage in modern, stable farming practices that are sustainable, environmental friendly, and have the propensity to yield significant positive net income. FACE is involved in seed rice multiplication and mangrove conservation. The focus is to promote stable, modern farming systems in order to improve food production and enhance the natural environment.
Liberia Chainsaw and Timber Dealers Union (also known as the Pit sawyers' Union)	The Liberia Chainsaw and Timber Dealers Union manages the supply of timber to domestic markets, and is fully recognized by the GOL and the international community. The Union also conducts trainings across Liberia. The Union receives funding from a small proportion of all timber sales.
Liberia Community Development Foundation (LCDF)	LCDF has the objective to objective of seeking funds and material donations to support education and local development in Liberia. LCDF's aims are to: (1) Organize basic business management training programs; (2) Effect micro credit programs; (3) Develop intensive agriculture programs; (4) Upgrade health and sanitation in local communities; and, (5) Provide education to the disadvantaged/underprivileged.
National Charcoal Union of Liberia (NACUL)	NACUL is an umbrella organization of charcoal stakeholders in Liberia. NACUL advocates on behalf of charcoal producers, sellers and buyers, and works closely with FDA to monitor charcoal production.
Save My Future Foundation (SAMFU)	SAMFU was founded in 1987 with the mission of facilitating and promoting sustainable community-based natural and human resources management and development. Currently, SAMFU runs two core programs: Extractive Resource, Human Rights and Conflict Management; and, the Endangered Marine Species Conservation Programs.
Society for Environmental Conservation (SEC)	The SEC's objective is to increase community awareness of Liberia's rich biological sites from both a conservation and sustainable planning perspective. SEC works in the areas of alternative energy, biodiversity, climate change, development, ecotourism, environmental education, environmental justice, forests, global warming, sustainable agriculture/farming, watersheds, wetlands and wildlife protection, using a variety of methods from lobbying and advocacy to formal education methods and organizing grassroots actions.
Society for the Conservation of Nature in Liberia (SCNL)	Founded in 1986, SCNL is the oldest environmental NGO in Liberia. Its conservation projects include the creation and maintenance of protected areas, wildlife conservation, biomonitoring, and the use of socioeconomic surveys.
Sustainable Development Institute (SDI)	Established in 2002, the SDI works to transform decision-making processes of natural resource management so the benefits are shared equally. SDI's work aims to create space for the participation of local communities in decision making processes on natural resources.
International NGOs	

Institution	Functions/Responsibility
BirdLife International (BI)	BI in Liberia is represented by their local affiliate, SCNL. BI/SCNL has conducted bird inventories in several forest areas, and produced a list of Important Birds Areas in Liberia (IBAs).
CARE Liberia	CARE fights poverty and injustice in 86 countries around the world to help the world's poorest people find routes out of poverty. In Liberia, CARE focuses on food security, water and sanitation, women's economic empowerment and environmentally sustainable farming.
Conservation International (CI)	CI was established in Liberia in 2002 with an initial mission to help establish a protected area network with funding from The Critical Ecosystem Partnership fund. CI - Liberia's focus is now primarily on the East Nimba Nature Reserve (ENNR) Protected Area which is located in northern Nimba county.
Flora and Fauna International (FFI)	FFI has operated in Liberia since 1997, and currently has a five-year mission (2013-2018) to make a measurable improvement to the status of biodiversity and ensuring resilient ecosystems through supporting good environmental governance, building capacity and supporting conservation-friendly livelihood strategies.
Global Witness	Global Witness investigates and campaigns to prevent natural resource related conflict and corruption, and associated environmental and human rights abuses. Program areas include corruption, conflict, environmental governance, and accountability and transparency.
Greenpeace	Greenpeace is an independent global campaigning organization that acts to change attitudes and behavior, to protect and conserve the environment and to promote peace. Greenpeace has worked to develop a methodology for defining high carbon stock forests, which helps to prevent deforestation from palm oil production.
Wild Chimpanzee Foundation (WCF)	WCF aims to enhance the survival of the remaining wild chimpanzee populations and their habitat, the tropical rain forest, throughout tropical Africa. WCF focuses on education, conservation and research projects. In Liberia, WCF is working in Sapo National Park and Grebo Forest.

3.7 World Bank Safeguard Policies

The World Bank's environmental and social safeguards policies covering ten (10) key categories in a form of Operational Policies (OPs) are operationalized when triggered by the proposed project's scope. The policies/procedures are to ensure the safe development of projects it is funding. That is to prevent and mitigate unintended adverse effects on third parties and the environment in the development process. These Environmental and Social Safeguard Policies are discussed briefly in **Table 1** and an indication as to whether the WB policy is triggered by the proposed forestry sector projects is included.

Table 3: World Bank Safeguard Policies

No	World Bank Safeguard Policy	Summary of core requirements	Potential for Trigger under proposed project	Remarks or recommendation for proposed project
1	OP 4.01 Environmental Assessment	Requires environmental assessment (EA) of projects proposed for Bank financing to help ensure that they are environmentally sound and sustainable, and thus to improve decision making. The EA takes into account the natural environment (air, water, and land); human health and safety; social aspects (involuntary resettlement, indigenous peoples, and physical cultural resources); and transboundary and global environmental aspects. It categorises proposed projects into categories A, B, C or FI based on the extent of adverse impacts anticipated from the project.	Triggered	This ESMF is the Government of Liberia's (GoL) response to the Bank's EA policies and guidelines identify and address the adverse environmental and social impacts. OP 4.01 further requires that the ESMF report must be disclosed as a separate and stand-alone document by the GoL and the World Bank as a condition for Bank appraisal of the LFSP.
2	OP 4.04: Natural Habitats	Do not finance projects that which would lead to the significant loss or degradation of any Critical Natural Habitats. Supports projects that affect non- critical habitats only if no alternatives are available and if acceptable mitigation measures are in place. The policy strictly limits the circumstances under which any Bank-supported project can damage natural habitats (land and water areas where most of the native plant and animal species are still present).	Triggered	The project would affect natural habitats— native forests and associated ecosystems—albeit in a positive manner. It is designed to reduce ongoing patterns of loss and degradation of natural habitats, notably forests. The project's site-specific support for community forestry and smallholder agriculture includes measures to avoid promoting any further deforestation or forest degradation.
3	OP 4.36: Forest	Aim is to reduce deforestation, enhance the environmental contribution of forested areas, promote afforestation, reduce poverty, and encourage economic development. Support sustainable and conservation oriented forestry. Do not finance projects that involve significant conversion or degradation of critical forest areas.	Triggered	The project is intended to bring about positive changes in the protection, management, and sustainable utilization of Liberian forests. Community forestry activities will adhere to the principles of sustainable forest management specified in OP 4.36 (Para. 10).

4	OP 4.11: Physical Cultural Resources	Investigate and inventorise cultural resources potentially affected. Include mitigation measures when there are adverse impacts on physical cultural resources or avoid if possible	Triggered	Potential impact on culturally sensitive areas for communities within the geographical area of influence of the proposed Liberians living around forested areas recognize various physical cultural resources, including sacred forest areas as well as individual sacred trees and bushes. Chance Finds Procedures have been prepared for this project.
5	OP 4.12: Involuntary Resettlement	Assist displaced persons in their effort to improve or at least restore their standards of living. Avoid resettlement where feasible or minimize. Displaced persons should share in project profits. The policy aims to avoid involuntary resettlement to the extent feasible, or to minimize and mitigate its adverse social and economic impacts. The policy prescribes compensation and other resettlement measures to achieve its objectives and requires that borrowers prepare adequate resettlement planning instruments prior to Bank appraisal of proposed projects.	Triggered	It is expected that the LFSP will not need to relocate any villages or households in order to establish or strengthen these parks and reserves. The creation of new protected areas would deal with established, pre-existing human settlements through boundary adjustments and internal park zoning, rather than by requiring their relocation.
6	OP 4.10: Indigenous Peoples	Screen to determine presence of indigenous peoples in project area. Policy triggered whether potential impacts are positive or negative. Design mitigation measures and benefits that reflect indigenous peoples' cultural preferences.	Not triggered	No indigenous groups have been identified within the project's area of influence.
7	OP 4.37: Safety of Dams	Requires that experienced and competent professionals design and supervise construction, and that the borrower adopts and implements dam safety measures through the project cycle. The policy distinguishes between small and large dams by defining small dams as those normally less than 15 meters in height. Large dams are 15 meters or more in height.	Not triggered	There are no dams involved in the project.

8	OP 4.09: Pest Management	Rural development and health sector projects have to avoid using harmful pesticides. A preferred solution is to use Integrated Pest Management (IPM) techniques. If pesticides have to be used, the Bank-funded project should include a Pest Management Plan (PMP)	Triggered	The project will use the Pest Management Plan (PMP) for the ongoing Liberia Smallholder Tree Crop Revitalization Support Project, since Component 2.4 of LFSP will support a subset of the same activities in the same counties of Liberia. The ESMF for LFSP also addresses the potential for limited pest management activities in order to protect forest tree nurseries under the community forestry Component 2.3. The LFSP strongly emphasizes integrated pest management but recognizes that some pesticides are likely to be used in the project, particularly to control fungal and insect infestations of cocoa and coffee.
9	OP 7.50: Projects on International Waterways	Ascertain whether riparian agreements are in place, and ensure that riparian states are informed of and do not object to project interventions.	Not triggered	The project would not take water from, or otherwise affect, international waterways.

10	OP 7.60: Projects in Disputed Areas	Ensure that claimants to disputed areas have no objection to proposed project.	Not triggered	There are no disputed areas involved in the project as defined in OP 7.60.
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Process framework

A Process Framework document has also been prepared for this project which covers issues relating to restrictions of access to legally designated and protected areas and involves a participatory approach. The potential livelihood impacts are assessed.

4.1 COUNTRY BASELINE DESCRIPTION

The Republic of Liberia is located at latitudes 4°21' N and 8°33' N of the equator and longitudes 11°28'W and 7°32'W. Liberia covers 111,369 km², and is located entirely within the humid Upper Guinean Forest Ecosystem in West Africa on the Atlantic Coast. Within its borders, 15,050 km² consist of water, and the remaining 96,319 km² are land.

The perimeter of Liberia is 2,551 km, and it shares a border with three countries. Côte d'Ivoire is to the east with a shared border length of 598 km; Sierra Leone is to the west with a shared border of 370 km; and Guinea is to the north with a shared border of 540 km. Liberia is bordered to the south by the North Atlantic Ocean, with a coastline of 579 km from Cape Palmas at the southeastern border with Côte d'Ivoire heading northwest beyond Robertsport to the Mano River on the border with Sierra Leone.



Figure 1: Administrative map of Liberia

4.2 Biophysical environment

Physiography

Liberia has four topographical regions at different altitudes, each with distinct physical features. Along the sea coast is the coastal plain of 560km. Next to the coastal plain is the belt of inundated

plateaux followed by the belt of high land and rolling hills in the north and northwest respectively. Most mountains are located in the northern part of Liberia and include the Bong, Nimba, Mano, Putu, Boni and Wologizi ranges. Mount Wutivi (1380meters at Yekepa) is the highest peak.

Climate

Liberia's climate consists of two separate climate regimes: the equatorial climate regime restricted to the southernmost part of Liberia, where rainfall occurs throughout the year, and the tropical regime dominated by the interaction of the Inter-tropical convergence zone (ITCZ) and the West African Monsoon. Because of Liberia's coastal location, the southwesterly flow of the monsoon prevails most of the year, maintaining a thin layer of moist marine air near the surface, although the Harmattan.

The tropical climate of Liberia is hot and humid throughout the year, with little variation in temperature (mean daytime temperatures: 27⁰-32⁰C; mean nighttime temperatures: 21⁰-24⁰C). There are two distinct seasons in Liberia, dry (November-May) and wet (May-October). Annual rainfall amounts are 4000-5000 mm along the coastal belt, declining to 1300 mm at the forest-savanna boundary in the north (Bongers et al. 1999). The seasonal variation in rainfall has a critical influence on the vegetation (Lawson 1996). Liberia exhibits a fairly high average relative humidity throughout most of the year ranging from above 80% along the coastal belt with lower humidity in the interior portion of the country.

During the Harmattan season (December-March), the dust-laden winds blown in from the Sahara can reduce the relative humidity to 50% or lower.

Soils

The 4 main Liberian soil types and their properties (Reed, 1951; CAAS-Lib, 2007; EPA, 2007) are summarized in Table 3. The soils range from weakly developed muds and hydromorphic clays along the coast and the inland swamps, to shallow soils on the plateaus and mountains and lateritic hills and terraces in the north. The soil patterns are determined by differences in age, parent material, physiography, and present and past climatic conditions. Latosols are the most widespread soil type, followed by lithosols, regosols and alluvial or swamp soils in that order.

Table 4: Soil types in Liberia

Soil type	Liberian classification	Area (%)	Area (ha)	Properties
Lateritic soils or latosols	Kakata, Suakoko and Voinjama Series	75%	8,352,750	Reddish brown, well-drained, deep profile, good structure, leached 10 cm top soil, low cation exchange capacity, calcium deficiency, 4-6% organic matter, acidic, aluminium toxicity, productive agricultural soils, occur in rolling hill country, used for tree crops production.
Lithosols	No information	17%	1,893,290	High gravel content, low moisture retention, shallow, low humus and mineral content, and occur in hilly and rugged terrain, medium agricultural potential.
Regosols or coastal sandy soils	Claratown, Sinko and Freeport Series	5%	2,227,400	Well-drained, 60% coarse sand, very low water-holding capacity, low humus and few mineral nutrients, found in the coastal plains, low agricultural potential
Alluvial soils or swamp soils	Gbelle, Ballam, Grayzohn and Cuttington Series	3%	22,740	Waterlogged, gray hydromorphic soils, poor drainage, thick dark layer of loamy-peaty organic material with relatively high humus and mineral contents

Hydrography

Freshwater bodies cover 15,050 km² (14%) of the total area of Liberia. These include rivers, lakes, lagoons, creeks and streams that drain to the Atlantic coast in a general northeast–southwest direction

Rivers— There are six major rivers, the Mano, Lofa, St. Paul, St. John, Cestos and Cavalla (Cavally). Combined, these rivers drain approximately 66% of the country, with short coastal watercourses draining about 3% (UNEP, 2004). The Cavalla River is the longest river and is shared between Liberia and Côte d'Ivoire. The St. Paul River is the second longest river and provides the majority of the raw water for the capital city Monrovia. Waterfalls, rapids, rocks and sandbanks occur frequently in upstream sections of most rivers, inhibiting river traffic, and limiting navigation inland to distances of 30-40 km. During the rainy season there is often severe flooding in the coastal plains (UNICEF 2006)

Lakes—There are only two major lakes in Liberia: Lake Shepherd (7,284 ha) located in Maryland County; and, Lake Piso, which can be more accurately described as an open coastal lagoon, in Grand Cape Mount County. Both lakes are situated adjacent to the Atlantic Ocean.

Wetlands—Near the coast many kilometers of tidal riverbanks (3,092 km), rivulets (645 km), and smaller tributaries (>1,000 km) are (or were) covered with mangroves that can reach 30 m in height. An estimated 600,000 ha of freshwater wetlands (swamps) occur in Liberia with only about 3% (20,000 ha) under cultivation (DAI 2008). Little is known about the specific values of freshwater wetlands in Liberia, from their role in providing medicinal plants, and other products, to their role in providing ecosystem services such as water quality enhancement, flood control, and

critical fisheries habitats. Similarly, little is also known about saltwater and brackish wetlands and their importance to artisanal as well as commercial marine fisheries.

Liberia is party to the Convention on Wetlands of International Importance, and has five designated Ramsar Wetland Sites covering a surface area of 95,879 ha (Table 1). Liberia has numerous brackish wetlands, three of which have been declared Ramsar sites (wetlands designated as internationally important under the Convention of Wetlands): Lake Piso; Marshall Wetlands; and, Mesurado Wetlands. Other identified coastal wetlands include the Bassa Bwa Lagoon and the mouths of the Mano, Lofa, St. Paul, St John, Cestos, Sehknwehn and Cavalla rivers (Ramsar.Wetlands.org, 2013). Liberia does not support extensive freshwater wetlands because the terrain slopes fairly constantly from the high northern border to the sea. Two small freshwater wetlands have been designated as Ramsar sites: Gbedin Wetlands and Kpatawee Wetlands.

Coast—The coastline of Liberia is 579 km in length, extending from the western border with Sierra Leone to the eastern border with Côte d'Ivoire. Approximately 90% of the coastline consists of sandy beaches that vary from 20-25 meters wide at the narrowest, to 60-80 meters at the widest beaches along the southeastern extent. The coastline is punctuated with lagoons, estuaries, bays and brackish wetlands.

Land cover and Vegetation

Liberia is situated within the Upper Guinean Forest that extends from Guinea at the northwestern extreme to the eastern limit in Cameroon. The Upper Guinean Forest is fragmented and Liberia is estimated to account for more than half of West Africa's remaining Upper Guinean tropical forest (Figure 4). The climax vegetation over most of Liberia is forest, which covers about 4.39 million hectares or 45 percent of Liberia's land area (FDA, 2006). The most recent forest classification (2006) included 2.42 million hectares of closed dense forest, 1.02 million hectares of open dense forest and 0.95 million hectares of agriculture/degraded forest (Table 2).

There are three general types of forest (Cole 1968; Vooren and Sayer 1992; Mayers et al. 1992): (1) Evergreen or mixed evergreen/semi deciduous moist forests of western Liberia where there is a distinct dry season (under 100 mm rain/month); (2) Wet evergreen forests of eastern Liberia where the dry season is very short or absent; and, (3) Submontane (or montane) forests found in the highest hills in Liberia, above about 800-1000 m, although this zone is poorly-differentiated from the contiguous lowland forests. Swamp and riparian forests can be found embedded within the moist evergreen and semi-deciduous forests. An extensive zone of degraded forest occurs near the coast and extends inland in central Liberia, separating the moist and wet forest blocks. The degraded forest is mostly managed for shifting cultivation, and typically shows a mosaic of fields with scrubby and forested fallows. "Farm bush", the degraded secondary growth derived from forest that follows slash-and-burn agriculture, is increasingly the most dominant vegetation type in this zone.

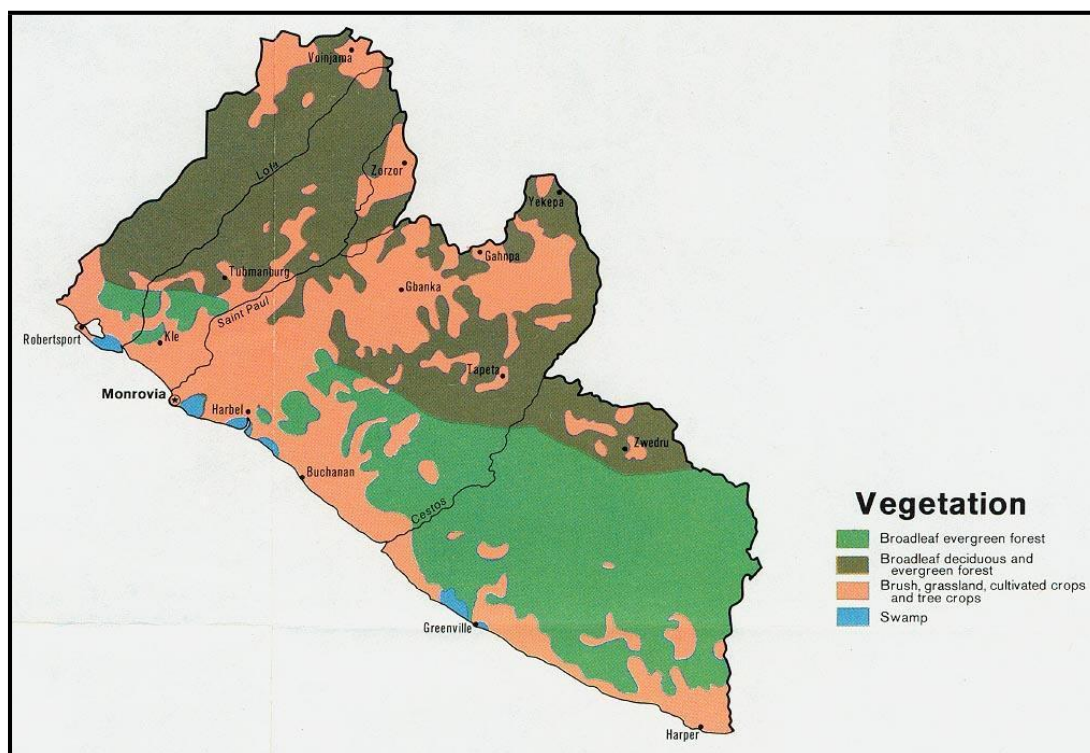


Figure 2: Vegetation map of Liberia

4.3 Socio- economic environment

Liberia is divided into 15 Counties for administrative purposes. Each county is then further divided into Districts, townships and villages. In the traditional structure, each County is also divided into clans which are sub-divided into sub-clans. Townships are grouped into clans depending on the language groups and traditional affiliations (FFI, 2004).

A County is headed by a Superintendent, a district by a Commissioner, a clan by a paramount chief, a sub-clan by a clan chief, a township by a town chief and a village by a village chief. The county heads are appointed by the President of the Republic, whilst the chiefs are mostly through an inheritance system. These administrative structures play important roles in the implementation of policy actions and regulatory requirements.

Population and social development

The total population in Liberia is estimated at 3,989,703—with 44% under the age of 15. One-third of the population lives in the capital of Monrovia and surrounding Montserrado County. Liberia harbors a number of refugees, most of whom fled conflict in Côte d'Ivoire; the current estimate as of December 1, 2013 is more than 54,000 refugees. Both annual population growth rates (2.6%) and annual urban growth rates (3.4%) are high. The division between urban and rural is substantial, with those who live in Monrovia commanding much greater access to basic services than do those who live in the rural areas.

4.4 Forest resources

General Characterization

Liberia is the only country in the Upper Guinean Rainforest of West Africa that once was covered entirely with rain forest. The most recent forest classification (2006) included 2.42 million hectares of closed dense forest, 1.02 million hectares of open dense forest and 0.95 million hectares of agriculture/degraded forest (Figure 5). All forest resources in Liberia, with the exception of forest resources located on communal forests and forest resources that have been developed on private or deeded lands through artificial regeneration, are held in trust by the Republic of Liberia under the 2006 National Forestry Reform Law.

Estimates of deforestation rates are variable and suffer from a lack of data. Between 1990 and 2005, forest area in Liberia has been reported as being reduced by 22% (FAO 2005). This equates to an average annual rate of deforestation of 0.9% over that period. A 2008 forest change analysis in Liberia performed by a partnership between the FDA, CI and South Dakota State University notes the average deforestation rate increasing from 0.2% in 1986-2000 (Christie et al. 2007) to 0.35% in 2000-2006. Comparatively, in 2006 the National Forest Policy and Implementation Strategy (FDA 2006) cited the annual rate of deforestation in Liberia at approximately 12,000 ha, or 0.3%. Most recently in 2009 a report commissioned by Liberian NGO Green Advocates estimated an annual deforestation rate during that year of between 0.5 and 1% (Shearman 2009). Unfortunately in the absence of current, reliable data, it is difficult to ascertain the trend and accuracy of deforestation estimates.

A very recent global-scale analysis provides some clarity on recent deforestation patterns in Liberia (Hansen et al. 2013). In the period from 2000 to 2012, Liberia lost 395,500 ha, and gained 108,400 ha of total forested area. Excluding water, this equates to a total forest loss of 4.1 percent of the land area. Patterns of forest loss varied with tree cover over the 12 years analyzed: areas with 51-75 percent tree cover lost the most forest (230,500 ha), followed by areas with 76-100% tree cover (154,700 ha). Annual data will soon be released on the WRI Global Forest Watch portal, which will allow for the calculation of annual deforestation rates during that time period.

Economic Value of Forests and Gender Issues

The forest economy is extremely important across Liberia, particularly in the rural areas. Many communities are dependent on timber and non-timber forest products, both for use within the community and for domestic and international trade. Estimates are that about 70 percent of Liberia's rural dwellers earn a living from forests and forest-related products (Soloh 2005). Biomass resources—primarily firewood and charcoal—meet 99.5% of the Liberian population's energy needs for cooking and heating and are thus vital to basic welfare and economic activity (Milbrandt 2009).

The production of timber for export is carried out at an industrial scale in two main regions of the country: the south east (e.g. Grand Bassa, Sinoe, River Cess, Grand Gedeh) and north (e.g. Lofa, Gbarpolu, Grand Cape Mount). Forest production in the formal sector is mainly destined for export

to markets in Asia and Europe. According to SGS data (personal communication), timber export permits in 2013 were issued to India (15,271 m³; 32% of total permits); China (8,806 m³; 18%); Thailand (7,561 m³; 16%); Turkey (7,885 m³; 16%); France (2,358 m³; 5%); Greece (949 m³; 2%); Germany (537 m³; 1%).

Commercial timber production was carried out in very high levels in the 1980s, and again from the late 1990s until UN sanctions were imposed in 2003. During this period, logging activities were carried out at unsustainable levels of harvesting and considerable revenues were generated. However, various studies have identified that logging prior to 2003 was characterized by poor governance, corruption and financial mismanagement. There was no transparency regarding revenues generated from the sector, but analysis of volumes of timber from Liberia reported by importing countries, and the Concession Review process in 2004, indicated millions of dollars in unpaid taxes. Any revenues collected were held by individuals or the central government and benefits were not shared with communities. Following the reform process and lifting of sanctions, timber exports have been slow to resume. The revenues received by the government are recorded in a chain of custody system and verified by the LEITI reporting mechanism. The relatively low levels of commercial logging activity mean that revenues are very low compared to original FDA projections, and many concessions have not paid the area-based fees stated in their concession agreements (land rental and/or annual bid premiums). There have also been problems identified in the operation of the benefit sharing mechanisms (e.g., National Benefit Sharing Trust) which are described in the National Forestry Reform Law and regulations (Halton 2013).

The domestic market of timber is almost entirely supplied by Chainsaw Milling. Domestic production and consumption is estimated to exceed timber exports, a situation which is particularly acute at present, due to both the low levels of timber exports and industrial scale operations, and to a building boom as the country continues its reconstruction, which have increased domestic demand. The domestic sector is a major source of employment, particularly in rural areas. The networks of chainsaw operators, traders and domestic timber dealers are estimated by the Liberia Chainsaw & Timber Dealers Union to number over 15,000 across Liberia. In addition, each team of chainsaw operators will be supported by crews of cooks and transport workers, so the wider employment of the sector is very significant.

The production and sale of charcoal is another major source of employment. The vast majority of the Liberian population is dependent on charcoal as a source of energy for cooking. At the time of the 2008 census, an estimated 85% of households were dependent on charcoal, and a study in 2010 estimated that 4million bags of charcoal per annum are consumed in Monrovia alone. NACUL estimates that over 10,000 people are involved in production and trade of charcoal, representing a significant source of livelihoods across the country. Despite the significance of the charcoal sector, it is currently not formalized or regulated, although there is dialogue on this issue between FDA and NACUL. The FDA has negotiated with charcoal producers to introduce a levy on sacks of charcoal being moved around the country (particularly the large volumes transported into Monrovia) but enforcement is weak, and there are reports of corruption in the collection mechanisms (Halton 2013). Non Timber Forest Products (NTFPs)—such as bush meat, honey, medicines (*Alchornea*

cordifolia, *Xylopia staudtti*, *Hugaruna* and *Piptadeniastrum africanum*), colorants, bamboo and rattan cane (*Calamus deeratus*, *Raphia palma-pinus*) used for furniture construction—play an important role in the livelihoods of many rural communities. Although there are many constraints challenging NTFP value chains—namely that GOL structures have little experience promoting NTFPs, infrastructure is poor, local business ethic is weak, rural credit is scarce, and trader networks are underdeveloped—NTFPs are thought to provide significant income to rural producers (Lebbie et al. 2009; USAID 2009a). There is interest in the harvesting and trade of NTFPs, which could offer sources of economic activity from forests without loss of forest cover. A number of community forestry and conservation projects have focused on identifying NTFPs and exploiting these as a source of income and employment (e.g. USAID 2009a). There are several large programs starting in the agricultural sector focusing on tree crops and improving market linkages to boost trade in these commodities. These tree crop programs are focused on smallholders and will initially target rehabilitation or replanting of existing stands, but as the situation in relation to land tenure in rural areas is clarified, it is likely that this will expand into new areas. There is a significant, but unquantified, trade in bushmeat for domestic and regional markets. The full economic and ecological impacts are unknown.

There is currently no legal framework for identification or trade of carbon credits in Liberia, though the development of such legislation is expected. As such, the lack of a legal framework means that there is currently no mechanism for sharing of benefits from carbon trade with communities in the affected area.

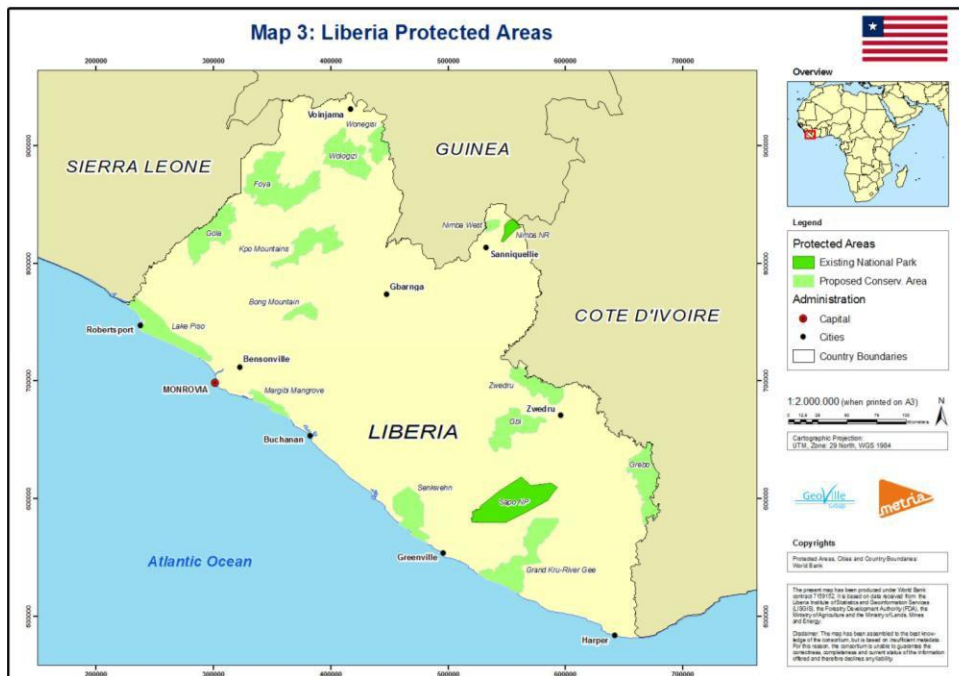


Figure 3: Liberia Protected Areas

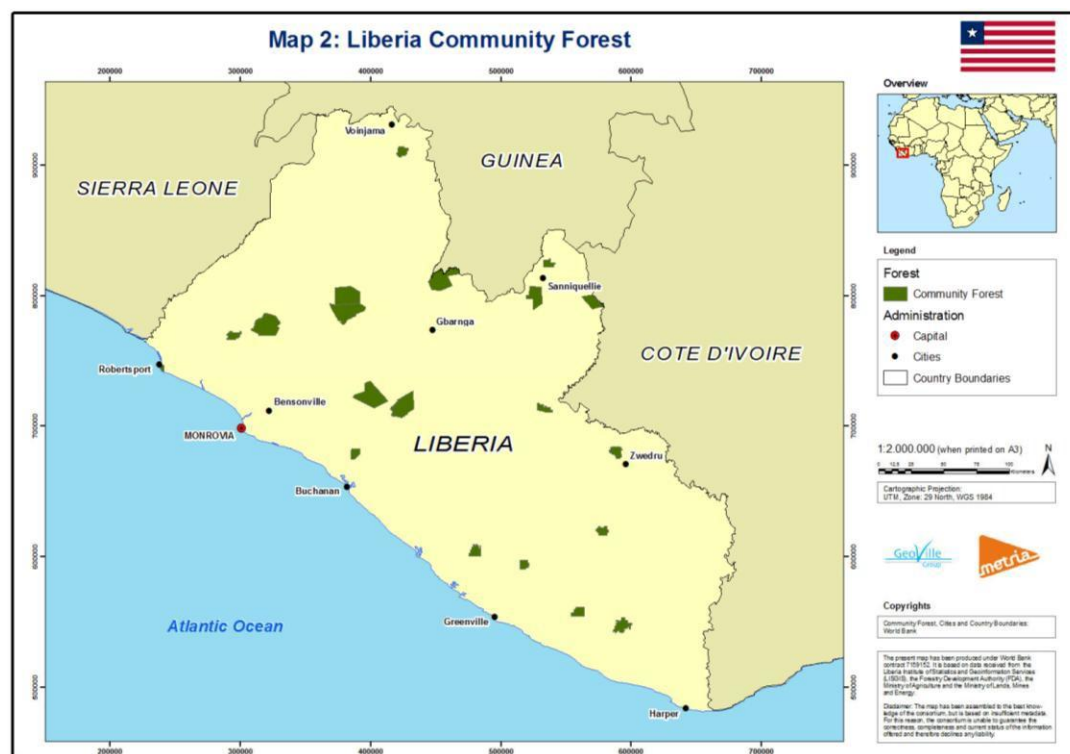


Figure 4: Community Forest map of Liberia

5.0 POTENTIAL IMPACT ISSUES AND CONCERNS

The potential environmental and social issues and concerns, both positive and negative, are identified based on the proposed project site specific activities.

The project is designed to reduce deforestation and forest degradation and to increase benefits-sharing from forest resources, without generating significant adverse environmental or social impacts.

The main safeguards-related issues associated with the project's site-specific investments include (i) the need to ensure that **community forestry activities** are sustainable from an environmental (including silvicultural) standpoint; (ii) ensuring that support for **improving smallholder agriculture** provides an alternative to further deforestation, rather than promoting any additional forest clearing; and (iii) providing appropriate **livelihoods-related support** to communities whose access to natural resources within protected areas might be restricted as a result of project activities.

The measures for addressing these impacts are specified in this report and also in the Process Framework which have been prepared in a highly participatory manner. The project design is also benefiting from the safeguards-related due diligence taking place under existing REDD+ preparation activities, including the ongoing Strategic Environmental and Social Assessment study.

The specific sub project activities and interventions are listed in the table below.

The key activities for which mitigation actions will be required may comprise the following:

Community forestry related activities

- Allocation and development of selected forest areas into protected area status
- Establishment of biological corridors
- Territorial demarcation
- Training of forest rangers
- Building of offices, staff accommodation and ranger outposts

Smallholder agricultural related activities

- Rehabilitation of cocoa plantations and also replanting and new planting of the tree crops
- Conservation agriculture- production of annual food crops on degraded lands
- Horticultural and low land rice cultivation
- Small scale processing mills and other activities
- Rehabilitation (but not expansion or major upgrading) of market access roads

Livelihood related support

- Pilot projects on alternative livelihoods
- Commercial management and add value to forest products (e.g. charcoal, lumber, furniture, construction wood)
- Ecotourism activities
- Development of domestic market for charcoal and lumber business

Projects concerning capacity building and extension and communication are deemed to be 'soft projects' and may not be associated with any physical infrastructural development.

In summary, **Table 5** below lists some significant potential social and environmental impact issues from the implementation of the various sub-project activities.

Table 5: Project components and activities of environmental and social concerns

Subcomponent	Some relevant Proposed Activities	Specific activities of Potential Environmental and Social Concern
Component 1: Strengthened Regulatory and Institutional Arrangements for Implementation of REDD+		
Sub-Component 1.1. Strengthened Capacity in Institutions (public, private, CSOs) for Improved Management of Forest Landscapes	Institutional support at four levels (1) REDD+ management (NCCS, NCCSC etc); (2) National level (FDA, EPA, LC, MoA, LISGIS etc) (3) Regional support to county and district FDAs and regional inter- agency task forces; (4) Service delivery partnerships (CSOs)	-
Sub-Component 1.2. Legal Reform and Law Enforcement	<p>Contribute to the establishment of an independent multi-stakeholder committee to review and provide approval to logging concessions in the future</p> <p>Hence establish procedures in which new industrial logging concessions will only be awarded after independent review of all forest-related concessions for legal compliance and satisfactory procedures</p>	<ul style="list-style-type: none"> • Allocation and development of selected forest areas into protected area status • Establishment of biological corridors • Territorial demarcation • Training of forest rangers
Component 2: Strengthened Capacity for Management of Targeted Forest Landscapes		
Sub-Component 2.1. Improved Land Use Planning	Technical assistance, training, and resources for operational costs, and small goods and services	-
Sub-Component 2.2 Strengthened Management of Protected Areas of Targeted Forest Landscapes	<p>Prioritize those PAs located in the targeted forest landscapes where key investments in improved protection and management still need to be made and will not be funded from other sources.</p> <p>Support priority investments to strengthen the on-the-ground management of the Sapu, Lake Piso, Gola Forest, Wonegizi, and Grebo Forest protected areas.</p> <p>Physical demarcation of Gola Forest National Park and its external land boundaries, primarily with a cleared path (about 2 m wide but with larger trees not removed), supplemented by vertical markers and signs at strategic points.</p>	<ul style="list-style-type: none"> • Allocation and development of selected forest areas into protected area status • Establishment of biological corridors • Territorial demarcation • Training of forest rangers • Building of offices, staff accommodation and ranger outposts and potential impact on physical cultural resources including chance finds

Subcomponent	Some relevant Proposed Activities	Specific activities of Potential Environmental and Social Concern
	Small civil works needed for effective on-the-ground protected area management, including headquarters	
Sub-Component 2.3. Support for Community Forestry in Targeted Forest Landscapes	<p>Community grants for small community enterprises to produce, transform and commercialize a variety of timber and non-timber forest products, and other agro and agro-forestry activities (e.g. cocoa, rice, coffee, cassava, tree plantations for firewood and charcoal, etc).</p> <p>Promote/support establishment/strengthening of small CFE (existing or new ones) for the commercial management and add value to forest products (e.g. charcoal, lumber, furniture, construction wood)</p> <p>Support communities establish small-scale tourism activities in a phased manner.</p> <p>The targeted communities will be encouraged to adopt sustainable land use and agricultural practices that enhance the structural and functional integrity of the forest ecosystem and improve rural livelihoods. This will involve a mix of conservation agricultural practices; sustainable land use, community forest management, alternative livelihood and effective use of degraded land.</p> <p>Eco-tourism activities will be promoted in Lake Piso</p>	<ul style="list-style-type: none"> • Pilot projects on alternative livelihoods • Commercial management and add value to forest products (e.g. charcoal, lumber, furniture, construction wood) • Ecotourism activities • Development of domestic market for charcoal and lumber business • Rehabilitation of cocoa plantations and also replanting and new planting of the tree crops • Conservation agriculture- production of annual food crops on degraded lands • Horticultural and low land rice cultivation • Small scale processing mills and other activities
Sub-Component 2.4. Strengthen Capacity for Sustainable Agriculture	<p>Strengthen sustainable agriculture in targeted landscapes.</p> <p>Establishing partnerships with private sector agents to encourage building of alliances at the local level for promoting value chain based partnerships and small and medium enterprises around common property resources for livelihoods benefits such as smallholder tree crops in targeted landscapes, small scale processing mills and post-harvest technologies.</p>	<ul style="list-style-type: none"> • Rehabilitation of cocoa plantations and also replanting and new planting of the tree crops • Conservation agriculture- production of annual food crops on degraded lands • Horticultural and low land rice cultivation • Small scale processing mills and other activities • Rehabilitation (but not expansion or major upgrading) of market access roads

Subcomponent	Some relevant Proposed Activities	Specific activities of Potential Environmental and Social Concern
	<p>This support will provide additional funding for the STCRSP to expand its coverage within the targeted landscapes to rehabilitate cocoa plantations and also support replanting and new planting of the tree crops.</p> <p>The project is implemented in communities with old farms and degraded lands through rehabilitation of existing farms, adapted models of re-planting and new planting in association with financing mechanisms for revitalizing the tree crop sub-sector.</p> <p>Ensure that the community is involved in the allocation of land for farming purposes and there are no social issues within the community on the utilization of the land for intended purpose.</p> <p>Development of small scale processing; rehabilitation (but not expansion or major upgrading) of critical markets access roads in project areas.</p> <p><i>Conservation agriculture:</i> These activities will enhance the productivity of annual food crops on degraded lands through sustainable agricultural practices. Based on selection of agricultural enterprises by communities through demand driven approach, grants will be provided to support production of annual crops; grains, legumes and pulses through minimum tillage activities. The project will encourage the use of cover crops and promote conservation agriculture with greater emphasis on soil and water conservation techniques. Contour farming will be encouraged to conserve water and protect soil on sloping fields. Erosion control on farms and river bank protection will be supported.</p>	<ul style="list-style-type: none"> • Rehabilitation of cocoa plantations and also replanting and new planting of the tree crops • Conservation agriculture- production of annual food crops on degraded lands • Horticultural and low land rice cultivation • Small scale processing mills and other activities • Rehabilitation (but not expansion or major upgrading) of market access roads
	<i>Horticulture and lowland rice cultivation:</i> Planting of rice on	<ul style="list-style-type: none"> • Rehabilitation of cocoa plantations and also

Subcomponent	Some relevant Proposed Activities	Specific activities of Potential Environmental and Social Concern
	<p>lowland with good water management technology will be encouraged to reduce pressure on upland forest areas. By encouraging farmers to use the lowlands to grow rice, horticultural crops and vegetables, as well building their capacity to manage simple water management infrastructure, the current pressure on the forests would be significantly reduced. The sub component will also fund lowland infrastructure for water management and clearing of rural access roads.</p>	<p>replanting and new planting of the tree crops</p> <ul style="list-style-type: none"> • Conservation agriculture- production of annual food crops on degraded lands • Horticultural and low land rice cultivation • Small scale processing mills and other activities • Rehabilitation (but not expansion or major upgrading) of market access roads

6.1 GUIDELINES FOR MITIGATION AND ENHANCEMENT MEASURES

6.2 Mitigation Measures

These mitigation guidelines are given to address the significant impacts. The responsibilities for implementing these measures are described later in the report.

Table 6: Environmental and social mitigation measures

Specific activity	Potential Environmental and Social Issues	Proposed Mitigation Measures
Allocation and development of selected forest areas into protected areas	Loss of livelihood (hunters, fishermen, farmers, traditional medicine men, small scale miners etc.)	<ul style="list-style-type: none"> • Sufficient consultations to be held with stakeholder communities and groups/ persons to provide amicable agreements over boundary demarcations; • Grievance redress mechanism to be prepared and implemented to be followed by all parties • Ensure appropriate assistance is provided to PAPs including small scale miners as defined in the Process Framework; • Employment and other opportunities given to local communities as much as possible. • Alternative livelihood schemes to be discussed, agreed and provided for <u>affected persons/ groups</u>
	Restricted access to communal resources	<ul style="list-style-type: none"> • Process Framework document prepared and implemented to confirm participatory process to be followed to manage issues of restricted access
	Cultural issues	<ul style="list-style-type: none"> • Necessary cultural rites agreed with community and performed prior to access to sacred groves and other such community areas
	Conflicts between traditional authorities and FDA	<ul style="list-style-type: none"> • Ensure appropriate compensatory arrangements are made with project affected communities as defined in the Process Framework; • Employment and other opportunities given to local communities as much as possible. • Consultation plan to be prepared and implemented to ensure regular interaction between FDA and traditional leaders • Grievance redress mechanism to be prepared and deployed • Forest management plans to be prepared for all sites to also reflect community aspirations
Territorial demarcation	Conflict over boundaries by communities	<ul style="list-style-type: none"> • Consultation plan to be prepared and implemented to ensure regular interaction between FDA, Land Commission (LC) and traditional leaders
	Loss of vegetation, threat to fauna and erosion risks as well as sediment transport to water bodies	<ul style="list-style-type: none"> • Vegetation clearance to be done during dry weather conditions to minimize erosion risks; • Vegetation clearance to be limited strictly to only required areas to avoid unnecessary losses (2m wide) and larger trees will not be removed. • Promote buffer zones along the local streams to ensure their integrity and protection of other aquatic life forms.

Specific activity	Potential Environmental and Social Issues	Proposed Mitigation Measures
Training and deployment of forest rangers	Safety and security issues	<ul style="list-style-type: none"> FDA to devise policies and procedures to protect field staff Work closely with LC and law courts to efficiently and swiftly determine court cases.
Building of offices, staff accommodation and ranger outposts	Land acquisition	<ul style="list-style-type: none"> Transparent procedures followed with sufficient documentation to confirm proper acquisition including cases of voluntary donation as per PF. All civil works will be screened for any environmental and social impacts.
	Occupational health and safety	<ul style="list-style-type: none"> Workers will be required to wear suitable Personal Protective Equipment (PPE), including hardhats, safety boots, and gloves as needed. Workers will be sufficiently trained in the safe methods pertaining to their area of work to avoid injuries.
	Community Health and Safety	<ul style="list-style-type: none"> Work sites will be fenced to avoid accidents. Dust and noise from work sites will be controlled as needed.
	Chance finds	<ul style="list-style-type: none"> Contractor to ensure cases are immediately reported to the Supervising Engineer and then the Ministry of Cultural Affairs, to determine further required actions including (as appropriate) the salvage and safekeeping of items. A chance find procedure has been included as part of the ESMF.
Pilot projects on alternative livelihoods	Acceptance of projects by communities	<ul style="list-style-type: none"> Adequate consultations to be held with stakeholder communities to agree on alternative livelihoods Training to be given to interested community members on identified livelihood Basic resources to be made available for community to embark on selected projects Monitoring and evaluation mechanism put in place for follow up and to ensure success <u>Grievance redress systems introduced and implemented</u>
	Land acquisition for alternative livelihood activities.	<ul style="list-style-type: none"> Transparent procedures followed with adequate documentation to confirm acquisition including voluntary donations as per provisions in the PF
Forest harvesting, Development of domestic market for charcoal and lumber business	Sustainability	<ul style="list-style-type: none"> Community Forest Management Plans to be prepared and must be approved by the FDA after meeting set standards Procedure and standards to be consistent with WB Forest Policy (OP 4.36) FDA staff sufficiently trained to review Management Plans to ensure sustainability

	Loss of forest products to charcoal	<ul style="list-style-type: none"> • Tree plantations to be encouraged to produce raw material for charcoal production
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Specific activity	Potential Environmental and Social Issues	Proposed Mitigation Measures
	Biodiversity	<ul style="list-style-type: none"> Design planting to include both exotic and indigenous plants in the right proportions and positions Ensure biodiversity plots are maintained within tree plantations and also along waterways and streams within the plantations
	Air quality deterioration from charcoal burning and handling in households	<ul style="list-style-type: none"> Liaise with local and international organizations promoting the use of eco-friendly stoves
Rehabilitation of cocoa plantations and also replanting; and new planting of tree crops	Farmer health and safety issues	<ul style="list-style-type: none"> Farmers will be encouraged to use safety wears like wellington boots to protect themselves against snakebite and other hazards. Farmers will be trained on fertilizer and agrochemical applications in order to prevent inhalation as part of pest management (see Annex 7).
Production of annual food crops on degraded lands	Land clearing and preparation for cropping and farm development;	<ul style="list-style-type: none"> To be done under dry weather conditions and with appropriate equipment in order not to pose pollution threat to neighbouring water bodies Open burning of biomass will not be encouraged The plantation development will be phased in order to generate biomass which could be harvestable at a given time. Salvaging of useable biomass can significantly reduce the volumes of waste that has to be disposed of. Any felled trees and cleared underbrush will be appropriately utilized (including as pegs for planting), or allowed to decompose and/or used as pegs
	Agrochemical usage	<ul style="list-style-type: none"> Farmers will be educated by MoA extension officers on proper use of agrochemicals including pesticides, and hazards associated with pesticide use including the dangers in improper handling of empty pesticide containers. They will be introduced to proper disposal methods. The Pest Management plan used under the ongoing Tree Crop project will be used during the implementation of the LFSP.
	Pesticide use and hazards	<ul style="list-style-type: none"> The use of pesticides on plantations will be minimal. The main control methods for pests and diseases will involve the use of resistant hybrids, trapping/scaring of animals, protecting young plants with collar wire and destroying nestling/breeding areas of pests. A constant phyto-sanitary observation will be maintained to help prevent the outbreak and spread of any potential disease/pest Uncontrolled mass spraying of fungicides will be avoided. The use of herbicides will not be encouraged. Control of weeds will be done manually.

Specific activity	Potential Environmental and Social Issues	Proposed Mitigation Measures
		<ul style="list-style-type: none"> • Labour-intensive approach using simple farm tools like hoes and cutlasses will be employed. • Encourage use of organic farming practices when possible • The project will conduct safety training for pesticide handlers and all agricultural workers. The training programme will include handling of agro-chemicals, use of PPE and what to do in the case of pesticide exposure.
Horticultural and lowland rice cultivation	Biodiversity	<ul style="list-style-type: none"> • Avoid environmentally sensitive sites and unnecessary exposure or access to sensitive habitat; Consult EPA in the selection and use of such sites; • Clearance of plots will be sufficiently phased to reduce the impacts of vegetation removal on terrestrial flora and fauna.
Small scale processing mills	Installation and operation of processing facilities;	<ul style="list-style-type: none"> • Implement practices to avoid resource wastage • All discharges to environmental media to be minimized and monitored regularly
	Occupational health and safety	<ul style="list-style-type: none"> • All workers to be protected by the use of PPEs
	Community health and safety	<ul style="list-style-type: none"> • Work sites will be fenced to avoid accidents involving the public.
Rehabilitation of access roads	Dust dispersal	<ul style="list-style-type: none"> • Dust suppression methods (watering of roads during construction of office, and vehicles adhering to speed limits) to be employed to avoid excessive emissions which may cause nuisances and threat to public health
	Erosion and sediment transport to nearby water bodies	<ul style="list-style-type: none"> • Road maintenance and rehabilitation to be done during the dry weather conditions to minimize erosion risks
Ecotourism activities	Protection of lake resources	<ul style="list-style-type: none"> • Environmental and social management plan to be prepared to guide the use of the resource
	Lake water quality including biological characteristics	<ul style="list-style-type: none"> • Regular monitoring exercises to be instituted and implemented to assure the quality of the water body
	Sanitation including domestic liquid and solid waste generation and management	<ul style="list-style-type: none"> • Sanitation facilities to be provided for workers and visitors and these will be maintained by the managers of the facility

7.1 ENVIRONMENTAL AND SOCIAL MANAGEMENT PLAN

The ESMP outlines mechanisms for the screening of proposed project interventions, and identifies potential environmental and social impacts and their subsequent management. The Plan also describes the working arrangements between the FDA and other relevant institutions for the implementation of proposed safeguard measures as well as the requirements for institutional capacity building. An indicative cost is provided to implement the Plan. The ESMP will be included in the project's Manual of Operations. The FDA will enter into a Memorandum of Understanding with EPA in regards to the implementation of the safeguards related to this project.

The provisions of this ESMP are in compliance with Liberian national environmental regulations and the World Bank safeguard policies. The roles and responsibilities of the FDA and the other collaborating agencies are clearly defined which are consistent with their statutory mandates.

7.2 The Environmental and Social Screening Process

A preliminary screening activity will be carried out on major project activities to immediately determine whether they are likely to have negative environmental and social impacts. The FDA and EPA staff at the appropriate level will use the checklist provided in **Annex 2** for this purpose. If significant impacts are anticipated then the EPA must be consulted and the Liberia Environmental Assessment (EA) procedures duly followed.

The purpose of the preliminary screening is to determine whether project activities are likely to have potential negative environmental and social impacts and the level of involvement required of the EPA in designing and implementing appropriate mitigation measures. The EPA will be required to exercise its statutory functions to ensure that projects are developed and implemented in an environmental safe manner. The Agency will also assist in monitoring any residual impacts to ensure sustainability. This early Screening process will also consider the requirements of the Process Framework to manage community needs with respect to restrictions on access to communal resources as well as livelihood issues.

When there are minimal or no impacts (verified by using the checklist), project managers must consult internally with the FDA Environmental and Social Safeguard Focal Person for confirmation. Once an agreement is reached, the manager may proceed with the minimum regular reporting requirements which will be discussed and agreed with the EPA and FDA Environmental and Social Focal point.

Where there may be doubt concerning project risks and impacts, the County and/or FDA Environmental and Social Focal Point should consult the EPA for guidance as provided by the Liberia EA procedures.

Those projects requiring EPA clearance will only commence when an environmental permit has been procured from the EPA. The Agency has a list of projects for which ESIA is mandatory which are consistent with the World Bank categorization of projects.

There may be the need for land acquisition for alternative livelihood interventions such as farming and building of office space. The PF describes the required process for proper land acquisition and documentation. All project-supported civil works (such as construction of office space, staff accommodations, and ranger posts) will be on government, public, or voluntarily donated community lands. This will be verified through the environmental and social screening mechanism specified in this ESMF, before any civil works commence.

7.3 Environmental and Social Assessment Procedure to be followed for Projects

The formal environmental approval and permitting processes will be guided by both the Liberia EIA procedures as given by the EPA Act (2003) and the World Bank safeguard policy OP4.01 which provides guidance on the environmental assessment procedures for WB funded projects.

The Environmental Protection Agency Act (2003) provides for the establishment of an Environmental Protection Agency with functions among others, to review and approve environmental impact statements and environmental impact assessment submitted in accordance with this Act.

Part III of the Environment Protection and Management Law, 2003 provides a mechanism for balancing development and environment concerns. Annex 1 of the act provides a list of projects and activities for which an environment impact assessment license or permit shall be required prior to their commencement.

The procedures establish an EIA process to among others, provide enough relevant information to enable the EPA to set an appropriate level of assessment of any proposed undertaking, investment or programme for the necessary review and to facilitate the decision making process for the EIA approval. The procedures comprise activities such as project Registration, preparation of project brief, Scoping, EIS preparation, and Public hearing as described by the administrative flow chart in **Annex 3**.

Registration

The FDA being the project proponent will submit an application for an environmental impact assessment license, on a prescribed form addressed to the County Environmental Officer of the Agency in conformity with Section 36 of the Agency Act.

Publication of Notice of Intent

Following the submission of an application for an environmental impact assessment permit, the FDA will publish a notice of intent, which will state in a concise or prescribed manner information that may be necessary to allow a stakeholder or interested party to identify its interest in the proposed project or activity.

Submission of Project Brief

Prior to commencing, carrying out, executing or conducting any of the projects, the FDA will submit to the Agency and the relevant Line Ministry a project brief in a concise or manner for review and approval.

The Agency, in consultation with the Line Ministry, will evaluate the project brief to determine the potential environmental impact of the proposed project or activity and shall make the

following determination:

- a) If a project may have a significant impact on the environment, the Agency shall require the proponent of applicant to prepare an **environmental review** in accordance with section 13 of this Law;
- b) If the project or activity will have or is likely to have a significant impact on the environment and the project brief discloses no sufficient mitigation measures, the Agency shall require the proponent or application to prepare an **environmental impact study** in accordance with section 14 of this Law;
- c) If the project or activity will not have, or is unlikely to have a significant impact on the environment or that the project discloses sufficient mitigating measures, the Agency may issue:
 - i. A finding of no significant impact, a "FONSI", and a notice published and placed on the notice board of the registry of the Agency at its head office and the office of the County Environmental Committee for the information of the public;
 - ii. A certificate of approval; unless the Agency determines that the scope, size and/or sensitivity or the project warrants public consultation prior to the issuance of the certificate of approval.

Environmental Reviews

- 1) The FDA will prepare an environmental review for project or activities that may have a significant impact on the environment, and will contain sufficient information to enable the Agency to determine whether a full environmental impact study should be required for the project;
- 2) The Agency will promulgate guidelines describing the contents and format of environmental reviews, and specifying the procedures to be followed by the Agency in evaluating environmental reviews.

Scoping Process

The scoping process includes extensive stakeholder consultations to:

- a) Identify, inform and receive input from the effected stakeholders and interested parties;
- b) Determine and narrow the scope of the issues to be addressed in the environmental impact assessment;
- c) Identify and define, at an early stage of the EIA process, the significant environmental issues, problems and alternatives related to the different phases of the proposed project or activity;
- d) Ensure public participation early in the EIA process;
- e) Ensure that all relevant issues and alternatives are adequately addressed in the environmental impact study;
- f) Provide the applicant with the information necessary for formulating the terms of reference for the environmental impact study and impact statement; and
- g) Guide the applicant's consultants in preparing the environmental impact statement.

The FDA will, in a prescribed manner, submit to the Agency a written scoping report.

Environmental Impact Study and Report

If required, an environmental impact study shall be prepared in accordance with the Terms of Reference developed by the FDA based on the results of the scoping activities and in

consultation with the Agency and Line Ministry for review by the review committee to be set up by the Agency.

Public consultation on the EIS The Agency will:

- a) By notice published for the consecutive days, invite comments from the public;
- b) The public *notice* shall state the particulars of the project as set out in section (14) above;
- c) The comments under sub-section (a) shall be received by the agency within 30 days of the publication of the notice or within such extended period as the Agency may grant by published notice.

Public Hearing

Upon receiving the comments of the public and the Line Ministry or other agencies to whom a copy of the environmental impact statement was sent, or upon the expiry of the period stipulated for receipt of comments, and on considering the opinion from the comments, the Agency shall decide whether to hold a public hearing.

Approval or Rejection of the Project or Activity The Agency may:-

- 1) Approve the project or activity unconditionally if it is satisfied that the project or activity shall not result in significant damage to the environment;
- 2) Approve the application conditionally by requiring the developer to redesign the project or do such other thing as the Agency considers necessary, taking into consideration the suggestions or comments made and all environmental factors; or
- 3) Refer the application back to the applicant for further study or submission of additional information;
- 4) Reject the application where it is of the opinion that the project may cause significant or irreversible damage to the environment.

Conduct environmental and social assessment studies

This project is a category B project. For Projects for which the decision is to prepare an Environmental Review document (equivalent WB category B project) or and ESIA (WB Category B and A Projects), stand-alone reports will be prepared.ESIAs prepared under the framework will be subject to WB review. The LFSP will not support any sub-project investments that would correspond to WB Category A projects. Any ESIAs prepared for LFSP investments pursuant to this ESMF will be subject to WB review.

The County Forestry manager in consultation with the nearest EPA county office, will prepare the Terms of Reference for the ESIA, and follow procurement rules for the recruitment of consultants for the ESIA. The ToR may be prepared using issues identified during the screening exercise and also the registration of the project with the EPA, and in possible consultation of the project coordinator at the FDA head office. Also, the impact mitigation measures provided in this ESMF may provide some basis for the design of the ESIA ToR.

Annex 4 provides ToR for the recruitment of consultants to assist FDA with environmental and social due diligence for LFSP activities, including but not limited to ESIAs for certain LFSP subproject investments.

The ESIA will identify and evaluate potential environmental impacts for the proposed activities, compare alternatives, and design mitigation measures. The preparation of the ESIA will be done in

consultation with stakeholders, including people who may be affected. Community consultations are critical in preparing a proposal for the activities likely to have impacts on the environment and communities. The community consultations should identify key issues and determine how the concerns of all parties will be addressed in the ESIA. When an ESIA is necessary, the administrative process enacted by the EPA will be followed and executed.

Procedures for projects requiring an ESIA

First stage:

Preparation of Terms of Reference

The results of identification, and extent of the ESIA (scoping), the terms of reference will be prepared by the Regional Safeguards Officer.

Second stage:

Selection of consultant

Third stage:

Preparation of the ESIA with community consultation

The report will follow the following format:

- Description of the study area
- Description of the subproject
- Discussion and evaluation of alternatives
- Environment description
- Legal and regulatory
- Identifying potential impacts of proposed sub-projects
- Process of public consultations
- Development of mitigation measures and a monitoring plan, including estimates of costs and responsibility for implementation of surveillance and monitoring

Table 7: Summary of Environmental Screening and Assessment Procedures and Responsibilities

No.	Stage	Institutional responsibility	Implementation responsibility
1.	Environmental and Social screening of proposed project interventions to assist in project formulation using checklist	FDA	FDA
	Statutory Environmental Registration of Project	FDA	FDA
2.	Determination of appropriate environmental assessment level/ category	EPA	EPA
3.	Implementation of environmental assessment	EPA	EPA
3.1	If ESIA is necessary		
3.1a	Preparation of terms of reference	EPA	EPA
3.1b	Validation of ESIA/EMP TOR (Scoping)	EPA	EPA
3.1c	Selection of Consultant	EPA	EPA
3.1d	Realization of the EIA, Public Consultation Integration of environmental and social management plan issues in the tendering and project implementation,	EPA	EPA

No.	Stage	Institutional responsibility	Implementation responsibility
4	Review and Approval	EPA	EPA
4.1	EIA Approval (B1)	EPA	EPA
4.2	Approval simple measures (B2&c)	EPA	EPA
5.	Public Consultation and disclosure	FDA/EPA / WB	FDA/EPA/WB
6.	Surveillance and monitoring	FDA/EPA/ MLNR	FDA/EPA
7	Development of monitoring indicators	EPA/FDA	EPA/FDA

7.2.1 Environmental standards

The EPA is responsible for setting environmental standards but these have not been prepared yet. In the interim, the World Bank Group's *Environmental, Health and Safety Guidelines* (EHS) will be used where applicable to the management of pollutant emissions and conservation of natural resources. In particular, the *General Environmental, Health and Safety Guidelines* encompass the environment, occupational health and safety, and community health and safety. Other EHS Guidelines that apply to specific LFSP-supported, community-level activities include *Perennial Crop Production*, *Forest Harvesting Operations*, and *Sawmilling and Wood-based Products*. (Link: www.ifc.org/ehsguidelines)

8.1 INSTITUTIONAL CAPACITY FOR ESMF IMPLEMENTATION

8.2 Institutional responsibility and capacity for the ESMF Implementation

The Project will be executed by the Forest Development Agency in collaboration with other partners particularly, Land Commission, Ministry of Agriculture, EPA. A Secretariat at the FDA will be responsible for the coordination of activities of the Project. FDA will enter into a Memorandum of Understanding with EPA specifically with respect to safeguards management.

Forestry Development Authority (FDA)

The Authority by its mandate, is responsible for establishment of permanent forest estates made up of reserved areas upon which scientific forestry will be practiced. The sector is currently hosting some other international projects which may be supporting the Authority with some vital logistical requirements and training. However, capacity for environmental assessment is virtually non-existent and it is necessary to provide requisite training to regional and county officers as well as provide them with basic logistics (eg. transport) to be able to carry out basic environmental assessment functions.

Environmental Protection Agency (EPA)

The Act creates the Agency as the principal authority in Liberia for the management of the environment with responsibility to co-ordinate, monitor, supervise and consult with relevant stakeholders on all activities in the protection of the environment and sustainable use of natural resources.

The Agency is bedeviled with numerous logistical challenges both at the head office in Monrovia and the seven (7) out of the fifteen (15) counties in which it has some presence. Even though there may be some technical staff available who may have the capacity to support the project, the Agency will need substantial support in terms of transport and environmental field testing equipment to be able to perform its permitting and monitoring functions.

It is necessary that the project further offers training to the county environmental inspectors in environmental monitoring and reporting.

Land Commission

Land Commission Act, 2010 establishes the Land Commission with a five year mandate to propose, advocate and coordinate reforms of land policy, laws and programs in Liberia. The LC has no adjudicatory or implementation powers. The mandate of the LC extends to all land and land based natural resources, including both urban and rural land, private and public land and land devoted to residential, agricultural, industrial, commercial, forestry, conservation and any other purposes.

The Commission is in transition and should eventually evolve into a one-stop shop with responsibility and capability to undertake all land related planning and management activities such as Surveying, Valuation, Titling, and so on. There is substantial national commitment and donor support for this initiative as the commission eventually upgrades its status to an Authority.

Ministry of Agriculture

The Ministry is charged with the responsibility to plan, execute, administer, manage and supervise agriculture programs. It provides extension services; trains local farmers in improved cultural practices, and supplies farm inputs to enhance food security.

The Ministry will be required to support the provision of alternative livelihoods schemes involving agricultural development at the community level.

8.3 Implementation Plans

The EPA will serve as the lead agency for safeguards implementation through a Memorandum of Understanding (MOU) with the Forest Development Authority (FDA). A Project Coordination Unit (secretariat) has been established to manage the project and ensure linkages and coordination with other interventions under the FSP. Such MOU arrangements already exist between FDA and EPA in conducting the SESA for Liberia's REDD+ program, as well as between EPA and the Ministry of Agriculture in managing safeguards for the Smallholder Tree Crops Project.

The main responsibility for implementing the ESMF and the PF rests with the Forest Development Authority which will enter into an MOU with the EPA for implementation of the safeguards under this project. The EPA will hire an Environmental Safeguards Coordinator, while the FDA will appoint a Social Safeguards Specialist. They will be supported by additional environmental and social experts (as needed) based in both institutions. The EPA/FDA regional/ county managers will oversee the implementation of all actions at the field level to prepare assessment reports and oversee the implementation of mitigation actions for adverse environmental and social impacts, within their respective operational areas to the community level.

8.3.1 Institutional strengthening and capacity building

The EPA will use existing safeguards coordination and implementation group to address environmental and social due diligence across the LFSP and other forest related programmes including the REDD+.

Social Safeguard Specialist

The FDA Social Safeguards Specialist will have an environmental and social assessment background. He or she will be responsible for:

- Integrating environmental and social safeguards across the LFSP, in collaboration with the EPA-based Environmental Safeguards Coordinator.
- Leadership across the national, regional and county levels for the implementation of safeguards
- Providing guidance and project level info and tools on safeguards for all stakeholders
- Managing the environmental and social safeguard specialists (consultants)
- Responsible for coordinating all safeguard activities with donors, implementing agencies and other potential investors
- Oversee all environmental and social safeguard training and capacity building

Environmental and social consultants

The Consultants who will be conversant with the WB safeguard policies and their instruments and application as well as other REDD safeguard principles, will be hired periodically as and when required to support the implementation of the environmental and social safeguards, including the preparation of manuals and checklists. Particular attention will be on the safeguards policies triggered by the project. The consultants' level of understanding should be adequate to facilitate training and other capacity related activities on safeguards. The template for the preparation of ToRs to recruit consultants is provided in **Annex 4**.

Environmental Safeguards Coordinator, EPA

The Environmental and Safeguards Coordinator will;

- Work with the FDA Social Safeguards Specialist (Focal Point) to ensure that all environmental and social safeguards issues are incorporated into all project documents including bid and specifications documents for all sub project types.
- Ensure that safeguards issues are included as part of the training at County level and contractors invited to participate.
- Draft safeguards report based on collated documents and reports from county activities as part of usual reporting on the project.
- Be the first point of contact for the County in case of any challenging issues on project-related safeguards - land, environmental, safety and health and draw the FDA ESS Focal Point's attention in case of lack of resolution
- Collaborate with relevant authorities (chiefs and clan heads) and other community members and facilitate the implementation of subprojects and implementation of any other safeguards related activity.
- Perform any other related activities that may be assigned by the FDA ESS Focal Point to whom s/he will report.

8.4 Training provisions

The competence of the EPA/FDA to carry out their respective design, planning, approval, permitting, monitoring and implementation roles will, to a large extent, determine the success and sustainability or otherwise of the Programme. All the institutions have very limited or no experience in environmental assessment and therefore will require extensive training at all levels to be able to fully participate in the project.

The capacity building will include training workshops and production of guidance reports and tools. The training programmes given in Table 8 are recommended which include the preparation of Community Forest Management Plans.

The main recipients for training will be the FDA regional and county officers and the EPA County Environmental Inspectors. Their present capabilities to successfully prepare and implement environmental and social mitigation actions are very limited. The training will be organized in collaboration with the EPA head office and will be in the form of seminars and workshops. The training will include the dissemination of the ESMF report, Liberia EIA procedures and the World Bank policies on environment and social assessment (OP 4.01), Involuntary Resettlement (4.12) and Forests (OP 4.36). The FDA will explore the possibility of having community environmental and social safeguard facilitators, and training them.

The FDA is responsible for approval of Community Forest Management Plans and capacity will be improved to ensure that the Plans prepared meet the required standards for sustainable forest harvesting and good forest management practices, including those specified in the World Bank's Forests Policy (OP 4.36, Paragraph 10)..

Table 8: Training programme

Level	Training Content	Target
1.	<ul style="list-style-type: none"> World Bank Safeguard policies especially those triggered by the LSFP; Liberia EPA Environmental Assessment Regulations, ESMF/ PF Preparation of Community Forest Management Plans/ Consultation Plans 	EPA/FDA (Secretariat); FDA, LC; County managers; EPA Private sector
2.	<ul style="list-style-type: none"> Screening Checklist, ToR for recruitment of specialists, and Preparation of environmental briefs 	EPA/FDA/ Regional and County FDA (E and S focal points) Private sector
3.	<ul style="list-style-type: none"> Preparation of Terms of Reference for ESIA/ Pest Management Plan 	EPA/FDA (Secretariat) County Environmental Inspectors

The training and awareness creation will be annual events and the primary targets will be the FDA regional/ county officers. It is proposed to have 2- day training programmes within a year at a central location and the content of the training will include a review of key environmental and social management activities and further discussions on the ESMF. It is expected that participants would at the end of the training be in a position to deal more effectively with difficult environmental and social challenges that they may come across.

Production of guidelines and tools

The ESMF provides guidelines to mitigate adverse environmental and social impacts arising out project implementation. Training manuals and checklists are required to assist safeguard focal points to carry out their functions. Such checklist and manuals will include those designed for environmental and social screening of projects, see **Annex 2**. Consultants may be hired to produce additional manuals and checklists as and when required by the project including a Pest Management Plan.

8.5 Budgetary provisions

The Liberia Forest Sector Project's environmental and social safeguards-related activities are listed below, along with their budgetary allocations over the estimated 5- year project life span (around US\$249,200).

The budget earmarked allocated for livelihood restoration activities (in cases where existing livelihoods might be affected by protected area expansion or strengthening) is an additional approximately US\$2 million, which will be allocated as needed during LFSP implementation, in

accordance with the criteria and procedures outlined in the Process Framework.

Staff hiring

Environmental Safeguards Coordinator (EPA)	US\$168,000
Social Safeguards Specialist (FDA)	US\$168,000

Training

Workshops/seminars on ESMF, WB safeguards, EPA regulations, and Pest Management Plan	US\$ 50,000
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Guidance and Tools

Preparation of booklets, checklists, Pest management Plan, Forest Management Plan, Consultation Plans, etc.	US\$ 50,000
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Communication

Radio/ TV discussions/ adverts	US\$ 20,000
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Transport/ per diem

Staff local travels, site visits	US\$ 50,000
International meetings	US\$100,000

Monitoring and Evaluation

Due diligence and verification	US\$ 30,000
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Grievance Redress Mechanism

Conflict resolution training for the Grievance team	US\$ 25,000
Feedback and Grievance Redness Mechanism	US\$ 75,000

Environmental Review of Community Forest Management Plans

Technical Assistance	US\$ 70,000
Temporary FDA staff for this function	US\$140,000

Development of an Information System for Safeguards

Set up of the system	US\$ 50,000
Operation of the system	US\$ 50,000
Development of FPIC guidelines	US\$200,000

TOTAL US\$1,246, 000 (Average US\$249,200 per annum)

9.0 MONITORING AND EVALUATION

Monitoring plans will be prepared to assist in determining the progress of implementation of the safeguard provisions. The monitoring indicators which should be verifiable, are described below including the responsible institutions/ persons. The monitoring will consider both the ESMF implementation and activities at the Project level.

ESMF implementation

The monitoring issues will be a confirmation of adequate dissemination of the ESMF and PF to all stakeholders. The verifiable indicators will therefore consist of (1) records of consultations and meetings, and (2) Workshop reports.

The FDA through the EPA will ensure the implementation of the ESMF monitoring programmes and the responsibility will rest directly with the Environmental and Social Safeguards Focal Points.

Project implementation

The monitoring items will include information to confirm:

- Environmental and social screening of sub projects
- Preparation of follow up actions plans if required
- Registration of sub projects with the EPA
- Preparation of project environmental briefs
- Adequate mitigation measures provided in ESMPs
- Post project monitoring

The verifiable indicators will include (1) completed checklists, (2) environmental briefs submitted to the EPA, actions plans prepared and implemented, (3) EPA permits, (4) Community Forest Management Plans, (5) Pest Management Plans, (6) Procedure followed to secure Chance Finds, (7) Monitoring reports

The FDA will ensure the implementation of the safeguards at the Project level and this will be led directly by the Regional/ County focal persons. They will be supervised by the Environmental and Social Focal Person at the head office.

10.1 CONSULTATIONS, ESMF DISCLOSURE, FEEDBACK AND GRIEVANCE REDRESS MECHANISM

10.2 Stakeholder consultations

To prepare the ESMF, various stakeholders were consulted. A major meeting was held in Kakata, Margibi County which brought together over 40 participants from various counties including Superintendents, traditional leaders, women groups etc to discuss the LFSP and the potential environmental and social implications of the project on communities and required remedial actions, (see Annex 5.1 for list of participants).

In addition, the ESMF preparation team also met with officials of the Land Commission and the EPA to discuss institutional concerns and confirm capacities. The SESA national team was also consulted and their experience was sought to further enrich the preparation of the ESMF and the PF.

The list of stakeholders contacted and issues discussed are summarized in **Annex 5**.

10.3 ESMF Disclosure

The disclosure is a requirement from the World Bank safeguard policies as well as from national environmental assessment procedures, and the project will therefore make the report available to project affected groups, local NGOs, and the public at large.

FDA and EPA will make copies of the ESMF available in selected public places as required by law for information and comments as well as in the media.

The notification will be done through newspaper advertisements and provide:

- a brief description of the Project;
- a list of venues where the ESMF report is on display and available for viewing;
- duration of the display period; and
- Contact information for comments.

The ESMF and other safeguard instruments will be announced in two national newspapers and also on local radio in the respective project areas. Copies of the transcripts will be sent to the Bank.

10.4 Feedback and Grievance Redress Mechanism

Grievances and disputes may arise due to one or more of the following situations:

- Disagreement on land or property boundaries;
- Disagreement on plot/property valuation and valuation rates applied;

- Mistakes in inventorying or valuing properties;
- Disputed ownership of a given asset (two or more people claiming ownership of an affected property);
- Successions, divorces, and other family issues resulting in disputed ownership or disputed shares between inheritors or family members;
- Disagreement on livelihood restoration package (e.g. alternative livelihood package not being suitable to them, proposed alternative plot characteristics/agricultural potential not adequate or suitable);
- Disputed ownership of businesses and business related assets (e.g. owner and operator of a business may be distinct individuals, which gives rise to disputes in the event of compensation).

The objectives of the grievance process are to

- Provide affected people with avenues for making a complaint or resolving any dispute that may arise during the course of the implementation of FSP actions or projects;
- Ensure that appropriate and mutually acceptable redress actions are identified and implemented to the satisfaction of complainants; and
- Avoid the need to resort to judicial proceedings.

Court cases are known to be cumbersome and take a long time before settlements are reached and usually one party is still not satisfied. It is therefore proposed to adopt a simple procedure for affected persons to be able to follow easily, and which will provide aggrieved people with an avenue for amicable settlement without necessarily opening a Court case.

Proposed grievance management and redress mechanism

The FDA has engaged a consultant to specifically develop a Feedback and Grievance Redress Mechanism (FGRM) REDD+ Mechanism in Liberia. This activity is funded under the REDD+ Readiness additional finance of the Forest Carbon Partnership Facility. The Liberia Forestry Project will implement will apply this dispute mechanism during project implementation. It is expected that this will be consistent with the provisions of the Forest Sector Project in addressing disputes and conflicts arising from ownership and benefit sharing related issues. The DRM for REDD+ will propose amicable settlement/mediation as a first option, which is in line with the stated above objectives under this ESMF.

The proposed DRM for the FIP which is consistent with the REDD+ will comprise the following:

Dispute Resolution Mechanism

The proposed DRM recommends four key steps as follows:

- Receive and Register grievances or complaints;
- Acknowledge, Assess and Assign (Acknowledge receipt of grievance, outline how grievance will be processed, assess eligibility and assign responsibility)
- Propose Response
- Agreement on Response
 - If agreement is reached, implement agreement
 - If agreement is not reached, review case and if no agreement is reached under the review process, then the case can be referred to the law courts.

The proposed DRM also recommends various levels of institutional arrangements in addressing the disputes/grievance and these include:

- Options 1: Resolve disputes/ grievance within
 - Community level (Community Resource Management Centres (CRMCs))
 - County level (County Dispute Resolution Team)
 - National level (National Dispute Resolution Team)
- Option 2: refer to outside bodies
 - Use or delegate functions to Alternative Dispute Resolution (ADR) centres (National and County)

Details of the grievance resolution process, institutional arrangements, composition, and capacity needs requirements for all the levels (community, county, national) will be provided in the DRM which will be the basic document for addressing grievances and disputes under the LFSP and also REDD+.

Dissatisfaction and alternative actions

Courts of law will be a “last resort” option, which in principle should only be triggered where first instance amicable mechanisms and review processes have failed to settle the grievance/dispute. However the Constitution allows any aggrieved person the right of access to Court of law.

Documentation and tracing

Annex 6 presents a template form for the grievance redress process. The Grievance Redress Management team at each level (i.e. community, county or national) will file the completed form appropriately as part of data keeping /documentation and for future reference to confirm resolution of grievance. It is also advised that photocopies of these documented resolved cases be collated on a quarterly basis into a database held at the FDA/REDD+ Secretariat.

Financing

The entire GRM process will be funded by the FDA, with support from the ongoing REDD+ Readiness Project.

Recommended grievance redress time frame

The table below presents recommended timeframes for addressing grievance or disputes related to livelihood restoration and compensation. It is envisaged that such disputes could be resolved at the community or county levels.

Table 9: Suggested time frame for Grievance Redress

Step	Process	Time frame
1	Receive and register grievance	within 5 Days
2	Acknowledge, Assess grievance and assign responsibility	within 14 Days
3	Development of response	within 14 Days
4	Implementation of response if agreement is reached	within 1 Month
5	Close grievance	within 7 Days
6	Initiate grievance review process if no agreement is	within 1 Month

Step	Process	Time frame
	reached at the first instance	
7	Implement review recommendation and close grievance	within 2 Months
8	Grievance taken to court by complainant	-

11.0 CONCLUSION

The ESMF is a necessary tool required to ensure that the LFSP even though it is recognized overall as an environmentally positive project, is implemented in a manner which would enhance ecological conditions in Liberia and strengthen stakeholder institutions to perform better. The stakeholder institutions will include government, traditional authorities and community structures.

The potential adverse impacts have been highlighted and possible mitigation measures suggested to guide the project actors. Institutions will need to be strengthened to be able to effectively participate in the project and their training needs as well as required logistics should be made available for the project to be successful.

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ANNEX 1

MAIN FINDINGS/OBSERVATIONS FROM SESA CASE STUDY FIELD WORK

Case Study Location/ community	Benefits/Values	Drivers	Causes	Potential REDD+ Strategy Options likely to be applicable	Other Issues/Questions arising
Lofa-Zigida	<p>Cultural heritage and sustenance</p> <p>Income and livelihood security including food, NTFP, ecosystem services</p> <p>Domestic energy supply for cooking, heating, preservation</p>	<p>Shifting cultivation</p> <p>Commercial hunting</p> <p>Chainsaw milling</p>	<p>Rapid population growth and demand for food, energy and income</p> <p>Poverty [limited choices or availability of viable non-forest based resources and livelihoods options]</p> <p>Newly arrived migrant husbands clearing forest to establish 'first-comer' use rights</p> <p>Lack of coordinated land use planning</p>	<p>Family planning – to ensure sustainable population growth</p> <p>Integrated farming systems e.g. Agroforestry systems and component technologies.</p> <p>Renewable energy e.g. mini-hydro, solar PV</p> <p>Build on and reinforce local systems for regulating hunting</p> <p>Livestock and fish farming to limit local demand for bush meat and serve urban demands</p> <p>Land use planning</p> <p>Livelihood and support for non-farm income generating activities (NTFP, handicrafts, small businesses, skills training)</p> <p>Gender sensitive direct cash payment for conservation</p>	<p>Build capacity for leadership skills and natural resource management and governance.</p> <p>Unless there is local interest in conservation efforts, outside intervention unlikely to succeed. Need to enlist local support for forest management and conservation through support for initiatives that enable communities share conservation benefits</p> <p>Competing priorities between community livelihood needs and national conservation plans.</p> <p>Equitable and fair benefit sharing mechanism (community capacity to manage benefits, administrative and management framework for direct cash payment to communities) Past interventions focused on subsistence/ livelihood; new options/ new approaches needed</p>
Nimba-Gbarpa	Cultural heritage and sustenance	Shifting cultivation	Presence of large-scale mining concession and	Integrated farming systems e.g. Agroforestry systems and component technologies	<p>Comments above apply.</p> <p>The issue of equitable and fair</p>

Case Study Location/ community	Benefits/Values	Drivers	Causes	Potential REDD+ Strategy Options likely to be applicable	Other Issues/Questions arising
	<p>Income and livelihood security including food, NTFP, ecosystem services</p> <p>Domestic energy supply for cooking, heating, preservation</p>	<p>Commercial hunting</p> <p>Chainsaw milling</p> <p>Industrial and artisanal mining</p> <p>Smallholders Tree crop plantation</p>	<p>artisanal mining</p> <p>Absence of land use planning</p> <p>Poverty [limited choices or availability of viable non-forest based resources and livelihoods options]</p> <p>Population growth</p> <p>Lack of coordinated land use planning</p>	<p>Renewable energy e.g. solar PV</p> <p>Build on and reinforce local systems for regulating hunting</p> <p>Livestock and fish farming to limit local demand for bush meat and serve urban demands</p> <p>Land use planning</p> <p>Livelihood and support for non-farm income generating activities (NTFP, handicrafts, small businesses, skills training)</p> <p>Enhancement of carbon loading in degraded forest areas, focusing on indigenous species / forest rehabilitation</p> <p>Gender sensitive direct cash payment for conservation</p>	<p>benefit sharing mechanism (community capacity to manage benefits, administrative and management framework for direct cash payment to communities) Past interventions have focused on subsistence/ livelihood; new options/ new approaches need to be explored</p> <p>Overlapping of mining concession with community forest.</p> <p>How do communities deal with the growing pressure on farmlands from other land use interests (artisanal and industrial mining community and state forest reserves?)</p>
Bong-Gbarngay	<p>Cultural heritage and sustenance</p> <p>Income and livelihood security including food and NTFP,</p> <p>Domestic energy supply for cooking, heating, preservation</p>	<p>Smallholders Tree crop plantation</p> <p>Shifting cultivation</p> <p>Land pressures due to historical dispossession</p>	<p>Lucrative income from tree crops in the 70s and 80s</p> <p>Presence of large agro-plantation in other parts of the county</p> <p>Population growth</p> <p>Poverty [limited</p>	<p>Family planning– to ensure sustainable population growth</p> <p>Integrated farming systems e.g. Agroforestry systems and component technologies</p> <p>Renewable energy e.g. solar PV</p> <p>Livestock and fish farming to limit local demand for bush meat and serve urban demands</p>	<p>What are the prospects for future tree crop plantations in the wake of the low global prices with respect to tree crop as a REDD+ strategy options?</p> <p>- ‘Migrant’ farmers from nearby ‘urbanized’ communities, i.e. Suakoko contribute to increasing the pressure on available land</p>

Case Study Location/ community	Benefits/Values	Drivers	Causes	Potential REDD+ Strategy Options likely to be applicable	Other Issues/Questions arising
	Tree crop plantation		choices or availability of viable non-forest based resources and livelihoods options]	Land use planning Livelihood and support for non-farm income generating activities (NTFP, handicrafts, small businesses, skills training)	
Grand Kru-Newaken	Cultural heritage and sustenance Income and livelihood security including food, NTFP, ecosystem services Domestic energy supply for cooking, heating, preservation	Shifting cultivation Industrial plantation Commercial Logging Commercial hunting Chainsaw milling	Increase in population due to industrial activities and demand for food, energy and income Extreme Poverty [limited choices or availability of viable non-forest based resources and livelihoods options] Access to forest land enabled by forest roads and capacity for land clearance enhanced by chainsaw logging Lack of coordinated land use planning	Integrated farming systems e.g. agroforestry systems and component technologies Renewable energy e.g. solar PV Build on and reinforce local systems for regulating hunting Livestock and fish farming to limit local demand for bush meat and serve urban demands Land use planning Livelihood and support for non-farm income generating activities (NTFP, handicrafts, small businesses, skills training)	What are the prospects for food security with most of the land under industrial oil palm plantations and logging concessions? How can industrial tree plantations cater for the long term economic and food security needs of the communities? What possibilities exist for communities to participate meaningfully in existing concessions to ensure maximum benefits?
Rivercess-Teekpeh	Cultural heritage and sustenance Income and livelihood security	Shifting cultivation Commercial Logging	Increase in population due to industrial activities and demand for food, energy and income	Value addition to sawn timber (wood processing industries) Integrated farming systems e.g. Agroforestry systems and component	Conflicts over management and sharing of benefits. The issue of equitable and fair benefit sharing mechanism

Case Study Location/ community	Benefits/Values	Drivers	Causes	Potential REDD+ Strategy Options likely to be applicable	Other Issues/Questions arising
	including food, NTFP, ecosystem services Domestic energy supply for cooking, heating, preservation	Hunting Chainsaw milling Artisanal gold mining	Extreme Poverty [limited choices or availability of viable non-forest based resources and livelihoods options] Ineffective regulatory supervision Lack of capacity to implement sustainable forest management and prevent unsustainable or unregulated logging Access to forest land enabled by forest roads and capacity for land clearance enhanced by chainsaw logging Lack of coordinated land use planning	technologies Renewable energy e.g. solar PV Livestock and fish farming to limit local demand for bush meat and serve urban demands Land use planning Reducing logging area footprint Enhancement of carbon loading in degraded forest areas, focusing on indigenous species / forest rehabilitation Livelihood and support for non-farm income generating activities (NTFP, handicrafts, small businesses, skills training)	(community capacity to manage benefits, administrative and management framework for direct cash payment to communities) Company -community partnership in logging concessions. Is it possible? Regulation and support for small-scale logging enterprises e.g chainsaw milling. What are the cost and benefits of commercial logging against other REDD+ options?
Margibi-Sherman Farm	Income and livelihood Domestic energy supply for cooking,	Smallholders Tree crop plantation Shifting	Huge demand for supply of charcoal from urban communities	Integrated farming systems e.g. Agroforestry systems and component technologies Renewable energy e.g. mini-hydro, solar	What will be the outcome with respect to the competition between charcoal production and timber for rubber wood?

Case Study Location/ community	Benefits/Values	Drivers	Causes	Potential REDD+ Strategy Options likely to be applicable	Other Issues/Questions arising
	heating, preservation	cultivation Charcoal production	Extreme Poverty [limited choices or availability of viable non-forest based resources and livelihoods options] Absence of alternative livelihood Lack of coordinated land use planning	PV Develop small holder based fuel wood plantations Livestock and fish farming to limit local demand for bush meat and serve urban demands Land use planning Livelihood and support for non-farm income generating activities (NTFP, handicrafts, small businesses, skills training)	What other sources of income are possible when the current demand for charcoal declines? What other alternatives are possible for local energy needs for cooking apart from charcoal and firewood? What lands are available for fuel wood plantations and what are the suitable species (trees with wood of high calorific values, etc)?

ANNEX 2: Screening checklist for Environmental and Social Issues

1. Project Information: Name and Contact Details:			
Project Name	Location: (county/district/village)		
	If other, explain:		
FDA County Focal Point			
Name of reviewer:		Date of screening:	
Subproject Details: Attach location map (longitude – latitude coordinates (GPS reading) if available):			
Type of activity: <i>What will be done, who will do it, what are the objectives and outcomes</i>			
Estimated Cost:			
Proposed Date of Commencement of Work:			
Expected Completion of Work			
Technical Drawing/Specifications Reviewed:	Yes/No – refer to Application Portfolio		
2. Physical Data:		Comments	
Subproject Site area in ha			
Extension of or changes to existing land use			
Any existing property to transfer to subproject			
Any plans for construction, movement of earth, changes in land cover			
3. Preliminary Environmental Information:	Yes/No	Refer to Process Framework	Comments
Is there adjacent/nearby critical natural habitat?			
Is there activities On Protected Area?			
Is there activity adjacent to Protected Area?			
What is the land currently being used for? (e.g. agriculture, gardening, etc)			List the key resources.
Will the proposed activities have any impact on any ecosystem services, biodiversity issues or natural habitats?			

Will there be restrictions or loss of access to using natural resources in any traditional areas including medicinal plants or those of economic value for livelihoods?		✓	
Will there be water resource impacts?			
Will there be soil impacts?			
Are there any new or changing forest management planning or activities?		✓	
Any cultural heritage/sacred sites in project area?		✓	

4. Preliminary Social and Land Information:	Yes/No	Refer to Process Framework	Comments
Has there been litigation or complaints of any environmental nature directed against the proponent or subproject?		✓	
Will the subproject require the involuntary acquisition of land (expropriation or eminent domain)?	No		All project works would be on land either owned by Government or voluntarily provided community land, with clear documentation provided before any works are approved.
What is the status of the land holding (customary, lease, community lands, etc.)?		✓	
Is there evidence of land tenure status of farmers and/or occupants (affidavit, other documentation)?		✓	
Are there outstanding land disputes?		✓	
Has there been proper consultation with stakeholders?		✓	
Is there a grievance process identified for PAPs and is this easily accessible to these groups/individuals?		✓	
Will there be any changes to livelihoods?		✓	
What are the main issues associated with farmer benefits and community benefits?		✓	
Will any restoration or compensation be required with any affected group?		✓	

5. Impact identification and classification:

When considering the location of a subproject, rate the sensitivity of the proposed site in the following table according to the given criteria. Higher ratings do not necessarily mean that a site is unsuitable. They indicate a real risk of causing undesirable adverse environmental and social effects, and that more substantial environmental and/or social planning may be required to adequately avoid, mitigate or manage potential effects. The following table should be used as a reference.

Issues	Site Sensitivity			Rating (L,M,H)
	Low	Medium	High	
Natural habitats	No natural habitats present of any kind	No critical natural habitats; other natural habitats occur	Critical natural habitats present; within declared protected areas	<u>If High Refer to Annex 3.1 and Contact Regional EPA</u>
Water quality and	Water flows exceed any	Medium intensity of	Intensive water use;	

water resource availability and use	existing demand; low intensity of water use; potential water use conflicts expected to be low; no potential water quality issues	water use; multiple water users; water quality issues are important	multiple water users; potential for conflicts is high; water quality issues are important	
Natural hazards vulnerability, floods, soil stability/ erosion	Flat terrain; no potential stability/ erosion problems; no known flood risks	Medium slopes; some erosion potential; medium risks from floods	Mountainous terrain; steep slopes; unstable soils; high erosion potential; flood risks	
Land and Farming Tenure	No conflicts, disagreements around use of land, tenant farmer rights and location of admitted farms and farmers transparent	Process of land regularization and rights to natural resources being worked out with clear communication and grievance process in place	Land conflicts historically unresolved, admitted farmers being evicted, tenant farmers losing rights and no transparency or grievance redress available	If Medium or High Refer to Process Framework

6. E & S assessment comments based on site visit:

Summary Observations

Determination of environmental category based on findings of the screening: A_____B_____C_____

☐

Requires an EIA

☐

Requires preparation of additional E&S information

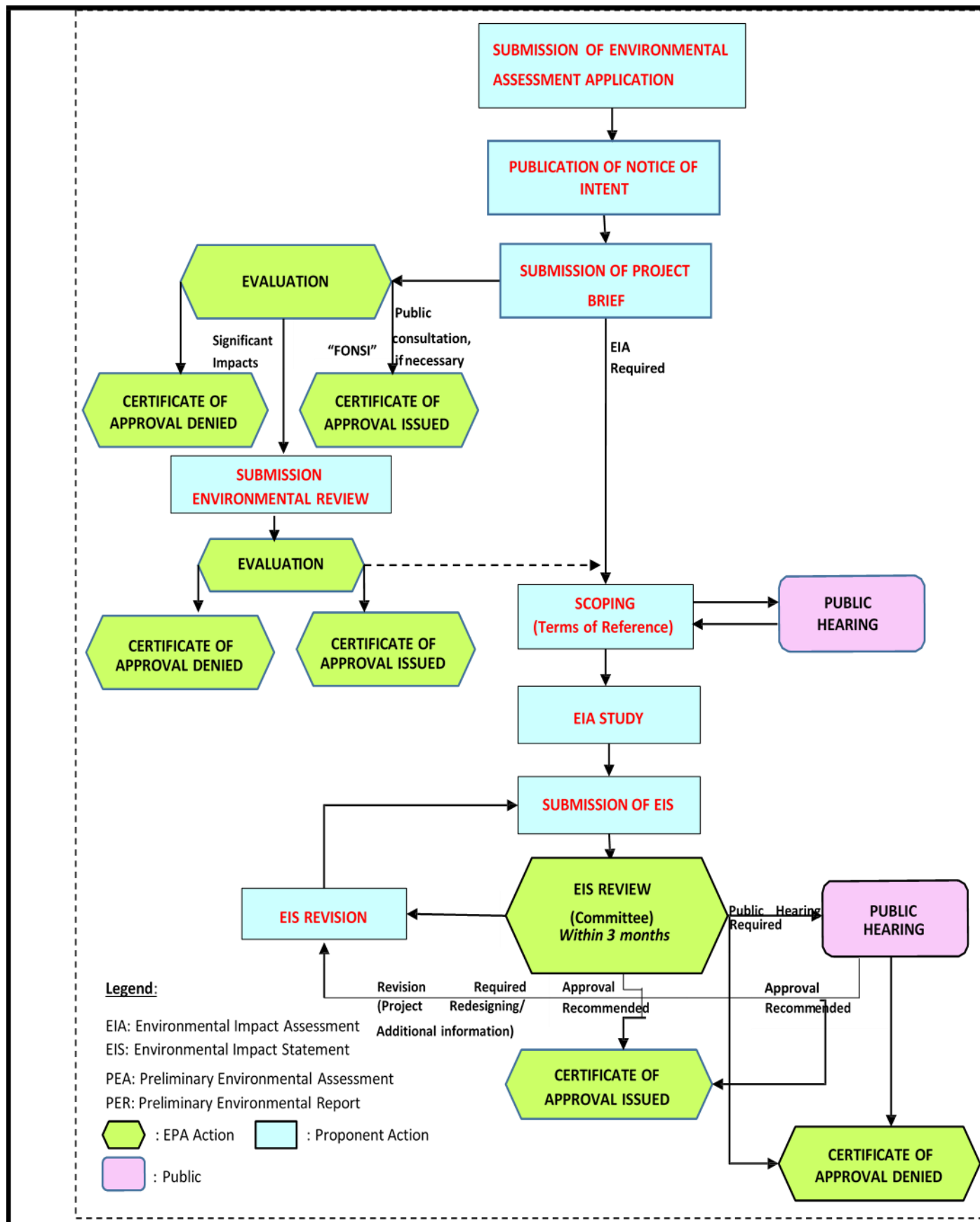
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Does not require further environmental or social due diligence

Prepared by:

Date:

ANNEX 3: Flow chart for environmental assessment procedures in Liberia



ANNEX 4: ToR for the ESIA consultants

The ESIA Consultant will support the overall project environmental and social due diligence with:

- development of background information related to E&S application requirements
- development of ESIA for the project that is in line with the Liberia environmental assessment
- development of checklists and manuals for implementation of safeguards
- public dissemination of all E&S requirements at appropriate forums
- assist the FDA E&S FP in ensuring that sub projects are screened and reviewed using the E&S Screening Form
- discussions with the head office, regional and County FPs concerning the E&S requirements
- technical advice, on an as needed basis to FPs on provisions in the ESMF and any other E&S issues
- monitoring subproject progress as it relates to adherence with the ESMF requirements and associated guidelines,
- resolving implementation bottlenecks, and ensuring overall that E&S subproject implementation proceeds smoothly;
- collecting and managing E&S information relevant to the subproject and accounts (i.e. environmental monitoring and audit reports); and
- developing the annual E&S report

A Consultant will be retained on a full or part time basis pending determination by the FDA on the work requirements per year.

In addition, the Consultant will provide technical advice on environmental management and mitigation during the life of the LFSP, and to enhance E&S provisions to:

- Develop series of Technical Planning Guidelines (including manuals and checklists) specific to the FSP and the types of subprojects that build upon the checklists and E&S and other Guidelines provided with this ESMF.
- liaise with the appropriate FPs to share knowledge and explain the objectives and ESMF requirements for approved subprojects in their Districts
- raise awareness among stakeholders on E&S issues related to the FSP, and
- Lead the delivery of capacity-building programmes for relevant stakeholders.

ANNEX 5: STAKEHOLDER CONSULTATION

Stakeholder	Date	Comments
<p>Project officers for the Liberia Forest Sector Development Project</p> <p>David Saah (National REDD+ Project Coordinator, REDD Implementation Unit, Forestry Development Authority)</p> <p>Ephraim S. Swen (Procurement Specialist, Readiness Preparation Activities, Forestry Development Authority)</p> <p>Zinnah Elijah Whapoe (SESA Coordinator, REDD+ Implementation Unit of the EPA)</p> <p>Nicholas Metiaki Soikan (Social Development Specialist, GCCGT, World Bank Group)</p>	30 August 2015	<p>The team provided an overview of the assignment.</p> <ul style="list-style-type: none"> • The main objective of this consultancy is to update EXPAN's (i) draft Environmental and Social Management Framework (ESMF) and (ii) draft Process Framework (PF) for the Liberia Forest Sector Project, on behalf of the Government of Liberia. The EXPAN Project ended on 30 June 2015. • The team provided insights to the extent of the scope of the EXPAN project and the additional requirements for the update e.g. the EXPAN was for three protected areas, while the current assignment is dealing with almost 14 protected areas. • The SESA study is going on alongside the ESMF and PF. The inception phase is completed and an inception report has been submitted. At present the scoping phase is ongoing and the consultants are yet to submit the draft report for review • The focus of the study should be protected areas within the three forest landscapes • The team also provided a brief overview of the local administration of Liberia • The team provided a brief overview of the planned activities for the week including community stakeholder workshop on 1st September 2015 at Kakata. 48 participants have been invited for the workshop and drawn from all three forest landscapes. • The consultant was reminded of the deadline for submission of the draft report (i.e. 11 September 2015) • Consultations were also held on the concept notes of the LFSP

Stakeholder	Date	Comments
Environmental Protection Agency, Liberia (See Annex 4.1 for List of Officers consulted)	4 th September 2015	<ul style="list-style-type: none"> Some members of the EPA were involved in the preparation of the ESMF and PF for the EXPAN project. They are therefore quite familiar with the current project The EPA will need to play a key role in the LFSP as per their mandate to ensure compliance with environmental provisions of Liberia The EPA has highly qualified and capable staff to implement its role in the protection of the environment, as confirmed by a due diligence by the AFDB on the LEC hdroproject. The agency however requires logistical support and resources to be fully established and operational especially with respect monitoring and enforcement. This is also confirmed by a management assessment of the EPA by the UNDP. The EPA has appointed inspectors in 10 of the 15 counties. The inspectors however do not have functional offices to operate from (no computers, generators etc.). Reports are therefore hand-written by some inspectors. Each county has 3 to 4 inspectors with a minimum qualification of BSc in the natural sciences. Although there is a gradual improvement over years, the budgetary allocation to the EPA at present is not sufficient to meet its needs. The Agency currently has 189 employees. There is the need for more education on the importance of the Agency to government in order to receive the needed attention. The compliance and monitoring team are seriously constrained as they have only two vehicles for field operations. There is the need to collaborate with the FDA to establish offices in the counties. Need for consultation with other institutions to be apprised of the mandate of one another and identify gaps within the institutions to be able to determine the capacity building requirements The Agency has prepared a list of the requirements to enable its full operation and continuous development and will make it available to the consultant. The Agency's Annual report will also be made available
Environmental Protection Agency, Liberia (Jerry T Toe, Manager, Department of Compliance and Enforcement)	4 th September 2015	<ul style="list-style-type: none"> Mr Toe provided a brief description of the environmental assessment process for Liberia (i.e. registration of project, preparation of a project brief, environmental impact assessment if required and issuance of permit) The EPA has trained independent evaluators (consultants who prepare project briefs and ESIAs) in the country and keeps a database of all consultants practicing in the country. This list is made available to project proponents after registration of the project. Review committee is set up to review reports submitted to the Agency The EPA has key challenges with monitoring and enforcement due to limited logistics With respect to the LFSP, the social impacts are the most significant, especially in the Grebo area due to the proximity and dependence of the communities on forest resources.

Stakeholder	Date	Comments
Land Commission Stanley Nimley Toe (Senior Programme Officer/Manager)	2 nd September, 2015	<ul style="list-style-type: none"> Land issues became more prominent after the civil war in Liberia Land regulations have undergone reforms over the years leading to the formation of the Land Commission in 2009. Land Commission has undertaken projects reviewing and analyzing: Liberia's land laws; Liberian legal history; comparative best practices; customary tenure; women's land rights; public land sale deeds, aboriginal land grant deeds, public land grant deeds, and tribal certificates; and land use rights, including commercial use rights. The land rights policy has been set up to facilitate access to land (which has been a critical issue after repatriation from the United States when all land acquired by the American Colonization Society from indigenous peoples became public land and was allotted to citizens as private deeded land. The land policy has four categories of land rights (Public Land, Government Land, Customary Land, and Private Land), and a cross-cutting sub-category called Protected Areas, which must be conserved for the benefit of all Liberians A draft land law has been developed based on the policy. The first public hearing on the law was held in July 2015 A land administration Policy has been developed which deals with land use, management of information, land surveying, land registration, land mapping and land valuation. The Lands Commissions tenure ends in January 2016 and will be taken over by a new land agency (Land Authority), as recommended by the Land Administration Policy. Agencies performing land administration will be transitioned to the Authority Policies being developed <ul style="list-style-type: none"> Urban land policy Land dispute resolution policy (methodologies are being tested, including for standardisation of traditional methods) Land use policy is yet to be developed. The customary rights law vests ownership of land to communities (agricultural land, cultural lands, protected areas, forest areas) Areas gazetted as protected areas will remain so. Compensation payments may have to be made to affected communities Community ownership self defines the community at the clan/village level, establishes legal entitlement to government structures, demarcates lands and issues deeds. The Land Administration Policy will provide opportunity for field testing of the provisions for community ownership The land reform process is being supported by projects such as the World Bank's Land Administration Project, USAID's Land Governance Support Project which focus on

Stakeholder	Date	Comments
		<p>customary land</p> <ul style="list-style-type: none"> Article 22 vests all right to minerals to the government in trust for the people of Liberia. Customary land vests natural resources to the community
Consultants for the preparation of Strategic environmental and Social Assessment for the LFSPA (Silas Siakor, E Abraham T Tumbey Jnr,	5 th September 2015	<ul style="list-style-type: none"> A national inception workshop was held with over 100 participants, including the RTWG, EPA, FDA etc. in March 2014 Over 240 people were engaged during site studies for the SESA in June 2015 through focus group discussions. The sites were selected based on Geography and the drivers of deforestation such as smallholder farming, shifting cultivation, industrial logging, charcoal production, plantation development) There has also been 6 county level consultations and 4 regional level consultations (the 6 counties were selected such that all 15 will be consulted by the end of the exercise) Participatory mapping exercise to help communities to determine the requirements of community management of forests Grievance redress mechanism is being addressed by another consultant A forest cover mapping study was carried out in 2015 by GeoVille. The updated maps were shared by Dropbox® with the institutions and the FDA may be able to provide copies, if available. <p><u>Challenges</u></p> <ul style="list-style-type: none"> Multiplicity of stakeholders with overlapping roles results in 'consultation fatigue' The strategies of REDD+ are not very clear Alternative livelihood may vary from one location to another Some livelihood issues may not be replaceable e.g. replacement of fuel wood with charcoal may not be sufficient since the fuel wood has complementary benefits There are gaps between the WB safeguards and the local regulations Representatives of stakeholder institutions consulted may not necessarily carry the official opinion of the institution. They may also not report back to their institutions. The scope of the SESA includes benefits sharing. <u>Challenges with land use planning in Liberia complicates the approach to studying land use</u>
Natural Resources Development Corporation, a private, EPA certified, local consultancy firm (John C Nylander)	5 th September 2015	<ul style="list-style-type: none"> Confirmed process for environmental assessment in Liberia Local consultants such as the Natural Resources Development Corporation, have the capacity to carry out environmental assessment of projects that may arise out of the LFSP Consultants undergo training in the country and receive certification from the EPA to practice. The scope of the training needs to be expanded to ensure the skills of the consultants significantly advanced after the training

Annex 5.1: Participants at stakeholders' workshop at Kakata, Margibi County, 01 September 2015



Forestry Development Authority
Readiness Preparation Activities
REDD+ Implementation Unit
Wheintown, Mount Barclay
P. O. Box 3010
Monrovia, Liberia



ATTENDANCE SHEET

Liberia Forest Sector Project Stake Holder Consultation to Update ESMF and PF

September 1, 2015

No	Name	Institutions	Contact Number	Email Address	Signature	Position	County
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6	James Z. Duogbaya	CFE	0880546924		[Signature]	Chairman	G/Gedeh
7	Peter S. GARWO	Traditional Council	0886452814		[Signature]	Secretary	G/Gedeh
8	Betty BLOE	Rural women	0886629947		[Signature]	Vice Chair	G/Gedeh
9	Franklin S. Toweh	MIA	0277353457		[Signature]	Vice Chairman	Nimba
10	Kebek Beyan	Winlay	0880703055		[Signature]	Chair lady	LOFA
11	Kalulu Pusah	PCF	0886876669		[Signature]	E/O	Cape mt

	NAME	INSTITUTION	CONTACT NO.	E-MAIL	POSITION	COUNTY
12	MAKPA Pusah	Latia W/G	—	—	Chair / Leader	Cape mt
13	Haji A. Sombai	MIA	0826654294	—	Paramount Ch.	11 1)
14	Chief Emmanuel Klesseh	Traditional Council	0776558043		Counts Chairman	Sinoe
15	J. Weezie Zeaternal	CFDC	0886624644		Fin. Sec.	Lofa
16	B. Harris Zeah	FDA	0886593544	—	Regional Forester	Lofa Co
17	Jackson Bloe	F.D.A	0886661165	—	DTike	Lofa
18	Peter S. Kamara	Community Agriculture	077225200		Technician	Lofa
19	AUGUSTINE M. KAMARA	RADIO PISO	075793702 / 0886500047	—	PROGRAM DIRECTOR	CAPE MOUNT
20	Joseph D. Tolon	MIA	0776319658	—	Dev. Supt	Nimba
21	Matomma Saryon	MIA	0880603877	—	Paramount chief	Lofa
22	Gballey S. Gray	MIA	0777009644	—	traditional speaker	Bomi
23	Boima Q. Sando	YES INC	0776867736	7bomiasando@yahoo.com	Project Dev. Officer	Bomina
24	Ernest G. Davis	MIA	0886578734		Dev. Supt	Bomi
25	YANLEY BORLEH	TRADITIONAL COUNCIL MIA	0886479594		CHAIR LADY	Gbarpolu
26	BENDU M. JAH	RURAL WOMEN	0886599114		CHAIR LADY	
27	Sam C. Dobayaw	Pit saw	0886457587		Chairman	G/Gedeh
	Alexandre Gila	Chercoal	088045807		//	//

	NAME	INSTITUTION	CONTACT NO.	E-MAIL	POSITION	COUNTY
28	John Kelvin	R.R.F.	0777 080811		Assistant Program officer	Gbarpolu
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33	Biah, Levi Z	EPA	0886106143	sehwek@gmail.com	CTA	Margibi
34	Therest NGUMAH	FIDA	0770510044		FIDA	Margibi
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36	Papa S. Konneh	F.D.A	0886043976		Driver	
37	Zoe Kogblie	WODWO	0888076374		member	Lofa County
38	Siappa K. Johnson	C.S.G.P	0886072073		super Visor	Margibi
39	Ephraim J. Swen	FDA/RILL	0886567224	ephraim@yale.com	Procurement Specialist	Mont.
40	Lucia M. Sonii	Rural Women	0886688177		Chair lady	Cape Mount
41	Esther J.S. Clarke	Rural Women	0886296149		President	Margibi
42	Abraham T. Gbeway	M/A/GGCO	0886558885	abgbeway@yahoo.com	Asst Supt for Dev	GGCO
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44						
45	Yawah Jaiwey	Impro file Desk	088635757	yawahjaiwey@gmail.com	Reporter	Margibi
46	John Zangbay	Radio fire	0888211295	R-S 2013 Gm	Reporter	Margibi
47	Darius Kheanyie	Fabric Radio	0886400795	dkweanyie2005@yahoo.com	Reporter	Margibi
48						
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50						
51						
52						
53						
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ANNEX 6: GRIEVANCE AND RESOLUTION FORM

-GRIEVANCE AND RESOLUTION FORM FOR RESETTLEMENT AND COMPENSATION-

Name (Filer of Complaint): ID

Number (PAPs ID number):

Contact Information (house number/ mobile phone) :

Nature of Grievance or Complaint:

Date

Individuals Contacted

Summary of Discussion

.....

.....

.....

Signature.....

Date:.....

Signed (Filer of Complaint): Name

of Person Filing Complaint (if different from Filer): Position or

Relationship to Filer:

Review/Resolution

Date of Conciliation Session:

Was Filer Present?:

Yes

No

Was field verification of complaint conducted?

Yes

No

Findings of field investigation:..... **Summary**

of Conciliation Session Discussion.....

Issues.....

Was agreement reached on the issues?

Yes

No If

agreement was reached, detail the agreement below:

If agreement was not reached, specify the points of disagreement below:

.....

.....

Signed (Conciliator):

Signed (Filer):

Signed:

(Independent Observer)

Date:

ANNEX 7: PEST MANAGEMENT PLAN

Memorandum of Understanding (MOU) between Forest Development Authority (FDA) and Ministry of Agriculture (MOA) will be signed under the Liberia Forest Sector Project (LFSP), and budget is allocated for MOA to execute activities, including the implementation of this Pest Management Plan (PMP).

Background

The Strengthened Capacity for Sustainable Agriculture sub-component of LFSP is utilizing the PMP that was originally developed for the ongoing, World Bank-supported Liberia Smallholder Tree Crop Revitalization Support Project (STCRSP). This is because the LFSP is supporting a many of the same types of agricultural activities as the STCRSP (and no additional ones) and the institutional mechanisms for delivery of project activities and for environmental management are the same.

The main characteristics of the Liberian tree crop sector at present are the old age of plantations and their low productivity. There have been no significant replanting activities for the last twenty five years due to the war, and a large proportion of the country's tree crop plantations are now at the end of their productive life, necessitating replanting.

The main constraint to the implementation of a large scale replanting program, particularly for smallholders, is the lack of long term credit. This situation is consistent with the experience in other tree crop producing countries in Asia or Africa, where commercial banks are generally reluctant to provide long term credits to farmers for tree crops mainly due to the crops' long gestation period, the perceived high credit risk and the lack of collateral.

The objectives of STCRSP and the Sustainable Agriculture sub-component of LFSP include increasing poor tree crop farmers' income opportunities by rehabilitating unproductive farms and supporting tree crop replanting and new planting and by supporting preparation activities toward the future development of the tree crop sector and effective smallholder participation. The proposed project will be the first, preparatory stage of a long term pro-poor growth program focused on developing the tree crop sector. The target group will be poor smallholders in the main country's tree crop producing counties.

The objective of this PMP is to ensure that adverse environmental and social impacts as a result of agro-chemical use in achieving the proposed project objectives will be avoided or, where unavoidable, will be minimized, as required by World Bank Safeguards Policy OP 4.09.

This policy is designed to strengthen capacity of the beneficiary country's regulatory framework and institutions to promote and support safe, effective and environmentally sound pest management (i.e. to promote the use of biological or environmental control and to avoid using harmful pesticides. It applies to all projects involving pest management, whether or not the project finances pesticides.

More specifically the policy aims to:

1. Ascertain that pest management activities in Bank-financed operations are based on integrated approaches and seek to reduce reliance on synthetic chemical pesticides in agricultural projects;

2. Ensure that health and environmental hazards associated with pest management, especially the use of pesticides, are minimized and can be properly managed by the user;
3. As necessary, support policy reform and institutional capacity development to (i) enhance implementation of
4. Integrated Pest management (IPM)-based pest management, and (ii) regulate and monitor the distribution and use of pesticides.

This policy is triggered whenever the procurement of pesticides or pesticide application equipment is envisaged directly or indirectly by a project and thus will apply to the proposed project where a subproject includes the use of pesticides as part of the revitalization process. Thus the requirement for this Pest Management Plan (PMP).

Liberian Agro-chemical Policy, Regulatory Framework and Institutional Capacity

There appears to be little joined up policy and regulation in Liberia concerning the importation and use of agrochemicals.

Three agencies – the Environmental Protection Agency (EPA), the Ministry of Agriculture (MoA) and Ministry of Commerce and Industry (MoCI) all are able to issue licenses for agro-chemical imports, but do not necessarily keep each other informed. The EPA under the Environmental Protection Management Law, Sections 52 (Management of Pesticides, Toxic and Hazardous Chemicals and Materials), 53 (address misuse of these substances) and 55 (Importation and Exportation of Hazardous Waste) has the power to address misuse of such substances through fines, seizure and other legal instruments. The MoA's Quarantine Division is responsible for recording all the chemicals which are imported into the country and checking them for their compliance to the international laws (mainly respect of Stockholm Protocol) and to the allowed list of pesticides, while the MoCI's Bureau of Standards is responsible for keeping records of all goods that enter the country.

Pest Problems in the Liberian Tree Crop Sector

Plant pests and diseases, on visual evidence, result in a significant reduction in crop yields throughout Liberia. The extent of such crop loss is not documented, nor has there been any significant research into their control. The full extent of pesticide use in Liberia is unknown, but some indication might be obtained from the list of import licenses issued by the three licensing Agencies. However, this information is not readily available. Even so, official records will not account for the importation through the non-formal channels. The lack of coordination and regulation means that there is very little data available re the type and quantity of agro-chemicals in the market and even though lists of banned chemicals exist, the lack of public awareness and lax border controls (aid by absence of effective regulation) makes it possible for banned and non-registered agro – chemicals to continue to be used by agricultural sector.

The above notwithstanding, very few small farmers in Liberia use any form of chemical pest/disease management due to cost, absence of credit and in many cases lack of local availability. Where they use plant protection chemicals, it is frequently indiscriminate due to lack of application knowledge and ignorance of its impacts on the wider environment and human health. The awareness and use of the Integrated Pest Management (IPM) is virtually non-existent.

However, the fact that most small farmers do not currently use chemical plant protection chemicals and that these are costly inputs should be seen as potential opportunity to promote the use of IPM techniques during the project implementation, though it must be recognized that where pest and diseases are in epidemic proportions (as Black Pod and Swollen Shoot are in Cocoa) this will be a Herculean task requiring extensive and intense eradication.

Regardless, a concerted effort should be made during the implementation to convince the farmers of the economic and environmental benefits of the IPM.

Pest Management and Pesticide Use Policy/Strategy

The general pest control objectives are to:

1. Control, and/or eradicate and maintain good surveillance of the major economic pests whose outbreaks are responsible for large-scale damage/loss to agricultural production.
2. Provide protection to man and animals against vectors of deadly diseases.

The pest management methods should be a mix of the following:

1. Mechanical Methods: Hand picking, digging, trapping;
2. Biological Methods: Use of parasites and predators, NPV, Bt, etc.
3. Chemical method: Use of eco-friendly and bio-friendly insecticides, fungicides and pesticides.

Pest Management Plan

The STCRSP project has been implemented to support the rehabilitation of smallholder rubber, oil palm, cocoa and coffee farms throughout Liberia. The LFSP will support the same types of activities within portions of the LFSP's Target Forest Landscapes, to provide smallholder farmers with productive tree crops as an alternative to further deforestation with slash-and-burn agriculture. This involves providing loans and expertise to farmer organizations to prune their existing tree crops and provide limited inputs to increase production in situ, and later to replant their farms to increase production with new stock and additional inputs as necessary.

Included in the proposed revitalization program is the use of agro-chemicals to control pests and diseases. It will be up to the farmer organizations to decide the amount and type of insecticides, pesticides, etc. and the application equipment, thus part of the rationale for this management plan is to provide guidance. Currently farmers use little or no agro-chemicals so it is expected that the loan support will lead to an increase in the use of agro-chemicals. Such an increase of pesticides uses could potentially be harmful to both the environment and public health. In accordance with the World Bank safeguard policies (OP 4.09 on Pest Management) this Pest Management Plan has been prepared to ensure that future sub projects do not engage in unsafe pest management.

The objective is that the type of insecticides used should:

- i. Integrated Pest Management (IPM) is an innovative approach with emphasis on biological control. IPM is efficient, economical with limited or totally free residual problems.
 - i. Have negligible adverse human health effects.
 - ii. Be effective against the target species.
 - iii. Have minimal effect on non-target species and the natural environment.

- iv. take into account the need to prevent the development of resistance in pests

The methods, timing, and frequency of pesticide application should be such as to avoid or minimize damage to natural enemies, as well as for personnel applying them.

The objectives of the PMP are:

- a) to assist the country to develop its regulatory framework and build capacity within its institutions to promote and support safe, effective, and environmentally sound pest management;
- b) provide collaborative linkages between the project and international IPM groups to assist in the development of a national IPM policy, to strengthen national and local capacity to address pest problems faced by farmers, to encourage national and local compliance with international conventions and guidelines on pesticides, and to further develop IPM through awareness of resources developed elsewhere;
- c) provide an information basis for stakeholder groups to establish functional mechanisms enabling farmers to identify, understand and manage pest and vector problems in the rehabilitation of their agriculture production, reduce personal and environmental health risks associated with pesticide use, and protect beneficial biodiversity such as natural enemies of pests and pollinators;
- d) assist farmers to understand and respond to the external IPM environment that affects their livelihoods (For example, stringent minimum pesticide residue levels that limit the potential for farmers to benefit from international trade opportunities);
- e) Promote participatory approaches in IPM for farmers to learn, test, select and implement "best-bet" IPM options to reduce losses due to arthropod pests, diseases and weeds.
- f) Promote biodiversity monitoring to serve as early warning systems on pest status, alien invasive species, beneficial species, and migratory pests.
- g) enable the project to monitor pests and disease vectors and mitigate negative environmental and social impacts associated with pest/vector control in the tree crop sector

Action Plan of PMP

- a) Diagnose pest problems affecting the Tree Crop Sector as the basis for stakeholders to develop a shared vision on priority needs and IPM opportunities.
- b) Develop the capacity of stakeholders (especially the farmers) to understand and manage pest problems through farmer participatory learning approaches with complementary participatory research on feedback issues emanating from farmers' field experiences.
- c) Extend public awareness of the issue through organizing stakeholder workshops (including EPA, MoA, MoCI, Ministry of Health and Social Welfare and other relevant Agencies to establish a consensus to enforce the regulation and to create a network of exchange of information as pesticides are concerned leading to a regular reliable importation inventory and records.
- d) Introduce and promote biological controls as alternatives to chemical control regimes and thereby reduce environmental and personal health risks in agriculture:
- e) Establish biodiversity monitoring schemes for early warning on changes in pest and vector status, natural enemy complexes, pollinators, and detect migratory pests and introduction of alien invasive species.

- f) Develop/update a national IPM policy including national legislation governing the registration, manufacture/importation, distribution and use of pesticides in order to promote compliance with the World Bank's safeguard Policies, OP 4.09 and BP 4.01, and other international conventions and guidelines on pesticide use
- g) Establish partnership linkages with international organizations for assistance to develop a national IPM policy framework and establish a national IPM advisory and oversight committee (multi-stakeholder composition).

The process for training and demonstrations could involve identification of a small subset of progressive farmers in each district. The farmers selected for training can then in turn train the other farmers in their respective area. This process is critical because the main benefits of IPM depend on all farmers in a contiguous area practicing IPM; otherwise, the benefits are much less likely to materialize.

Anticipated outcomes will be:

- a. Strengthened institutional capacity on IPM
- b. Improved farmer awareness of the health hazards of misuse and mishandling of agro-chemicals and the advantages of IPM
- c. Introduction of training in the proper handling, usage and storage of agro-chemicals, and the proper disposal of chemical containers.
- d. Increased awareness about efficacy and advantages of eco-friendly alternatives of chemical pesticides.
- e. Development of promotional material, dissemination of IPM through field demonstrations, canvassing through extension personnel and NGOs
- f. Dissemination of information about traditional and IPM techniques and practices used for the control of insect/pests.
- g. Improving the information and knowledge base on pests, chemical pesticide use, health impacts, IPM use and trends across the country. This would be included in the monitoring and evaluation schedule suggested for the project.
- h. Farmers using newly acquired knowledge to choose compatible methods to reduce losses in production and post-harvest storage.
- i. Ripple effect spreading out from participating communities to other agriculture activities and from participating farmer to other farmers.

Capacity Building

The success of IPM depends largely on developing and sustaining institutional and human capacity to facilitate informed decision making by farmers, and empower farmers to integrate scientific and traditional knowledge to solve location-specific problems, and respond to market opportunities. This will be particularly important in Liberia as much of the infrastructure and knowledge base was destroyed during the civil war. In IPM, there is the need for farmers to accurately identify and diagnose pests and pest problems, understand tropic relationships that underpin biological control opportunities, and use such knowledge to guide pesticide and other kinds of interventions. Through the participatory approaches the LFSP can build local capacity to ensure rapid spread and adoption of ecologically sound and environmentally friendly management practices in participating communities.

A foundation element of the capacity building exercise is diagnosis of pest problem and IPM opportunities to provide baseline information that will enable stakeholders to develop a shared vision on felt needs and IPM strategies. Through informal interviews, field visits, and planning meetings, stakeholders will develop joint understanding of the key issues affecting production and develop a common IPM plan based on agreed concerns.

Training at all levels will be based on participatory learning modules for capacity building in

IPM information delivery. The participants will be equipped with skills in facilitation, group dynamics, non-formal education methods to encourage adult learning. Farmer training will focus on farmers' group learning for informed decision making. Group learning will be experiential through farmer-led field trials and discussions on practical aspects of crop and livestock production and pest management including indigenous knowledge/technologies.

Farmer group learning will be facilitated by Training or Trainers trained men and women extension agents and on farm demonstrations with organized field days where farmers can participate in the analyze of results and recommend corrective action based on the results of their own analyses. Field day participants will include representatives of national and local policy makers from government, development agencies, NGOs, rural and national press media, researcher institutes, and national extension services. The Farmers Organizations established as part of the STCRSP and LFSP will create a new learning fora which will help to increase scientific literacy, ownership of biological and ecological information and knowledge, and informed decisions making habits in the communities.

Also trained farmers can be expected to promote secondary adoption of proven options. For example, each farmer trained will train other farmers and explain new/improved IPM practices they have learnt.

Monitoring and Evaluation

The M&E Section of the PIU in MOA will evaluate the PMP component for over-all effectiveness and that of the IPM initiative. The M&E will involve establishing a base line on the current status to evaluate the impact of project interventions. The M&E of IPM will be based on pre-defined parameters such as adoption of biological and mechanical methods of pest control, use of parasites and predators, adoption of bio-pesticides.

The following indicators will be incorporated into a participatory monitoring and evaluation Plan:

Capacity to inform: Number of trainers trained; number and type of participatory farmer training sessions; category and number of participants reached beyond baseline figures; practical skills/techniques most frequently demanded by extension agents and farmers; and crop management practices preferred by farmers.

Capacity to motivate: Number of farmers who correctly apply the skills they had learnt; new management practices adopted most by farmers; category and number of other farmers trained by project trained farmers; types of farmer innovations implemented; level of pest damage and losses; rate of adoption of IPM practices; impact of the adoption of IPM on production performance.

Major benefits: Increase in crop production; increase in farm revenue; social benefits: e.g., improvement in the health status of farmers; level of reduction of pesticide purchase and use; and

number of FO families using preventive mechanisms against diseases. Farmer educational activities will be central to the exit strategy which should feature increased roles and responsibilities of committed national and local communities to take primary responsibilities in the development of action plans and expertise exchange for IPM development and promotion.

Institutional Strengthening: Type and number of participants in short-term technical study visits¹⁹ for hands-on laboratory and field training, and farmer participatory learning will help to create favorable conditions for continuity of IPM processes and results. These study tours should involve representatives of the regulatory authorities, implementing agencies and FOs.

Annex 8: Environmental & Social Monitoring Report Template

Name of subproject:

Project Location:

1. Environmental and Social Impacts

Brief description of the environmental impacts which were predicted when the project was designed.

2. Environmental and Social Impacts Observed During Field Visit

Brief description of the environmental effects observed during the field visit against the predicted effects and level of damage, as well as the unpredicted effects and level of damage

3. Project Compliance of environmental and social policy, laws and regulations

Brief description of the project's compliance with environmental specifications and guidelines

4. Results of Field Visit

Brief description of the ongoing bio-physical and socio-economic effects against baseline values and past monitoring results

5. Conclusions and Recommendations to Project Management

Listing of recommendations for adjustments so that project becomes fully compliant

6. Conclusions and Recommendations to the Monitoring Programme

Listing of recommendations for adjustments to the monitoring programme

7. Other Observations, Recommendations and Conclusions

Name of Monitor:

Signature:

Date:

Date of Review by ESMT:

8. Recommended Actions by ESMT

Brief summary of discussions and decisions on the issues by ESMT

Signed by Safeguards Manager:

Date:

Annex 9: Chance Finds Procedures

Project-supported civil works could impact sites of social, sacred, religious, or heritage value. "Chance finds" procedures would apply when those sites are identified during the actual construction period.

(1) Cultural property includes monuments, structures, works of art, or sites of significant points of view, and are defined as sites and structures having archaeological, historical, architectural, or religious significance, and natural sites with cultural values. This includes cemeteries, graveyards and graves.

(2) The list of negative subproject attributes which would make a subproject ineligible for support includes any activity that would adversely impact cultural property.

(3) In the event of finding of properties of cultural value during construction, the following procedures for identification, protection from theft, and treatment of discovered artifacts should be followed and included in standard bidding document;

(a) Stop the construction activities in the area of the chance find;

(b) Delineate the discovered site or area;

(c) Secure the site to prevent any damage or loss of removable objects.

(d) Notify the Supervising Engineer who in turn will notify the responsible authorities;

(e) The Ministry of Information, Cultural Affairs, and Tourism (aka Ministry of Cultural Affairs), in collaboration with responsible local authorities (where applicable), would be in charge of protecting and preserving the site before deciding on subsequent appropriate procedures.

(f) Decisions on how to handle the finding shall be taken by the Ministry of Cultural Affairs or other responsible authorities. This could include changes in the layout (such as when finding an irremovable remain of cultural or archeological importance), conservation, restoration and salvage.

(g) Implementation of the authority decision concerning the management of the finding shall be communicated in writing by the Ministry of Cultural Affairs.

(h) Construction work could resume only after permission is given from Ministry of Cultural Affairs or other responsible authorities concerned with safeguarding the cultural heritage.

These procedures must be referred to as standard provisions in construction contracts. During project supervision, the Supervising Engineer shall monitor the above regulations relating to the treatment of any chance find encountered.

Relevant findings will be recorded in World Bank Supervision Reports and Implementation Completion Reports will assess the overall effectiveness of the project's cultural property mitigation, management, and activities, as appropriate.

Annex 10: Environmental Rules for Contractors

These Environmental Rules for Contractors are prepared for all the contractors to be engaged for any LFSP civil works construction activities. The rules include provisions for proper management of construction sites, safe storage of construction materials and safe disposal of wastes.

General Considerations

- The contractor shall, in all his activities ensure maximum protection of the environment and the socio-economic wellbeing of the people affected by the project, whether within or outside the physical boundaries of the project area.
- Before any construction works begin, the contractor shall ensure that the relevant environmental and land acquisition certificates of authorization for the works have been obtained from Liberia's Environmental Protection Agency and/or Land Commission.
- In general, the contractor shall familiarize himself with the ESMF and the PF for the LFSP. Specifically, the contractor shall make every effort to follow and implement the recommendations and mitigation measures of the ESMF, PF, and any supplemental safeguards document, to the satisfaction of the EPA, FDA, or Ministry of Agriculture, as applicable.
- The contractor shall always keep on site and make available to environmental inspectors or any authorized persons, copies of the ESMF and any other relevant documents for the monitoring and evaluation of environmental and social impacts and the level or progress of their mitigation.

Acquisition of Construction Materials

The contractor shall ensure that construction materials such as sand, quarry stone, soils or any other construction materials are acquired from approved suppliers and that the production of these materials by the suppliers or the contractor does not violate the environmental regulations or procedures as determined by the EPA.

Movement and Transportation of Construction Materials

The movement and transportation of construction materials to and within the construction sites shall be done in a manner that generates minimum impacts on the environment and on the community, consistent with the provisions of the ESMF.

Fencing of Construction sites

Construction sites refer to all areas required for construction purposes, including equipment staging areas. The boundaries of the site shall be demarcated prior to any work commencing on the site. It is the responsibility of the contractor to decide on an appropriate system of protective fencing for the site. The site boundary demarcation fence shall be removed when construction is completed, if appropriate.

The Contractor shall ensure that all their equipment and materials remain within the boundaries of the site and he shall ensure that materials used for construction on the site do not blow away or otherwise escape the site.

Storage of Construction Materials and Equipment

Construction materials shall be stored in a manner to ensure that:

- There is no obstruction of service roads, passages, driveways and footpaths;
- Where it is unavoidable to obstruct any of the service paths, the contractor shall provide temporary or alternate by-passes without inconveniencing the flow of traffic or pedestrians;

- There is no obstruction of drainage channels and natural water courses;
- There is no contamination of surface water, ground water or the ground;
- There is no access by public or unauthorized persons, to materials and equipment storage areas;
- There is no access by staff, without appropriate protective clothing, to materials and equipment storage areas;
- Access by staff and public or unauthorized persons, to hazardous, corrosive or poisonous substances including sludge, chemicals, solvents, oils, asbestos cement dust or their receptacles such as boxes, drums, sacks and bags is prohibited.

Solid Waste Management

The Contractor shall institute a waste control and removal system for the site. All wastes shall be disposed of offsite at an approved refuse disposal site in consultation with the EPA. Burning of any waste on any construction site is forbidden. The Contractor shall supply waste bins throughout the site at locations where construction personnel are working. The bins shall be provided with lids and an external closing mechanism to prevent their contents blowing out and shall be scavenger-proof to keep out any animals that may be attracted to the waste. The Contractor shall ensure that all personnel immediately deposit all waste in the waste bins for removal by the Contractor. Bins shall be emptied on a frequent basis and waste removed to a temporary storage site where it shall be properly contained in water and windproof containers until properly disposed of. The bins shall not be used for any purposes other than waste collection.

In performing his activities, the contractor shall use the best practical means for preventing emissions of noxious or offensive substances into the air, land and water. He shall make every effort to render any such emissions (if unavoidable) inoffensive and harmless to people and the environment. The means to be used for making the emissions harmless or for preventing the emissions shall be in accordance with the ESMF and any other applicable safeguards document, and with the approval of the EPA and (if applicable) relevant Local Authority. Hazardous wastes shall be treated and disposed of in conformity with the national regulations and where applicable, with the supervision of qualified personnel.

Wastewater Management

The Contractor shall construct and operate the necessary collection and treatment facilities for waste water to prevent pollution. In cases where water is mixed with oily waste, separators shall be installed. The oil should be stored in tanks or drums as hazardous waste and disposed of in approved manner. The Contractor shall dispose of collected waste water in a manner agreed with the EPA and respective local officials.

The Contractor may discharge “clean” silt laden water overland, preferably vegetated land at the construction site and allow this water to filter into the ground. However, the Contractor shall ensure that he does not cause soil erosion as a result of any overland discharge.

Water from washing operations shall be collected in a sturdy container and disposed of in a manner agreed with EPA. Trucks delivering concrete or other construction supplies or equipment shall not be washed at the project site, nor in any other environmentally sensitive areas. All washing operations shall take place at a location where wastewater can be disposed of in an acceptable manner. Sanitary wastes shall be disposed into septic tanks.

Stockpiles, Borrow Pits and Quarries

Borrow pits and quarries shall be prohibited where they might interfere with the natural or designed drainage patterns. River locations shall be prohibited if they might undermine or damage the river banks, or require works in the wet area, which may carry too much fine material downstream. The

Contractor shall ensure that all borrow pits and quarries are restored, either to their original conditions or to semi-natural habitats that maintain useful conditions for wildlife.

Site Restoration

The Contractor shall ensure that all temporary structures, equipment, materials, and facilities used for construction activities are removed upon completion of the project. Any oil and fuel contaminated soil shall be removed and buried in waste disposal areas. Soak pits and septic tanks shall be covered and effectively sealed off and the sites shall be re-vegetated.

Health and Safety of Workers

The contractor shall protect the health and safety of workers by providing the necessary and approved protective clothing and by instituting procedures and practices that protect the workers from dangerous operations. The contractor shall be guided by and shall adhere to the relevant national labour regulations for the protection of workers. In addition, the contractors should indicate specific measures they will take during construction to prevent HIV-AIDS or other disease transmission by the work force.

Natural Habitats

In all relevant civil works projects, the contractor shall locate project facilities (permanent and temporary) so as to avoid or minimize the clearing of natural vegetation. The contractor shall enforce a strict prohibition on the washing of vehicles or changing of lubricants in waterways or wetlands.

Chance Finds Procedures for Physical Cultural Resources

If, during project construction, the contractor or project workers encounter archaeological relics, fossils, human remains, or other items of historical or other cultural value, the Contractor shall (i) temporarily suspend any works which might damage these items and (ii) notify the Supervising Engineer who will then notify the competent authority (Ministry of Cultural Affairs) for guidance regarding the appropriate next steps to evaluate, salvage, recover, protect, and/or document the items found.

Worker Behaviour

To help ensure that good environmental and social practices are consistently followed throughout project construction and operation, all workers, operational staff, and contract personnel shall be prohibited from (i) hunting, (ii) fishing, (iii) wildlife capture, (iv) bush-meat purchase, (v) plant collection, (vi) unauthorized vegetation burning, (vii) speeding, (viii) weapons possession (except by security personnel), (ix) working without Personal Protection Equipment (PPE), (x) inappropriate interactions with local people, (xi) disrespecting local customs and traditions, (xii) littering of the site and disposing trash in unauthorized places, (xiii) using alcohol on-site or during working hours, (xiv) sexual harassment, or (xv) setting unauthorized fires of any kind.
