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Liberia: Country Forest Note

Environment and Natural Resources Global Practice



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Liberia

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ABBREVIATIONS AND ACRONYMS

AFC	Authorized Forest Community	ITTO	International Tropical Timber Organization
ASM	Artisanal and Small-Scale Mining	LFSP	Liberia Forest Sector Project
CFMA	Community Forest Management Agreement	NDC	Nationally Determined Contributions
CFN	Country Forest Note	NGO	Nongovernmental Organization
CPF	Country Partnership Framework	NFRL	National Forestry Reform Law
CRL	Community Rights Law	NTFP	Non-Timber Forest Product
CSO	Civil Society Organization	PA	Protected Area
EU	European Union	PES	Payment for Environmental Services
EUEI	European Union Energy Initiative	PROSPER	People, Rules and Organizations Supporting the Protection of Ecosystem Resources
FCPF	Forest Carbon Partnership Facility	REDD+	Reducing Emissions from Deforestation and Forest Degradation
FDA	Forestry Development Authority	SFM	Sustainable Forest Management
FMC	Forest Management Contract	TFA	Tropical Forest Alliance
GDP	Gross Domestic Product	TSC	Timber Sale Contract
GHG	Greenhouse Gas	UNFCCC	United Nations Framework Convention on Climate Change
IFC	International Finance Corporation	VPA	Voluntary Partnership Agreement

1. Purpose, Objectives, and Key Messages

This Country Forest Note (CFN) is a living document aimed at assisting the dialog between the World Bank, the Government of Liberia, and key development partners on potential future engagements in the forestry sector in Liberia, aligned with the pillars of the 2016 World Bank Forest Action Plan. The Note serves as an informational document for future World Bank discussions with the Government of Liberia only and is not to be interpreted as a commitment of future World Bank engagement in Liberia. Additionally, the Note may be used by the Forestry Development Authority (FDA) to engage national stakeholders around the strategic value of forests and investment needs of the sector.

The key objectives of this CFN are to (a) identify opportunities and shape a more programmatic approach to the World Bank's engagement (that is, further analytical support, policy actions, and investments) and (b) guide coordination with other development partners in the sector.

The gaps and opportunities identified in the CFN recognize the unique challenges of the forest sector in a post-conflict country and the need for programmatic engagement by leveraging appropriate financing instruments consistent with the national macroeconomic framework. The CFN goes beyond the focus of the last three decades—on extracting maximum commercial benefits from the forests—and emphasizes the potential for livelihoods and employment in the forest sector, cognizant of the Government's goals of sustainable management of forests and their enhanced contribution to Liberia's economy. Gaps and opportunities, as well as key actions, are structured along the Forest Action Plan focus areas (with some adjustments) of (a) sustainable forest management (SFM); (b) sustainable forest value chains; and (c) cross-cutting areas (land use, climate change, and governance and institutions).

Data and information available for the forest sector in Liberia are scarce and fragmented, due to the disruptive effects of the civil conflicts and the capacity and budget constraints under which the FDA operates. The gaps and opportunities identified in this CFN draw upon reports and documents from previous analysis of the available data and analytical work for Liberia undertaken by various development partners, the World Bank, and the International Monetary Fund. Lessons learned from the implementation of Reducing Emissions from Deforestation and Forest Degradation (REDD+) and other World Bank and donor-led initiatives have also been considered (refer to Section 5 of this Note). The authors of this Note have made the best use of and triangulated the available data to build a coherent narrative.¹ Nevertheless, huge data

¹ The following served as important sources of analysis that were used for the Note: analysis undertaken during preparation of the National REDD+ Strategy (Development of a National REDD+ Strategy for Liberia – Final Report, LTS, 2016); Liberia Forest Sector Diagnostics (World Bank 2012); Windows of Opportunity for Liberia's Forestry Sector, Results of a Poverty and Social Impact Analysis (World Bank 2012); Liberia: Gap Analysis of Targeted Domestic Natural Resource Markets (USAID 2015); Liberia: Domestic Timber Value Chain Analysis (USAID 2017); and Non-Timber Forest Products: An Ethnobotanical Survey and Value Chain Study, People, Rules and Organizations Supporting the Protection of Ecosystem Resources (PROSPER) (USAID 2013) (see annex 1 for a full list of references).

gaps exist, and, while reading through this Note, the reader should be aware of this important limitation.

Key Messages

- (a) **The forest sector is contributing significantly to national development, and there is potential for even greater gains.** Liberia's forest sector is uniquely placed with (i) relatively high contribution of the sector to the national economy compared to other sectors (10 percent), (ii) the highest forest cover (68 percent) as percentage of land area in West Africa, (iii) high biodiversity value of forests, and (iv) high commercial value of forests. In addition, the sector has a fairly robust and conducive legal framework, which recognizes customary rights of local communities to access and manage forests for their benefit (with early steps being taken to transfer management of forests to communities).
- (b) **A shift from a 'revenue-generating' centric approach to one aligned with a more integrated 4C's approach is needed.** The sector vision is comprehensive, integrating all aspects of forestry through the 4C's approach, with a focus on community, commercial, conservation, and carbon. Until recently, the sector has been considered a source of revenue—through the export of round logs—with much less attention being paid to the potential for job creation and in-country value addition (sawmilling, furniture making, and so on) through private sector partnerships.
- (c) **Continued investments in SFM and the 4C's approach may lead to increased welfare development, particularly in rural areas,** while addressing the threat of deforestation and degradation and depletion of the forest resource in the near future.
 - (i) *Community forestry:* Impacts from ownership of community forest resources can be substantial if these resources are managed well. This may include further use and commercialization of non-timber forest products (NTFPs), conservation, and commercial logging. Chainsaw logging, which will be formally authorized once the new Chainsaw Milling Regulation is promulgated, represents a potential important source of revenue for communities, in terms of economic benefits from local processing for the growing domestic market. With a view to greater inclusion of women in such activities, a gender analysis of Liberia's forest policy, laws, and regulations should be initiated. The legal framework provides a basis for socially and environmentally sound welfare development and forest management in rural areas. However, benefits of community forests will be difficult to realize without adequate information and

logistical and technical support to communities for the establishment of governance structures and contracts' negotiation and to navigate the implementation challenges.²

- (ii) *Commercial logging*: Removing operational obstacles while ensuring compliance with the legality verification requirements of the Voluntary Partnership Agreement (VPA) should ensure SFM and increased revenue collection. In the past, the revenue collection has been poor, leading to lower than expected benefit flows to the households. Investment in downstream value creation in the industrial forest sector may also increase employment and revenue (including in the form of tax) from exports, provided forest revenues are tracked and managed well.³
 - (iii) *Conservation*: Developing the national protected area (PA) network with strong community engagement may contribute to national pride and identity and provide a long-term foundation for ecotourism focused on the country's globally unique forests and biodiversity.
 - (iv) *Carbon*: SFM for long-term revenue generation and payment for verified reductions in emissions from avoided deforestation represent overlapping incentives for the Liberian Government for better forest management. Reducing the current deforestation rate will also make Liberia more resilient to the threats posed by climate change.
- (d) **The large (and growing) informal sector needs attention to ensure sustainability.** Sustainable small-scale timber harvesting and charcoal production markets present economic opportunities for local communities and enterprises, in the form of local employment, incomes, and fiscal revenue generation. More important, nearly all timber used for construction and furniture making comes from domestic sources and is produced informally in Liberia, which means that its contribution to the economy is overlooked. Charcoal production, which is sizeable and growing, is also informal and often uses unsustainable methods. Regularizing the sector is challenging but, at the same time, it is the only way forward to maintain the forest and produce sustainable economic benefits.
- (e) **Need for accurate resource data/inventory and forest management planning.** Several challenges in forest sector planning and management stem from lack of credible forest resource assessments. Past reports in Liberia show that even forests with high canopy cover (as deduced from the spatial data) may have low biomass and poor commercial value, and reliable biomass assessments have been a contentious issue. A national forest inventory has been initiated through the ongoing World Bank support under the Forest Carbon

² The findings of the report 'Windows of Opportunity for Liberia's Forest Sector, Results of Poverty and Social Impact Analysis', 2012 presented the opportunity and challenges around community forestry.

³ This finding is also highlighted in the report 'Windows of Opportunity for Liberia's Forest Sector, Results of Poverty and Social Impact Analysis' 2012.

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Partnership Facility (FCPF) and Liberia Forest Sector Project (LFSP) in partnership with the Food and Agriculture Organization of the United Nations (FAO) and would provide the much-needed critical information on the state of forest resources. Once the data become available, they will be utilized for improvements in forest management planning.

- (f) **The FDA's mandate, institutional capacity, and financing need to be aligned for efficient service delivery and operational predictability.** Weak forest governance and FDA's low institutional capacity has adversely affected implementation and coordination of the 4C's approach and inhibited effective oversight of forest management activities. Strategic planning efforts initiated through the LFSP and exploring options for mobilizing additional finance to increase investment for the sector to sustain its activities, without substantial reliance on donor support, will be critical.
- (g) **Conditions for private sector engagement need to be enhanced.** Improving conditions for the private sector could contribute to community-based enterprise development and increased investment in the sector. Measures may include better access to finance, improved infrastructure and market access, market intelligence, streamlined tax codes and foreign-currency regulations, and simplified tax collection procedures and customs processes.
- (h) **Options for immediate income-generating opportunities for communities need to be explored.** Although such options may not be economically attractive individually, when compared with the immediate benefits from commercial management, they may become attractive and viable if presented as a bundle.
- (i) **Continuity in donor engagement and support needs to be maintained.** Significant donor support has been provided to the sector. The World Bank's approach to future engagement should ensure continuity (through the FCPF and LFSP) to sustain and enhance existing and expected outcomes, in coordination with other development partners.
- (j) **Basic data collection and analysis on forests needs to be strengthened for well-informed decision making.** There is a lack of up-to-date and accurate data, which makes effective planning difficult.

2. Summary Data Box

Key Forest Statistics

Area covered by forests (percentage of the total country area)

- Liberia contains about 4.3 million ha of lowland tropical forest that comprises 43 percent of the remaining Upper Guinea forests of West Africa. In 2015, forests covered around 68 percent of Liberia's land surface.

Forest loss (and/or gain) over the past years/decades

- The deforestation rate is estimated at 0.46 percent per year for 2005–2015, based on the available data.

The role of forests in sustainable development, economic growth, and job creation

Number of people depending on forests for their livelihoods

- The forest sector in Liberia is a significant source of livelihood for rural Liberians, with over one-third of Liberia's population (or 1.5 million people) living in forested areas.

Direct contribution of forest sector to gross domestic product (GDP) (for example, timber), employment, trade

- Forest sector contributed 10 percent of the GDP annually in 2014–2016. In 2015, it was estimated that around 10,400 people were directly employed by the sector (formal employment).

Contribution of forests to other economic sectors

- Forests serve as an important source of energy, as fuelwood and charcoal. Timber from forests is used for construction, and ecotourism has been identified as an opportunity for development, particularly in Lake Piso Multi-Use Reserve, Sapo National Park, and East Nimba Nature Reserve.

Provision of environmental services and sociocultural services

- Liberia's forests are an important source of biodiversity, with Liberia listed as one of the 35 global biodiversity hotspots, serving multiple sociocultural purposes. Liberia's forests also provide vital environmental services such as climate regulation, soil protection, air purification, and water regulation and supply; they also host sacred sites for Liberian communities.

National ambitions for the forest sector

Government/sectoral plans (existing and upcoming) relevant to and affecting forests

- Liberia's forests are recognized as having the "potential to significantly contribute to poverty reduction and economic growth" and are considered "a vital source of food, medicines, building materials, and ecosystem services" in Liberia's Agenda for Transformation, which is a medium-term development plan in support of Liberia's national vision, Liberia Rising 2030.

Nationally Determined Contributions (NDC)—where it mentions forests for mitigation and adaptation

- Forestry features in Liberia's NDC, reflecting its importance as a net carbon sink. Identified mitigation options with implications for the forestry sector include (a) reducing greenhouse gases (GHGs) by at least 10 percent by 2030 and (b) improving energy efficiency by at least 20 percent by 2030. Identified adaptation options for the forestry sector include (a) increasing awareness and participation of local dwellers in forest conservation, (b) protecting biodiversity-rich zones, and (c) increasing forested lands through reforestation of degraded areas.

3. Liberia's Forest and its Contributions to the Economy

3.1. Introduction

1. **Liberia's Agenda for Transformation recognizes forests as having the “potential to significantly contribute to poverty reduction and economic growth” and as “a vital source of food, medicines, building materials, and ecosystem services.”** The Agenda for Transformation is a medium-term development plan for 2013–2017, focused on Liberia's primary developmental challenges of sustaining peace, achieving economic transformation, developing human capital, and improving governance and public institutions, prepared in support of Liberia's national vision, Liberia Rising 2030.
2. **Forests can become a powerful engine of growth for the economy** if there is better implementation of legislation and regulations, improved clarity on property rights, strengthened community participation, and investments in infrastructure and capacity. By integrating community, conservation, and commercial aspects of forestry, the sector can contribute to job creation (including for the youth entering the labor force), income generation and its equitable distribution, increased foreign exchange earnings, economic diversification, and poverty reduction (particularly in remote rural areas).

3.2. Forests and Forest Cover in Liberia⁴

3. **Liberia stands out as the most forested country in West Africa.** In 2015, forests (greater than 30 percent crown cover) made up 6.5 million ha, that is, 68 percent of Liberia's land surface. This includes some areas under tree-crops such as oil palm, rubber, and cocoa. Out of this, about 4.3 million ha is categorized as tropical forest with over 80 percent of canopy cover (see figure 1 and annex 4) (Metria and Geoville 2016).⁵ Furthermore, about 15 percent was classified as degraded land (that is, canopy/tree cover under 30 percent). The land cover map will be updated once Liberia's forest definition has been validated.⁶
4. **Deforestation and forest degradation remained low during the civil conflict, but as peace was restored in the mid-2000s, pressure on the forest and its natural resources has increased.**

⁴ Winrock International 2016.

⁵ Note that the estimates of forest cover (particularly those with more than 30 percent crown cover) include the areas under tree crops, including oil palm, rubber, and cocoa.

⁶ At an FDA-sponsored multistakeholder workshop in January 2016, a final national forest definition was proposed, with the following thresholds: minimum area of one hectare, minimum canopy cover of 30 percent, and minimum tree height at a maturity of 5 meters. Agricultural plantations, including tree crops, such as oil palm, rubber, and cocoa, would not be considered forest under this national definition. The definition is now undergoing final validation.

Between 1990 and 2010, Liberia lost approximately 12.2 percent of its forest cover (World Bank 2016c). Average annual deforestation rate between 1975 and 2000 (which largely covers the conflict period) was 0.5 percent, while after 2000, it increased to 1.3 percent annually.⁷ However, based on data available for 2005–2015, the current deforestation rate is estimated to be 0.46 percent per year (Winrock International 2016). Most of the forest loss has occurred in the eastern part of the country in the Tropical Forest Zone where, as a result of selective logging and slash-and-burn agriculture, much of the dense forest has been converted into degraded forest, thicket, or savanna or is being used for agriculture.

5. The land cover classification in table 1 (also see map in annex 4) does not explicitly identify the area under agriculture. However, the grassland, shrub, and ecosystem complex land cover types are associated with the rural and agriculture domains.⁸ Shifting cultivation affects almost 30 percent of the 4.3 million ha of dense forest (more than 80 percent canopy cover) and almost 70 percent of the less dense forest (30–80 percent canopy cover) (LTS International 2016).

Table 1. Area data for land cover layers in Liberia

Land cover class	Hectares	% of mapped area
Forest >80% canopy cover	4,389,270	45.50
Forest 30–80% canopy cover	2,186,495	22.60
Forest <30% canopy cover	1,529,949	15.80
Mangrove and swamps	37,158	0.40
Settlements	44,595	0.50
Surface water bodies	60,374	0.60
Grassland	625,332	6.50
Shrub	606,928	6.30
Bare soil	173,690	1.80
Ecosystem complex (rocks and sand)	2,271	0.02
Clouds (unmapped)	14,336	0.15
Total mapped area (land and inland water)	9,656,062	100

Source: Area data for the 2015 – Metria and Geoville (2016) land cover layer; LTS International 2016.

6. **Existing forests have different uses.** Out of the total forest area (with canopy cover over 30 percent) (approximately 6.6 million ha), almost 28 percent is designated for commercial timber production (under Forest Management Contracts [FMCs] and Timber Sale Contracts [TSCs]), 18 percent is under existing and proposed PAs, 5 percent is under

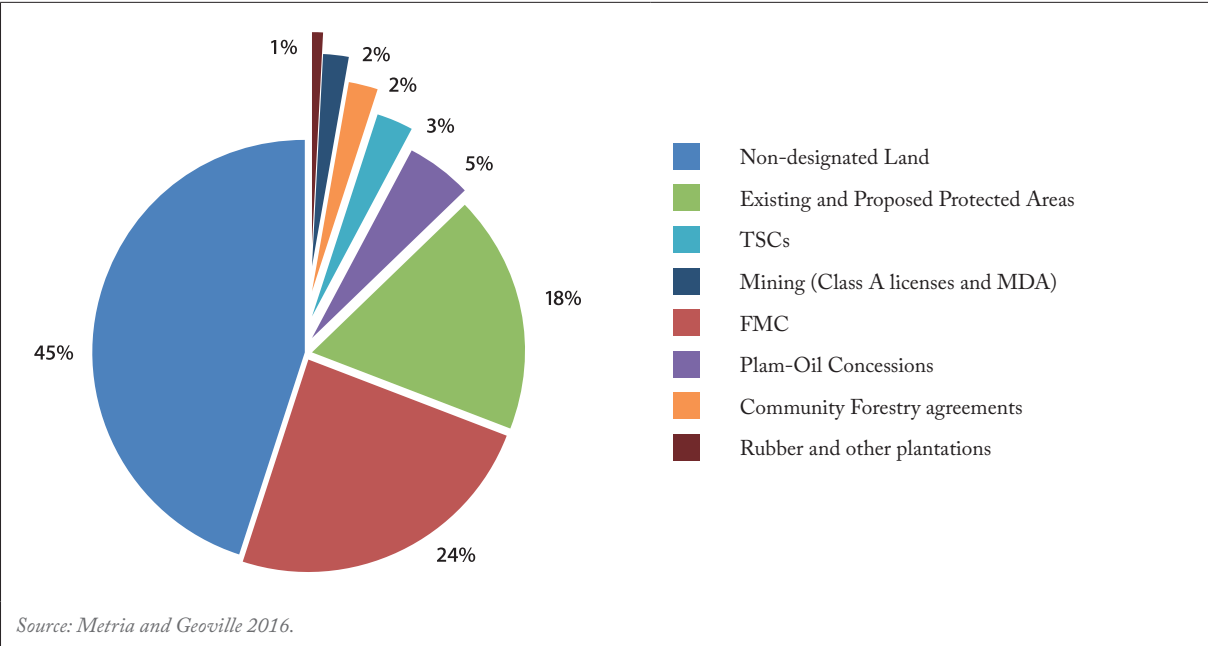
⁷ According to data from the United States Geological Survey, <https://eros.usgs.gov/westafrica/land-cover/land-use-land-cover-and-trends-liberia>.

⁸ The available data on the percentage of land under agriculture are variable and range from 12.7 percent (Metria and Geoville 2016) to 28 percent (FAO 2015) due to use of different assumptions and methodologies.

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palm oil concessions, and 1 percent is under rubber plantations (see figure 1). The non-designated category is about 45 percent of the forest area; this land is used in a variety of ways by communities, smallholder cultivators, and transitory populations.

Figure1. Allocation of Forest land in Liberia (2015)



3.3. Contributions to the Economy

The forest sector is an important contributor to income and employment for Liberia’s economy, in terms of both marketed (and measured) goods and services, as well as non-marketed (and largely unmeasured) ecosystem services. This section presents a short overview of the sector’s contribution to the economy, drawing upon various available studies.

7. The formal (measured) forestry activities contributed 10 percent of GDP in 2014, according to the 2016 Annual Report of the Central Bank of Liberia (Central Bank of Liberia 2016). According to the report, forestry was the fourth largest contributor to the GDP after (a) services, (b) agriculture and fisheries, and (c) mining and panning. In 2015, Government revenues from forest sector levies, such as stumpage fees, export fees, and area fees, were US\$8.5 million and formed almost 2 percent of the total tax revenues collected.



World Bank/ Peter Aldinger

8. **The forest sector is important for creating employment.** According to the FAO's Forest Resources Assessment 2015, around 10,400 people were formally directly employed by the sector (FAO 2015).
9. **The informal forestry sector contributes significantly (and likely much more than the formal sector) to incomes and employment, through activities such as chainsaw milling and charcoal production.** The informal chainsaw milling sector provides between 19,000 and 24,000 more or less permanent jobs to urban and rural individuals. The annual revenue generated by chainsaw milling alone is estimated to be US\$31–41 million or about 3–4 percent of the GDP (USAID 2015).
10. **Most Liberian households depend on firewood and charcoal for their cooking needs.** Charcoal production (mostly informal) and firewood gathering contributed an estimated 11 percent of GDP in 2013–2014 (USAID 2015).

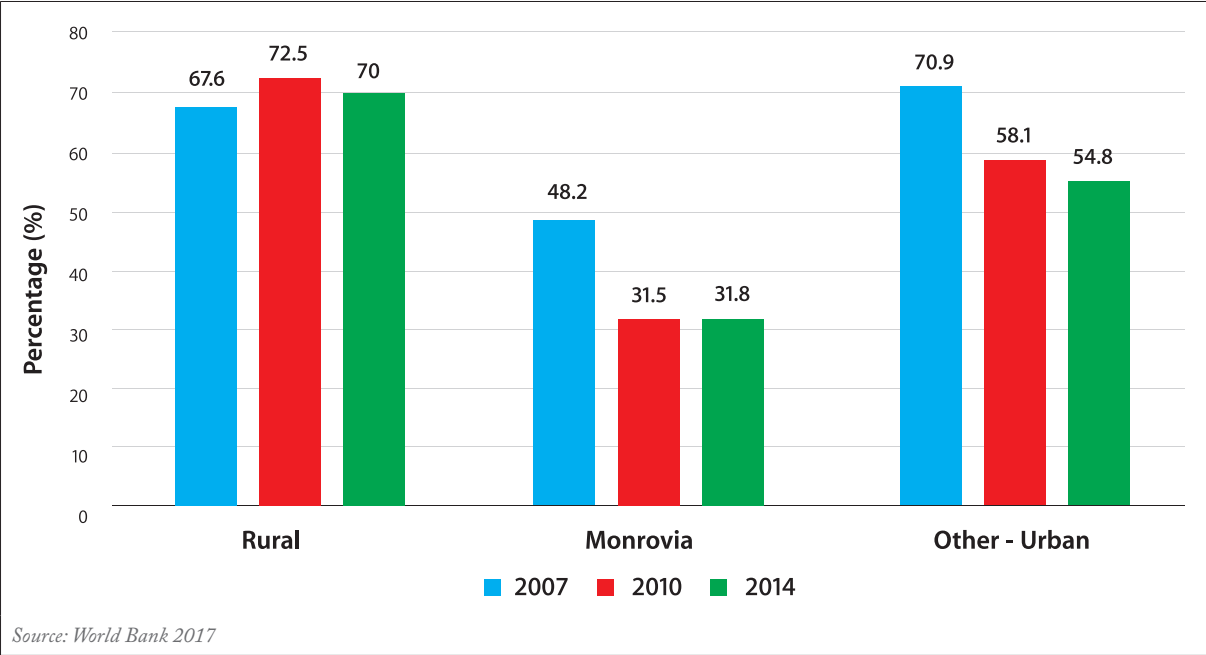


World Bank / Anushree Shetty

11. **Sustainable forest sector development management, with an emphasis on generating employment for rural forest dependent communities, could be an important part of a strategy to address stubborn rural poverty.** Analysis of the poverty trends between 2007 and 2014 indicates that rural poverty is more resistant to aggregate economic growth as compared to urban poverty (see figure 2). Devolving forest management rights and responsibilities could therefore be a strong driver for breaking the rural poverty nexus. Forest-based enterprise development could be another option to address poverty and rural unemployment.
12. **Finally, forests play an important role as a safety net for vulnerable and marginalized people.**

Rural Liberians depend on the forest sector for a significant portion of their livelihoods. Over one-third of Liberia’s population lives in forested areas, but most Liberians are dependent on forests and their products, as well as the ecosystem services forests provide. Being removed from formal employment opportunities, the rural population is further dependent on the natural capital provided by traditional forest resources for their basic livelihood, which needs to be sustainably managed.

Figure 2. Poverty trends by area, 2007–2014 (%)



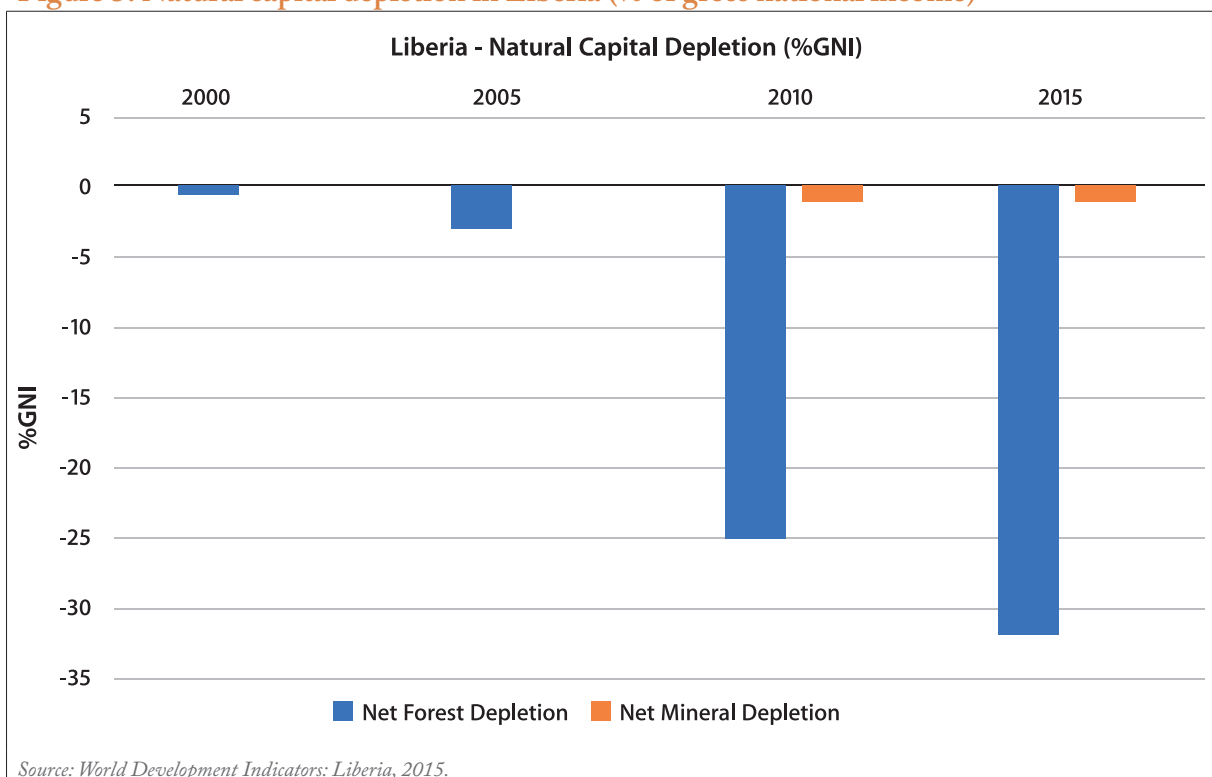
13. **Despite their important contributions, forests are under threat and need to be better and sustainably managed.** Overall, net forest depletion as percentage of gross national income⁹ increased from 0.5 percent in 2005 to 32 percent in 2015 (see figure 3). Deforestation and forest degradation are caused by shifting agriculture, chainsaw milling, charcoal production, poor enforcement of regulations governing forest concessions, expansion of commercial agriculture concessions (for example, palm oil), and artisanal and small-scale mining (ASM).

⁹ Calculated as the product of unit resource rents and the excess of roundwood harvest over natural growth.



World Bank/ Peter Aldinger

Figure 3. Natural capital depletion in Liberia (% of gross national income)



14. **The sector's economic contribution was significantly affected by the Ebola crisis in 2014.** The Ebola outbreak had a significant negative impact on all commercial operations in the country and, thus, real GDP growth stagnated between 2014 and 2016.

Based on a deeper subsectoral analysis, the following chapters of this Note will highlight key actions that will be necessary to ensure that SFM principles and practices are implemented.

Policy and legal framework

15. **The first major efforts to manage and regulate the forestry sector in Liberia began in the 1950s.** During this time, legislation was passed, through which national parks and reserves could be identified and protected while operators began commercial logging activities. The FDA was established by the FDA Act as a state-owned enterprise in 1976, with a broad remit to conduct research, provide training, and “devote all publicly owned forest lands to their most productive use for the permanent good of the whole people, considering their direct and indirect values” (FDA Act, Section 3 [b]).
16. **Despite its wide remit, the activities of the FDA over the next 25 years focused largely on timber concessions and promoting the export of timber from Liberia.** Timber was recognized as a resource that could contribute to rapid economic growth of the country. However, commercial timber production has also been plagued by several problems, including opaque allocation processes, as identified in the 2004 review of concessions by the Forest Concession Review Committee.¹⁰ The committee recommended that all concessions be cancelled and a revised process be developed under which new concessions could be awarded.
17. **The National Forestry Reform Law (NFRL) adopted in 2006 provided a new framework for identifying, allocating, and managing logging concessions, with the establishment of the 3C's approach, which gives equal importance to community, commercial, and conservation aspects of forestry.**¹¹ Under the framework and new regulations of the NFRL, seven FMCs and 10 TSCs were awarded in 2009. Positive developments also include (a) Liberia signing a VPA with the European Union (EU), which aims to address illegal logging, improve forest governance, and promote trade in legal timber products, and (b) the establishment of the Chain of Custody system for tracking wood products, to prevent the illegal harvesting and export of timber, though the sustainability of these efforts is not assured. The Community Rights Law (CRL) of 2009 with respect to forest lands was also

¹⁰ An overlap of customary land rights, private land rights, and concessions is the result of the opaque allocation processes, undermining tenure security and contributing to ongoing property rights disputes.

¹¹ The 4th C, which is carbon, is now a part of the SFM approach in Liberia, although it is yet to be recognized by legislation. However, this Note mainly focuses on the 3C's.

passed to enable the transfer of forest rights to communities, providing the legal basis for demarcation, formal recognition, and the sustainable management of community forests. The FDA was also restructured, creating three distinct departments, each responsible for one of the ‘Cs’, in addition to the cross-cutting units of law enforcement, planning, and research and development.

18. **The ‘Sanctions Lifting +6’ process, conducted in 2012, evaluated the strengths and weaknesses of the 3C’s approach.** This evaluation concluded that the progress on each ‘C’ had been unequal, with significant focus on commercial forestry but less progress on community or conservation forestry (PROFOR 2012). Ensuring that the 3C’s are fully integrated into the sustainable management of the sector and improving the quality of operations under each ‘C’ are key continuing challenges that need to be addressed in Liberia.

4. Subsector Contributions, Constraints, and Opportunities

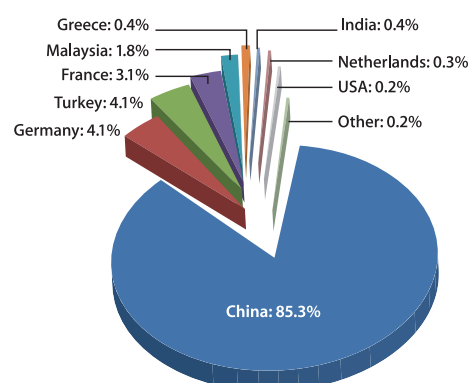
4.1. Focus Area 1: Sustainable Forest Management - Protect and Optimize Management of Forests

4.1.1. Commercial Forestry: Contributions and Challenges

This section summarizes the contribution of and challenges within the commercial timber sector, which focuses on contracts with large private logging companies. It is not a comprehensive analysis of the concession system but a selective focus on persistent problematic issues.

19. **Commercial timber contributes a substantial share of Liberia’s GDP and is also a significant source of the country’s export earnings.** In terms of economic value, revenues from commercial production amounted to US\$87.6 million in 2016, representing almost 10 percent of Liberia’s GDP (Central Bank of Liberia 2016). This is projected to rise slightly to US\$90.1 million in 2017. The officially recorded round logs’ production in 2014 was 174,436 m³; and it fell by 40 percent to 111,785 m³ in 2015. Log production was projected to have risen to 192,814 m³ in 2016, in response to a rise in the

Figure 4: Top 10 export markets for Liberia in 2014



Source: ITC (2015) main markets, in terms of export value, for the product '44 Wood and articles of wood, wood charcoal' exported by Liberia in 2014.

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international market price for round logs.

20. **The commercial timber industry in Liberia is focused overwhelmingly on the production of logs for export**, with more than 80 percent of round logs produced (in the formal sector) exported in 2014.¹² The civil wars destroyed the domestic downstream industry in the forestry sector. The export value of primary timber products was around US\$34.2 million in 2014 (ITTO 2016).



World Bank/ Matthew Owen

21. **China is the predominant destination of Liberia's commercial log exports.** In 2014, Liberia exported 85 percent of its timber, by value, to China. The top three EU importers, by value, were Germany (4.1 percent), France (3.1 percent), and Greece (0.6 percent) (see figure 4).¹³
22. **It is estimated that the commercial sector could produce annual revenues in the range of US\$90–100 million under the sustainable production regime.** Experts in the sector suggest that of this, about US\$15–20 million could go to the Government as taxes and fees (World Bank 2012a). This estimate is based on the existing suboptimal operational conditions; however, were the Government to remove key constraints, as identified by concessionaires (by revising concession-level estimates of sustainable harvests, improving infrastructure, streamlining the current system of levies, and so on), even more revenue could be sustainably created. However, a better estimate of the potential of commercial forestry would be known once the data from the national forest inventory become available.
23. **Government forest tax and fees collection levels have varied.** Between 2010 and 2015, revenues from timber-related levies, such as stumpage, export, and area fees, ranged from a

¹² World Bank staff calculation, based on data available from the International Tropical Timber Organization (ITTO) and the Central Bank of Liberia.

¹³ Gateway to International Trade: Liberia, European Timber Trade Federation, <http://www.timbertradeportal.com/countries/liberia/>.

low of US\$3.7 million in 2013 to a high of US\$21.3 million in 2012.¹⁴ However, revenue collection is hampered by the continuing failure of companies to pay what they owe. For instance, in 2016, it was estimated that logging companies operating in the country owed the Government over US\$25 million in arrears on taxes and stumpage fees (SGS 2016).

24. **There are three types of commercial agreements under which timber can be legally produced.** These are (a) FMCs, (b) TSCs, and (c) commercial-use contracts signed between communities and logging companies under Community Forest Management Agreements (CFMAs); Private Use Permits were also previously available, but the FDA is no longer authorizing their use.¹⁵ At present, there are seven valid FMCs, 10 TSCs (of which two are active), and 21 CFMAs (under 12 of which communities have entered into third-party agreements with logging companies).¹⁶
25. **The FMCs account for approximately 24 percent of the total forested area in Liberia** and 29 percent of the highest canopy cover forest (more than 80 percent canopy cover); they comprise a total of about 1.7 million ha (1 million ha under active FMCs and 0.7 million ha under proposed FMCs). The FMCs are often positioned between PAs or proposed PAs and cover large blocks of high canopy forest.
26. **Existing and proposed TSCs cover 3 percent of the total forest area** or about 190,000 ha. Most of this area is dense forest (over 80 percent canopy cover). Although most TSCs have the status of 'proposed', rather than 'active', once they are fully approved, this forest could be completely cleared. It is possible, however, that the TSCs where felling has not started will expire before any harvesting takes place.
27. **Commercial concessions are operating under many constraints.**¹⁷ Constraints specific to the operation of current concessions include (a) lack of accurate estimates of commercially valuable harvestable timber at the time of bidding for concessions, which then raises problems during operations; (b) overly complex structure of taxes, fees, and levies; (c) poor infrastructure that complicates transporting equipment to the logging sites and logs from the harvesting sites to the ports; and (d) imposition of unrealistic targets and lack of clarity on roles and responsibilities for the concessionaires, especially when it comes to

¹⁴ Liberia FLEG-T, EU Partnership Agreement, Aide Memoire, Second Joint Implementation Committee Meeting, Annex 7.

¹⁵ Due to violations in the implementation and issuance of Private Use Permits, the Government instituted a moratorium on further issuance of new Private Use Permits and existing ones were cancelled.

¹⁶ Because the CFMAs are relatively new, not much information is available on their operations. However, based on the limited information, their status and potential to contribute to economic development (including through commercial timber production) is presented in subsection 4.1.2 below.

¹⁷ In general, the operating environment for the private sector in Liberia is difficult. Liberia ranked 174 out of 190 countries in the World Bank 2017 Doing Business report; and its current ranking on the Global Competitiveness Index is 131 out of 138 countries (this information is drawn from the Liberia Systematic Country Diagnostic).

implementing social agreements.¹⁸

28. **Commercial concessions practice selective timber extraction but need to follow SFM practices.** Currently, forest operations largely focus on selective log extraction, with no silvicultural systems being applied to ensure sustainability. One option to encourage sustainable operation is to introduce the requirement for forest operations to be certified under acceptable international standards, by ensuring that the existing Code of Forest Harvesting Practices fully subscribes to such standards.
29. **The indirect impact of commercial logging on forest areas is unknown but is likely significant.** Most of the road network in Liberia, and all in some rural areas, was built by logging companies to extract timber. These routes play a pivotal role in exposing the land to chainsaw logging, agriculture, settlement expansion, charcoal production, hunting, ASM, and other activities that lead to long-term deforestation and forest degradation.
30. **Unsustainable commercial forest management could also contribute to forest degradation.** If forest degradation continues either directly through logging or through uses associated with roads and population growth, this will result in a more fragmented forest landscape with less biodiversity and lower commercial value.
31. **Community benefits, though legally earmarked, have not been forthcoming.** Communities near the FMCs and TSCs should receive 30 percent of the land rental fees (money paid by the logging companies to the Liberia Revenue Authority, routed to communities through the Ministry of Finance and Development Planning and the National Benefit Sharing Trust Board). Communities should also receive US\$1 per m³ of timber that is extracted. They are also meant to receive other benefits from social agreements that are negotiated with logging companies, which include infrastructure projects such as roads, community hospitals, and schools. However, in practice, the communities have not received these benefits, for two major reasons. First, the logging companies have failed to fulfill their contractual obligations—there are many cases of non-payment or partial payment of land rental and extraction fees and failure to implement projects and activities established in social agreements. Second, the delay or failure by the Central Government (the Liberia Revenue Authority and the Ministry of Finance and Development Planning) to forward remitted revenues, which communities are legally entitled to (Civil Society Independent Forest Monitors 2013). Discussion between the Government of Liberia and companies on

¹⁸ Social Agreement is an agreement required by the FDA to be concluded between communities around a given logging contract area and the logging company authorized to operate in that area, which establishes the relationship between the company and the affected communities or communities that could be affected by that commercial activity.

the issue of outstanding fees is ongoing.¹⁹

- 32. To encourage investment by the private sector, the country needs to reduce major obstacles to doing business.** The five most frequently cited obstacles to doing business by executives are (a) limited access to finance, (b) high tax rates, (c) government instability, (d) foreign-currency regulations, and (e) corruption (World Bank 2017). Poor infrastructure and lack of road networks present additional challenges for business opportunities in remotely located communities.



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4.1.2. Community Forestry: Contributions and Challenges

The focus on community management of forest resources, provided for in the CRL, has increased in the recent years. The CRL grants rights to communities over their traditional forestland and establishes a framework for the community forestry program more broadly. Community forestry is critically important for enabling private investment in SFM, ensuring more equitable distribution of economic opportunities and income from forest resources, contributing to environmental services, improving governance, and mitigating conflict.

- 33. Community forestry is the future of sustainable forestry in Liberia.** Globally, the proportion of forest under community ownership or management has increased from 21 percent to 31 percent since 2002 (RRI 2013). In Liberia, there are 21 CFMAs. These account for 167,739 ha of forest area (of forest with over 30 percent crown cover), approximately 2.5 percent of the total forested area of the country.
- 34. The CRL requires the establishment of community governance structures for the**

¹⁹ However, a new law, an Act to Govern the Forestry Industrial Development and Employment Regime, which was passed on October 9, 2017, gives all the FMC concessionaires a grace period of three years from the date of the passing of the Act to settle their bid premium arrears, including the possibility of a write-off against any investments they might have made in the wood processing sector in this three-year period and two years before this period.

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sustainable management of community forest resources. The FDA has received and accepted approximately 130 applications from communities across the country for Authorized Forest Community (AFC) status, incorporating them into the nine-step process, which ends with the signing of a CFMA. Accelerating the pace of implementing the nine-step process, which supports the community from the application for AFC status to its formal recognition, across applicant communities in Liberia is the most immediate challenge, as the process is resource and time intensive. Building FDA's capacity to efficiently manage this process, including through outsourcing activities to technical service providers, will be crucial.



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35. **Communities can use their forests for both conservation and commercial purposes.** Based upon the number of applications for the AFC to date, and the information on the uses of forest land (as presented in Section 4.2 of this Note), almost 3 million ha of forest (in the 'non-designated' category of forested land) have the potential to come under community management. While it is too early to say how much of this land would be allocated for commercial logging by communities, it is possible that it could surpass the 1 million ha under active commercial concessions. Community forests, therefore, have the potential to significantly contribute to the development of communities through the provision of secure incomes and employment, as well as revenue for the Government, as commercial timber harvesting in the AFCs is subject to almost the same requirements as under the FMCs. To achieve this, investments in technical capacity, transportation, access to markets, and the promulgation and enforcement of appropriate regulations and their enforcement will be needed if communities are to realize the economic benefits and sustainably manage their forest resources.

4.1.3. Conservation of Natural Forests and Biodiversity: Contributions and Challenges

This section discusses the significance of Liberia's forests for conservation and biodiversity; some of the ways that Liberia's rich biodiversity endowment can be conserved and managed more sustainably; and the potential to use the forests for sociocultural purposes, and, in the long term, for ecotourism.

36. **Liberia is recognized globally for its biodiversity value, as it contains the largest remaining humid forest area within the biologically unique Upper Guinea Forest block (which is one of 35 global biodiversity hotspots).** Liberia's forests are home to many rare and endemic species. They support over 225 timber tree species, 2,000 flowering plant species, 140 mammal species, 600 bird species, and over 1,000 species of identified insects (Republic of Liberia 2017).
37. **Largely uncontrolled bushmeat hunting is creating what biologists call 'empty forests' across much of Liberia, where most of the larger animal species have been hunted out.** Many of the forest mammal and bird species that are depleted by bushmeat hunting are essential for long-term forest health because of their vital role in seed dispersal and forest regeneration. Bushmeat is a major protein source for many rural Liberians, so hunting cannot feasibly be banned outright. However, the necessary future transition toward greater sustainability of hunting in Liberia will likely require some combination of (a) improved enforcement to protect endangered species; (b) effectively managed no-hunting zones (within PAs and possibly some community forests) to help repopulate areas; (c) regulating the number of hunters and hunting methods; and (d) alternatives to substitute bushmeat, such as a market-driven increase in livestock and poultry.
38. **Liberia's National Government has indicated its commitment to conserve the country's biodiversity and much of its remaining forest area.** Liberia ratified the Convention on Biological Diversity in November 2002 and launched the National Biodiversity Strategy and Action Plan 2017–2025 in 2017. The National Biodiversity Strategy and Action Plan serves as a national blueprint for sectors and institutions responsible for biodiversity management in the country. The Government has pledged to conserve 30 percent of the country's remaining forest area within PAs. Liberia's Parliament also passed a new Wildlife Conservation and Protected Area Management Law in 2016. Despite these and other Government commitments, effective on-the-ground conservation of Liberia's forests and biodiversity remains a major challenge, though there are encouraging signs of progress.
39. **Liberia's PAs are necessary for effective biodiversity conservation across the country.** To date, Liberia has legally established five national-level PAs: Sapo National Park, Gola Forest National Park, Grebo-Krahn National Park, East Nimba Nature Reserve, and Lake Piso Multiple Use Reserve, which, taken together, amount to about 480,000 ha or approximately 11 percent of the nation's forests. On-the-ground protection and management of these areas is a major challenge, requiring adequate budget for capital investments, such as physical demarcation and park infrastructure; recurrent costs, such as park guard salaries and fuel; and livelihoods-related support to local communities. The LFSP, supported by the World Bank with funds from Norway, is providing various types of support to strengthen the on-the-ground management of the abovementioned PAs. The project is also assisting FDA with pre-gazettement studies of several proposed PAs, which will need to be closely

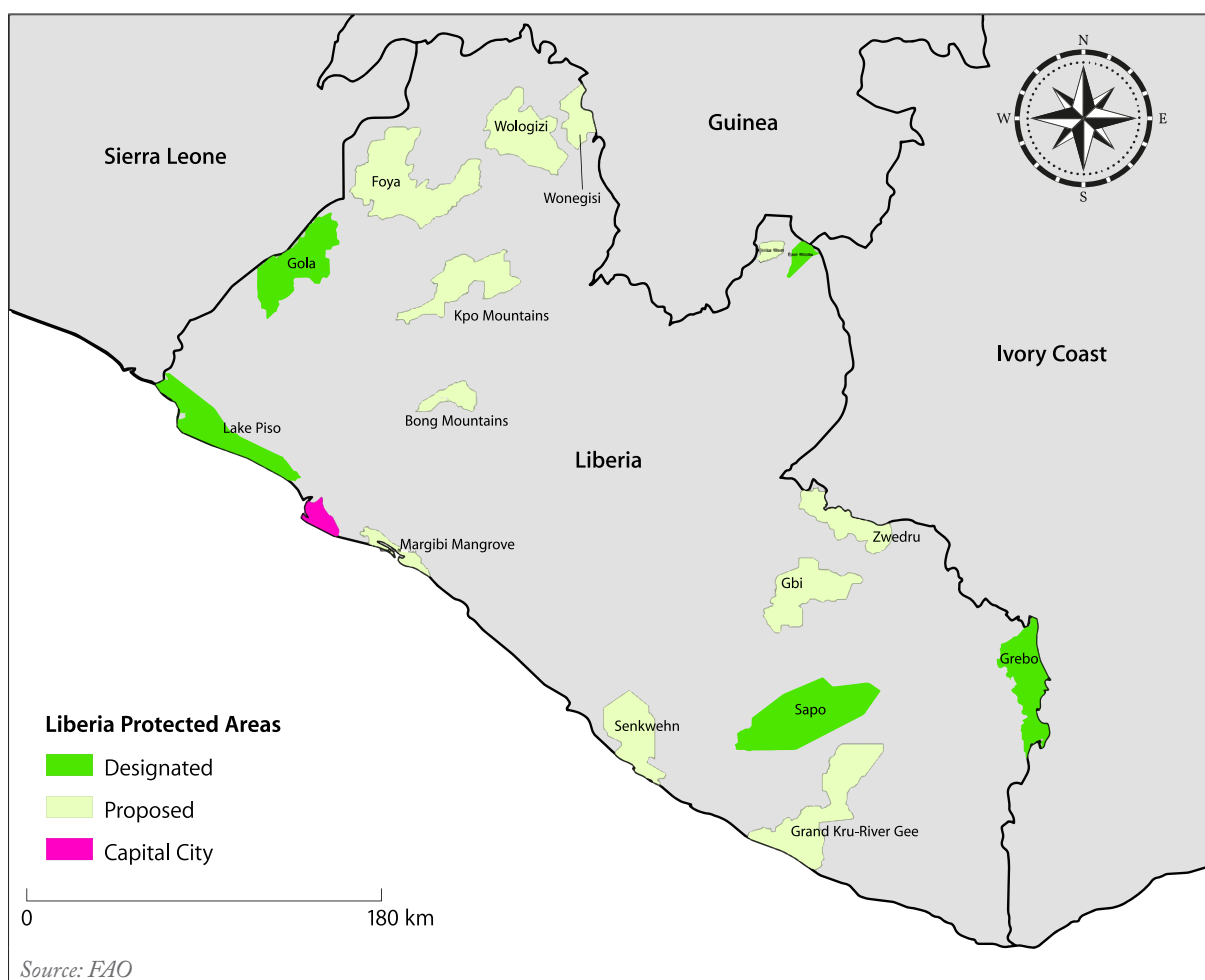
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consulted with local communities and other stakeholders before they are proposed for legal gazettelement as some category of PA.



FDA

40. **Forest-based communities have an essential role in promoting improved forest and biodiversity conservation.** In the vicinity of PAs, community members could collaborate more effectively with FDA officials in forest monitoring, maintaining boundaries and buffer zones, and other activities that facilitate effective management. To achieve such collaboration, the FDA will often need to improve its outreach and support to local communities around PAs. There is also a need to promote sustainable livelihoods for the communities living near or within the PAs. Outside of PAs, the CRL provides the authorizing environment for communities to be more fully engaged in forest management in collaboration with the FDA. In addition, traditional knowledge and the innovations and practices of forest-based communities relevant to the conservation and sustainable use of biodiversity can be better recognized, documented, and promoted.



41. **Nature-based ecotourism is still nascent in Liberia, although it might be worth considering as a longer-term opportunity.** The Liberian National Export Strategy on Tourism (2016–2020) was developed as part of the Government of Liberia’s ongoing efforts to diversify the Liberian economy and harness the country’s significant tourism-based resources. There is potential for the development of the ecotourism sector in Liberia, provided the infrastructural, institutional, and market challenges can be overcome through appropriate support and sustainable management of the resources.

Key Actions:

Focus Area 1: Sustainable Forest Management - Protect and Optimize Management of Forests

The key actions are organized by the three subsectors (commercial, community, and conservation) that together form the three pillars of SFM in Liberia. At the operational level, the three pillars need to interact strongly as stakeholders are common to all three subsectors.

Commercial forestry: Strengthen government management and oversight of the subsector

- Implement recommendations of past concession reviews (complemented with review initiated under the LFSP) to ensure that responsible logging companies can operate within a clear regulatory framework, also including concession allocation that takes into consideration land suitability and overlapping land claims.
- Ensure adherence to the Code of Forest Harvesting Practices in commercial concessions and continue regulatory improvements, traceability, and sustainable management practices under the VPA.
- Ensure that a certain proportion of timber taxes and fees collected from timber harvesting is allocated to the FDA and made available on a routine and predictable basis (as a measure to meet the resource needs of the FDA).
- Strengthen grievance redress mechanisms, court system, and/or arbitration in the country to ensure that communities reliably receive their due share as part of agreements with concessionaires.
- Improve the overall business climate by putting in place better access to finance, improved infrastructure and market access, market intelligence, streamlined tax codes and foreign-currency regulations, simplified tax collection procedures and customs processes, and so on.

Community forestry: Establish a solid basis for social and environmentally sound development in forested rural areas

- Strengthen the capacity of the FDA to support accelerated AFC establishment through signing of the CFMAs.
- Provide support for inclusive self-organized and self-governance community structures.

- Develop clear guidelines for community forest management plans.
- Educate community members on appropriate use of community forests (for example, pursue conservation and commercial activities and development of small-scale enterprises based on the NTFPs) and provide hands-on assistance to communities in the sustainable management of their forest resources, including during the negotiation of commercial agreements with companies.



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- Support research to identify community-company partnership models for commercial timber harvesting and other forest-based enterprises.
- Conduct a gender analysis of Liberia's forest policy, laws, and regulations, with a view to better inclusion of women in economic activities.

Strengthening conservation and sustainable management of biodiversity

- Support establishment of proposed PAs once they have undergone a pre-gazettement review, taking into account their conservation value, customary land claims, and existing human uses, in close consultation with local communities and other stakeholders.
- Ensure that the FDA has sufficient budget and high-level political support for the effective

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management of Liberia's PA system, including the need to address the challenge of illegal mining in PAs.

- Support the capitalization of the Liberia Conservation Trust, a trust fund that has recently been established to augment the funding available for Liberia's PAs, starting with the East Nimba Nature Reserve.
- Improve the flow of conservation-related benefits to communities located near or within PAs, including potential for PES schemes.
- Work with the AFCs to make their community forest management plans as conservation and biodiversity friendly as feasible, with respect to existing forestry practices, as well as adequate control of hunting.
- Learn from successful ecotourism initiatives from the region, including through South-South knowledge exchanges.

4.2. Focus Area 2: Sustainable Forest Value Chains

4.2.1. Small-Scale Timber/Chainsaw Milling Sector: Contributions and Challenges

This subsection describes the small-scale timber and chainsaw milling subsector, including its significant contribution to meeting domestic demand; the various challenges it faces, such as inequitable distribution of benefits, low efficiency, limited technical capacity, lack of regulation; and its role in deforestation. It proposes actions to meet the challenges and strengthen long-term sustainable management of the sector.

42. **The small-scale timber industry in Liberia meets all the domestic demand for timber and serves as a source of income and employment for thousands of rural dwellers.** Chainsaw milling is a bustling and constantly expanding activity as it meets the domestic demands of a growing economy. According to the 2017 USAID report (USAID 2017), the informal annual production of sawn wood ranges from 691,944 m³ to 922,591 m³ (in roundwood equivalents) (USAID 2015). *Both domestic and export* timber markets rely on harvesting the same tree species. Mostly informal, chainsaw milling provides between 19,000 and 24,000 permanent jobs to urban and rural individuals. Informal chainsaw milling is, therefore, a well-developed economic sector, as demonstrated by a total estimated annual trading value (revenue) of between US\$31 million and US\$41 million (USAID 2015). Nearly half of the income generated goes to the country's rural population (USAID 2015). The report estimated that a chainsaw miller could earn an annual profit of US\$1,439–1,918.

43. **Chainsaw milling in Liberia is characterized by limited capacity in processing and transformation, and low efficiency (assessed to be around 30 percent).** Increasing the efficiency of chainsaw milling would increase the benefits of all those along the supply chain—from community members to the eventual buyers of timber—and result in reduced rates of harvesting and deforestation and forest degradation.



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44. **Value addition in the wood processing industry is also very low.** The entire primary processing is done with rudimentary equipment, like chainsaws and ripping machines, mostly at the point of extraction. Calibration, drying, treatment, dyeing, and quality control do not follow standards; storage, logistics, and distribution facilities are open air; and this affects the quality of processing and the value of products.²⁰ The 2017 USAID report (USAID 2017) found that the existing small and medium enterprises making furniture add an additional value of US\$44 per m³ of sawn wood. In comparison, a 2012 study in Nigeria found that the average value added by furniture-making firms to a cubic meter of sawn wood was US\$271 (USAID 2017). The sector in Liberia is characterized by lack of information on consumer needs and demands and is largely supply-driven. There are clear opportunities to increase the value of the timber that is harvested, creating better benefits for various actors in the value chain.

45. **Chainsaw milling is an important driver of deforestation and forest degradation.** The chainsaw milling industry is estimated to affect an area at least as large as that under commercial concessions (25 percent of total forest) (LTS International 2016). The estimated informal annual production of sawn wood is more than three times the size of the formal timber sector. This likely poses a significant threat of forest degradation (and possibly deforestation in the long term). In addition, given that the domestic demand for timber is likely to increase with continuing economic growth and increasing incomes, chainsaw milling, as practiced currently, will continue to be a significant driver in the future.

46. **Going forward, chainsaw milling will need to be formalized through the promulgation of appropriate regulations.** The regulations will then need to be integrated into the VPA mechanism—the standard of legality for timber in Liberia. If done well, this will also yield increased revenue for the Government.

²⁰ Some of the main species of trees logged for domestic use and exports were niangon (*Heritiera utilis*), tetra (*Tetraberlinia tubmaniana*), wawa (*Triplochiton scleroxylon*), framire (*Terminalia ivorensis*), abura (*Mitragyna ciliata*), and lovoa (*Lovoa trichilioides*).

47. **There is a great need to encourage value addition activities, to enhance incomes and create employment through downstream processing of logs.** A lack of capacity for producing processed timber products, such as plywood and sawn timber, has deprived Liberia of the value-added benefits that these products could provide. In recent decades, there has been limited recovery of downstream processing of legally harvested timber and other wood products.

4.2.2. Fuelwood and Charcoal Sector: Contributions and Challenges

This section describes the significant contributions the charcoal industry makes to the economy of Liberia and proposes measures that can be undertaken to meet the existing challenges for the long-term sustainable management of the sector.

48. **Wood and charcoal serve as primary cooking fuel sources for nearly 98 percent of Liberia's population;** this includes 43.8 percent of households using charcoal (70.3 percent in urban areas and 9 percent in rural areas) and 54 percent using wood (26 percent in urban areas and 90 percent in rural areas).²¹ There is a large data gap in estimating the current volume of the charcoal sector in Liberia.
49. **Charcoal is the second largest informal wood-based industry,** following the informal timber industry in Liberia, with an estimated annual market value of US\$15–25 in 2009. Additionally, there is an increasing trend in charcoal production, which grew by 4.6 percent every year between 2002 and 2012 (USAID 2015), and which indicates the growing dependence of the population on charcoal for daily needs. The average annual charcoal expenditure per household was estimated at US\$171, or 22 percent of total household income (USAID 2015). Thus, there is clearly a huge opportunity in this sector for income and government revenue generation, with adequate regulation and management.
50. **Due to lack of regulation, the charcoal industry is highly decentralized with a well-developed but informal value chain.** Annual charcoal use in Monrovia was estimated at around 1.03 million metric tons in 2010 and valued at about US\$15.8 million; it is assumed that this is about 75 percent of the total volume used in the country and is equivalent to 1.1 million m³ of wood (USAID 2015). Thousands of Liberians, including women, are involved in the charcoal value chain, both in production and retail.

²¹ Demographic and Household Survey (DHS), Liberia Country Report, 2013.



World Bank/ Matthew Owen

51. **The charcoal value chain is marked by low efficiency.** Most charcoal is produced using traditional, inefficient kilns with low conversion rates. Findings also suggest that much charcoal is wasted as it is transported in bags, with around 5–15 percent of the weight transformed into dust; therefore, converting charcoal into briquettes could produce another 200–600 thousand bags of charcoal, reducing the need to fell more trees (EUEI 2011).
52. **Charcoal is a significant driver of forest degradation and deforestation,** as its production is estimated to affect at least an area of forest similar to that of saw milling (25 percent of total forest area) (LTS International 2016). The annual volume of charcoal used in Monrovia alone is estimated to be about five times greater than the current maximum annual timber harvest in the formal forestry sector.
53. **In some cases, charcoal is a by-product of other forest conversion activities,** thought to come from old rubber trees felled as part of the restoration of plantations neglected during the civil conflict. It is also closely linked to shifting agriculture: when land is cleared for cropping, the sale of timber for fuel provides cash for seeds and planting. The clearing of land for palm oil and other cash crops is another source of wood for charcoal production. However, these provide limited supplies of wood for charcoal manufacture and are in limited areas of the country. In most cases, fuelwood collection acts as a direct driver of deforestation and/or forest degradation, to meet demand.

54. **It is expected that most of the population will remain dependent upon wood and charcoal for their energy needs in the near future.** Currently, less than 3 percent of Monrovia's population is connected to the public electricity grid; it will likely be many years before the rural population has access to similar services. Without interventions, rates of deforestation and degradation due to fuelwood demand are predicted to remain high in the short and long term.

4.2.3. Non-Timber Forest Products: Contributions and Challenges²²

The NTFPs market has been largely ignored and remains undeveloped in Liberia. However, it appears to have the potential to serve as a source of regular income to the communities. This section provides the available information on the current role of the NTFP sector in Liberia, as well as the various challenges it faces. It also proposes actions to meet the challenges and develop the sector sustainably in the long term.

55. **The FDA²³ defines NTFPs as** “products that include non-wood forest products (which are goods of biological origin other than wood) that are derived from the forest, including services, such as rope making and gum collecting that are related to the collection and processing of these small products made of ligneous (or wood) materials, such as wooden stool, pounding mortars and pestles, masks, drums, or other handcrafted items which are not industrial timber or pulp.”
56. **NTFPs are of considerable importance for forest communities' livelihoods.** Liberia's rural population depends on NTFPs for food (fruits, plants, nuts, meat, and honey); furniture materials (such as rattan); and traditional medicines. In 2013, an ethnobotanical study looked at the availability of NTFPs in selected forest areas to investigate possible interventions for the improvement of value chains (USAID 2013). The study assessed the potential of NTFPs on several criteria: the rate of sustainable harvesting, which products would complement ongoing ventures rather than replace them, activities that can provide additional income and equally involve Liberian women, and NTFP collection activities that can take place within the rules and regulations of the Community Forest Management Bodies. The study identified five NTFPs—griffonia, grains of paradise, bush cola, bitter cola, and West African black pepper/bush pepper—that have the most promising market potential that could be developed.

²² This section relies heavily on data from the USAID 2015 report.

²³ FDA Regulation No. 111-08 Regulation on the Commercial and Sustainable Extraction of Non-Timber Forest Products (NTFPs).



World Bank/ Nalin Kishor

Key Actions:

Focus Area 2: Sustainable Forest Value Chains

Small-scale/chainsaw milling sector: Improve the generation/distribution of incomes and sustainability of the sector

- Create incentives for those dependent on the sector by creating a legal and regulatory framework formalizing the chainsaw milling sector. This approach should take into consideration the standards and processes that drive value creation and increase the quality of products.
- Learn from best practices/lessons from other countries, including through South-South knowledge exchanges.
- Provide support through Technical and Vocational Education and Training for downstream interventions to improve the quality and efficiency of existing small and medium enterprises.
- Initiate market research to identify new wood-based industries that are driven by consumer demands, with high potential to generate income and employment.

Fuelwood and charcoal sector: Formalize and clean up charcoal value chain

- Create incentives for those involved through a legal and regulatory framework to formalize this sector.
- Conduct an in-depth charcoal value chain assessment (including production, transport, intermediaries, wholesale, and retail) to understand ways of sustainably managing the sector and realizing its income-generating potential (including tax revenues for the FDA).
- Pursue efficiency improvements in the charcoal value chain, both on the production/supply and the consumption/demand side as no-regrets options. On the supply side, this could include developing woodlots of fast-growing species on degraded community lands and promoting clean and high-efficiency technologies, such as improved kilns and charcoal briquetting. On the demand side, it would consider removing value added tax/duty on the sale of clean cook stoves (for example, gasifier stove technologies that use wood chips or pellets) to promote the use of products that are also less harmful for human health

NTFPs: Develop the full potential of the NTFP sector for income and employment

- Conduct surveys to identify NTFPs with the highest income- and employment-generating potential in community forests. These would be most relevant/useful if incorporated into the socioeconomic survey and resource reconnaissance during the CFMA establishment process.
- Identify the demand and market potential for these products through a market trend analysis.
- Support communities with technical and financial assistance for collection, processing, and marketing of those NTFPs with the greatest potential.

4.3. Focus Area 3: Cross-Cutting Challenges to SFM

This section of the Note will focus on the challenges associated with three important livelihood- and income-generating activities—palm oil, large-scale mining, and ASM. These compete for forest land, put pressure on forests, and, therefore, require cross-sector coordination to ensure sustainability. This is not an exhaustive list of activities competing for forest land in Liberia. However, this is the set of activities for which there is the most reliable data. Clearly, there is a need to collect information on other sectors, particularly infrastructure (roads, dams, and irrigation) so that they can be considered in crafting a forest smart multisector strategy for the country.

4.3.1. Competing Land Uses and Impacts of Non-Forest Sectors

Shifting agriculture

57. **Food security is an important consideration for Liberia, and over 50 percent of the total land in Liberia is used for shifting cultivation (Metria and Geoville 2016).** Shifting agriculture is being practiced widely by communities on the non-designated category of forest land. Most of Liberia's rural population is dependent on these forests and their various products and ecosystem services as they also play an important role as a safety net for vulnerable and marginalized people. The forest areas near large populations and roads are especially threatened by clearance and forest degradation from agricultural uses. Unclear property rights and insecurity of tenure, as well as a lack of land-use planning, negatively contribute to this situation. The national policy is to move toward settled agriculture. At the same time, the demand for agricultural land is likely to increase significantly as the population and levels of consumption increase. Thus, the likely threat to forests from shifting agriculture will be widespread and persistent.

Forest conversion for palm oil production

58. **Palm oil accounts for the largest industrial agricultural land use and is an important driver of deforestation**, based on the maximum area that is permitted for development by concession agreements. Since 2009, four international palm oil companies have been granted concessions for palm oil production on 620,000 ha of land.²⁴ Concession areas allocated to palm oil account for approximately 5.4 percent of the total forest area, which could potentially be cleared of forests. However, promising initiatives to reduce deforestation linked to commercial crops are emerging. The recent zero net deforestation value chain commitments by large companies (for example, L’Oreal, SC Johnson, Nestle) and the supportive national policy work under the Tropical Forest Alliance 2020 (TFA 2020) which initiated the African Palm Oil Initiative²⁵ are expected to substantially reduce forest conversion for palm oil.

Large-scale mining

59. **Large-scale mining is identified as a potentially important driver of deforestation and is among the largest threats to forests and wildlife.** Large-scale mining of iron ore was a major export earner for Liberia in the past and has become so again in the post-conflict period, with the restarting of iron ore extraction in the Nimba Hills by ArcelorMittal in 2011. Mineral exploration licenses have been granted for over 4.6 million ha of land, nearly half the total land mass of the country. However, in practice, the immediate deforestation occurs only in the area actually being mined, which will typically be a smaller area than the licensed area. Thus, after making the appropriate adjustments, the total forest land likely to be cleared in the next 10–15 years due to large-scale mining, is about 338,000 ha (that is, 5.2 percent of the total forest area of the country). There is existing regulation (the Minerals and Mining Law) that mandates environmental conditions for undertaking mining activities on forested lands, including the requirement to restore the mining site after completion of the mining operations. However, while mines themselves may have a relatively small direct impact on forests, mining is linked to a long list of other activities that can cause rapid and widespread deforestation. For instance, moving the ore from mine to market may require building transportation infrastructure like rails, roads, and ports—all of which usually take place at the expense of forests. Thus, there is a need for careful planning to minimize, if not eliminate fully, the impacts on forests due to large-scale mining activities in Liberia. Use of biodiversity offsets and getting mining companies to commit to zero net-deforestation targets are ways of minimizing negative impacts on forests and have the potential to be applied in Liberia (World Bank 2016, Resources Policy 2017).

24 Sime Darby, Golden Veroleum, Equatorial Palm Oil, and Maryland Oil Palm Plantations.

25 <https://www.tfa2020.org/activities/african-palm-oil-initiative/>.

Artisanal and small-scale mining



World Bank/ Peter Aldinger

60. **ASM is an attractive livelihood option and a threat to some PAs.** ASM is also practiced extensively across Liberia, and a 2009 study estimated that 100,000 people were engaged in the activity nationally. The recent incidents related to the presence of illegal mining camps *inside* the Sapo National Park demonstrate that this could be a serious driver of deforestation and environmental pollution in PAs, as well as a source of conflict and social unrest. Thus, steps would need to be taken to regulate it, including developing relocation and alternative livelihoods approaches for those involved in this activity.
61. **The Government of Liberia has drafted a Land Rights Act,** which aims to delineate the different categories of land ownership and rights and to ensure that all communities, families, individuals, and legal entities enjoy secure tenure. When passed, this Act will serve to strengthen the provisions of the CRL and NFRL and further clarify land rights and use. The draft Land Rights Act is currently pending approval of the Legislature.²⁶

²⁶ Changes were made to the submitted 2016 version but their status is unclear. Unconfirmed changes to the Act could potentially lead to the removal of protected lands from their customary land owners. It is important that the Act ensures that land previously designated by the FDA as proposed PAs retains its designation.

4.3.2. Contribution to GHG Mitigation


Forestry is crucial to Liberia's low-carbon agenda. This section looks at how Liberia's global commitments relate to forestry.

62. **It is estimated that in 2011, 89.8 percent of the GHG emissions in Liberia came from the land use, land-use change, and forestry sector (Republic of Liberia 2015b).** Forests are an important carbon pool. Forestry features prominently in Liberia's NDCs under the Paris Climate Agreement, realizing its importance as a net carbon sink. Identified mitigation options which have implications for the forestry sector include (a) reducing greenhouse gas emissions by at least 10 percent by 2030, (b) improving energy efficiency by at least 20 percent by 2030, (c) raising the share of renewable energy to at least 30 percent of electricity production and 10 percent of overall energy consumption by 2030, and (d) replacing cooking stoves of low thermal efficiency (5–10 percent) with those with higher-efficiency (40 percent). Identified adaptation options for the forestry sector include (a) increasing awareness and participation of local dwellers in forest conservation, (b) protecting biodiversity rich zones, and (c) and increasing forested lands through reforestation of degraded lands.

4.3.3. Institutions and Governance


The FDA is a pivotal agency with a vast mandate, yet it is starved of resources, preventing it from discharging its responsibilities effectively. Serious deficiencies arise in practically every area of the FDA's operations, including strategic planning, financial management, human resource management, asset management, procurement processes, information technology, monitoring and evaluation, and so on. Compounding this is the FDA's woefully inadequate operational budget. This represents a huge obstacle to ensuring SFM in Liberia and must be addressed as a priority.

63. **The FDA is a large organization with a relatively complex structure.** The FDA is headed by a Managing Director and two Deputy Managing Directors (Operations and Administration and Finance), overseen by a Board of Directors. The FDA is organized into five major departments—Legality Verification, Commercial, Conservation, Community Forestry, and Research and Development—to be able to effectively discharge its mandate. Each department is led by a Technical Manager, who reports to the Deputy Managing Director of Operations. The total professional staff strength of the FDA is 348 (excluding 156 staff in administration), who are distributed between Monrovia and four regional offices (FDA 2015).

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64. **A Strategic Planning Unit reports directly to the Managing Director.** The Strategic Planning Unit is mandated to develop and operationalize the FDA's strategic vision, by formulating a series of Strategic Five-Year Action Plans. The last Strategic Plan ended in 2012; a new plan is being developed.
65. **The discussion in the previous sections of this CFN illustrates the critical role of the FDA in sustainably managing Liberia's forests.** For the FDA to effectively fulfill its mandate, the five departments need to work in close collaboration. However, in practice, the departments do not coordinate effectively. A key constraint is a lack of shared vision and strategic planning. There are no reliable channels/platforms through which information can be routinely shared across the departments. The number of staff allocated to the departments is disproportionate to the agency's responsibilities. In particular, the Community Forestry Department has a very small staff, which is inadequate to meet the burgeoning demands of the increase in the number of applications for the AFC and the impending need for community forest management planning.
66. **The four regional offices of FDA suffer from inadequate facilities** (no power, lack of office space, and so on) and lack means of mobility (limited number of vehicles and difficulties paying for gasoline to undertake field operations). Consequently, their capacity to monitor, reach remote locations, and interact with forest-dependent communities is severely compromised (USAID 2013).
67. **The FDA has no systematic staff development program.** There is no system of staff performance reviews and there are no performance-based incentives. Although the FDA retired a large number of staff in 2017, many of the remaining staff who have reached retirement age may not be performing to the full capacity, yet there are insufficient funds to provide suitable retirement packages. Additionally, the Forestry Training Institute and the Forestry School of the University of Liberia, which provide the pool of new entrants for FDA, are severely constrained by, among other things, inadequate resources, outdated curricula, and weak faculty, and, therefore, produce graduates that may not have the required skills for the modern forest sector management.

68. **The FDA's operational budget has been mostly inadequate relative to the activities that it is required to perform.** The FDA currently does not receive a fixed portion of the revenues generated by commercial forestry nor does it receive adequate annual budgetary allocation to develop an effective investment plan for the sector. There is no system of reinvesting in the sector to ensure its sustenance and sustainability. The revenues generated from timber and other forest products are collected through a number of mechanisms. However, all receipts of fees are deposited in the Central Bank of Liberia, directly contributing to the consolidated fund, with no funding immediately available for reinvestment in the sector. The FDA's budget is determined by the legislature on an annual basis and is disbursed quarterly. This is problematic, as the FDA cannot do any strategic or multiyear planning for its activities. Additionally, the actual disbursements to the FDA are rarely made on time and quarterly disbursements have often been arbitrarily cut back.²⁷
69. **The issuance of green bonds is an emerging opportunity for sector financing, especially for the private sector to engage and invest in climate change mitigation and adaptation activities, including in the forestry sector.** Within this market, forests bonds represent an innovative financial instrument, which could be used to raise private capital from investors who are committed to finance forest preservation. Since 2011, the World Bank issued green bonds in support of the forestry sector for close to US\$620 million in Tunisia, Mexico, the Russian Federation, and China (World Bank 2016b). In 2016, the International Finance Corporation (IFC) (part of the World Bank Group) issued a forests bond in Eastern Kenya for US\$152 million designed to protect forests and use the revenues to finance community-based needs, including training, employment, and small works infrastructure (IFC 2016). These bonds are attractive financial instruments for investors because they simultaneously achieve financial returns and result in positive environmental benefits. In Liberia, the potential of a forests bond could be explored. Such a bond, could, for example, raise private capital to advance the efforts of the Government to meet the objectives of the National REDD+ Strategy and finance its activities.
70. **Governance challenges permeate all the other main challenges identified in this Note.** For example, enforcing contractual obligations for the FMCs and the TSCs (including those related to payment of all taxes and fees by the logging companies and implementing Social Agreements) requires strong oversight capability in the FDA. Strong inter-sectoral coordination is needed to manage the pressures on forests from the agriculture, mining, and infrastructure sectors. Tackling the challenges of bringing chainsaw milling and charcoal manufacture into the formal sector will need, among other things, close attention to the development of equitable benefit sharing arrangements and enforcement of regulations. Managing PAs more effectively will require strengthening the law enforcement capabilities of the FDA. Improved land governance is required to ensure tenure security for landholders

²⁷ Personal conversations with the Managing Director and the Comptroller at the FDA.



and forest users to avoid deforestation and promote sustainable use of forest resources. High-quality governance is the bedrock for the sustainable management of the forestry sector and should be prioritized.

71. **The legal framework and policy environment for Liberia's forestry sector is sound.** The legal and policy framework comprises the NFRL and the CRL, including its implementing regulation (Regulation to the CRL of 2009 with Respect to Forest Lands, as Amended (2017)), which recognize the ownership rights of communities over forest resources on community forestlands. The Land Rights Policy and draft Land Rights Act recognize four categories of land ownership—public, government, customary, and private—with customary lands sharing the status of private lands. The legal framework for conservation in the forest sector is established in numerous pieces of legislation, including the NFRL. It also includes the Protected Forest Areas Network Law (2003), built on the commitments in the Environmental Protection and Management Law (2002), and, more recently, the National Wildlife Conservation and Protected Area Management Law.
72. **Other laws and agreements serve to strengthen the overall governance of the sector.** The Liberia Extractive Industries Transparency Initiative was established in 2009 to ensure that the commercial exploitation of the country's mineral and other natural resources was done in a transparent and accountable manner. The VPA established a legality assurance system, which includes requirements for traceability and verification as part of the Forest Law Enforcement, Governance, and Trade program.
73. **The FDA has developed protocols and procedures on public access to information.** When fully operational, these protocols will improve the FDA's credibility and strengthen the level of transparency, accountability, and good governance for the sector. Patterned after the Freedom of Information Act of 2010, the FDA finalized protocols for public disclosure in 2016.²⁸ The protocols provide user-friendly step-by-step descriptions of internal and external channels for obtaining information from the FDA.
74. **The forestry sector has not escaped Liberia's endemic corruption.** Corruption affects the award and management of forest concessions in Liberia, with unscrupulous logging companies exploiting local populations and the government alike and resulting, among others, in high tax arrears.²⁹ Strengthening the capacity of the FDA to enforce laws and regulations could improve oversight and accountability of logging companies. In addition, creating strong governance structures and providing technical assistance at the local level could empower communities to minimize, if not fully stop, the irregularities and exploitation by logging concessions, operating in community owned forests.

²⁸ FDA: Freedom of Information Protocols and Procedures, September 2016.

²⁹ Management of commercial concessions, including its governance issues, has been reviewed by the independent bodies commissioned by the Government. The LFSP is also supporting review of concessions, the recommendations of which could dovetail into the CFN over time.

75. **The World Bank supported an in-depth review of the forest sector reform process in Liberia in 2012.** The study concluded that, “...the effective forest sector stakeholder participation needed to improve governance is impeded by lack of functional spaces and formal mechanisms for their engagement, and the lack of transparency, resulting from weak transparency and information sharing systems” (World Bank 2012a).
76. **A 2013 assessment of forest governance highlighted the lack of capacity in the FDA and other relevant government agencies for coordination and policy implementation (PROFOR 2012).** The study found that while the legal, policy, and regulatory frameworks for the country are mostly sound, implementation and enforcement of laws and regulations is generally weak. Additional recommendations for improvement included resolving land tenure disputes, providing access to information, improving stakeholder participation, and developing benefit-sharing arrangements with forest communities.
77. **The LFSP addresses some of the issues identified in the previous sector reviews.** The LFSP places a strong emphasis, aligned with the above challenges, on institutional and capacity building for the FDA through:
- A functional review of the FDA’s Strategic Planning Unit
 - A review of the mandate of the FDA and the drafting of a new Strategic Five-Year Plan (including identifying ways to improve interdepartmental coordination and monitoring progress through performance indicators)
 - A skills-gap analysis and associated staff training needs for skills enhancement
 - Implementing a Field-based Leadership Development Intervention and Rapid Results Agreements to improve the leadership, motivation, and efficiency of task delivery in the FDA
 - Improving opportunities for the students at the Forestry Training Institute, University of Liberia, and so on to produce well-trained graduates
 - Sponsoring staff for study tours and short-duration assignments to improve their knowledge base.
78. These initiatives would need to be supported beyond the life of the LFSP to ensure lasting changes in the sector.

Key Actions:

Focus Area 3. Cross-Cutting Challenges to Sustainable Forest Management

Competing land uses and impact of non-forest sectors

- Implement an integrated landscape approach to determine the optimum allocation of land among competing uses (for example, smallholder agriculture, large plantations, mining, conservation, and so on).
- Support the country's national policy to develop high-productivity, settled agriculture for food crops.
- Build on the actions undertaken in the LFSP to sustain and make more effective the operation of intersectoral coordination platforms at the center, as well as in the four regions of the country where the FDA has its regional offices.
- Support Liberia's commitments under the African Palm Oil Initiative 2020 and commit more companies practicing commercial agriculture to sign on to zero-deforestation agreements and implement them in their operations.
- Encourage mining companies to commit to zero net deforestation targets and allow for biodiversity offsets to manage unavoidable tradeoffs, in a forest-friendly way.
- Create incentives through the development of legal and regulatory frameworks to bring ASMs into the formal sector and assist them to develop alternative livelihood schemes.

Greenhouse gas mitigation: Utilize the overlap between Liberian and global interests to manage the forests sustainably

- Support actions to halt deforestation and forest degradation, proposed in the National REDD+ Strategy.³⁰
- Support potential efforts for PES, including payment for results for mitigation by REDD+.

Strengthen the capacity and effectiveness of the FDA and improve the quality of forest governance

³⁰ Pending final approval before it is made public on the FDA website.

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- Key proposed follow-up actions (complementary to those being supported through the LFSP) include the following:
 - Foster a deepening of the reforms within the FDA by supporting implementation of recommendations emerging from analytical work (mentioned in paragraph 77 above) and scale up rapid results agreements.
 - Make a cogent case (based on the FDA's Strategic Plan) to the Ministry of Finance and Development Planning to increase the operational budget of the FDA to a realistic level. Consider a multiyear allocation and ensure that the funds are made available in a timely fashion.
 - Develop a staff retirement plan and secure funding for retirement packages. In parallel, develop a staff recruitment plan.
- Strengthen the monitoring and law enforcement capabilities of the FDA (through increased surveillance capacity), including those required to tackle illegal logging.
- Promote devolvement of responsibility for forest management to local levels and to communities and improve transparency through the greater involvement of civil society organizations (CSOs) and nongovernmental organizations (NGOs) in decision making.
- Support the Liberia Land Authority to promote responsible land governance and land-use planning to improve tenure security of land and forest resources.
- Establish a unit within the FDA dedicated to responding to public requests for information promptly and with clarity.
- Develop legislative and regulatory frameworks and corresponding operational guidelines to bring chainsaw milling, charcoal manufacture, and artisanal mining activities into the formal sector.
- Revise the action plan prepared as part of the forest governance diagnostic exercise, taking into consideration the support provided through various initiatives and mainstream into the FDA reporting systems to the Government and external partners.

5. World Bank and Other Development Partners' Engagement in Liberia's Forest Sector

Current ,World Bank and partner engagement in forests

79. **The World Bank has been actively engaged in supporting Liberia's REDD+ agenda for over a decade**, in the post-conflict era after the peace agreement was signed in 2003. During these years, the World Bank has provided technical and policy assistance through the Liberia Forestry Initiative, Global Environmental Facility-funded projects, FCPF-funded REDD+ Readiness support, and analytical work. The World Bank has supported the Government of Liberia's longstanding commitment to reform the forest sector, balancing and integrating community, commercial, conservation, and carbon uses of the forests. REDD+ has been a significant element of the World Bank's engagement on forestry. With support from the FCPF facility, Liberia has advanced significantly in enhancing the national policy dialogue and legal framework that will enable it to manage forests alongside communities and to leverage results-based payments. As part of the REDD+ Readiness preparation support, Liberia developed its National REDD+ Strategy, which sets the country's path to participate in REDD+ as a large-scale incentives system. Toward this end, the Government of Liberia and the Government of Norway signed a Letter of Intent in September 2014 where Norway committed to support implementation of Liberia's National REDD+ Strategy.
80. **The World Bank is currently (and for the first time) collaborating with the Republic of Liberia on a landscape-level forest investment project.** The LFSP (US\$37.5 million, currently under implementation) is a result of the partnership with Norway. The project is aimed at improved management of, and increased benefit sharing in, targeted forest landscapes; the LFSP is implemented by the FDA, jointly with the Environmental Protection Agency, Liberia Institute of Statistics and Geo-Information Services, Ministry of Agriculture, Ministry of Lands, Mines and Energy, and Liberia Land Authority. Strong interministerial and interagency collaboration is key to successful project implementation, and the project is supporting the development of structures to facilitate this collaboration.

Ongoing World Bank engagement related to forestry sector

81. The World Bank engagement spans a number of sectors in Liberia, many of which have direct links to the forestry sector, namely public management, land management, agriculture, transport management, water supply, renewable energy, and social engagement. In addition, the World Bank provides general budget support that is linked to overall reforms in key sectors. Support to the land management sector, for example, under the

Liberia Land Administration Project, includes promulgation of land and land-use laws and regulations, mapping, and land-use planning—all of which would be relevant for forest sector management. Support to agricultural intensification leading to improved yields of subsistence and cash crops (such as under the ongoing Smallholder Tree Crops Revitalization Support Project and the recently closed West African Agricultural Productivity Project) as well as those contributing to commercialization of smallholder farmers through productive market linkages provide improved livelihoods and incomes to rural populations, reducing the need for expansion of land under agricultural production, which often comes at the expense of forests. Interventions that foster use of renewable energy sources (such as those under the Liberia Renewable Energy Project) also reduce pressures on forests, which are currently the main source of fuel for households. Refer to annex 2 for a complete list of planned and ongoing relevant World Bank projects.

Current development partners engagement in forests and forest relevant sectors

82. **Other development partners are actively supporting the Government of Liberia and the FDA to strengthen community, commercial, and conservation forest management.** Key among these are the support through the Forest Incomes for Environmental Sustainability Project by the United States Agency for International Development (USAID) to strengthen selected forest and agricultural value chains, establish legal and management frameworks for forest enterprises, and enhance knowledge and skills for forest enterprises and landscape management. The EU is also providing important support to develop business plans and alternative income-generating activities under the CFMAs while contributing to forest protection and reducing bushmeat hunting/trading of protected species. Other partners, such as Conservation International, Flora and Fauna International, Society for the Conservation of Nature of Liberia, and Wild Chimpanzee Foundation have been supporting the PA management efforts and building institutional capacity support to the FDA and other relevant agencies. More recently, Conservation International is engaging to improve conservation and sustainable use of Liberia's coastal natural capital by mainstreaming the value of nature into Liberia's development trajectory. The *Initiatief Duurzame Handel* (Sustainable Trade Initiative) supports the 'Green Growth: Achieving Forest Conservation in Commercially Productive Landscapes in Indonesia, Liberia, and Brazil Project' that aims to create, through the high carbon stock approach, deforestation-free supply chains at scale by forging committed public-private partnerships for jurisdictional and landscape approaches. The project targets three landscapes with high conservation value.
83. USAID financed the land governance support activity which supports the strengthening of land governance, human and institutional capacity, development of a customary land rights recognition model based on the Land Rights Policy, and stakeholder engagement in land governance. This has been done through communications and outreach activities, capacity building, and support for policy.

This Note will be used to explore additional opportunities of engagement.

Annex 1.

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Annex 2.

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World Bank Ongoing and Planned Projects Relevant to Forestry Sector

Project ID	Project	Lead Global Practice/ Cross-Cutting Solutions Areas	Team Leaders	Approval FY/Planned Approval Date	Closing FY	Lending Instrument	Commitment Amount (US\$, millions)	Closing Date
Portfolio (under implementation)								
P113273	LR Smallholder Tree Crop Revitalization Support Project	Agriculture	Abimbola Adubi	2012	2019	IPF	15.00	11/30/2018
P125574	Liberia Road Asset Management Project (LIBRAMP)	Transport and ICT	Kulwinder Singh Rao	2011	2024	IPF	157.70	06/30/2024
P143064	Liberia: Public Sector Modernization Project	Governance	Smile Kwawukume	2014	2020	IPF	2.00	09/30/2019
P146827	Liberia Youth Opportunities Project	Social Protection and Labor	Laura R. Ralston	2016	2021	IPF	10.00	12/31/2020
P149683	Liberia Renewable Energy Access Project	Energy and Extractives	Joseph Tawiah Quayson, Zubair K.M. Sadeque	2016	2021	IPF	2.00	06/30/2021

Project ID	Project	Lead Global Practice/ Cross-Cutting Solutions Areas	Team Leaders	Approval FY/Planned Approval Date	Closing FY	Lending Instrument	Commitment Amount (US\$, millions)	Closing Date
P155947	Liberia Urban Water Supply Project	Water	Deo-Marcel Niyungeko, Maximilian Leo Hirn	2016	2021	IPF	10.00	06/30/2021
P162893	Liberia Land Administration Project	Social, Urban, Rural and Resilience Global Practice	Linus Benedikt Pott, Victoria Stanley	2018	2023	IPF	7.00	10/31/2022
Pipeline (under preparation)								
P149279	Southeastern Corridor Road Asset Management Project	Transport and ICT	A.K. Farhad Ahmed, Kulwinder Singh Rao, Satheesh Kumar Sundararajan	01/18/2018	—	IPF	69.00	—
P160945	Smallholder Agriculture Transformation and Agribusiness Revitalization Project (STAR-P)	Agriculture	Abimbola Adubi, Adesimi Freeman	07/12/2018	—	IPF	30.00	—

Annex 3:

Recent and Ongoing Bank Support to Liberia Forest Sector - Key Outputs

Analytical work

- Liberia Forest Sector Diagnostics: Results of a Diagnostic on Advances and Learning from Liberia's Six Years of Experience in Forestry Sector Reform. The World Bank, December 2012.
- Liberia: Assessment of key governance issues for REDD+ implementation through application of the PROFOR forest governance tool, FCPF & PROFOR, March 2013.
- Windows of Opportunity for Liberia's Forestry Sector, Results of a Poverty and Social Impact Analysis. The World Bank, 2012.
- Institutional Assessment, Proposed LFSP, Daniel R. Gross, 2016.

REDD+ Readiness Preparation Support

Original grant (key outputs delivered in 2016)

- National REDD+ Strategy for Liberia
- Liberia land cover and forest mapping
- Liberia's REDD+ reference level, 2016 (preliminary)
- Strategic Environmental and Social Assessment for Liberia REDD+, including six cases representing the range of environmental and social issues likely to arise from REDD+ Strategy implementation
- Environmental and Social Management Framework for Liberia REDD+
- Capacity building for the FDA and EPA on REDD+, safeguards, and forest cover monitoring

Additional Funding grant (outputs expected by January 2019)

- Updated land cover and forest mapping
- National forest inventory
- Satellite land monitoring system
- National feedback and grievance redress mechanism for REDD+
- Safeguards information system
- Updated Forest Atlas, including management dashboards for the FDA
- Continued capacity building on REDD+ and forest cover monitoring

Liberia Forest Sector Project (outputs expected by June 2020 (the project closing date))

Component 1. Strengthened Regulatory and Institutional Arrangements for Implementation of REDD+

Subcomponent 1.1. Strengthened Capacity in Institutions (Public, Private, CSOs) for Improved Management of Forest Landscapes

- ‘State of Environment Report for Liberia’ produced
- Support for multistakeholder platforms (National Climate Change Steering Committee, multiagency meetings, Community Forest Working Group, Community Forest Development Committee, and so on)
- Technical expertise and operational resources provided to the FDA to review Community Forest Management Plans
- Operational protocols and procedures developed for land boundary demarcation, community forest management planning, and agroforestry enterprise development
- Support to the Land Commission (or the new Land Authority) to enable boundary demarcation and land-use planning
- Support the Ministry of Agriculture to enable agroforestry and livelihood development activities in target landscape communities

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- Technical capacity built in the LISGIS for monitoring of forest cover and land-use changes
- Three FDA regional offices constructed in Bomi, Lofa, and Grand Bassa, regional office renovated in Zwedru
- Four regional interagency teams formulated and deployed for project specific tasks
- Delivery service partners supported (including local NGOs, CSOs, and so on) through training on land-use and forest management planning, participatory boundary demarcation, and so on
- Forestry Training Institute supported in curriculum development for the SFM
- Core and specialized trainings conducted for the FDA/Environmental Protection Agency staff
- FDA/EPA staff provided with regional work placement opportunities to enhance staff skills in PA and community forest management
- Three regional study tours conducted with a focus on PAs management and community forestry

Subcomponent 1.2. Legal Reform

- Procedures for future award of concessions reviewed and established
- Technical review mechanism for review and approval of logging concessions established

Component 2. Strengthened Management of Targeted Forest Landscapes

Subcomponent 2.1. Improved Land-Use Planning

- National land-use map produced
- Road map for national land-use planning produced

Subcomponent 2.2. Strengthened Management of Protected Areas of Targeted Forest Landscape

- Lake Piso Multiple-Use Reserve boundary signposted

- Sapo National Park boundary cleared
- Wonegizi Nature Reserve boundary marked with temporary markings
- Gola Forest National Park headquarters, staff accommodation (3 units), and outposts (2 units) constructed
- Wonegizi Forest National Park headquarters, staff accommodation (3 units), and outposts (2 units) constructed
- Management plans for Sapo National Park and Wonegizi Nature Reserve produced
- Management plan summaries for Sapo, Gola, Grebo, Wonegizi, and Lake Piso produced
- FDA staff working in PAs trained in sustainable PA management
- Pre-gazettement activities conducted for Foya and Kpo Mountains, Grand Kru-River Gee, Gbi, and Senkwehn PPAs
- Support for design of Conservation Trust Fund for Liberia
- Study on tourism and ecotourism potential in targeted landscapes produced
- Junior forest officers trained (on-boarding training)

Subcomponent 2.3. Community Forestry in Targeted Forest Landscapes

- Communities supported to conduct a Socioeconomic Profile Reconnaissance Survey
- Community action plans produced
- Community land-use plans prepared in a participatory manner
- Community training exchanges organized
- Technical service providers trained

Subcomponent 2.4. Strengthened Capacity for Sustainable Agriculture

- Farmers supported on tree crops establishment and conservation agriculture

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- Farmer organizations provided with post-harvest equipment

Component 3. Forest Monitoring Information System

Subcomponent 3.1. MRV and Reference-Level Development

- A forest reference emission level submitted to the United Nations Framework Convention on Climate Change (UNFCCC)
- Monitoring, reporting, and verification system institutionalized
- Four regional working groups on MRV established
- Activity data on forest degradation assessed and estimated
- Historical GHG inventories for land use, land use change and forest /agriculture, forestry and other land use assessed and streamlined
- Independent verification of emission reductions conducted

Subcomponent 3.2. Development of an Information System for Safeguards

- An information system for safeguards set up and tested
- National guidelines on community consultation in forestry projects developed

Annex 4. Liberia Forest and Land Cover Map, 2015 (Metria and Geoville 2016)

