



Draft for discussion

Liberia forest sector strategy 2025-2029

Sunday, October 6 2025

Contents

1. Introduction.....	1
2. Overview of Liberia's forest sector.....	3
2.1 History of the forest sector.....	3
2.2 Forest cover and composition.....	3
2.3 Concerns as regards deforestation or forest degradation.....	4
2.4 Forest ownership, tenure and management.....	5
2.5 Forest production.....	7
2.6 Forest-based industries and services.....	7
2.7 Trade in forest products.....	8
3. Liberia's forest management targets.....	9
4. Forest governance: institutional strengthening.....	10
4.1 General considerations.....	10
4.2 Constraints and challenges.....	10
4.3 Strategic direction and targets.....	13
4.4 Action plan.....	13
4.5 Finance options.....	13
5. Forest production and forest industry.....	14
5.1 General considerations.....	14
5.2 Constraints and challenges in forest management.....	14
5.2.1 Challenges faced by FMCs.....	14
5.2.2 Challenges faced by CFMAs.....	15
5.2.3 Challenges in NTFP production.....	16
5.2.4 Constraints in forest plantation development.....	16
5.2.5 Challenges in the management of unlicensed forests.....	16
5.3 Challenges in value chain development linked to production forests.....	17
5.3.1 Constraints faced by the wood processing industry.....	17
5.3.2 Constraints faced by the NTFP sector.....	17
5.3.3 Constraints as regards payment for environmental services.....	18
5.4 Strategic direction and targets.....	18
5.5 Action plan.....	18
5.6 Finance options.....	18
6. Strengthening the management of protected forests.....	19
6.1 General considerations.....	19

6.2	Constraints and challenges.....	19
6.3	Strategic direction and targets.....	20
6.4	Action plan.....	20
6.5	Finance options.....	20
7.	Mitigation of outside pressures on forests.....	21
7.1	General considerations.....	21
7.2	Constraints and challenges.....	21
7.3	Strategic direction and targets.....	21
7.4	Action plan.....	21
7.5	Finance options.....	21
	References.....	22

Editorial notes:

- The strategy is not modelled according to the 4Cs, but all 4Cs will appear in the strategy: actions on Commerce will be covered under Forest Production and forest industry; actions on Communities will be covered under Forest Production, under Protected Area Management; and under Bufferzone Management; Carbon actions will be under the different sections on Finance; Conservation actions will be under Protected Area Management.
- text between [..] refers to literature references, to be replaced by a numbering of references.
- Text in red is suggested text
- Text in grey shade is text yet to be edited
- Actions identified in this strategy document will be copied into a separate 5-year Action Plan.

1. Introduction

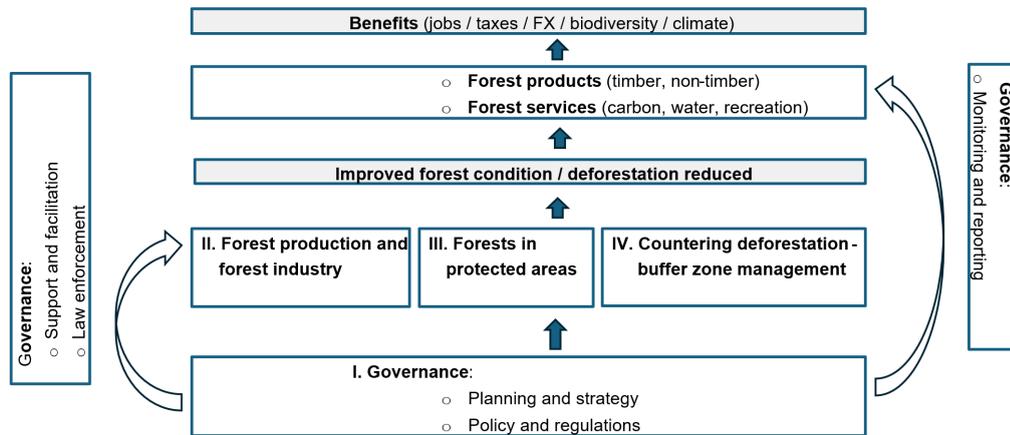
Liberia's Forest Development Authority (FDA) developed this forest sector strategy for the period 2025-2029 as a replacement of the previous National Forestry Policy and Implementation Strategy of 2006, which had a ten-year implementation period with an expected review in 2016. Since then, new realities have emerged especially as concerns climate change and land tenure issues addressed by the Land Rights Act that require new policy and action. Therefore, a new five-year strategy and action plan was required, consistent with the Government's development agenda (ARREST) for the next five years, as well as Liberia's Nationally Determined Contributions to the Paris Agreement. [text is paraphrased from FDA 2024 A Road Map for Liberia Forest Sector Rejuvenation]

Central theme in this strategy document is the rejuvenation of Liberia's forest sector. An objective that FDA can not achieve on itself; therefore, this strategy document is aimed at assisting the dialogue between FDA and key development partners on the strategic approach towards forest protection, restoration and sustainable use, and how this agenda can be supported by other governmental agencies, private sector, civil society and development agencies. [text is paraphrased from FDA 2024 A Road Map for Liberia Forest Sector Rejuvenation]

This strategy document builds on provisional planning documents prepared by FDA in March 2024, specifically "A Road Map for Liberia Forest Sector Rejuvenation, an anticipation of Forest Priorities under Liberia's ARREST Agenda" of March 2024; including a related "Policy Brief" of March 2024; a note on "FDA Internal Factors Analysis" (**.. add date ...**) and the note on "FDA Strategic Planning Process". This strategy document is accompanied by an Action Plan for the period 2025-2029.

Where in previous planning documents the 4C approach was followed, representing Commerce, Community, Conservation and Carbon, the March 2024 documents identified new 'pillars' i.e. Institutional Strengthening; Sustainable Forestry Resources Management; Forest Product Enterprise (Industry) Development; and Sustainable Financing and Governance. This document is guided by this identification of 'pillars', with slight adaptations, having sections on I. Governance; II Forest Production and Forest Industry; III Protected Forests; and IV Buffer-zone Management for countering external pressures on the forest estate; completed with V finance and Investment. As visualized in the diagram below.

Forest sector diagram



- Conclude with a summary of the process of preparation (by whom, with whom, when)

2. Overview of Liberia's forest sector

2.1 History of the forest sector

Suggestion: write a section of 10 to 20 lines to describe the history of Liberia's forest sector: e.g. what did the sector look like before the civil war; what happened during the civil war; and what happened in the years after the civil war.

2.2 Forest cover and composition

Liberia's definition of forest is an area of land that has a canopy cover of minimum 30 percent; contains trees with a minimum of five meters height or the capacity to reach it; covers a minimum of 1 hectare of land. [4Cs] Under this definition, Liberia contains about 4.3 million ha of forest. [FDA 2024] With a land area of 9.6 million ha, this corresponds to 45% forest cover – implying that forests are a major land use category in Liberia.

Liberia's forest can be classified as follows: [4Cs] [WB 2018 and CI 2017 in F4F 2021]

- evergreen lowland forests in the southeast and semi-deciduous forests in the northwest.
- mangrove forests along river estuaries along Liberia's coast line (around 11,000 ha) [FRA 2020].
- northern savannah: patches of open forest in the far north-western parts of the country and a small portion in the north-east, severely degraded due to continuous burning and clearing for agricultural purposes.
- Forest plantations (approximately 27,000 ha) [FRA 2020]

Besides, Liberia also has rubber plantations (90,000 ha) established both by companies or smallholders; these are considered as forest under FAO definition but not under Liberia's own definition of forest and therefore will not be taken into consideration in this document. [FAOSTAT 2022]

Data of forest cover and forest cover change for Liberia are ambiguous. FDA's (2024) specification of 4.3 million ha of forests dates from 2004, as quoted in the 2007 National Forest Management Strategy – of which 3.4 million ha as dense or open dense forest with 1 million ha degraded forest due to agriculture. Similarly, FDA (2024) reports an annual deforestation rate of 0.46 % or about 20,000 ha; FRA 2020 reports an annual loss of 30,000 ha; EU assumes the annual loss to be 2 % or around 85,000 ha annually.

All this hints at the need for strengthening FDA capacity for forest cover monitoring; secondly, a sharper definition of deforestation; and third, a better interpretation of data:

1. Tree cover versus forest cover: e.g. the National Forest Inventory conducted in 2018 and 2019 gives a higher forest cover estimation of 6.6 million ha instead of 4.3 million ha by inclusion of areas under shifting cultivation in their fallow phase but it may be questioned whether these lands still function as forest e.g. wildlife habitat or natural tree growth. In sum, a change in tree cover is not necessarily also a change in forest cover;
2. Forest loss on forest land versus forest loss on other lands. The core issue as regards deforestation is that no forests should be cleared on lands allocated to forest production or forest conservation. In its 2007 National Forest Management Strategy, Liberia set a target of 4,3 million ha to be maintained as permanent forest lands and another 1.3 million ha to non-permanent forest land with a mixture of agriculture and forest area. So, a key task in forest cover monitoring will be to assess how much of

the 4.3 million permanent forest land still has forest cover; and how much forest cover remains outside these areas.

Deforestation is mostly preceded by forest degrading actions which enable access to the forests and create openings that enable clearing of remaining forest cover.

Causes of forest degradation include: [AD 2023]:

- Unscrutinized logging [MIP]
- Uncontrolled chainsaw logging [MIP]
- Charcoal production [MIP]
- Wildfires [AD 2023]
- Unregulated hunting [AD 2023] or harvesting of plants or animals for bushmeat or pet trade [4Cs] [MIP]
- Pollution of creeks and rivers through mining [4Cs]
- Expansion of human settlement
- Climate change: increased temperatures and prolonged heat waves. [AD 2023]

Causes of deforestation include:

- Small-scale subsistence agriculture (slash-and-burn, for rice, cassava)
- Small-scale cash crop production (cocoa, coffee, rubber) [F4F 2021]
- Large-scale commercial agriculture (oil palm, rubber)
- Mining (artisanal, industrial)

2.3 Concerns as regards deforestation or forest degradation

With 45% forest cover, forests are a major land use category in Liberia. While seeking economic growth, the country will need to balance the interests of economy and nature. Currently, forests are mostly replaced by low-input low-output agriculture, whereas deforestation and degradation of forests create the following economic, social and environmental concerns:

- Loss of income from wood or non-timber forest production, or from tourism and recreation
- Loss of means of subsistence for forest communities
- Loss of indigenous culture (indigenous forest-dwelling groups)
- Loss of environmental services: carbon sequestration, climate regulation, water retention, soil stabilization, coastal protection and fishery nurseries (mangroves) and other such services to people and economy, both domestic and regional
- Loss of biodiversity: Biologically, Liberia is exceptionally diverse. It has high rates of endemism of many species that are nearly extinct outside the country. The remaining rainforests in Liberia includes a significant 43% of the remaining Upper Guinea rainforest ecosystem. Liberia's forests still host the last viable populations of some endangered species like the pygmy hippopotamus, western chimpanzee or forest elephant amongst others, [AD 2023] while the mangrove forests in the river estuaries provide a habitat for manatees. Tropical forests cannot survive without its associated wildlife, so curbing illegal extraction of wildlife is needed to ensure the future of these forests and their functions. [MIP] [F4F 2021] [4C] [FDA]

2.4 Forest ownership, tenure and management

Ownership of forest land

Land ownership in Liberia is classified as follows: [2013 Land Rights Policy and 2018 Land Rights Act]

- Government land; it includes protected areas and proposed protected areas
- Private land (owned by private persons)
- Customary land – owned by a community; it includes communal forest lands, defined as areas set aside by law for use by communities
- Public land – which is none of the former

No specification can be given here how much of the 4.3 million ha of permanent forest lands fall within any of the land ownership categories as listed. Yet such data are important in light of tenure rights and management of forest lands.

Forest tenure and management

- Ownership over forest resources: The National Forest Reform Law of 2006 states that all forest resources in Liberia are held in trust by the Republic for the benefit of the people – except forest resources located in communal forests, or forest resources that have been developed on private or deeded land through artificial regeneration.
- Use of forest resources: The Land Rights Act of 2018 states that a community may use its forest lands and harvest timber and non-timber products in keeping with the Community Rights Law of 2009 and the National Forest Reform Law of 2006. Community forests have a non-commercial purpose in principle, but commercial use can be allowed by the FDA in form of a community forest management agreement – see below.

The National Forest Reform Law (2006), the National Forest Management Strategy (2007) and the Community Rights Law (2009) established the following forest management models for Liberia:

- *Forest Management Contracts* (FMC) to be issued to logging companies for an area between 50,000 ha and up to 200,000 ha, with a duration of 25 years. As of 2016, there were seven FMCs with a combined area of 1.0 million ha [NUCFDC] yet none of these is operational anymore.

A Forest Management Contract is granted for a 25-year period, with the concessionaire being authorized to cut 1/25th of the area each year and only removing stems over a certain diameter depending on the species. FMC operations must respect such regulations as the Liberian Code of Forest Harvesting Practice (2009); the timber tracing system (LiberTrace); while taxes and fees include the bid fee (once), a land rental fee (annual; per ha), a stumpage fee, and an export fee. The forest law (2006) states that the FDA must make sure that those involved in commercial forestry activities post performance bonds to secure payment of fees, redress of injuries, compensation of employees, reclamation of land, and return of property.

Affected communities (those within 3 km distance of the FMCs) are to share in the FMC's benefits, firstly via social agreements that define communities' benefits and access rights, secondly, 30 percent of all land rental fees collected is distributed to

affected communities through the National Community Benefit Sharing Trust mechanism. [4C]

FMC holders are required by forest law (2006) to have business plans that include a strategy for enhancing domestic processing.

Previously, the national annual allowable cut was set to 750,000-800,000 cubic meters per annum [Emerton 2011 in: 4C]

None of the FMCs has FSC or PEFC certification. Before, one company had a FSC Controlled Wood certificate that was terminated in 2014. [search.fsc.org/en/certificate]

- *Community Forest Management Agreements*: in Liberia, a community forest is to be used for the sustainable use of forest products by local communities for non-commercial purposes. However, these forests can be licensed for commercial purposes once communities apply for a community forest management agreement (CFMA) with the FDA, thus becoming an 'authorized forest community'. CFMAs can be issued to authorized forest communities (AFC) for a duration of 15 years for the purpose of community-based forest management for an operational area of less than 50,000 hectares. The communities can use the land for hunting, farming and sign up to logging contracts with companies. [4C] As of 2024, there are 57 CFMAs with 1.2 million ha altogether. Of these, 42 signed commercial use contracts (CUCs) with logging companies involving 997,918 ha, and 5 CFMAs are earmarked for conservation involving only 25,367 ha. [NUCFMB] CUCs beyond 50,000 ha up to 250,000 ha shall be subject to the rules and regulations of a Forest Management Contract (FMC). [FDA Regulations to the Community Rights Law of 2009 with respect to Forest Lands] None of the CFMAs has FSC or PEFC certification.

Management of the CFMA is to be placed into the hands of a Community Forest Management Body (CFMB), under the supervision of the Executive Committee of the Community Assembly. To support CFMBs in their operations, a national umbrella structure has been created, the National Union of Community Forest Management Bodies.

- *Timber Sales Contracts* (TSC) to be issued to commercial logging companies for conversion of forest areas to other types of land uses within a period of three years. [F4F 2021] ~~As of 2016, there were 10 TSC license holders with 50,000 ha.~~ [NUCFDC] As the three-year time frame has lapsed the TSC model is no longer in use.
- *Private Use Permits* (PUP) allow the harvesting of wood on private land, with the consent of the landowner. These are no longer issued due to their misuse in previous years.
- *Protected areas*: the National Forestry Reform Law (2006) defines ten categories of protected areas that together should form a biologically representative network of protected forest areas connected via corridors. Including: (1) national forests; (2) national parks; (3) nature reserves; (4) strict nature reserves; (5) game reserves; (6) controlled hunting areas; (7) communal forests; (8) buffer zones; (9) conservation corridors; and (10) biodiversity protection areas. Liberia has 3 national parks (364,662 ha), one strict nature reserve (13,569 ha) and one sustainable multiple use reserve (97,159 ha) together 475,390 ha [4C] of which an estimated 198,000 ha is covered with forest.

- *Unclassified forests*: the above-mentioned forest management categories together hold around 2.2 million ha of forest. Assuming a total of 4.3 million ha of permanent forest land, this implies a remaining area of unclassified forest land of 2.1 million ha or about half of total forest land.
- a *Forest Use Permit* is required For NTFP collection or for tourism.
- The FDA finalized its *Ecotourism Concession Policy* to attract investment in eco-tourism. [FDA 2024 road Map for Liberia Forest Sector Rejuvenation]

2.5 Forest production

Overall, the forest sector is estimated to have generated USD 291 million in 2021, against a national GDP of 3,186 million i.e. around 9%. [IMF in: 4C]

Roundwood production (saw logs):

Liberian forests hold about 240 timber species, out of which about 60 species have been commercialised but the most traded species are just six: Azobé (*Lophira alata*), Niangon (*Heritiera utilis*), Bossé (*Guarea cedrata*), Iroko (*Milicia excelsa*), Ayous (*Triplochiton scleroxylon*) and Dabema (*Piptadeniastrum africanum*). [4C]

Historically, Liberia would produce about 1 million cubic meters of roundwood annually, but currently, production is around 460 thousand cubic meters. Mostly from natural forest, with about 10% from plantation forests. [FAOSTAT 2022] CFMAs produce 75 percent of roundwood, while FMCs produced 25 percent of round logs [LEITI 2022 in: 4C]

Estimations are that the informal chain saw milling sector sector may be extracting 3 to 4 times more volume than the formal sector. [AD 2023] This would imply an informal roundwood production of about 1.5 to 2 million cubic meters annually. This informal CSM sector provides between 19,000 and 24,000 permanent jobs to both urban and rural individuals. The annual revenue generated by CSM alone is estimated to be US\$ 31-41 million. [4C]

Firewood and charcoal:

An estimated 10.4 million cubic meter of wood is extracted annually for firewood or charcoal production and thus exceeds by far exceed the estimated saw log production, [FAOSTAT] The charcoal industry employs up to 28,000 people on a 'full-time equivalent' basis [Hooda et al 2019 in 4C].

Pulp wood:

Reportedly, the forest plantations were established for the production of pulp and paper (tissue factory). Yet, Liberia produces no pulp wood. [FRA 2015 country report in: F4F country fiche]

Non-timber forest products:

These resources can include bamboo, firewood, construction materials, medicinal plants, timber, fish, animal skins, honey, beeswax, fibers, gums, resins, ornamentals, game meat, fodder, mushrooms, fruits, and dyes. [4C] But the dominant product on the local market is bushmeat, ~~while the main export product is rubber—in FAO terminology, rubber or latex is recorded as a non-timber forest products, regardless whether it is from natural forest or plantations.~~

2.6 Forest-based industries and services

Wood industry:

Historically, about 10 sawmills and four ply mills were in operation, exporting processed wood and plywood out of the country. [4C] That is different today: while the National Forest Reform Law (2006) requires companies to have a functioning sawmill in place within two years after starting logging operations, so far only one logging company established a functioning sawmill that processes only a small part of harvested logs into planks (no drying facility).

In addition, Firestone (rubber company) has a complete processing plant with sawmills, drying facilities and assembly facilities for finger jointing, making doors and furniture. The plant was developed to process rubber wood at the end of its productive cycle and provided work for 600 people, but due to poor quality of the prime material in combination with high international market standards it was closed down.

Trials with tree plantations were conducted in the 1970s (acacia, gmelina, teak). A paper mill proposal (tissue production) using gmelina or rubber wood was not successful. [pers. comm. H. Karnwea]

Non timber forest based industries:

~~Even the rubber collected by Firestone on its biggest rubber plantation in the world (49,000 ha plus supply from out-growers) is not really processed to a significant extent in Liberia, but is exported abroad. [F4F 2021]~~

Eco-tourism:

Eco-tourism is hardly developed in Liberia, there are just about 5 eco-lodges each with a limited visitor capacity. [Tourism Association – personal comm.]

Payment for environmental services:

... any information on existing forest carbon schemes?

... any statement on payment for watershed management, any examples in Liberia?

2.7 Trade in forest products

Domestic wood consumption: any statement possible how much of wood production is for the Liberian domestic market, and how much is for exports?

Exports of forest based products:

- Round log exports: 24,000 cubic meters were formally recorded as exported in 2022. [FAOSTAT] In 2022, almost all wood exports (99%) went to Asian countries. (From USD 4 million in 2021 to USD 38 million in 2022) in exports of solid wood products, with Vietnam as destination [ITC Trade Map] ~~This implies that the balance was either used in local informal small-scale wood industries to cater for the domestic market, or were exported via ports or border crossings without the required registration.~~ Any statement possible on unrecorded exports?
- furniture exports in 2022 valued at USD 190,000.
- Exports of other wood products are nil (e.g. wood based panels, pulp and paper products)
- NTFP exports?

Wood imports: can FDA provide import figures, by product category?

- Pulp and paper is the main import category.

Wood trade balance: When comparing the values of (formal) exports with (formal) imports, Liberia had become a net wood importing country up to year 2021 — USD 16 million negative — the spike in year 2022 for exports of sawn wood products needs further clarification.

Non timber forest products:

Remarkably, according to FAOSTAT, Liberian imports of rubber products in 2022 were close to rubber export value. Rubber exports are predominantly to the USA, rubber product imports are mostly from Asia.

3. Liberia's forest management targets

National Forestry Reform Law 2006:

- The establishment of a protected forest area network of about 1.5 million ha, being 30% of the forest area existing in 2006

National Forest Management Strategy 2007:

- Integrity of 4.39 million ha of close-dense and open-dense forest is maintained as best as possible in 25 years.
- Commercial forestry activities ensure a sustainable production of forest products, provide long-term employment, facilitate value-added inputs and industries, and contribute revenue through fees to the central government.

Liberia's Revised Nationally Determined Contribution 2021:

- Reduce the national deforestation rate by 50% by 2030
- Restore 25% of priority degraded forests by 2030
- Limiting Forest Management Concessions to 1.6 million ha by 2030
- Conversion of timber sales contracts into carbon concessions by 2030
- Increase Forest Protected Areas to 1.5 million ha, ensuring a 3 km buffer zone, by 2030
- Increase the designation of Community Forest Area to 1 million ha
- Improve protection and conservation measures in 30% of mangrove ecosystems; restore 35% of degraded coastal wetlands and mangrove ecosystems by 2030

4. Forest governance: institutional strengthening

4.1 General considerations

Development of the forest sector in its economic, social and ecological dimensions requires the creation of a conducive operational context by the relevant state governance entities.

The principal Liberian authority that governs forest management is the Forestry Development Authority (FDA), created in 1976 as a corporate body pursuant to the Public Authorities Law. Its objectives and powers are detailed in the Act Creating the Forestry Development Authority (1976). At the same time, the FDA will need to maintain close coordination with other ministries e.g. with the Ministry of Commerce and Industry as regards industrial processing of forest products, or the Ministry of Agriculture as regards land use planning and the development of alternative livelihoods for forest fringe communities.

4.2 Constraints and challenges

Here, governance is understood to consist of the following series of tasks; a) planning and strategy development; b) policy and regulations; c) coordination and facilitation; d) law enforcement; and e) monitoring and reporting. Following this division of tasks, forest sector governance in Liberia needs reinforcement as follows:

a) Planning and strategy development:

Lack of a Strategic/ Master Plan for the forestry sector [From Forest Finance Strategy for Liberia 2024] A long-term plan is missing, not significantly affected by changes in political power [from FDA Internal Factors Analysis] With a more balanced approach to the 4Cs, a greater emphasis is to be placed on commercialization. [from: FDA Strategic Planning Process]

The forest sector seems to lack performance targets, e.g. the targeted roundwood production volume; the carbon sequestration target; or a tourist visitor target; and based on these, the tax revenue target or the targeted contribution to national GDP. Added to this, the fact that so many FMC are dormant and shifting logging to CFMAs raises questions on the production capacity of forests – a most vital element for development of a sector strategy.

Lack of knowledge of the state of forest resources [From Forest Finance Strategy for Liberia 2024] as basis for forest sector planning. Including a lack of scientific research to determine the decline in primary tree species composition. [from FDA Internal Factors Analysis] Liberia conducted its first comprehensive National Forest Inventory 2018-2019. A Forest Reference Emissions Level was also developed in 2020. FDA had a unit trained on monitoring, reporting and verification (MRV) of forest-based carbon emissions, but with the end of project support, the unit has fallen apart. [4C]

There is too much divergence in production and export data; e.g. export data from Liberia are very different from import data from buying countries. [LRA; LEITI] Currently there are no estimates of growth rates or the residual volumes following harvesting, so it is not possible to estimate the AAC for Liberia. A system of permanent sample plots to monitoring forest productivity is missing. [4C] [Liberia National Forest Inventory 2018/2019]

The National Forest Inventory did not cover mangrove forests. [National Forest Inventory 2018/2019]

b) Policy and regulations:

Lack of formulation of policies or regulations: the National Forestry Policy and Implementation Strategy of 2006 had a ten-year implementation period with an expected review in 2016. No new policies have been adopted considering the emerging realities of forest management, which include climate change and land tenure issues addressed by the Land Rights Act. The Wildlife Law has been reviewed, with the enactment of a restatement pending. [FDA 2024 A Road Map towards Liberia Forest Sector Rejuvenation] Poor regulation of the timber industries resulting in weak timber industry sector [from FDA Internal Factors Analysis] Absence of legislation to back some policies. [from FDA Internal Factors Analysis] No institutional framework for carbon trade [FDA Strategic Planning Process]

Lack of evaluation of policies or regulations: most regulations have not been reviewed to assess their impact (success and challenges) on sustainable forest management. The NFRL implementation has not been reviewed. [FDA 2024 A Road Map towards Liberia Forest Sector Rejuvenation]

c) Coordination and facilitation:

Poor facilitation of sector development, e.g. due to: abuse of discretion and rent-seeking by forestry sector officials [FDA Strategic Planning Process]; poor public infrastructure e.g. roads or power supply [FDA Internal Factors Analysis]; lack of an established forestry and forest products information database [Forest Finance Strategy for Liberia 2024]; Strong centralization of forestry services [Forest Finance Strategy for Liberia 2024]; poor timber resource allocation and legality verification measures. [FDA Strategic Planning Process]

Poor inter-agency coordination and teamwork resulting in overlapping of tasks; poor departmental coordination at all levels [FDA Internal Factors Analysis]

d) Law enforcement:

Lack of capacity for forest law enforcement [FDA policy brief March 2024] resulting in illegal mining, pit-sawing, and illegal harvesting in forest areas [FDA Internal Factors Analysis] Weak oversight by the FDA over the wood industry. [FDA Strategic Planning Process]

FDA lacks the capacity for proper supervision of logging operations: inadequate review of forest management plans, and insufficient inspection of log removal and transport, resulting in serious levels of over-logging, illegal logging and movement of logs outside of the LiberTrace wood tracking system. Forests as productive assets become degraded thus destroying FDA's own source of revenue.

Lack of authority to fine and penalize violators. [FDA Internal Factors Analysis]

Prosecution of law offenders requires the effective partnership between FDA and law enforcement agencies, such as the police and judiciary. Currently, such coordination and partnership has been reported to be weak. [4C]

e) Monitoring and reporting:

No monitoring and evaluation system in place [FDA Internal Factors Analysis]

- *No communication strategy* in place [FDA Internal Factors Analysis] *There is insufficient availability of forest sector data in the public domain, which is a hindrance to independent monitoring or development support. [IFMCM]*

Over-coming the aforementioned shortcomings implies the strengthening of the institutions responsible for forest sector governance; in first instance, the FDA, but addressing eventual constraints in the performance of related governance institutions also needs to be given due consideration.

The factors underlying the shortcomings in forest governance may be narrowed down to a few: insufficient operational budget; limitations in staff capacity; insufficient cooperation from

other governance agencies; and a lack of respect to rules and regulations by the actors in the forest sector or by outside actors. To explain more specifically:

- Lack budget for FDA:

Lack of state funding: insufficient budgetary allocation from central government for effective operations; budgetary constraints for operational activities as a result of delay from Central Government [FDA Internal Factors Analysis]

Lack of financial autonomy: as a state corporation, the FDA is under-financed and practically without financial autonomy, preventing it from direct investment in ventures e.g. tourism [FDA 2024 A Road Map towards Liberia Forest Sector Rejuvenation]

Lack of direct own income: no access to internally generated funds from timber [FDA Internal Factors Analysis]; weak capacity in FDA in financial mobilization and management [FDA Internal Factors Analysis]; with the growing interest in forest carbon as a marketable forest product, the lack of a management portfolio at the FDA to ensure that forest carbon issues are adequately articulated, and clear decisions are taken and implemented has seen little return to the Country and forest communities from the ecosystem services the forest provides. [FDA 2024 A Road Map towards Liberia Forest Sector Rejuvenation]

Collection of taxes and revenue has dropped significantly as most logging contracts remain dormant or not operational, combined with a shift in logging activity from FMC to CFMA resulting in lower taxes and higher tax evasion. In addition, there are significant payment arrears from FMCs for past years – indication that the system of performance bonds is not effectively applied. FDA's methodology for forest product taxation is not clear, not verifiable, and without actualisation; all factors that may result in potential loss of state revenue.

Inefficiency of the national forestry fund [Forest Finance Strategy for Liberia 2024]

- Limitations in institutional capacity:

- *An inadequate institutional framework* for the sustainable management of forest resources; dispersion of competences, responsibilities and interests between different services and ministries [Forest Finance Strategy for Liberia 2024]

Staff composition: the FDA's staffing arrangement needs to be reviewed to better align with Liberia's forest management objectives; better incentives need to be provided to staff; priority needs to be given to the honorable retirement of long-service staff. [FDA 2024 A Road Map towards Liberia Forest Sector Rejuvenation]

Organisation and procedures: the FDA has weak institutional structures and mechanisms. [from: FDA Strategic Planning Process] Weak governance system or accountability. [FDA Internal Factors Analysis] Weak Human Resource systems -Lack of staff appraisal system; no clear procedure for staff employment; absence of motivational packages to deserving staff; slow response from Departments, Divisions and Units whenever request for documents. [FDA Internal Factors Analysis]

FDA is not fully respecting all its managerial obligations as per Act of 1976, e.g. the organization of regular board meetings, policy development, annual reporting, commissioning of audits, and similar.

Equipment and facilities: the limited availability of logistical equipment (vehicles, technical field equipment, etc.), office material (computers, printers, photocopiers, etc.), and staff supplies greatly hinder their capacity to perform. [FDA 2024 A Road Map towards Liberia Forest Sector Rejuvenation] Poor ICT infrastructure; restricted electricity at FDA central office; vehicles are not regularly serviced;

security uniforms are very old and not good to wear to work; lack of logistics (GPS's, compasses, vehicle, binders, cameras); limited /lack of infrastructure and logistics especially at the FDA counties offices [FDA Internal Factors Analysis]
Limitations in skills: Poor capacity of staff regarding capacity building; e.g. lack of training in law enforcement and investigative technique [FDA Internal Factors Analysis] dependency on external service providers for specific tasks e.g. SGS continuing its responsibilities in revenue collection/mobilization [FDA Internal Factors Analysis]; incapacity to write bankable proposals[From Forest Finance Strategy for Liberia 2024]

- Lack of inter-agency coordination:
Inter-departmental coordination is weak; inadequate sectoral working groups. [FDA Strategic Planning Process] Competing for land use system; political influence and interferences [FDA Internal Factors Analysis]
Stakeholder coordination is weak [FDA Strategic Planning Process]
Poor donor coordination [FDA Strategic Planning Process]
- Lack of sector self-discipline:
Weak organization of the charcoal and NTFP sectors [Forest Finance Strategy for Liberia 2024]

4.3 Strategic direction and targets

To be developed

4.4 Action plan

To be developed

4.5 Finance options

To be developed

5. Forest production and forest industry

5.1 General considerations

This chapter will focus on forests where forest exploitation (i.e. wood harvesting) is allowed, including the related processing and manufacturing.

Interventions in this sub-sector need to be aimed at the actual forest stewards. For Liberia's natural production forests, these are the FMCs or CFMAs. Apart from these, there are forest plantations, and there remain un-licensed production forests under the management of FDA itself. Next, interventions need to focus on enhancement of forest value chains, which can include harvesting wood for timber or woodfuel; the collection of non-timber forest products; or revenue from environmental services e.g. carbon sequestration, payment for watershed management, the conservation of biodiversity, or otherwise.

Forest-based industry can be categorised as either processing industry, or services industry, each with sub-divisions.

5.2 Constraints and challenges in forest management

5.2.1 Challenges faced by FMCs

On paper, there remain seven FMCs with a combined area of 1.0 million ha [NUCFDC] yet none of these is operational anymore. This is a grave concern for Liberia, as the FMCs are supposed to generate the wood production for rebuilding a domestic wood industry; and without active management of these forests, these forests will be colonized by others for illegal wood harvesting, charcoal production, mining or conversion to smallholder farming.

This dormancy of FMCs is due to a series of constraints, as follows:

- An uncondusive operational environment:
 - Deforestation: what is happening to the FMCs now that these are in dormancy?*
 - Transportation constraints:* Liberia has a very bad road network. A large portion of the country is not accessible at all during the long raining season (May to November); the tarmac road network is very limited and partly in a very bad state, with a lack of bridges. [from: FDA Strategic Planning Process]
 - Lack of professional support services:* for instance, Liberia has no record of voluntary forest management certification, therefore, no presence of specialised certification bodies. Different from the mining or agricultural sectors where certification bodies do operate. [SGS personal communication]
 - Power shortage:* The national power grid is hardly developed. Companies need to use (expensive) diesel generators to produce electricity. [from: FDA Strategic Planning Process]
 - Insecurity of tenure:* FMCs may have overlaps with mineral project exploration concessions, agricultural concessions, or proposed conservation areas. [4C]
- Poor intrinsic forest productivity:
 - Depleted forest stock:* many of the concessions have been worked two or three times often with repeated re-entry. [4C] At the same time, FMCs did not comply with the Liberia Code of Forest Harvesting Practice; annual coupes were not mapped; no 100 percent stock surveys were undertaken [4C]. In addition, illegal chainsaw milling within FMCs also caused depletion of commercial forest stock.
 - Limited range of commercial timber species:* only a limited number of timber species has sufficient value to compensate the costs of logging [4C]

- Strained relations both with government and with communities:
Tax evasion. Generally a poor registration of logging companies, often without an address. [LEITI]
Non-compliance with paying the social agreements to communities
- Operating constraints:
Loss of working days due to machinery breakdown or adverse weather conditions
Bureaucratic delays with permits and licenses
Lack of skilled labour
Lack of finance: limited access to investment capital and high costs of finance
Taxation: taxes are too high in relation to the value of forest production; high import fees for machinery parts [FDA 2024]

5.2.2 Challenges faced by CFMAs

With the dormancy of the FMCs, wood production in Liberia has shifted to the CFMAs. However, communities are receiving far less than what is expected to benefit them as forest-owning communities. [FDA 2024 A Road Map for Liberia Forest Sector Rejuvenation] This implies a risk to the sustainability of the CFMA model.

Constraints faced by CFMAs include the following:

- Constraints in the operational context:
Insecurity of tenure: control over their forest area is an issue for the community forest management boards. Forests are being depleted by charcoal producers, wildlife is poached for bushmeat, forests are converted to farming area. All of this both by own community members as well as by migrants coming from elsewhere, all of them driven by poverty and looking for a livelihood.
Location and accessibility: for community forests in the more remote locations, distance to market or lack of passable roads can be a major constraint for value chain development.
- Constraints as regards forest production potential:
Limited production potential: Commercial licenses for managing community forests are granted on mostly small land areas which presents challenges for sustainable utilization of forest resources. [FDA 2024] While the largest community forest measures 49,625 ha, the average size of community forests is 21,870 ha and the median size is 19,590 ha; some community forests are as small as 610 ha. [NUCFMB] Following a 25 year cutting cycle, this implies a median annual operational area of 785 ha – or less as not all forest area is suitable for harvesting. It will depend on actual remaining forest stock whether such area can generate sufficient production to off-set the costs of logging and also generate sufficient revenue to keep the community motivated for community forestry.
- Constraints in forest management capacity:
No understanding of the forest resource base: the CFMA licensing process (9 steps) does not include a proper forest inventory, implying that no sound basis exists for determination of the annual allowable cut and therefore no good basis exists for a forest management plan or community business plan. [FAO-UNDP]
Delegation of timber harvesting: No good examples exist yet in Liberia with independent community logging, despite several efforts. [NMSMC] Instead, logging companies exert pressure on communities to partner in a CFMA application, which is subsequently logged by the company under a commercial use contract (CUC). Loggers can e.g. easily prepay the required CFMA application

fee of US \$ 250 and support the different steps. Taxation in CFMAs is lower than in FMCs and forests in CFMA areas generally are in better condition than in FMCs. [F4F 2021] Or, the production of timber is in the hands of informal chain saw milling operators. Their degree of organisation is low - e.g. of the estimated total of 22,000 chainsaw millers only 2,600 are currently affiliated to LICSATDUN, the formal representative body of chainsaw loggers and timber traders. Chain saw milling has a high level of wastage and inefficiency in converting logs into lumber, and has a high degree of informality. [4C]

- Low revenue:

Intrinsically limited earning capacity of community forests: commercial licenses for managing community forests are granted on mostly small land areas, which presents challenges for sustainable utilization of forest resources. This has impacted both the commercial viability of these areas and the forest's ability to regenerate naturally. [FDA 2024 A Road Map for Liberia Forest Sector Rejuvenation] The average annual community income from the land rental fee is USD 17,000; the maximum is USD 34,000. [NUCFMB] As this money is to be spent on community projects, it may contribute little to poverty alleviation at the individual household level.

Fund mis-management: The average amount in arrears of CFMA land rental payments is USD 160,000 per community, with a maximum of USD 500,000 [NUCFMB]. Adding to this, there is also unaccountability of the limited funds and benefits received by communities, with reports of corruption and mismanagement of community benefits/funds at the community leadership levels. [FDA 2024 A Road Map for Liberia Forest Sector Rejuvenation]

Lack of countervailing power: communities generally lack negotiation and monitoring skills and experience in sustainable forest management. Literacy levels are low. CUCs are under-reporting log harvests - logs are loaded into containers to conceal the wood from superficial visual inspection. [IFMCM] This lack of capacities has resulted in deficient planning, inefficient exploitation systems, poor respect of rules (over-logging, logging outside demarcated areas) and a neglect to the regeneration of forest stands after harvesting. [AD 2023] [F4F 2021]

5.2.3 Challenges in NTFP production

The NTFP sector is highly informal in Liberia; organization of the charcoal and other NTFP sectors is weak. [from 20204 Forest Financing Strategy]

Charcoal can be assumed to be the main non-timber forest product. Its production is very destructive to the forest, without the use of innovative technologies for production and utilization of charcoal. [from 20204 Forest Financing Strategy] Yet, given the fact that market demand is to remain structural for the foreseeable future, it is imperative to think of sustainable solutions for meeting market demand.

Bushmeat, similarly to charcoal production, has structural market demand for the foreseeable future, while the collection of bushmeat is also very damaging to the forest condition due to the use fire (cane rat hunting) or by depletion of wildlife which also has a critical role in maintaining forest health.

Other NTFPs: Liberia's forests can produce a wide range of other NTFPs but their collection, processing and marketing lacks both organisation as well as feasibility assessments for enhancement of production and income.

5.2.4 Constraints in forest plantation development

The area of forest plantations in Liberia is relatively small, with reports are that these are in no good condition due to a lack of protection and maintenance. [F4F 2021]. By contrast, neighbouring countries are seeing more investment going into forest plantation development; the establishment of tree plantations is to be encouraged in Liberia. [NDC 2021; FDA 2024]

- *Lack of market pull:* the local market still gets enough wood supply from the natural forest. Besides, no major industry is in place to absorb wood from tree plantations.
- *Barriers in access to land:* the Land Rights Law of 2018 makes land acquisition more difficult to private investors [F4F 2021].

5.2.5 Challenges in the management of unlicensed forests

There remains an area of forests that are not classified as FMC, CFMA nor protected area. But forests without active management tend to be regarded as open access areas and therefore are prone to conversion to other land use. Their mapping and demarcation is therefore important under a forest sector conservation strategy, and thought must be given to a management approach for these unlicensed forests with due funding.

5.3 Challenges in value chain development linked to production forests

5.3.1 Constraints faced by the wood processing industry

Despite significant forest cover, Liberia is a wood-importing country; it exports round logs and it imports finished wood products. Previously, a minority of forest concessionaires had installed sawmills, these produced lumber primarily for export with residual production for domestic markets; in addition, three plywood/veneer plants existed; none of these exist anymore. [National Forest Management Strategy 2007]. The exportation of round logs represents a loss of opportunity for job creation and the building of local enterprises. [FDA 2024 A Road Map for Liberia Forest Sector Rejuvenation]

Current constraints include:

- *Lack of reliable wood supply:* with the collapse of the FMCs, formal wood industries lost their supply base and have no more guaranteed supply of wood. Round logs are sent for exports instead, often evading legality verification measures. [from: FDA Strategic Planning Process]
- *Lack of competitiveness:* Currently, almost all the wood supplied to the domestic market is from chain saw lumber. Chain saw lumber is cheap to produce and formal timber operators are unable to compete. Whereas the global market for processed wood products is highly competitive in price and quality, which Liberian wood industry is too weak to compete with. [from: FDA Strategic Planning Process]
- *Lack of market access:* Major wholesalers and retailers in the EU are insisting that wood products they buy come from legal and sustainable operations. With no certification, Liberia will be cut out of important export markets, and this will constrain even more investments into the timber sector. [4C]

5.3.2 Constraints faced by the NTFP sector

- Charcoal production is currently inefficient and destructive. [from: FDA Strategic Planning Process]. But development of an efficient and deforestation-free charcoal sector is constrained by the following factors:
Unrestricted access to wood for charcoal production, especially from forest encroachment and conversion of forest land to farming.

Indiscriminate markets: more efficient charcoal production techniques exist, and deforestation-free production is feasible e.g. using waste wood from logging, but this is more expensive while consumers are only concerned with the price of the products.

- Bushmeat production is unsustainable due to:
lack of harvesting quota
lack of enforcement of such quota.
- Other NTFPs have limited commercial value, mostly due to:
unregulated harvesting resulting in stock depletion
lack of organisation of the marketing chain

5.3.3 Constraints as regards payment for environmental services

- Forest carbon: Liberia is yet to benefit from the potential benefits of the global carbon market. Yet, also the forest production forests could generate carbon income for Liberia, e.g. via forest restoration or improved logging or otherwise. Key constraints to address:
A legal framework i.e. laws and regulations
Supporting mechanisms such as an MRV system, FREL measurements, or a national carbon credits registry.
- Payment for watershed management:
- Payment for biodiversity conservation: new initiatives are developing to reward biodiversity conservation, whereas in production forests, this could be straightforwardly achieved via FSC or PEFC certification as these have criteria for ecological aspects of forest management. Yet, Liberia has no incentive mechanism to promote FSC or PEFC forest certification.

5.4 Strategic direction and targets

To be developed

5.5 Action plan

To be developed

5.6 Finance options

To be developed

6. Strengthening the management of protected forests

6.1 General considerations

The Forest Law (2006) defines a protected area as an area set aside for conservation purposes. Non-extractive use may be allowed (tourism, recreation, research), while exploitation for mining, hunting, farming, fishing or timber harvesting is mostly not allowed. The Forest Law defines the following categories of protected forest areas: National Forests, National Parks, Nature Reserves and Strict Nature Reserves.

The Forest Law also states that the Authority (i.e. FDA) shall establish a protected forest area network, together with conservation corridors, and incorporating existing national forests, to cover at least 30 percent of the existing forested area of Liberia – at the time representing about 1.5 million hectares. The conservation corridors can consist of Game Reserves, Controlled Hunting Areas, Communal Forests and other Buffer Zones. This protected forest area network is to facilitate sustainable protected forest management and biodiversity protection.

The Forest Law also states that the Authority shall, in collaboration with local communities, non-governmental organizations, and interested international organizations, undertake efforts to provide alternative livelihoods for communities adversely affected by the establishment or maintenance of Protected Forest Areas.

Question: are mangroves included covered under any of these categories?

The National Wildlife Conservation and Protected Area Management Law (2016) states that the mandate to manage wildlife and their habitats in and outside of protected areas for the benefit of the people of Liberia be entrusted to the FDA. [4C] However, in several sites, FDA delegates operations to a number of development partners (e.g. Wild Chimpanzee Foundation, SCNL, others). Similarly, for delegating monitoring tasks, the FDA has established a National Community Ecoguard Program which is active in several (proposed) protected areas of Liberia [4C]

6.2 Constraints and challenges

In actuality, forests and wildlife are not well protected in the protected forest areas. [FDA policy brief March 2024] Personnel numbers, equipment, and budget for operating costs are inadequate to sustain operations; limited logistics and infrastructure challenge the effective management of gazetted protected areas. [FDA 2024 A Road Map towards Liberia Forest Sector Rejuvenation] Many people engage in hunting, mining, chain sawing, or charcoal production activities to provide desperately needed income for their families. [F4F 2021] While the proclamation of additional protected forest areas meets with resistance from many communities around protected areas who fear that they will be denied their existing livelihoods when the protected areas are established. [4C]

These shortfalls in protection effectiveness are due to the following constraints:

- Lack of financial resources; lack of innovative finance mechanisms for protected area management. [from: FDA Strategic Planning Process] *Donor dependency* [4C]; implementation of conservation actions depends foremost on financial support from development partner organizations. [F4F 2021] As can be explained by:
Low budgetary allocation to the FDA for operational activities. [4C]
Tourism potential benefits remain unachieved. [4C]
The national REDD+ strategy has not yet resulted in significant finance for Liberia's protected areas.

The Liberia Conservation Fund is not providing any significant funding yet for Liberia's protected areas. To wit, the National Wildlife Conservation and Protected Area Management Law (2016) mandated FDA to establish a Conservation and Wildlife Fund for the administration of protected areas, wildlife conservation and management activities. [4C] A Liberia Conservation Fund was set up in 2018. Conservation International has committed US\$ 1 million to the fund and GoL has made a matching pledge [4C] but contributions from other donors e.g. mining sector or government itself are still pending.

- Lack of institutional coordination:

Fragmented implementation of conservation activities due to deficient overall coordination between implementing partners [F4F 2021]

Lack of inter-agency coordination on land use: e.g. the Integrated Water Resource Policy (2007) does recognize the need for soil and water conservation practices on upland slopes. However, there are no specific controls or water sector policies relating to the nature of development or activities allowed in, or in the vicinity of, protected areas. [4C] As well, some areas designated for protection overlap with logging concessions, mining licenses or land allocated for commercial agriculture. [4C]

Lack of investment promotion: Liberia's vast forest resources present an excellent opportunity for ecotourism but have been underutilized due to limited investment opportunities and bureaucracy in establishing tourism enterprises. [FDA 2024 A Road Map towards Liberia Forest Sector Rejuvenation] The main constraint to ecotourism development is bad infrastructure (roads and utilities) at the potential tourist sites. [4C]

- Lack of economic alternatives for community members:

Lack of capacity: e.g. one constraint limiting tourism activities is the scarcity of any hospitality services. [4C]

- *Narrow scope on protected forests* -e.g. focus on protected forest areas and less on the corridor forests that offer a broader range of use options, e.g. fishing or controlled hunting [paraphrased from 2024 Forest Financing Strategy]

6.3 Strategic direction and targets

To be developed

6.4 Action plan

To be developed

6.5 Finance options

To be developed

7. Mitigation of outside pressures on forests

7.1 General considerations

While previous chapters focused on strengthening the management and economic or biological productivity of Liberia's production forests and protected forests, this chapter will focus on measures to mitigate pressures coming from outside that drive deforestation or forest degradation.

7.2 Constraints and challenges

The causes of deforestation and forest degradation are listed in chapter 2. The underlying causes can be defined as follows:

- Lack of development planning:
 - Lack of inter-agency coordination:* dispersion of competences, responsibilities and interests between different services and ministries [from 20204 Forest Financing Strategy]
 - Inadequate engagement* and poor participation of local communities in resource management [from: FDA Strategic Planning Process]
 - Lack of alternative livelihoods:* inability to empower communities in livelihood initiatives [quotes from FDA Internal Factors Analysis] Un-employed youth or migrants use forest resources to find a livelihood, by lack of alternatives. This hints at a lack of a rural development agenda that can offer improved economic perspectives for a significant number of people, resulting in a re-orientation of rural livelihood development away from forest lands.
- Lack of resources:
 - Fire prevention, detection and control:* with climate change and farm expansion, the risk of forest fires will increase, implying an increased capacity for forest fire prevention, detection and control. : increased temperatures and prolonged heat waves.
 - Up-stream pollution:* mining is causing pollution of creeks and rivers. [4Cs] More capacity is needed for environmental inspection and law enforcement.

7.3 Strategic direction and targets

To be developed

7.4 Action plan

To be developed

7.5 Finance options

To be developed

References