

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Liberia

Rome, 2014

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Global Forest Resources Assessment (FRA). This country report is prepared as a contribution to the FAO publication, the Global Forest Resources Assessment 2015 (FRA 2015).

The content and the structure are in accordance with the recommendations and guidelines given by FAO in the document Guide for country reporting for FRA 2015 (<http://www.fao.org/3/a-au190e.pdf>). These reports were submitted to FAO as official government documents.

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TABLE OF CONTENTS

Report preparation and contact persons.....	4
1. What is the area of forest and other wooded land and how has it changed over time?	6
2. What is the area of natural and planted forest and how has it changed over time?	15
3. What are the stocks and growth rates of the forests and how have they changed?	19
4. What is the status of forest production and how has it changed over time?	28
5. How much forest area is managed for protection of soil and water and ecosystem services?	35
6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?	40
7. What is the area of forest affected by woody invasive species?	43
8. How much forest area is damaged each year?	46
9. What is the forest area with reduced canopy cover?	50
10. What forest policy and regulatory framework exists to support implementation of sustainable forest management SFM?	51
11. Is there a national platform that promotes stakeholder participation in forest policy development?	53
12. What is the forest area intended to be in permanent forest land use and how has it changed over time?	54
13. How does your country measure and report progress towards SFM at the national level?	57
14. What is the area of forest under a forest management plan and how is this monitored?	59
15. How are stakeholders involved in the management decision making for publicly owned forests?	61
16. What is the area of forest under an independently verified forest certification scheme?	62
17. How much money do governments collect from and spend on forests?	64
18. Who owns and manages the forests and how has this changed?	66
19. How many people are directly employed in forestry?	71
20. What is the contribution of forestry to Gross Domestic Product (GDP)?	73
21. What is forest area likely to be in the future	74

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Introductory Text

Place an introductory text on the content of this report

The United Nations Security Council imposed sanctions on Liberian timber and products export in June 2003 with conditions that the government should establish full authority and control over timber producing areas and ensure that government revenues from timber industry are not used to fuel conflict.

Working with the international community, the following actions were identified as essential to meet these requirements:

- Regulatory reform
- Revenue review
- Concession review
- Forest inventory and land use planning
- Conservation areas
- Public participation

International Partners and the Government of Liberia commenced the reform process in early 2004. Monitoring the progress, the UNSC partially lifted the sanctions in 2006 and subsequently lifted it in the same year.

These requirements would not have been met without legal reforms. Therefore, the New National Reform Law of Liberia was drafted and passed in October 2006. This law excludes the Community Forestry Law which has been draft pending enactment.

The new Forest Policy provides for a 3-pillar approach to sustainable forest management and benefit optimization (Commercial, Community and Conservation)

Liberia is situated within the tropical rain forest belt of West Africa and accounts for 43% of the Upper Guinea Forest. Liberia biodiversity is diverse in animal and plant species: containing:

- 590 bird species;
- 125 mammal species;
- 74 reptile and amphibian species;
- 1 000 insect species;
- 2 000 flowering plants, 59 endemic to Liberia;
- 240 timber species of which about 60 species have been exploited and exported.

In the present efforts of country capacity building, international partners, especially FAO, play an important role to lay the basis for a sound forest management. It is expected that assistance will remain available to assist Liberia in the following priorities:

- National Forest Inventory (as last inventory was conducted in 1967);
- Assessment of degraded areas for reforestation;
- Cadastral survey;
- NWFP assessment.

Desk Study?

Check "yes" if this survey is a Desk Study, "no" otherwise	
Desk Study?	no

1. What is the area of forest and other wooded land and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

1.1 Categories and definitions

Category	Definition
Forest	Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.
Other wooded land	Land not classified as "Forest" spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of 5-10 percent or trees able to reach these thresholds ; or with a combined cover of shrubs bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use.
Other land	All land that is not classified as "Forest" or "Other wooded land".
...of which with tree cover (<i>sub-category</i>)	Land considered as "Other land", that is predominantly agricultural or urban lands use and has patches of tree cover that span more than 0.5 hectares with a canopy cover of more than 10 percent of trees able to reach a height of 5 meters at maturity. It includes bothe forest and non-forest tree species.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.
Forest expansion	Expansion of forest on land that, until then, was not defined as forest.
...of which afforestation (<i>sub-category</i>)	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not defined as forest.
...of which natural expansion of forest (<i>sub-category</i>)	Expansion of forests through natural succession on land that, until then, was under another land use (e.g. forest succession on land previously used for agriculture).
Deforestation	The conversion of forest to other land use or the longterm reduction of the tree canopy cover below the minimum 10 percent threshold.
...of which human induced (<i>sub-category</i>)	Human induced conversion of forest to other land use or the permanent reduction of the tree canopy cover below the minimum 10 percent threshold.
Reforestation	Natural regeneration or re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.
...of which artificial reforestation (<i>sub-category</i>)	Re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.

1.2 National data

1.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments

1	Nicolas BAYOL et Jean-François CHEVALIER, 2004. Current state of the forest cover in Liberia; Forest information critical to decision making study report. World Bank Washington USA	Forest Cover	1979 and 2003	The images chosen as reference for 2000 data were the 1999-2002/2003 ortho-rectified set of images. Reference year to be considered for the data is 2003.
2	CI_SDSU Christie et al (2007)	Forest Cover	2000-2006	N/A
3	www.fda.gov.lr	Plantations	N/A	FDA annual reports
4	N/A	N/A	N/A	N/A

1.2.2 Classification and definitions

National class	Definition
1. Urban areas	No definition
2.1 Predominant rural agricultural domain	The tree is still present in the agricultural landscape: to be found singly, under the form of small forests clusters or along water ways and streams, but agriculture is present all over
2.2 Agricultural area with small forest presence	Presence of original forest more market, small residual forest massifs appear alongside agricultural areas and cover 10 to 20% of the surface area. The remaining forest surfaces are subjected to agricultural pressure and shrink every year.
2.3 Mixed Agricultural and Forest Area	Forest cover 20 to 50% of the surface, but agricultural dynamics is already taking over the forests. Agriculture/forest equilibrium can still be found although with great difficulty without external assistance.
3.1 Agriculture degraded forest	The forest area component always represents over 50% of the surface. Partly occupied with signs of human occupation.
3.2 Open dense forest	This class covers all the forests presenting evidence of harvesting
3.3 Closed dense forests	Not disturbed by recent logging activities. This class also covers old –logged forests
5. Free water	N/A
6. Savannah or bare soil	This class covers areas without vegetation like Isenberg, or savannas
7. Coastal ecosystem complex	This class gathers different types of vegetation which can be found on the coast. Ex: Mangroves, forests on sandy coastal barriers islands.
8. Agro-industrial plantation	N/A

1.2.3 Original data

Forest area	
<u>Original data for reference year 2003</u>	
National Class	Area in hectares
1. Urban areas	46 047
2.1 Predominant rural agricultural domain	436 747
2.2 Agricultural area with small forest presence	3 042 091
2.3 Mixed Agricultural and Forest Area	1 317 873
3.1 Agriculture degraded forest	949 615
3.2 Open dense forest	1 013 993
3.3 Closed dense forests	2 424 078
6. Savannah or bare soil	13 312
7. Coastal ecosystem complex	161 390
8. Agro-industrial plantation	178 294
Total Land Area	9 583 440

1.3 Analysis and processing of national data

1.3.1 Adjustment

Forest area	
<u>Calibrating data for reference 2003</u>	
Country Land area in ha	9 583 440

FAO STATS Land area in ha	9 632 000
Calibration factors	1.005067074

Results after calibrating data for reference year: 2003

National Classes	Calibrated Area in hectares
	2000
1. Urban areas	46 280
2.1 Predominant rural agricultural domain	438 960
2.2 Agricultural area with small forest presence	3 057 506
2.3 Mixed Agricultural and Forest Area	1 324 551
3.1 Agriculture degraded forest	954 427
3.2 Open dense forest	1 019 131
3.3 Closed dense forests	2 436 361
6. Savanna or bare soil	13 379
7. Coastal ecosystem complex	162 208
8. Agro-industrial plantation	179 197
Total land area	9 632 000

1.3.2 Estimation and forecasting

Forest area

According to the Current state of the forest cover in Liberia (2004), lost forest between 1979 and 2004 is about 15 %, which means about 30 000 ha/year

FRA categories	Area in hectares				
	2003	1990	2000	2005	2010
Forests	4 539 462	4 929 462	4 629 462	4 479 462	4 329 462

1.3.3 Reclassification

Forest area				
<u>Reclassifying data for reference year 2003</u>				
Reclassification process appears to be a difficult matter. Based on the field knowledge, forestry experts recommend the following:				
National Classes	Forests	OWL	OL	OLWTC
1. Urban areas			100%	
2.1 Predominant rural agricultural domain			100%	
2.2 Agricultural area with small forest presence			100%	
2.3 Mixed Agricultural and Forest Area	35%		65%	
3.1 Agriculture degraded forest	65%		35%	
3.2 Open dense forest	100%			
3.3 Closed dense forests	100%			
6. Savanna or bare soil			100%	

7. Coastal ecosystem complex			100%	
8. Agro-industrial plantation			100%	100%

Note: The breakdown of land use (2003) does not allow assessing the OWL, it is decided to rather allocate all the classes to OL as per the definition.

Results after reclassifying data for reference year 2003

National Classes	Forests	OWL	OL	OLWTC
1. Urban areas	0	0	46 280	0
2.1 Predominant rural agricultural domain	0	0	438 960	0
2.2 Agricultural area with small forest presence	0	0	3 057 506	0
2.3 Mixed Agricultural and Forest Area	463 593	0	860 958	0
3.1 Agriculture degraded forest	620 378	0	334 049	0
3.2 Open dense forest	1 019 131	0	0	0
3.3 Closed dense forests	2 436 361	0	0	0
6. Savanna or bare soil	0	0	13 379	0
7. Coastal ecosystem complex	0	0	162 208	0
8. Agro-industrial plantation	0	0	179 197	179 197

Total	4 539 462	0	5 092 538	179 197
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Summarising data for reference year 2003 gives:

FRA categories	2003
	Area in hectares
Forests	4 539 462
OWL	0
OL	5 092 538
OLWTC	179 197
Total land area	9 632 000

1.4 Data

Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	4929	4629	4479	4329	4179
	Other wooded land	0	0	0	0	0
	Other land	4703	5003	5153	5303	5453
	... of which with tree cover	179197	179197	179197	179197	179197
	Inland water bodies	1505	1505	1505	1505	1505
	TOTAL	11137.00	11137.00	11137.00	11137.00	11137.00

Table 1b

Categories	Annual forest establishment / loss (000 hectares per year)				...of which of introduced species (000 hectares per year)			
	1990	2000	2005	2010	1990	2000	2005	2010

	Forest expansion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which afforestation	0	0	0	N/A	0	0	0	0
	... of which natural expansion of forest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Deforestation	0	0.166	0	0.166	0	0.15	0	0.15
	... of which human induced	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reforestation	0	30	0	30	N/A	N/A	N/A	N/A
	... of which artificial	0	30	0	30	0	30	0	30

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 2	Tier 1
Other wooded land	Tier 2	Tier 2
Forest expansion	Tier 2	Tier 2
Deforestation	Tier 1	Tier 1
Reforestation	Tier 2	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> • Forest • Other wooded land • Afforestation • Reforestation • Natural expansion of forest • Deforestation 	<p>Tier 3 : Data sources: Either recent (less than 10 years ago) National Forest Inventory or remote sensing, with ground truthing, or programme for repeated compatible NFIs</p> <p>Tier 2 : Data sources: Full cover mapping / remote sensing or old NFI (more than 10 years ago)</p> <p>Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status)</p> <p>Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status)</p> <p>Tier 1 : Other</p>

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends

Forest	N/A	Recent study has been conducted on the deforestation rate in Liberia by the CI-SDSU (Christie and al., 2007), which indicates an annual rate of deforestation of 0.35%. Nevertheless, it is been considered that the deforestation trend resulting from the Current state of the forest cover in Liberia (2004) study appears relevant for the long period of 1990 to 2005. Besides, Liberia faces presently an increase of harvesting activities, compared to the previous years. Therefore the deforestation rate of 0.35% (CI-SDSU, 2007) may be too low. Consequently, it has been decided the keep the higher deforestation rate of 30 000 ha/y.
Other wooded land	There may exist an unknown extent of other wooded land, but it was not possible to separate it from the other categories.	N/A
Other land	N/A	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	N/A	Remains Constant
Forest expansion	N/A	N/A
Deforestation	N/A	N/A
Reforestation	Reforestation started in 1971 to 1989. Halted in 1990 due to the war. Restarted in 2001 and stopped again in 2003. (From 1997 to 2003, additional 1,000 ha was established). Expected to commence soon. In total, only 11 000 ha have been planted. Estimated 7818ha remain after 1990.	N/A

Other general comments to the table

About 99% of the Plantations is exotic species. They were intended for pulp and paper. Indigenous species were only intended for trials. Table 1b: In 1990 Liberia was at war and we could not report any forest data, while in 2005 Liberia was under United Nations Security Council sanction, because of that we could not report on forest data.

2. What is the area of natural and planted forest and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

2.1 Categories and definitions

Term	Definition
Naturally regenerated forest	Forest predominantly composed of trees established through natural regeneration.
Naturalized introduced species	Other naturally regenerated forest where the tree species are predominantly non-native and do not need human help to reproduce/maintain populations over time.
Introduced species	A species, subspecies or lower taxon occurring outside its natural range (past or present) and dispersal potential (i.e. outside the range it occupies naturally or could occupy without direct or indirect introduction or care by humans).
Category	Definition
Primary forest	Naturally regenerated forest of native species where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.
Other naturally regenerated forest	Naturally regenerated forest where there are clearly visible indications of human activities.
...of which of introduced species (<i>sub-category</i>)	Other naturally regenerated forest where the trees are predominantly of introduced species.
...of which naturalized (<i>sub-sub category</i>)	Other naturally regenerated forest where the trees are predominantly of naturalized introduced species.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
...of which of introduced species (<i>sub-category</i>)	Planted forest where the planted/seeded trees are predominantly of introduced species.
Mangroves	Area of forest and other wooded land with mangrove vegetation.
...of which planted (<i>sub-category</i>)	Mangroves predominantly composed of trees established through planting.

2.2 National data

2.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	The world's mangroves 1980-2005 FAO	Mangroves	1990-2010	OWL
2	National Forest Management Strategy 2007 FDA	Forest	2007-2012	Still in use
3	World Atlas of Mangroves	Mangroves	2010	from international sources: ITTO, FAO, UNEP-WCMC, UNESCO-MAB, ISME and UNU-INWEH

4	N/A	N/A	N/A	N/A
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2.2.2 Classification and definitions

National class	Definition
N/A	N/A

2.2.3 Original data

Based on questions 4-5-6

1. Plantation area assumed to be constant since 1979
2. Conservation= Primary forest
3. The rest modified natural

2.3 Analysis and processing of national data

2.3.1 Adjustment

Production= total forest concession+ plantation

2.3.2 Estimation and forecasting

The area of primary and planted forest is assumed to be constant and the change of other naturally regenerated forest is calculated as the difference between total forest area as reported in question 1 less area of primary forest and planted forest.

2.3.3 Reclassification

Production=Total forest concessions+Plantations-protected area (forest=Conservation of biodiversity).

In 1990 and 2000, the production area is 175 216ha

in 2005 and 2010, the production area is 193 932ha

Remaining area=unknown designation.

Regarding the Permanent Forest Estate (PFE), it is considered that the area remains constant for the reporting years.

2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	175	175	175	175	175
	Other naturally regenerated forest	4746	4446	4296	4146	3996
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	8	8	8	8	8
	... of which of introduced species	8	8	8	8	8
TOTAL		4929.00	4629.00	4479.00	4329.00	4179.00

Table 2b

Primary forest converted to (000 ha)								
1990-2000			2000-2010			2010-2015		
Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land
0	0	0	0	0	0	0	0	0

Table 2c

Categories	Area (000 hectares)				
	1990	2000	2005	2010	2015
Mangroves (forest and OWL)	14.3	9.3	6.8	10.9	10.9
... of which planted	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
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Primary forest	Tier 2	Tier 2
Other naturally regenerated forest	Tier 1	Tier 1
Planted forest	Tier 1	Tier 1
Mangroves	Tier 2	Tier 2

Tier Criteria

Category	Tier for status	Tier for reported trend
Primary forest/Other naturally regenerated forest/Planted forest	<p>Tier 3 : Data sources: Recent (less than 10 years) National Forest Inventory or remote sensing with ground truthing or data provided by official agencies or programme for repeated compatible NFIs</p> <p>Tier 2 : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years) Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>

2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	Natural mean	N/A
Other naturally regenerating forest	Natural mean and enrichment planting	N/A
Planted forest	Since 1971, FDA has planted about 11 000 hectares, with about 1% indigenous species. But it seems that only 7 818 ha remain after 1990.	N/A
Mangroves	N/A	N/A

Other general comments to the table

Reforestation program is now Government major concern. In 1990 no data because of the war period, 2005 UN sanction still on Liberia; so data was only provided in 2000 and 2010.

3. What are the stocks and growth rates of the forests and how have they changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

3.1 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees with a minimum diameter of 10 cm at breast height (or above buttress if these are higher). Includes the stem from ground level up to a top diameter of 0 cm, excluding branches.
Net Annual Increment (NAI)	Average annual volume of gross increment over the given reference period less that of natural losses on all trees, measured to minimum diameters as defined for "Growing stock".
Above-ground biomass	All living biomass above the soil including stem stump branches bark seeds and foliage.
Below-ground biomass	All biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead wood	All non-living woody biomass not contained in the litter either standing lying on the ground or in the soil. Dead wood includes wood lying on the surface dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in above-ground biomass	Carbon in all living biomass above the soil including stem stump branches bark seeds and foliage.
Carbon in below-ground biomass	Carbon in all biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Carbon in dead wood	Carbon in all non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in litter	Carbon in all non-living biomass with a diameter less than the minimum diameter for dead wood (e.g. 10 cm) lying dead in various states of decomposition above the mineral or organic soil.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a soil depth of 30 cm.

3.2 National data

3.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Atlanta consult. 1989. Inventaire Forestier de la Guinée Forestière. Rapport de synthèse. Atlanta consult-Industrie-und Unternehmensberatung GmbH)	Volume/ha	1989	The inventory provided volume data by sub region and by forests types (dense, medium and open forest), measured over bark from minimum DBH of 20 cm.
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A

4	N/A	N/A	N/A	N/A
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3.2.2 Classification and definitions

National class	Definition
1. Urban Area	No definition
1.2. Predominant rural agricultural domain	The tree is still present in the agricultural landscape: to be found singly, under the form of small clusters or along water way and streams, but agriculture is present all over
1.3. Agricultural with small forest presence	Presence of original forest more market, small residual forest massifs appear: alongside agricultural area and cover 10 to 20% of surface area. The remaining forest surfaces are subjected to agricultural pressure and shrink every year.
1.4. Mixed agricultural and forest area	Forest cover 20 to 50% of the surface, but agricultural dynamics is already taking over the forests. Agriculture/forest equilibrium can still be found although with great difficulty without external assistance.
1.5. Agricultural degraded forest	The forest area component always represents over 50% of the surface. Partly occupied with signs of human occupation.
1.6. Open dense forest	This class covers all the forest presenting evidence of harvesting.
1.7. Closed dense forest	Not disturbed by recent logging activities. This class also covers old-logged forest.
1.8. Free water	Water within.
1.9. Savannah or bare soil	This class covers areas without vegetation like Isenberg or savannas.
2.0. Coastal ecosystem complex	This class gathers different types of vegetation which can be found on the coast. Ex. mangroves, forest on sandy coastal barriers islands.
2.1. Agro-industrial plantation	Plantation, Species are Acacia, Gmelina, and Pines

3.2.3 Original data

Growing stock		
Country/Area	Total forest 2000 in 1000 ha	Volume m ³ /ha
Liberia	3 481	158

Data from Question 1

	1990	2000	2005	2010
Forests area in 1000 ha	4 929	4 629	4 479	4 329

Biomass stock

The data on growing stock will be used as input.

Carbon stock

The table on carbon stock will be used as input.

3.3 Analysis and processing of national data

3.3.1 Adjustment

Biomass stock

The following conversion factors were used to give input to the final table

	WD	BEF	RS
Forests	0.58	2.53	0.24

Above-ground biomass and Below-ground biomass estimated by the following equations

$$- \text{AGB} = \text{GS} * \text{WD} * \text{BEF}$$

$$- \text{BGB} = \text{AGB} * \text{R}$$

3.3.2 Estimation and forecasting

Growing stock

Multiplying m^3 /ha by the total area from Question 1 gives:

Growing stock in Million m3			
1990	2000	2005	2010
778.78	731.38	707.68	683.98

Carbon stock

A/ -Carbon stock is calculated by multiplying the biomass by 0.47.

B/- Carbon in the litter has been estimated, based on the standard factor of 2.1 (tropical), and

- Soil carbon has been estimated, based on the factor of 47 (tropical, moist with LAC soils).

The biomass/ hectare values are then applied to the forest and other wooded land areas values in Question 1 to get the biomass for the reporting years.

Year	1990	2000	2005	2010
Total Forest (1000 ha)	4 929	4 629	4 479	4 329
Carbon in the litter (1000 t. C)	10 351	9 721	9 406	9 091
Soil carbon (1000 t. C)	231 663	217 563	210 513	203 463

3.3.3 Reclassification

3.4 Data

Table 3a

Category		Growing stock volume (million m ³ over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	778.78	731.38	707.68	683.98	660.28	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	<i>Heritiera utilis</i>	Niangon	N/A	N/A	N/A	N/A
2 nd	<i>Entandrophragma utile</i>	Sipo	N/A	N/A	N/A	N/A
3 rd	<i>Canarium schweinfurthii</i>	Aiele	N/A	N/A	N/A	N/A
4 th	<i>Lovoa trichiliodes</i>	Dibetu	N/A	N/A	N/A	N/A
5 th	<i>Anigera robusta</i>	Aningre	N/A	N/A	N/A	N/A
6 th	<i>Nauclea diderrichii</i>	Kussa	N/A	N/A	N/A	N/A
7 th	<i>Triplochiton scleroxylon</i>	Wawa	N/A	N/A	N/A	N/A
8 th	<i>Hellea ciliata</i>	Abura	N/A	N/A	N/A	N/A
9 th	<i>Tieghemella heckelii</i>	Makore	N/A	N/A	N/A	N/A
10 th	<i>Terminalla ivorensis</i>	Framire	N/A	N/A	N/A	N/A
Remaining			N/A	N/A	N/A	N/A

TOTAL			.00	.00	.00	.00
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THE PRE-FILLED VALUES FOR GROWING STOCK REFER TO THE FOLLOWING THRESHOLD VALUES (SEE TABLE BELOW)

Item	Value	Complementary information
Minimum diameter (cm) at breast height of trees included in growing stock (X)	20	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	N/A	N/A
Minimum diameter (cm) of branches included in growing stock (W)	N/A	N/A
Volume refers to above ground (AG) or above stump (AS)	N/A	N/A

PLEASE NOTE THAT THE DEFINITION OF GROWING STOCK HAS CHANGED AND SHOULD BE REPORTED AS GROWING STOCK DBH 10 CM INCLUDING THE STEM FROM GROUND LEVEL UP TO A DIAMETER OF 0 CM, EXCLUDING BRANCHES.

Table 3c

Category		Net annual increment (m ³ per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
CFRQ	Net annual increment	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which coniferous	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which broadleaved	N/A	N/A	N/A	N/A	N/A

Table 3d

Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
CFRQ	Above ground biomass	1142.79	1073.23	1038.45	1003.68	1001.96	0	0	0	0	0
CFRQ	Below ground biomass	274.27	257.58	249.23	240.88	239.16	0	0	0	0	0
CFRQ	Dead wood	0	0	0	0	0	0	0	0	0	0

TOTAL	1417.06	1330.81	1287.68	1244.56	1241.12	.00	.00	.00	.00	.00
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Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Carbon in above ground biomass	537.11	504.42	488.07	471.73	470.92	0	0	0	0	0
	Carbon in below ground biomass	128.91	121.06	117.14	113.21	112.41	0	0	0	0	0
	<i>Subtotal Living biomass</i>	666.02	625.48	605.21	584.94	583.33	0	0	0	0	0
	Carbon in dead wood	0	0	0	0	0	0	0	0	0	0
	Carbon in litter	10.35	9.72	9.41	9.09	8.77	0	0	0	0	0
	<i>Subtotal Dead wood and litter</i>	0	0	0	0	0	0	0	0	0	0
	Soil carbon	231.66	217.56	210.51	203.46	196.41	0	0	0	0	0
TOTAL		908.03	852.76	825.13	797.49	788.51	.00	.00	.00	.00	.00

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 1	Tier 1
Net annual increment	Tier 1	Tier 1
Above ground biomass	Tier 1	Tier 1
Below ground biomass	Tier 1	Tier 1
Dead wood	Tier 1	Tier 1
Carbon in above-ground biomass	Tier 1	Tier 1
Carbon in below ground biomass	Tier 2	Tier 2

Carbon in dead wood and litter	Tier 1	Tier 1
Soil carbon	Tier 1	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
Total growing stock	Tier 3: Data sources Recent 10 years National Forest Inventory or remote sensing with ground truthing or programme for repeated compatible NFI 10 years Domestic volume functions Tier 2: Data sources/registers and statistics modelling or old NFI 10 years or partial field inventory Tier 1: Other data sources	Tier 3: Estimate based on repeated compatible tiers 3 (tier for status) Domestic growth functions Tier 2: Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 tier for status Tier 1: Other
Net annual increment	Tier 3: Scientifically tested national volume and growth functions Tier 2: Selection of volume and growth functions as relevant as possible Tier 1: Other	Tier 3: Confirmation/adjustment of functions used through scientific work Tier 2: Review work done to seek alternative functions Tier: 1 Other
Biomass	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied or other domestic or otherwise nationally relevant biomass studies Tier 2: Application of country specific national or sub-national biomass conversion factors from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Carbon in above ground biomass • Carbon in below ground biomass • Carbon in dead wood and litter • Soil carbon 	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied Tier 2: Application of country specific national or sub-national biomass conversion factors form from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	N/A	N/A
Growing stock of broadleaved coniferous	N/A	N.A
Growing stock composition	N/A	N/A
Net annual increment	N/A	N/A
Above-ground biomass	N/A	N/A

Below-ground biomass	N/A	N/A
Dead wood	N/A	N/A
Carbon in above-ground biomass	N/A	N/A
Carbon in below-ground biomass	N/A	N/A
Carbon in dead wood	N/A	N/A
Carbon in litter	N/A	N/A
Soil carbon	N/A	N/A

Other general comments to the table

No recent survey has been done to light the GS situation. FDA along with Simon Lewis of Great Britain conducted (AGB) carbon inventory survey in Cavalla Plantation and calculated 210.05 carbon ton per plot. But information is not enough to represent a country Further studies are ongoing. Tables 3d and 3e were extrapolated on the basis of growing stock, using conversion factors.

4. What is the status of forest production and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

4.1 Categories and definitions

Term	Definition
Primary designated function	The primary function or management objective assigned to a management unit either by legal prescription documented decision of the landowner/manager or evidence provided by documented studies of forest management practices and customary use.
Non wood forest product (NWFP)	Goods derived from forests that are tangible and physical objects of biological origin other than wood.
Commercial value of NWFP	For the purpose of this table, value is defined as the commercial market value at the forest gate.
Category	Definition
Production forest	Forest area designated primarily for production of wood, fibre, bio-energy and/or non-wood forest products.
Multiple use forest	Forest area designated for more than one purpose and where none of these alone is considered as the predominant designated function.
Total wood removals	The total of industrial round wood removals and woodfuel removals.
...of which woodfuel	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

4.2 National data

4.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Pandey, D. 1998. Forest plantation areas 1995. November 1997, revised July 1998	Plantations	2000	Report to the FAO project GCP/INT/628/UK (unpublished).
2	Nicolas BAYOL et Jean-François CHEVALIER.. 2004. Current state of the forest cover in Liberia; Forest information critical to decision making study report. World Bank Washington USA	Concession area and protected area	2000	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

4.2.2 Classification and definitions

National class	Definition
N/A	N/A

4.2.3 Original data

- Production areas

a. Concession area

Based on the Current state of the forest cover in Liberia (2004), it is estimated/deducted that the forest concessions cover 3 835 818 ha in 2000-2002.

Then in 2006, all concession agreements were cancelled.

Recently, six (6) Timber Sales Contracts/TSCs, totalling 30 000 ha have been issued pending pre-felling requirements. Also three (3) Forest Management Contracts/FMCs (of 119 240 ha, 57 262 ha and 59 374 ha) have been ratified and signed by the President. Addition to these, four (4) TSCs of 5 000 ha each and four (4) more FMCs are expected to be issued out. Bidding is in process. The FMCs are 266 910 ha, 253 670 ha, 131 466 ha and 119 344 ha which have been added to areas for concession management. All of these are being placed in the projection for 2010.

Since 2010, the total concessions of Forest Management Contract (FMC) is seven (7), totaling 907,236ha and nine(9) Timber Sale Contract (TSC) totaling 45,000ha.

Therefore the following assumptions have been made regarding the concessions for the reporting years.

	1990	2000	2005	2010
Concessions in ha	n/a	3 835 818	3 835 818	1 057 266

b. Plantations

Based on the various sources (Pandey,1998 ; FRA 2000) and expert knowledge, it is assumed that the forest plantation area remains more or less constant with 8 000 ha since 1990.

c. Production areas, is equal to the total of concessions and plantations.

	1990	2000	2005	2010
Production in ha	8 000	3 843 818	3 843 818	1 065 266

- Protected areas

Based on the Current state of the forest cover in Liberia (2004), the following information is provided :

Sapo National Park :	161 647 ha
Nimba Nature Reserve :	13 569 ha
Like Piso Reserve:	23 493 ha
Total :	198 709 ha

In 2005, the Sapo National Park was extended and has an area of 180 363 ha.

(Note: Propositions have been made to increase the protected area in order to reach a total of 1 020 140 ha.)

4.3 Analysis and processing of national data

4.3.1 Adjustment

4.3.2 Estimation and forecasting

4.3.3 Reclassification

- Production = Total forest concessions + Plantations;
 - Protected area (forest) = Conservation of biodiversity.
- In 1990 and 2000, it is equal to 175 216 ha;
- In 2005 and 2010, it is equal to 198 709 ha.
- Remaining area= unknown designation.

4.4 Data

Table 4a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	8	3844	3844	1065	1065
	Multiple use forest	0	0	0	0	0

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	Cam wood	Baphia nitida	500	1
2 nd	Countrt spice	Xylophia staudtti	50	2
3 rd	Better root	Calamus deeratus	10	3
4 th	Honey	Apis mellifera	N/A	1

5 th	Bomboo cane	Bambusa oldhamii	N/A	4
6 th	Palm wine	Raphia spp	10	2
7 th	Charcoal	N/A	700	1
8 th	Deer meat	Antelopes (Duikers)	N/A	2
9 th	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			1270.00	

2010	
Name of local currency	Liberian Dollar

Category
Plant products / raw material
1 Food
2 Fodder
3 Raw material for medicine and aromatic products
4 Raw material for colorants and dyes
5 Raw material for utensils handicrafts construction
6 Ornamental plants
7 Exudates
8 Other plant products
Animal products / raw material
9 Living animals
10 Hides skins and trophies
11 Wild honey and beewax
12 Wild meat
13 Raw material for medicine
14 Raw material for colorants

15 Other edible animal products
16 Other non-edible animal products

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m ³ u.b.)	
	Total wood removals	...of which woodfuel
1990	4580.7	3452.7
1991	4089.8	3342.82
1992	4153.8	3118.81
1993	3815.5	2880.52
1994	3361.5	2732.49
1995	2975.8	2747.82
1996	3115.4	2951.44
1997	3549.8	3326.81
1998	4057.4	3736.36
1999	4717.8	4201.84
2000	5839.4	4725.36
2001	6086.9	4924.93
2002	6677	5132.95
2003	6329.8	5349.79
2004	5905.8	5575.82
2005	6141.4	5811.42
2006	6393.2	6033.2
2007	6623.4	6263.4
2008	6922.5	6502.5
2009	7170.7	6750.68
2010	7488.3	7008.34

2011	7488.3	7008.34
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Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 2	Tier 2
Multiple use forest	Tier 1	Tier 1

Tier Criteria

Category	Tier for status	Tier for reported trend
Production forest Multiple use forest	Tier 3: Updated including field verifications national forest maps including functions Tier 2: Forest maps older than 6 years including forest functions Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	N/A	The trend is due to forest concessions given out in the mid 90s and later reverted after 2005.
Multiple use forest	N/A	N/A
Total wood removals	N/A	There are regulations governing NWFP on domestic markets as well as export
Commercial value of NWFP	N/A	N/A

Other general comments to the table

Production of the forest resources particularly timber products are recorded by SGS an independent contractor.

5. How much forest area is managed for protection of soil and water and ecosystem services?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

5.1 Categories and definitions

Category	Definition
Protection of soil and water	Forest area designated or managed for protection of soil and water
...of which production of clean water (<i>sub-category</i>)	Forest area primarily designated or managed for water production, where most human uses are excluded or heavily modified to protect water quality.
...of which coastal stabilization (<i>sub-category</i>)	Forest area primarily designated or managed for coastal stabilization.
...of which desertification control (<i>sub-category</i>)	Forest area primarily designated or managed for desertification control.
...of which avalanche control (<i>sub-category</i>)	Forest area primarily designated or managed to prevent the development or impact of avalanches on human life assets or infrastructure.
...of which erosion, flood protection or reducing flood risk (<i>sub-category</i>)	Forest area primarily designated or managed for protecting communities or assets from the impacts of erosion riparian floods and landslides or for providing flood plain services.
...of which other (<i>sub-category</i>)	Forest area primarily designated or managed for other protective functions.
Ecosystem services, cultural or spiritual values	Forest area primarily designated or managed for selected ecosystem services or cultural or spiritual values.
...of which public recreation (<i>sub-category</i>)	Forest area designated or managed for public recreation.
...of which carbon storage or sequestration (<i>sub-category</i>)	Forest area designated or managed for carbon storage or sequestration.
...of which spiritual or cultural services (<i>sub-category</i>)	Forest area designated or managed for spiritual or cultural services.
...of which other (<i>sub-category</i>)	Forest area designated or managed for other ecosystem services.

5.2 National data

5.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Pandey, D. 1998. Forest plantation areas 1995. November 1997, revised July 1998	Plantation	2000	Report to the FAO project GCP/INT/628/UK (unpublished).

2	Nicolas BAYOL et Jean-François CHEVALIER.. 2004. Current state of the forest cover in Liberia; Forest information critical to decision making study report. World Bank Washington USA	Concession area and protected area	2000	None
3	ITTO, Status of tropical forest management 2005	PFE	2005	Blaser, J., Sarre, A., Poore, D. & Johnson, S. 2011. Status of tropical forest management 2011. ITTO, Yokohama, Japan.
4	N/A	N/A	N/A	N/A

5.2.2 Classification and definitions

National class	Definition
N/A	N/A

5.2.3 Original data

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5.3 Analysis and processing of national data

5.3.1 Adjustment

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5.3.2 Estimation and forecasting

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5.3.3 Reclassification

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5.4 Data

Table 5a

Categories	Forest area (1000 hectares)
------------	-----------------------------

		1990	2000	2005	2010	2015
CRG	Protection of soil and water	0	0	0	0	0
CRG	... of which production of clean water	0	0	0	0	0
CRG	... of which coastal stabilization	0	0	0	0	0
CRG	... of which desertification control	0	0	0	0	0
CRG	... of which avalanche control	0	0	0	0	0
CRG	... of which erosion, flood protection or reducing flood risk	0	0	0	0	0
CRG	... of which other (please specify in comments below the table)	0	0	0	0	0

Other

5.2.3 that no original data were available. 5.3.2 that no estimation or forecasting were possible. 5.4 that no forest areas are set aside for these purposes.

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	N/A	N/A	N/A	N/A	N/A
...of which public recreation	N/A	N/A	N/A	N/A	N/A
...of which carbon storage or sequestration	N/A	N/A	N/A	N/A	N/A
...of which spiritual or cultural services	N/A	N/A	N/A	N/A	N/A
...of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for reported trend	Tier for status
Protection of soil and water	Tier 1	Tier 1
Ecosystem services, cultural or spiritual values	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
Protection of soil and water	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations or legislation relating to soil and water protection. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Cultural or spiritual values • Public recreation • Spiritual or cultural services • Other 	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

5.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	Not adequately addressed. However, in the code of harvesting practices litter is addressed.	N/A
Production of clean water	N/A	N/A
Coastal stabilization	N/A	N/A
Desertification control	N/A	N/A
Avalanche control	N/A	N/A
Erosion, flood protection or reducing flood risk	N/A	N/A
Other protective functions	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A

Public recreation	N/A	N/A
Carbon storage or sequestration	N/A	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	N/A	N/A

Other general comments to the table

No available data for these sections.

6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

6.1 Categories and definitions

Category	Definition
Conservation of biodiversity	Forest area designated primarily for conservation of biological diversity. Includes but is not limited to areas designated for biodiversity conservation within the protected areas.
Forest area within protected areas	Forest area within formally established protected areas independently of the purpose for which the protected areas were established.

6.2 National data

6.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Pandey, D. 1998. Forest plantation areas 1995. November 1997, revised July 1998	Plantations	2000	Report to the FAO project GCP/INT/628/UK (unpublished).
2	Nicolas BAYOL et Jean-François CHEVALIER.. 2004. Current state of the forest cover in Liberia; Forest information critical to decision making study report. World Bank Washington USA	Concession area and protected area	2000	n/a
3	Expert information	EXPAN	2013	FDA report on community consultations for creation of Gola Peace Park
4	N/A	N/A	N/A	N/A

6.2.2 Classification and definitions

National class	Definition
Production (concession)	Forest set aside for commercial purposes
Protection forest	Forest designated for conservation by law
Conservation	Biodiversity purposes , proposed and by law
N/A	N/A

6.2.3 Original data

6.3 Analysis and processing of national data

6.3.1 Adjustment

6.3.2 Estimation and forecasting

6.3.3 Reclassification

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	175	175	198	198	198
	Forest area within protected areas	175	175	198	198	198

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 2	Tier 2
Forest area within protected areas	Tier 2	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> Conservation of biodiversity Forests within protected areas 	<p>Tier 3: Data obtained from national or state agencies responsible for conservation and protected area or legislation relating to area protection. Tier 2: Studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates Tier 1 Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>

6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	N/A	N/A
Forest area within protected areas	N/A	For the future, there are proposals to increase the area to 1 020 140 ha.

Other general comments to the table

The Government has proposed to set aside 30% of the forest areas for protection and conservation purposes. The new protected areas and parks will be Gola National protected area in Cape Mount County; Grebo Reserve park in River Gee County. Wologizi reserve in Lofa County.

7. What is the area of forest affected by woody invasive species?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

7.1 Categories and definitions

Category	Definition
Invasive species	Species that are non-native to a particular ecosystem and whose introduction and spread cause, or are likely to cause, socio-cultural, economic or environmental harm or harm to human health.

7.2 National data

7.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	www.fda.gov.lr	Forest Protection	2006-2009	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

7.2.2 Classification and definitions

National class	Definition
N/A	N/A

7.2.3 Original data

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7.3 Analysis and processing of national data

7.3.1 Adjustment

--

7.3.2 Estimation and forecasting

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7.3.3 Reclassification

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7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
Leucaena leucocephala	N/A	N/A
Acacia auriculiformis	N/A	N/A
Acacia mangium	N/A	N/A
N/A	N/A	N/A
Total	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 1	Tier 1

Tier Criteria

Category	Tier for status	Tier for reported trend

Invasive species	Tier 3: Systematic assessment in forest inventory or other survey (e.g. by conservation department) within the last 5 years) Tier 2: Systematic assessment in forest inventory or other survey (e.g. by conservation department conducted more than 5 years ago) Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
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7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	Acacias were introduced here in the mid 1980s as plantation species. Following their introduction, many people planted them in the cities for shade. There has not been any survey to determine the acreage	N/A

Other general comments to the table

No survey has been done to determine the hectare of invasive species mentioned above

8. How much forest area is damaged each year?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

8.1 Categories and definitions

Category	Definition
Number of fires	Number of fires per year
Burned area	Area burned per year
Outbreaks of insects	A detectable reduction in forest health caused by a sudden increase in numbers of harmful insects.
Outbreaks of diseases	A detectable reduction in forest health caused by a sudden increase in numbers of harmful pathogens, such as bacteria, fungi, phytoplasma or virus.
Severe weather events	Damage caused severe weather events, such as snow, storm, drought, etc.

8.2 National data

8.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	CI-SDSU (Christie et.al)	Deforestation	2007	N/A
2	World Bank Report	Deforestation	2004	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

8.2.2 Classification and definitions

National class	Definition
N/A	N/A

8.2.3 Original data

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8.3 Analysis and processing of national data

8.3.1 Adjustment

8.3.2 Estimation and forecasting

8.3.3 Reclassification

8.4 Data

Table 8a

Category		000 ha, number of fires									
		2003		2004		2005		2006		2007	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	1.8	N/A	1.48	N/A	0.15	N/A	1.32	N/A	1.36	N/A
	... of which forest area burned	1.46	N/A	0.86	N/A	0.04	N/A	0.31	N/A	0.17	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	1.52	N/A	0.83	N/A	0.13	N/A	1.88	N/A	2.01	N/A
	... of which forest area burned	0.17	N/A	0.17	N/A	0.02	N/A	0.15	N/A	0.31	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	Insects (Army worms)	2009	N/A
N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Outbreak category

1 Insects

2 Diseases

3 Severe weather events

Tiers

Category	Tier for status	Tier for trend
Area affected by fire	Tier 2	Tier 2
<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
Burned area	Tier 3 : National fire monitoring routines Tier 2 : Remote sensing surveys Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	Tier 3 : Systematic survey (e.g. via inventory or aerial damage assessment) Tier 2 : Management records Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
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Burned area	N/A	N/A
Insects	N/A	N/A
Diseases	N/A	N/A
Severe weather events	N/A	N/A

Other general comments to the table

N/A

9. What is the forest area with reduced canopy cover?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

Category	Definition
Reduction in canopy cover	Forest that has undergone a reduction of canopy cover of more than 20% between the years 2000 and 2010 within the forest canopy cover range of 30-80% as detected by the MODIS VCF sensor.

Table 9

Category	Area of forest with reduced canopy cover (000 ha)
Reduction in canopy cover	N/A

Tiers

Category	Tier for reported trend
Reduction in canopy cover	N/A

Tier criteria

Category	Tier for reported trend
Reduction in canopy cover	Tier 3 : Remote sensing with ground truthing and/or Landsat imagery Tier 2 : Remote sensing using Modis (using pre-filled data provided by FAO) Tier 1 : Expert opinion

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	N/A

Other general comments

--

10. What forest policy and regulatory framework exists to support implementation of sustainable forest management SFM?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

10.1 Categories and definitions

Category	Definition
Policies supporting sustainable forest management	Policies or strategies that explicitly encourage sustainable forest management.
Legislation and regulations supporting sustainable forest management	Legislation and regulations that govern and guide sustainable forest management, operations and use.

10.2 National data

10.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	www.fda.gov.lr	Forest Law and Regulations	2006	National Policy, laws and regulations
2	National Forestry Reform Law	Forest Law	2006	N/A
3	Community Rights Law with Respect to Forestland	SFM	2009	N/A
4	N/A	N/A	N/A	N/A

10.2.2 Classification and definitions

National class	Definition
N/A	N/A

10.2.3 Original data

--

10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management	yes	yes	yes	yes
... of which, in <u>publicly</u> owned forests	yes	yes	yes	yes
... of which, in <u>privately</u> owned forests	yes	yes	yes	yes
Legislation and regulations supporting sustainable forest management	yes	yes	yes	yes
... of which, in <u>publicly</u> owned forests	yes	yes	yes	yes
... of which, in <u>privately</u> owned forests	yes	yes	yes	yes

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	Forest area under sustainable forest management in the future. FDA expects to reach 1.6 million hectares under Sustainable Forest Management.
Legislation and regulations supporting sustainable forest management	Promulation of additional relevant regulation/instruments to promote mainstreaming of SFM.

Other general comments

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11. Is there a national platform that promotes stakeholder participation in forest policy development?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

11.1 Categories and definitions

Category	Definition
National stakeholder platform	A recognized procedure that a broad range of stakeholders can use to provide opinions, suggestions, analysis, recommendations and other input into the development of national forest policy.

11.2 National data

11.2.1 Data sources

	References to sources of information	Years	Additional comments
1	National Forestry Reform Law	2006	N/A
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	N/A	N/A	N/A

Table 11

Is there a national platform that promotes or allows for stakeholder participation in forest policy development?	yes
--	-----

11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	National Forestry Reform Law 2006; Community Rights Law with Respect to Forest Lands Ten Code Regulations and Policies and regulations applied for stakeholders. participation to ensure Sustainable Forest Management

Other general comments

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12. What is the forest area intended to be in permanent forest land use and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

12.1 Categories and definitions

Category	Definition
Forest area intended to be in permanent forest land use	Forest area that is designated or expected to be retained as forest and is highly unlikely to be converted to other land use.
...of which permanent forest estate (<i>sub-category</i>)	Forest area that is designated by law or regulation to be retained as forest and may not be converted to other land use.

12.2 National data

12.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	ITTO, Status of tropical forest management 2005	PFE	2005	n/a
2	www.fda.gov.lr	Forest law and regulations	2006 - 2009	Policies, laws and regulations
3	www.itto.int/technical_report	Status of tropical forest management	2011	Blaser, J., Sarre, A., Poore, D. & Johnson
4	n/a	n/a	n/a	n/a

12.2.2 Classification and definitions

National class	Definition
n/a	n/a

12.2.3 Original data

- <u>PFE and management plans</u>

Based on the ITTO, Status of tropical forest management (2005), it is indicated that Liberia has a Permanent Forest Estate of 1 411 000 ha.

12.3 Analysis and processing of national data

12.3.1 Adjustment

12.3.2 Estimation and forecasting

12.3.3 Reclassification

Regarding the PFE , it is considered that the area remains constant for the reporting years.

12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	
	... of which permanent forest estate	2720

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 1
Permanent forest estate	Tier 2

Tier Criteria

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other
Permanent forest estate	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other

12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	Still under study
Permanent forest estate	Been indicated

Other general comments

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13. How does your country measure and report progress towards SFM at the national level?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

13.1 Categories and definitions

Category	Definition
Forest area monitored under a national forest monitoring framework	Forest area monitored by a national monitoring framework or systems that provide measurement based periodic monitoring of forest extent and quality.
Forest reporting at national scale	National reporting of forest extent and characteristics that includes some measure of progress toward sustainable forest management.

13.2 National data

13.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	www.fda.gov.lr	Report system	2010	FDA report system
2	ITTO	Report system	2010	FDA report system
3	FAO/FRA	Report system	2010	FDA report system
4	n/a	n/a	n/a	n/a

13.2.2 Classification and definitions

National class	Definition
n/a	n/a

13.3 Data

Table 13a

Category	% of total forest area	Most recent year	Check all boxes that apply					
			Continuous	Periodic	Permanent ground plots	Temporary ground plots	Aerial/remote sensing sample based	Aerial/remote sensing full coverage
Forest inventory	N/A	n/a	no	no	yes	yes	yes	yes
Other field assessments	N/A	n/a	yes	yes	yes	yes	yes	yes
Updates to other sources	N/A	n/a	no	yes				
Expert estimate	N/A	n/a						

Table 13b

Type of forest reporting used at national scale	Check boxes that apply
1 Criteria and Indicators reporting	yes
2 Periodic national state of the forest report	yes
3 Other (please document)	yes
4 None	no

Other type of forest reporting

report system is done from data collected from the field by officers of the Chain of Custody or SGS officers

13.4 Comments

Category	Comments
n/a	n/a
n/a	n/a
n/a	n/a

Other general comments

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14. What is the area of forest under a forest management plan and how is this monitored?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

14.1 Categories and definitions

Category	Definition
Forest area with management plan	Forest area that has a long-term documented management plan, aiming at defined management goals which is periodically revised
...of which for production (<i>sub-category</i>)	Forest management plan mainly focused on production
...of which for conservation (<i>sub-category</i>)	Forest management plan mainly focused on conservation
Monitoring of forest management plans	Government monitoring of forest management plan implementation conducted through field visits or audits of forest management plan performance

14.2 National data

14.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	ITTO, Status of tropical forest management	PFE	2011	n/a
2	National Forest Management Strategy	SFM	2007	n/a
3	Code of Forest Harvesting Practices	SFM	2007	n/a
4	n/a	n/a	n/a	n/a

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	445
... of which for production	265
... of which for conservation	180

Table 14b

Indicate which (if any) of the following are required in forest management plans in your country	
1 Soil and water management	yes

2 High conservation value forest delineation	yes
3 Social considerations community involvement	yes

Table 14c

Percent of area under forest management plan that is monitored annually	100
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Tiers

Category	Tier for status
Forest area with management plan	Tier 1
Percent of area under forest management plan that is monitored annually	Tier 1

Tier criteria

Category	Tier for status
Forest area with management plan	Tier 3 : Reports that describe national records 5 years old or less that contain long-term forest monitoring plans Tier 2 : Industry or other records indicating the presence of a long-term forest management plan Tier 1 : Other
Percent of area under forest management plan that is monitored annually	Tier 3 : Government documentation of monitoring extent Tier 2 : Reports from forest managers or other documental sources Tier 1 : Other

14.4 Comments

Category	Comments
Forest area with management plan	Forest Management Plans are parts of requirements for obtaining contractual agreement with the government. Prospective holders are required to present these documents prior to bidding. First is Strategic Forest Management Plan for 25 years, Forest Management Plan for 5 years and Annual Operational. Plan. The Plans are scrutinized and accepted for prequalification. In addition, Forest Management Plan is a requirement under the National Forestry Reform Law of 2006. It is a pre-condition of a company being pre-qualified.
N/A	N/A
N/A	N/A

Other general comments

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15. How are stakeholders involved in the management decision making for publicly owned forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

15.1 Categories and definitions

Category	Definition
Stakeholder involvement	Stakeholder involvement is defined as significant inputs into at least one aspect of forest management at the operational scale

Table 15

Please indicate the type of stakeholder involvement in forest management decision making required in your country	
1. Planning phase	yes
2. Operations phase	yes
3. Review of operations	yes

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 2

Tier criteria

Category	Tier for status
Type of stakeholder inputs	Tier 3 : Government (national or sub-national) documentation of stakeholder inputs Tier 2 : Government (national or subnational) requirement but stakeholder inputs not documented Tier 1 : Other

15.2 Comments

Category	Comments
n/a	n/a
n/a	n/a
n/a	n/a

Other general comments

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16. What is the area of forest under an independently verified forest certification scheme?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

16.1 Categories and definitions

Category	Definition
FSC certification	Forest area certified under the Forest Stewardship Council certification scheme
PEFC certification	Forest area certified under the Programme for the Endorsement of Forest Certification scheme
Other international forest management certification	Forest area certified under an international forest management certification scheme with published standards and is independently verified by a third-party, excluding FSC and PEFC certification.
Certified forest area using a domestic forest management certification scheme	Area certified under a forest management certification scheme with published standards that are nationally recognized and independently verified by a thirdparty

16.2 Data

Table 16a

International forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	FSC	0	0	0	0	0	0	0
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	0	0	0	0	0	0	
	PEFC	0	0	0	0	0	0	
	Other	0	0	0	0	0	0	

Table 16b

Domestic forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	n/a	0	0	0	0	0	0	0
	n/a	0	0	0	0	0	0	0
	n/a	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
	n/a	0	0	0	0	0	0	
	n/a	0	0	0	0	0	0	
	n/a	0	0	0	0	0	0	

Tier criteria

Category	Tier for status
International forest management certification	Tier 3: International forest management scheme records maintained by the certifying organization for the reporting year Tier 2: International forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other
Domestic forest management certification	Tier 3: National registry reports for domestic forest management certification maintained by the certifying organization for the reporting year Tier 2: Domestic forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other

Tiers

Category	Tier for status
International forest management certification	Tier 3
Domestic forest management certification	Tier 1

16.3 Comments

Category	Comments related to data definitions etc
Certified forest area using an international forest management certification scheme	n/a
Domestic forest management certification	No domestic forest management certification scheme.

Other general comments

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17. How much money do governments collect from and spend on forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

17.1 Categories and definitions

Category	Definition
Forest revenue	All government revenue collected from the domestic production and trade of forest products and services. For this purpose revenue include: <ul style="list-style-type: none"> • <u>Goods</u> : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products. • <u>Services</u> : including concession fees and royalties, stumpage payments, public timber sales revenue taxes and charges based on forest area or yield, taxes on domestic trade and export of forest products, special levies on forestry activities and payments into forest related funds, other miscellaneous inspection, licence and administrative fees levied by forest administrations, permit and licence fees for recreation and other forest related activities.
Public expenditure on forestry	All government expenditure on forest related activities.

17.2 National data

17.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	FDA annual reports	Revenue (2000), Expenditures (2005)	2012	N/A
2	Central Bank Report	Revenue Expenditure	2012	N/A
3	Ministry of Finance	Budget	2011-2012	N/A
4	N/A	N/A	N/A	N/A

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	891391	N/A	267136
Public expenditure on forestry	N/A	34800	N/A

	2000	2005	2010
Name of Local Currency	Liberian Dollar	N/A	N/A

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	In 2000, the FDA Management reported generating revenue of about 20 Million United States Dollars. Rate to the US\$ was 43 L\$ to 1 US\$.
Public expenditure on forestry	N/A
Other general comments	N/A

Other general comments

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18. Who owns and manages the forests and how has this changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

18.1 Categories and definitions

Category	Definition
Public ownership	Forest owned by the State or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at national scale (<i>sub-category</i>)	Forest owned by the State at the national scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at the sub-national government scale (<i>sub-category</i>)	Forest owned by the State at the sub-national government scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
Private ownership	Forest owned by individuals, families, communities, private cooperatives corporations and other business entities, private, religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.
...of which individuals (<i>sub-category</i>)	Forest owned by individuals and families.
...of which private business entities and institutions (<i>sub-category</i>)	Forest owned by private corporations cooperatives companies and other business entities as well as private nonprofit organizations such as NGOs nature conservation associations, and private religious and educational institutions etc.
...of which local tribal and indigenous communities (<i>sub-category</i>)	Forest owned by a group of individuals belonging to the same community residing within or in the vicinity of a forest area or forest owned by communities of indigenous or tribal people The community members are coowners that share exclusive rights and duties and benefits contribute to the community development.
Unknown ownership	Forest area where ownership is unknown includes areas where ownership is unclear or disputed.
Categories related to management rights of public forests	Definition
Public Administration	The Public Administration (or institutions or corporations owned by the Public Administration) retains management rights and responsibilities within the limits specified by the legislation.
Individuals households	Forest management rights and responsibilities are transferred from the Public Administration to individuals or households through long-term leases or management agreements.
Private companies	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities private cooperatives, private nonprofit institutions and associations, etc., through long-term leases or management agreements.
Communities	Forest management rights and responsibilities are transferred from the Public Administration to local communities (including indigenous and tribal communities) through long-term leases or management agreements.
Other form of management rights	Forests for which the transfer of management rights does not belong to any of the categories mentioned above.

18.2 National data

18.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	New National Forestry Reform Law of Liberia (2006) Executive Order # 1 www.fda.gov.lr	Ownership	2006	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

18.2.2 Classification and definitions

National class	Definition
N/A	N/A

18.2.3 Original data

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18.3 Analysis and processing of national data

18.3.1 Adjustment

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18.3.2 Estimation and forecasting

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18.3.3 Reclassification

--

18.4 Data

Table 18a

Categories	Forest area (1000 hectares)
------------	-----------------------------

		1990	2000	2005	2010
	Public ownership	4929	4629	4479	4329
	... of which owned by the state at national scale	0	0	N/A	0
	... of which owned by the state at the sub-national government scale	0	0	0	0
	Private ownership	0	0	0	0
	... of which owned by individuals	0	0	0	0
	... of which owned by private business entities and institutions	0	0	0	0
	... of which owned by local, tribal and indigenous communities	0	0	0	0
	Unknown ownership	0	0	0	0
TOTAL		4929.00	4629.00	4479.00	4329.00

Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 2	Tier 2
Private ownership	Tier 1	Tier 1
Unknown ownership	Tier 1	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
Ownership	Tier 3: National forestry statistics registers of land titles or maps on land ownership or all forest area under one ownership category that is five years old or less. Tier 2: National forestry statistics registers of land titles or maps on land ownership or questionnaires that are more than five years old. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)
------------	----------------------------

	1990	2000	2005	2010
Public Administration	4929	4629	4479	4329
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	4929.00	4629.00	4479.00	4329.00

Category	Tier for reported trend	Tier for status
Public Administration	Tier 2	Tier 2
Individuals	N/A	N/A
Private companies	N/A	N/A
Communities	N/A	N/A
Other	N/A	N/A

18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	The New National Reform Forestry Law of Liberia states that all forest resources are held in trust by the Republic of Liberia for the benefit of the people. Except forest resources located in communal forests and forest resources that have been developed on private or deeded lands through artificial regeneration. Meanwhile all forests are public pending the resolution of the land ownership issue	N/A
Private ownership	The Government is still in the process of addressing ownerships of forests	N/A
Unknown ownership	Communal is a type of ownership but no surveys have been conducted to determine acreages nation-wide. However, every community or tribe have small patches of forest for their use.	N/A

Management rights	According to the New National Forestry Reform Law of Liberia, 2006, Forest Resources Licenses are issued to persons/organizations to extract Forest Resources or make other productive and sustainable use of forest land. Includes without limitation: They include Forest Management Contracts, Timber Sales Contracts, Forest Use Permits and Private Use Permits.	N/A
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Other general comments to the table

All concession agreements were cancelled in 2006. Inventory and Socio-economic surveys are ongoing to issue out contracts. Already, six (6) Timber Sales Contracts, totalling 30 000 ha have been issued pending pre-felling requirements. Also three (3) Forest Management Contracts of 119 240 ha, 57 262 ha and 59 374 ha have been signed by the President pending ratification of the Legislature. Additionally, there are nine (9) Timber Sales Contracts (TSC) and seven (7) Forest Management Contracts (FMC).

19. How many people are directly employed in forestry?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

19.1 Categories and definitions

Category	Definition
Full-time equivalents (FTE)	A measurement equal to one person working full-time during a specified reference period.
Employment in forestry	Employment in activities related to production of goods derived from forests. This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

19.2 National data

19.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Contribution of the forest sector to national economies 1990-2006 (FAO, 2008)	Employment in primary production of goods	1990, 2000, and 2005	n/a
2	n/a	n/a	n/a	n/a
3	n/a	n/a	n/a	n/a
4	n/a	n/a	n/a	n/a

19.2.2 Classification and definitions

National class	Definition
n/a	n/a

19.2.3 Original data

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19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	4.7	3.8	1.7	10.4
	... of which female	N/A	N/A	N/A	0.2

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	Refers to Paid employment only	Employment tool a major drive as reform process placed new regulations on commercial forestry.

Other general comments to the table

Public and private employment in the forestry sector. Sources: FDA Human Resource database

20. What is the contribution of forestry to Gross Domestic Product (GDP)?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

20.1 Categories and definitions

Category	Definition
Gross value added from forestry (at basic prices)	This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

20.2 Data

Table 20 (Pre-filled data from UNdata/EUROSTAT)

Category	Million	Currency	Year for latest available information
Gross value added from forestry (at basic prices)	144.1	US dollar	2011

20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices) Data sources: Central Bank of Liberia, and the Ministry of Finance	2010-2012

Other general comments

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21. What is forest area likely to be in the future

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

21.1 Categories and definitions

Category	Definition
Government target/aspiration for forest area	Government target/aspiration for forest area for a specific year.
Forests earmarked for conversion	Forest area that is allocated/classified or scheduled to be converted into non-forest uses.

21.2 National data

21.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Management Strategy.	SFM	2007	Sustainable management for the future.
2	Code of Forest Harvesting	SFM	2007	N/A
3	Community Rights Law	Community forestry	2009	n/a
4	National Forestry Reform Law	SFM	2006	Scientific harvesting method

21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	N/A	N/A

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	50

21.4 Comments

Category	Comments
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Government target/aspiration for forest area	study still on going.
Forests earmarked for conversion	Protected areas and conservation

Other general comments

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