

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Sierra Leone

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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N/A	N/A	N/A	N/A
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Introductory Text

The Republic of Sierra Leone lies between latitude 7 ° and 10 ° N and longitudes 10 ° and 14 ° W on the west coast of Africa, covering an area of 71,740 Sq Km. It is bounded on the north and east by Guinea, on the south-east by Liberia and on the south –west and west by the Atlantic Ocean.

The climate is tropical, showing distinct dry and rainy seasons. The rainy season extends from May to November, with precipitation ranging from 2,000 mm in the north to more than 5,000 mm along the coast.

Sierra Leone is moderately forested with 14.7% forest cover, and a further 61.1% of land classified as other wooded land. Sierra Leones’s closed forests comprise both evergreen and semi-deciduous rainforest, swamp forests, mangroves, and significant areas of secondary forest and regenerating “farm bush”. The National Biodiversity Strategy Action Plan assessment identified lowland rainforest, savannah, montane, wetlands and mangroves as the principle ecosystems.

The last national forest inventory took place in 1975, and those figures have not been updated since through conducting another inventory. However, increase in forest resources was observed to have commenced at the end of civil conflict in 2002. Forest resources were highly exploited during the course of the 10 year civil conflict in Sierra Leone. Forests were cut down to provide income for the most vulnerable in society and also to provide space for the erection of refugee camps that dotted the length and breadth of the country.

After the war the Forestry Division embarked on a massive tree planting drive in order to make up for forest lost in the preceding years.

The devolvement of national forest management to the district councils have also helped increase forest plantation establishment at district level. Data from the Forestry Division of the Ministry of Agriculture, Forestry and Food Security on areas planted with trees, indicate there will be a slight increase in the overall forest cover by 2015 compared to the 2010 level.

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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
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1	Laumans Paul A. 1996. Review of Existing Sources of information for Forest Resource Assessment in Sierra Leone. Working Document No. X (FO:DP/SIL/92/006). FAO, Rome.	Vegetation types	1976, 1986	N/A
2	United Nations Development Programme. 2003. Biodiversity Status and Trends in Sierra Leone	N/A	1988	Data varied very little with the 1986 data
3	Forestry Division	Plantations	1990, 2000, 2005 and 2010	N/A
4	Ministry of Agriculture, Forestry and Food Security; Ministry of Fisheries and Marine Resources. June 2004. Agriculture Sector Review and Agriculture Development Strategy. Volume III. Sector Report: Forestry and Wildlife	N/A	N/A	N/A
5	Iles, Moray et al. 1993. Gola Forest Reserve Sierra Leone. Interim Management Plan	N/A	N/A	N/A
6	The 2015 data for forest area was derived at through expert estimation after taking certain factors into consideration. Firstly, since 2002 at the end of the decade old civil war, the Forestry Division had made great strides in restoring forest cover removed during the war through uncontrolled fuel wood and timber harvesting, forest clearing for the erection of internally displaced peoples (IDP) camps. Secondly, government is currently implementing a project to establish extensive plantations of rubber in the country which is being undertaken by the Chinese. It is therefore estimated that by 2015 the forest area would have increased by about 300,000 hectares of the 2010 forest area	Forest area	2013	N/A
7	N/A	Other Forest Area	N/A	N/A

1.2.2 Classification and definitions

National class	Definition
Closed High Forest	Continuous tree formation of natural origin with canopy coverage more than 40%
Coastal tree savanna	Coastal tree savanna
Coastal woodland	Scrub, shrub and brushland
Ex-Mangrove swamp	Ex-Mangrove swamp
Forest Regrowth	Forest regenerating after it has been cleared
Fringing swamp forest	Forest fringing swamp
Lophira tree savanna	A savanna ecosystem dominated by <i>Lophira lanceolata</i> species
Mixed tree savanna	A savanna ecosystem with mixed tree species
Montane grassland	Montane grassland
Oil Palm plantations	Artificial plantation of <i>Elaeis guineensis</i>
Raphia swamp forest	Swamp dominated by <i>Raphia</i> sp.
Rock outcrop	Rock outcrop
Rubber plantation	Artificial plantation of <i>Hevea brasiliensis</i>
Savanna woodland	Scrub, shrub and brushland
Secondary Forest	Continuous tree formation of natural origin with canopy coverage between 30 and 40%
Swamp and riverine grassland	Swamp and riverine grassland
Swamp cultivation	Swamp cultivated for rice
Upland crops	Upland crops
Upland grassland	Upland grassland

1.2.3 Original data

Forest area		
	Area (ha)	
National Class	1976	1986

Closed High Forest	361 875	254 965
Coastal tree savanna	54 103	11 589
Coastal woodland	49 644	49 923
Ex-Mangrove swamp	0	28 627
Forest Regrowth	3 740 038	3 872 318
Fringing swamp forest	28 538	25 259
Lophira tree savanna	262 191	82 413
Mangrove	171 600	156 500
Mixed tree savanna	732 000	703 500
Montane grassland	4 000	2 900
Oil Palm plantations	6 300	7 200
Raphia swamp forest	35 500	35 000
Rock outcrop	50 000	60 300
Rubber plantation	2 100	1 700
Savanna woodland	622 600	540 500
SecondaryForest	261 000	205 600
Swamp and riverain grassland	181 900	138 600
Swamp cultivation	202 044	216 136
Upland crops	162 507	638 630
Upland grassland	252 877	147 392
Total	7 227 800	7 230 400

Forest expansion, reforestation

	ForestPlantation			...of which of introduced species ¹⁾			
	(in hectares)			(in hectares)			
	1990	2000	2005	1990	2000	2005	

Afforestation	6675	7853	11218	6007	7067	10096	
Reforestation	2669	3141	4487	2403	2827	4038	
...of which on areas previously planted	2669	3141	4487	2403	2827	4038	

1.3 Analysis and processing of national data

1.3.1 Adjustment

Forest area		
	Area	
UN Total area (ha)	7174000	
Land Area (ha)	7162000	
Inland Water (ha)	12000	
Calibration factor for 1976	0.990896	
Calibration factor for 1986	0.990540	
The resulting data now become:		
	Calibrated area	
National class	1976	1986
Closed High Forest	361875	254965
Coastal tree savanna	54103	11589
Coastal woodland	49644	49923
Ex-Mangrove swamp	0	28627
ForestRegrowth	3740039	3872318

Fringing swamp forest	28538	25259
Lophira tree savanna	262191	82413
Mangrove	170038	155020
Mixed tree savanna	725336	696845
Montane grassland	3964	2873
Oil Palm plantations	6243	7132
Raphia swamp forest	35177	34669
Rock outcrop	49545	59730
Rubber plantation	2081	1684
Savanna woodland	616932	535387
SecondaryForest	258624	203655
Swamp and riverine grassland	180244	137289
Swamp cultivation	202044	216136
Upland crops	162507	639096
Upland grassland	252875	147390
Total	7 162 000	7 162 000

1.3.2 Estimation and forecasting

Forest area		
The result of this reclassification gives the following:		
National class	1976	1986
A. ForestLand		
Closed High Forest	361875	254965
Coastal woodland	49644	49923
ForestRegrowth (50%)	1870019	1936159

Fringing swamp forest	28538	25259
Mangrove	170038	155020
Raphia swamp forest	35177	34669
Rubber plantation	2081	1684
Savannah woodland	616932	535387
SecondaryForest	258624	203655
ForestLandTotal	3392928	3196720
B. Other Wooded Land		
Coastal tree savannah	54103	11589
Lophira tree savannah	262191	82413
Mixed tree savannah	725336	696845
Other Wooded Land Total	1041630	790847
C. Other Land		
Ex-Mangrove swamp	0	28627
ForestRegrowth (50%)	1870019	1936159
Montane grassland	3964	2 873
Rock outcrop	49545	59730
Swamp and riverine grassland	180244	137289
Swamp cultivation	202044	216136
Upland crops	162507	639096
Upland grassland	252877	147392
Other Land with Tree Cover (Oil Palm plantations)	6243	7132
Other Land Total	2727444	3174433

Grand Total	7162000	7162000
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Then linear extrapolation has been done for 1990, 2000, 2005 and 2010

FRA Categories	Area (hectares)					
	1976	1986	1990	2000	2005	2010
Forest	3392928	3196720	3118237	2922029	2823925	2725821
Other wooded land	1041630	790847	690534	439751	314359	188968
Other land	2727444	3174433	3353229	3800220	4023716	4247211
...of which with tree cover ¹⁾	6243	7132	7488	8377	8821	9266
Inland water bodies	12000	12000	12000	12000	12000	12000
TOTAL	7174000	7174000	7174000	7174000	7174000	7174000

Forest expansion, reforestation

Between 1990 and 2000, it could be assumed that the planting efforts were mainly done at the beginning of the 90s with an annual forest establishment:

- for the afforestation:

of about 118 ha/y (= (7853 - 6675)/10),

of which of introduced species: 106 ha/y (= (7067 - 6007)/10);

- for the reforestation

of about 47 ha/y (= (3141 - 2669)/10),

of which of introduced species: 42 ha/y (= (2827 - 2403)/10).

Then, planting came close to nil in 2000 due to unrest situation.

With the peace process in place, plantation activities re-increase and could estimate in 2005:

- for the afforestation:

about 673 ha/y (= (11218 - 7853)/5),

of which of introduced species: 606 ha/y (= (10096 - 7067)/5);

- for the reforestation

about 269 ha/y (= (4487 - 3141)/5),

of which of introduced species: 242 ha/y (= (4038 - 2827)/5).

1.3.3 Reclassification



Forest area				
National class	Forest	Other Wooded land	Other Land	Other Land with tree cover
Closed High Forest	100%			
Coastal tree savanna		100%		
Coastal woodland	100%			
Ex-Mangrove swamp			100%	
Forest Regrowth	50%		50%	
Fringing swamp forest	100%			
Lophira tree savanna		100%		
Mangrove	100%			
Mixed tree savanna		100%		

Montane grassland			100%	
Oil Palm plantations			100%	100%
Raphia swamp forest	100%			
Rock outcrop			100%	
Rubber plantation	100%			
Savanna woodland	100%			
Secondary Forest	100%			
Swamp and riverine grassland			100%	
Swamp cultivation			100%	
Upland crops			100%	
Upland grassland			100%	

Forest regrowth (areas of forest fallow) has been classified as 50% forest and 50% other land assuming that these are small patches within the forest of which half are reverting to forests and the other half are likely to still have agriculture as the main use.

1.4 Data

Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	3118	2922	2824	2726	3044
	Other wooded land	691	440	314	189	200











	Other land	3353	3800	4024	4247	3918
	... of which with tree cover	7	8	9	9	15
	Inland water bodies	12	12	12	12	12
	TOTAL	7174.00	7174.00	7174.00	7174.00	7174.00

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	0.118	0	0.673	N/A	0.106	0	0.606	0.771
	... of which natural expansion of forest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Deforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which human induced	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reforestation	0.047	0	0.269	0.343	N/A	N/A	N/A	N/A
	... of which artificial	0.047	0	0.269	0.343	0.042	0	0.242	0.307

Tiers

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

Tier criteria

Category	Tier for status	Tier for reported trend
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<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 Tier 2 : Data sources: Full cover mapping / remote sensing or old NFI (more than 10 years ago) 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>
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1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	Increase in the area covered by forest started at the end of civil conflict in 2002. Forests and forest resources were highly exploited during the course of the 10 year (1990-2000) civil conflict in Sierra Leone. Forests were cut down to provide income for the most vulnerable in society and also to provide space for the erection of refugee camps that dotted the length and breadth of the country. After the war the Forestry Division embarked on a massive tree planting drive in order to make up for forest lost in the preceding years.	N/A
Other wooded land	Area under savannah ecosystem are foreseen to increase due to desertification that is creeping from north to south	N/A
Other land	The land under this category is being used for much of the afforestation after the war	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	N/A	N/A
Forest expansion	The figure for afforestation was obtained from Forestry Division records, which were derived from the annual national tree planting drive, especially those that are supervised and monitored by the District Forestry Officers throughout the country. This figure does not include trees planted by individuals on farms and fallow lands.	N/A
Deforestation	N/A	N/A
Reforestation	Many restoration efforts have been made to reforest degraded forest lands particularly around the capital city and other big towns as a way of controlling soil erosion and protecting water sources.	N/A

Other general comments to the table

The source is a review of existing and available information on the size of various land categories based on remote sensing imagery and maps. It gives no data on non-rubber forest plantations. This may be due to the fact the plantation sizes are too small to provide an independent segregation from the above-mentioned maps, but also because most plantations were established after 1984, when an FAO forestry project supported the establishment of plantations and woodlots. The forest area is larger than reported in FRA 2005 and the area of other wooded land considerably smaller because 50 percent of the national class “forest regrowth” has been classified as “forest” in the 2010 classification. In the FRA 2005 classification it was all classified as “Forest fallow”, which was then classified as “Other wooded land”.

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 <i>outside</i> 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	Forestry Division records	Forest characteristics	N/A	N/A
2	Laumans Paul A. 1996. Review of Existing Sources of information for Forest Resource Assessment in Sierra Leone. Working Document No. X (FO:DP/SIL/92/006). FAO, Rome	Rubber	N/A	N/A

3	FAO. 2007 The world's mangroves 1980-2005	Mangroves	1980 - 2005	N/A
4	Iles, Moray et al. 1993. Gola Forest Reserves Sierra Leone. Interim Management Plan	Annual timber increment	1993	N/A

2.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

2.2.3 Original data

Combining the information from the Forestry Division records and the expert knowledge, figures (below) of primary forest and plantations (see Question 1) have been estimated.

2.3 Analysis and processing of national data



2.3.1 Adjustment

2.3.2 Estimation and forecasting

2.3.3 Reclassification

2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	224	157	133	113	85.2
	Other naturally regenerated forest	2887.3	2757.1	2679.8	2598.5	2526.1





	... 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	6.7	7.9	11.2	14.5	16.4
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
TOTAL		3118.00	2922.00	2824.00	2726.00	2627.70

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

Table 2c

Categories	Area (000 hectares)				
	1990	2000	2005	2010	2015
Mangroves (forest and OWL)	145	105	100	95	83
... of which planted	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 3	Tier 3
Other naturally regenerated forest	Tier 1	Tier 1
Planted forest	Tier 1	Tier 1
Mangroves	Tier 3	Tier 3

Tier Criteria

Category	Tier for status	Tier for reported trend
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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>
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2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	Data obtained from Forestry Division records. Our forest reserves are made up of primary forest and secondary forest. The former has had no human disturbance, while the latter has been selectively logged.	N/A
Other naturally regenerating forest	Data derived from Forestry Division records.	N/A
Planted forest	The figure for planted forest is given under afforestation in original data of Question 1.	For 2010, it is assumed that the increase of planting activities will follow the trend of 2000-2005.
Mangroves	N/A	N/A

Other general comments to the table

N/A

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	Data for 2015 is derived from extrapolation of data from previous years	N/A	N/A	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

3.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

3.2.3 Original data

Growing stock				
Data from Question 1				
	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	3 118	2 922	2 824	2 726
Other wooded land	691	440	314	189

Biomass stock	
From data on growing stock.	

Carbon stock	
From question 1 and from data on biomass stock.	

3.3 Analysis and processing of national data

3.3.1 Adjustment

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3.3.2 Estimation and forecasting

Growing stock

Based on the expert knowledge, timber stocking for closed forests varies between 35 – 50 m³/ha (this is mainly for timber trees with 120 cm girth and above). It has been decided to select an average of 40 m³/ha for the forest GS.

The figure for OWL varies between 15 – 25 m³/ha depending on the type of savannah forest. It has been decided to select an average of 15 m³/ha for the OWL GS (considering the degradation that OWL faces).

Biomass stock

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

AGB = GS*BCEFs Where:

- GS - Taken from Table 6
- BCEFs = 3.4 (based on 2006 IPCC guidelines values for natural forests, humid tropical ; BCEFs, upper limit due to GS only from 40 cm and up).

BGB = AGB*R

R = 0.24 (based on 2006 IPCC guidelines values)

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.

3.3.3 Reclassification

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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	124.72	116.88	112.96	109.04	120.54	10.37	6.6	4.71	2.84	6.84
	... 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 utilis</i>	Utile	N/A	N/A	N/A	N/A
3 rd	<i>Piptadeniastrum africanum</i>	Dahoma	N/A	N/A	N/A	N/A
4 th	<i>Terminalia ivorensis</i>	Idigbo	N/A	N/A	N/A	N/A
5 th	<i>Tieghemella heckelii</i>	Makore	N/A	N/A	N/A	N/A
6 th	<i>Chlorophora regia</i>	Iroko	N/A	N/A	N/A	N/A
7 th	<i>Lovoa trichilioides</i>	African Walnut	N/A	N/A	N/A	N/A
8 th	<i>Brachystegia leonensis</i>	Okwen	N/A	N/A	N/A	N/A
9 th	<i>Pycnanthus angolensis</i>	Ilomba	N/A	N/A	N/A	N/A

10 th	Mitragyna stipulosa	Abura	N/A	N/A	N/A	N/A
Remaining			N/A	N/A	N/A	N/A
TOTAL			.00	.00	.00	.00

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)	40	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	-	N/A
Minimum diameter (cm) of branches included in growing stock (W)	-	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
	Net annual increment	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A
	... 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
	Above ground biomass	424.05	397.39	384.06	370.74	357.44	35.26	22.44	16.01	9.66	3.26










	Below ground biomass	101.77	95.37	92.18	88.98	85.79	8.46	5.39	3.84	2.32	0.77
	Dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		525.82	492.76	476.24	459.72	443.23	43.72	27.83	19.85	11.98	4.03

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	199.3	186.77	180.51	174.25	168	16.57	10.55	7.53	4.54	1.53
	Carbon in below ground biomass	47.83	44.83	43.32	41.82	40.32	3.98	2.53	1.81	1.09	0.76
	<i>Subtotal Living biomass</i>	247.13	231.6	223.83	216.07	208.32	20.55	13.08	9.34	5.63	2.29
	Carbon in dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Carbon in litter	6.55	6.14	5.93	5.73	5.53	1.45	0.93	0.66	0.4	0.14
	<i>Subtotal Dead wood and litter</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Soil carbon	146.55	137.33	132.73	128.12	143.07	32.48	20.68	14.76	8.88	2.98
TOTAL		400.23	375.07	362.49	349.92	356.92	54.48	34.69	24.76	14.91	5.41

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 1	Tier 1
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	Growing stock is directly related to standing forest. The trend therefore follows the area that is covered by forest	N/A
Growing stock of broadleaved coniferous	N/A	N/A

Growing stock composition	The growing stock composition is predominantly tropical hardwood species and less than 1% exotics	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

N/A

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	N/A	N/A	N/A	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

4.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A

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

4.2.3 Original data

Combining information from the Forestry Division records and the expert knowledge, data could be summarized as follows:

- Total area of Forest Reserve (permanent forest estate) = 285 000 ha, with about 240 000 ha for production.
- Protected areas
 - 1st protected area (Tiwai Island), community game sanctuary, constituted in 1987 = 1 200 ha
 - 2nd protected area (Outamba Kilimi National Park) established in 1995 = 110 900 ha
 - 3rd Gola Forest Reserve, proclaimed a National Park in 2012 (75 000 ha), under sustainable management with a management plan.
 - 4th Loma Mountains National Park (33,200 ha) proclaimed a National Park in 2013
-

4.3 Analysis and processing of national data

4.3.1 Adjustment

4.3.2 Estimation and forecasting

Above original data above were used for all 4 reporting years

It is considered that the Forest Reserve remains stable, as well as the production estate.

4.3.3 Reclassification

4.4 Data

Table 4a

Categories	Forest area (000 hectares)
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		1990	2000	2005	2010	2015
	Production forest	240	240	240	240	240
	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	Rattan	Laccospermaopacum	N/A	5
2 nd	Honey	N/A	N/A	11
3 rd	Bushpepper	Piperguineense	N/A	13
4 th	Spice	Xylopiiathropica	N/A	3
5 th	Raffia	Raphiavinifera	N/A	5
6 th	Bitterkola	Garciniakola	N/A	13
7 th	Bamboo	Bambusavulgaris	N/A	5
8 th	Tola	Beilschmiediamanni	N/A	1
9 th	Mushroom	N/A	N/A	1
10 th	Blacktombla	Dialiumguineense	N/A	1
TOTAL			.00	

2010	
Name of local currency	Sierra Leone Leones (SLLe)

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 beeswax
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	4826.9	4688.85
1991	4713	4591.4
1992	4679.8	4559.82
1993	4606.5	4482.87
1994	4525.7	4402.11
1995	4734.5	4610.87
1996	4724.3	4600.67
1997	5076.2	4952.59
1998	5203.9	5080.26
1999	5338.8	5215.23
2000	5481.4	5357.76
2001	5487.5	5363.94

2002	5497.2	5373.62
2003	5510.3	5386.71
2004	5526.7	5403.12
2005	5546.4	5422.79
2006	5571.9	5448.33
2007	5600.6	5477
2008	5632.4	5508.8
2009	5667.3	5543.71
2010	5705.2	5581.62
2011	5705.2	5581.62

Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 3	Tier 3
Multiple use forest	Tier 3	Tier 3

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	Out of the 48 Forest Reserves, about 43 are production forests, while the rest are protection forests.	N/A
Multiple use forest	This category of forest does not exist in Sierra Leone	N/A
Total wood removals	The bulk of wood removed from forests is in the form of fuel wood	N/A
Commercial value of NWFP	N/A	N/A

Other general comments to the table

Data is derived from Forestry Division records

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	N/A	N/A	N/A	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

5.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
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

Combining information from the Forestry Division records and the expert knowledge, data could be summarized as follows:

- Total area of Forest Reserve (permanent forest estate) = 285 000 ha, with about 240 000 ha for production.
- Protected areas
 - 1st protected area (Tiwai Island), community game sanctuary, constituted in 1987 = 1 200 ha
 - 2nd protected area (Outamba Kilimi National Park) established in 1995 = 110 900 ha
 - 3rd Gola Forest Reserve, proclaimed a National Park in 2012 (75 000 ha), under sustainable management with a management plan.

4th Loma Mountains National Park (33,200 ha) proclaimed a National Park in 2013

-

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
CFRQ	Protection of soil and water	301	301	301	301	301
CFRQ	... of which production of clean water	285	285	285	285	285
CFRQ	... of which coastal stabilization	16	16	16	16	16
CFRQ	... of which desertification control	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which avalanche control	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which erosion, flood protection or reducing flood risk	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Other	
N/A	

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	308	308	308	308	317

...of which public recreation	233	233	233	233	233
...of which carbon storage or sequestration	75	75	75	75	84
...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	Tier 1	Tier 1

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	N/A	N/A
Production of clean water	All of our forest reserves provide clean water for the communities residing around these forests	The area indicated in the table is the total area of forest reserves in the country

Coastal stabilization	For coastal stabilization, the forest reserves on the coast on the western area peninsular are directly involved.	The total area is the sum of the areas of these reserve forests.
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	Forests designated as national parks fall within these category	The area in the table is the total area of national park. One more national park is expected to proclaimed by 2015.
Carbon storage or sequestration	Carbon feasibility study is currently being done for the Gola Rainforest National Park (75,000 ha). Another forest to be considered for carbon study is the Kangari Hills (8,800 ha). It is expected that by 2015, these two forest areas will be designated for carbon storage.	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	N/A	N/A

Other general comments to the table

N/A

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	Forestry Division records	Protected areas	2013	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

6.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

6.2.3 Original data

Combining information from the Forestry Division records and the expert knowledge, data could be summarized as follows:

- Total area of Forest Reserve (permanent forest estate) = 285 000 ha, with about 240 000 ha for production.
- Protected areas
 - 1st protected area (Tiwai Island), community game sanctuary, constituted in 1987 = 1 200 ha
 - 2nd protected area (Outamba Kilimi National Park) established in 1995 = 110 900 ha
 - 3rd Gola Forest Reserve, proclaimed a National Park in 2012 (75 000 ha), under sustainable management with a management plan.
 - 4th Loma Mountains National Park (33,200 ha) proclaimed a National Park in 2013
 -

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	1	112	112	187	243
	Forest area within protected areas	1	112	112	187	243

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 3	Tier 3
Forest area within protected areas	Tier 3	Tier 3

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> Conservation of biodiversity Forests within protected areas 	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	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

6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	<ul style="list-style-type: none"> The first protected area was a community game sanctuary established in 1987 with an area of 1200 hectares. The second which measures 110 900 hectares was constituted a national park in 1995. The third is the Gola Forest (75,000ha) which became a national park in 2012. In 2013, two more forest reserves were proclaimed national parks; Loma Mountains (33,200ha) and the Western Area Forest Reserve (14,089ha). Also Kangari Hills Forest Reserve (8,872ha) is currently supported by a GEF funded project to upgrade its status to a national park by end of 2014. 	N/A
Forest area within protected areas	Forest area within protected areas is the same for biodiversity conservation	N/A

Other general comments to the table

N/A

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

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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
1.Gmelina arborea	N/A	N/A
2.Acacia mangium	N/A	N/A
3.Acacia auriculiformis	N/A	N/A
4.Tectona grandis	N/A	N/A
5.	N/A	N/A
6.	N/A	N/A
7.	N/A	N/A
8.	N/A	N/A
9.	N/A	N/A
10.	N/A	N/A
Total	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	N/A	N/A

Tier Criteria

Category	Tier for status	Tier for reported trend
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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	The 4 most common woody invasive species are listed above. The area covered by each of these species is hard to determine since they are scattered all over. The species also occur in plantations of varying sizes.	N/A

Other general comments to the table

N/A

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	N/A	N/A	N/A	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

8.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
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	143	N/A	215	N/A	286	N/A	358	N/A	430	N/A
	... of which forest area burned	2.8	N/A	2.8	N/A	2.8	N/A	2.8	N/A	2.8	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	502	N/A	573	N/A	645	N/A	717	N/A	717	N/A
	... of which forest area burned	2.8	N/A	2.8	N/A	2.8	N/A	2.8	N/A	2.8	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
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	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 1	Tier 1
<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
Burned area	It is estimated that 0.1% of country's land area was affected by fire in 2003 and increasing minimally annually as more people go into slash and burn agriculture	N/A
Insects	No data available	N/A
Diseases	No data available	N/A
Severe weather events	No data available	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	2592.9

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

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

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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	Forestry Policy 2010	N/A	2010	N/A
2	Conservation and Wildlife Policy 2010	N/A	2010	N/A
3	Forestry Act 1988	N/A	1988	N/A
4	Wildlife Conservation Act 1972	N/A	1972	N/A

10.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

10.2.3 Original data

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10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management	yes	no	no	yes
... of which, in <u>publicly</u> owned forests	yes	no	no	no
... of which, in <u>privately</u> owned forests	no	no	no	yes
Legislation and regulations supporting sustainable forest management	yes	no	no	yes
... of which, in <u>publicly</u> owned forests	yes	no	no	no
... of which, in <u>privately</u> owned forests		no	no	yes

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	Policies supporting sustainable forest management cover largely publicly owned forests
Legislation and regulations supporting sustainable forest management	Forestry and wildlife conservation legislations and regulation cover largely publicly owned forests

Other general comments

By-laws exist for privately owned forests in some of the local communities.

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	Forestry Division sources	N/A	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
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11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	We have what we call the Natural Resources Management Contact Group which comprises government and non-government organizations working on environmental issues. The group meets regularly to share information and ideas on environmental issues. The group has also been instrumental in the review of the forestry and wildlife conservation legislation

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	Forestry Division records	N/A	N/A	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

12.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

12.2.3 Original data

Combining information from the Forestry Division records and the expert knowledge, data could be summarized as follows:

- Total area of Forest Reserve (permanent forest estate) = 285 000 ha, with about 240 000 ha for production.
- Protected areas
 - 1st protected area (Tiwai Island), community game sanctuary, constituted in 1987 = 1 200 ha
 - 2nd protected area (Outamba Kilimi National Park) established in 1995 = 110 900 ha
 - 3rd Gola Forest Reserve, proclaimed a National Park in 2012 (75 000 ha), under sustainable management with a management plan.
 - 4th Loma Mountains National Park (33,200 ha) proclaimed a National Park in 2013.

12.3 Analysis and processing of national data



12.3.1 Adjustment

12.3.2 Estimation and forecasting

12.3.3 Reclassification

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	285

Tiers

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

Permanent forest estate	Tier 1
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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	Forest area intended to be in permanent forest land use. These are mainly protected areas
Permanent forest estate	Permanent forest estate

Other general comments

--

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	Forestry Division records	N/A	N/A	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

13.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
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	100	1986	no	yes	no	yes	no	no
Other field assessments	N/A	N/A	no	no	no	no	no	no
Updates to other sources	N/A	N/A	no	no	no	no	no	no
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	no
2 Periodic national state of the forest report	yes
3 Other (please document)	
4 None	

Other type of forest reporting
N/A

13.4 Comments

Category	Comments
Forestry Inventory	No follow up national forestry inventory has been held since 1986
N/A	N/A
N/A	N/A

Other general comments

--

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	Forestry Division data	N/A	N/A	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

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	N/A
... of which for production	N/A
... of which for conservation	75

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	82
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Tiers

Category	Tier for status
Forest area with management plan	Tier 3
Percent of area under forest management plan that is monitored annually	Tier 3

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	In 2013, percentage of forest area with management plan reached 82%. These are 4 of newly proclaimed national parks
N/A	N/A
N/A	N/A

Other general comments

--

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 3

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
Type of stakeholder inputs	The management plans make room for stakeholders participation in the planning and operations phases, Stakeholder also participate in the review of operations.
N/A	N/A
N/A	N/A

Other general comments

--

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
	1.Name	0	0	0	0	0	0	0
	2.Name	0	0	0	0	0	0	0
	3.Name	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
	1.Name	0	0	0	0	0	0	
	2.Name	0	0	0	0	0	0	
	3.Name	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	N/A

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	N/A

Other general comments

Non of our forests is certificated.

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	Forestry Division accounts department report	N/A	2000, 2005, 2010	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

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	1824976	1872997	1882601
Public expenditure on forestry	1600000	N/A	N/A
	2000	2005	2010
Name of Local Currency	Leone	N/A	N/A

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Figures on forest revenue reflect incomes obtained from both roundwood and fuelwood. Forest revenue is obtained from four main sources: Sale of round wood; Sale of fuelwood Timber, charcoal and fuelwood transport permit; Timber export permit. Note: forest revenue from the sale of permits is marginal
Public expenditure on forestry	The figure indicates budget provision by government for the years under review
Other general comments	The figure indicates money provided by external donors for biodiversity conservation of one of our forest reserves. This amount includes also money paid to communities as compensation for not logging and farming the forest. Trust fund currently being raised will ensure sustainability of this arrangement. This is for the Gola Forest Reserve only which is now being managed for biodiversity conservation with the aim of upgrading it to a national park.

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	Forestry Division Records	Ownership	2008	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
N/A	N/A
N/A	N/A
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

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18.4 Data

Table 18a

Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010

CFRQ	Public ownership	395	395	395	395
CFRQ	... of which owned by the state at national scale	395	395	395	395
CFRQ	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A
CFRQ	Private ownership	2723	2527	2429	2331
CFRQ	... of which owned by individuals	0	0	0	0
CFRQ	... of which owned by private business entities and institutions	0	0	0	0
CFRQ	... of which owned by local, tribal and indigenous communities	2723	2527	2429	2331
CFRQ	Unknown ownership	0	0	0	0
TOTAL		3118.00	2922.00	2824.00	2726.00

Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 1	Tier 1
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	395	395	395	395
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	395.00	395.00	395.00	395.00

Category	Tier for reported trend	Tier for status
Public Administration	Tier 1	Tier 1
Individuals	Tier 1	Tier 1
Private companies	Tier 1	Tier 1
Communities	Tier 1	Tier 1
Other	Tier 1	Tier 1

18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	Public-owned forests are mostly Gazetted Forest Reserves, Protected Areas, Wildlife Sanctuaries, National Parks and Game Reserves.	Public-owned forests have remained the same for a very long time and they are expected to remain so for a long time to come. Their status may change, e.g. a forest reserve may be upgraded to a National Park but the area will remain the same.
Private ownership	All other forests apart from the above-mentioned are private forests better known as community forests and under the custody of the local chiefs.	All other forests apart from the above category are classed under Private Ownership. These too may change to other categories but their ownership status will remain the same.
Unknown ownership	N/A	N/A
Management rights	Local communities manage community forests while as public-owned forests are managed by government represented by the Forestry Division of the Ministry of Agriculture, Forestry and Food Security.	N/A

Other general comments to the table

N/A

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	FAO 2001. Forestry Outlook Studies for Africa: Sierra Leone. FAO, Rome	Forestry staff	2000	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
N/A	N/A
N/A	N/A
N/A	N/A

19.2.3 Original data



Forestry staff in public service = 177 people.
Wildlife staff in public service = 33 people.

Forestry staff = 100% Primary production of goods (paid employment)

Wildlife staff = 100% Employment in management of Game Reserves and National Parks

19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	N/A	0.177	0.156	0.256
	... of which female	N/A	N/A	N/A	N/A

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	Refers to paid employment.	No new recruitment of staff has been done in the Forestry Division during the last 10 years prior to 2006. In 2006 government recruited 100 forest patrol officers and were posted to various parts of the country.

Other general comments to the table

The data above refers only to public service staff. People employed in other forest activities are not included.

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)	982997.95	Leone	2011

20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices)	N/A

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	It is envisaged that by the year 2020 the forest area would increase by about 8 to 10% of the 2015 forest area. Intensive forest restoration program including rubber plantation establishment is currently being undertaken by the Forestry Division of the Ministry of Agriculture, Forestry and Food Security. Every district in the country now has a District Forestry Office that sensitize the communities and promote tree planting.	National Tree Planting Drive	2000 - 2020	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

21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	3271	3407

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	1

21.4 Comments

Category	Comments
Government target/aspiration for forest area	Government plans to increase forest area in 2020 by 20% of the 2010 figure and in 2030 by 25% of the 2010 figure. Much of the increase will come from reforestation, afforestation and the constitution of some community forests into forest reserves
Forests earmarked for conversion	About a thousand hectares will be excised from a forest reserve to be given out as concession for gold mining

Other general comments

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