

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Zambia

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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Introductory Text

Place an introductory text on the content of this report

(Optional)

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	Chakanga M, & de Backer M., 1986 .The forest vegetation of Zambia. Wood Consumption and Resource Survey of Zambia.	Definitions and land Cover	1974	Basic analytical inputs were from the years 1973-1975. The validity of the tables depended on the basic material of the “vegetation map of Zambia” which was edited in 1976. Back checking was not possible.
2	Zambia Forestry Department, 2009, Integrated Land Use Assessment (ILUA)	Land cover	2006-2007	Reference year considered is 2007.
3	MENR 1998 (a). Zambia Forestry Action Plan. Ministry of Environment and Natural Resources	Plantation	1992	N/A
4	MENR 2008. Plantation expansion programme	Program of new plantation establishment	2008	N/A

1.2.2 Classification and definitions

National class	Definition
1. Parinari Forest	Canopy dominants restricted to Parinari excelsa & Syzygium guineense spp. afromontanum with the old emergent Entandrophragma devevovi. Marquesia macroura and Erythrophleum suaveolens are occasional canopy associates.
2. Marquesia Forest	Canopy dominants restricted to Anisophyllea pomifera locally and Syzygium guineense spp. Afromontanum.
3. Lake Basin (Chipya)	Three-storeyed woodland with an open evergreen to deciduous canopy 21 to 27 metres high characterised by Albizia antunesiana, Burkea africana, Combretum collinum, Erythrophleum africanum, Parinari curatellifolia, Pericopsis angolensis Pterocarpus angolensis, and Terminalia sericea. Bracken, Aframomum and Smilax are characteristic of the forest floor.
4. Cryptosepalum Forest	Canopy dominants are restricted to Cryptosepalum exfoliatum spp. Pseudotaxus and Guibourtia coleosperma in the lower rainfall areas of Zambezi, Kabompo and Kaoma Districts but associated with Marquesia acuminata, M. macroura, Parinari excelsa, and Syzygium guineense spp afromontanum in the higher rainfall of Mwinilunga.
5. Kalahari Sand Chipya	Canopy species are Burkea africana, Combretum collinum, Dialium engleranum, Erythrophleum africanum, Guibourtia coleosperma, Peltophorum africanum, Pterocarpus angolensis, Terminalia sericea, and there is a dense growth of Aframomum and Bracken on the forest floor.
6. Baikiaea Forest	Two-storeyed forest with an open or closed, usually deciduous canopy 9 to 18 metres high composed of Baikiaea plurijuga and Pterocarpus antunesii in varying proportions. Invasive Acacia giraffae and Combretum collinum are widespread. Entandrophragma caudatum is a local emergent. Below the canopy is a well-defined deciduous thicket composed of shrubs and scramblers 3 to 6 metres high.

7. Itigi Forest	Two-storeyed forest with a very open overwood of deciduous or semi-deciduous emergent 6 to 12 metres high characterised by <i>Baphia massaiensis</i> spp. <i>Floribunda</i> , <i>Boscia angustifolia</i> , <i>Burttia prunoides</i> , <i>Bussea massaiensis</i> , <i>Diospyros mweroensis</i> and the succulent cactus-like <i>Euphorbia candelabrum</i> . Trees are often encrusted with lichens.
8. Montane Forest	Tree-storeyed forest with a closed evergreen canopy about 27 metres high without any clear-cut dominants but with <i>Aningeria</i> spp., <i>Cola greenwayi</i> , <i>Myrica salicifolia</i> , <i>Nuxia</i> spp., <i>Olinia usambarensis</i> , <i>Parinari excelsa</i> , <i>Podocarpus milanjianus</i> , <i>Rapanea melanophloea</i> and <i>Trichilia prieuriana</i> as the most abundant species. Ground between forest patches covered by fire derived upland grasslands dotted with gnarled <i>Protea madiensis</i> shrubs.
9. Swamp Forest	Three-storeyed forest with a closed evergreen canopy about 27 metres high characterised by <i>Ilex mitis</i> , <i>Mitragyna stipulosa</i> , <i>Syzygium cordatum</i> , <i>S. owariense</i> , <i>Xylopia aethiopica</i> , and <i>X. rubescens</i> . (Delta swamp, Seepage swamp or Seasonal Swamp).
10. Riparian Forest	Three-storeyed forest with a closed, evergreen canopy 21 metre high characterised by <i>Diospyros mespiliformis</i> , <i>Khaya nyasica</i> , <i>Parinari excelsa</i> , <i>Syzygium cordatum</i> , associated with <i>Madina microcephala</i> , <i>Bridelia micrantha</i> , and <i>Cleistanthus milleri</i> . <i>Faurea saligna</i> , <i>Homalium africanum</i> , <i>Ilex mitis</i> , <i>Manilkara obovata</i> , <i>Raphia</i> palms. The composition varies from a northern evergreen element and a southern deciduous element. Most riparian forests are secondary.
11. Hill Woodland	Two-storeyed woodland with an open or partially closed canopy of semi-evergreen trees 15 to 21 metres high characterised by species of <i>Brachystegia</i> , <i>Isoberlinia</i> , <i>Julbernardia</i> , and <i>Marquesia macroura</i> with <i>Erythrophleum africanum</i> , <i>Parinari curatellifolia</i> and <i>Pericopsis angolensis</i> as frequent associates. The forest floor is covered by a more or less dense grass cover.
12. Hill Woodland	Similar to Miombo above but where there is more rock than soil on hills the <i>Brachystegias</i> and their allies almost die out except for <i>B. microphylla</i> in the north and <i>B. glaucescens</i> in the south and their place is taken by characteristic hill shrubs such as <i>Aeschynomene rubrofrarinacea</i> and <i>A. semilunaris</i> , <i>Euphorbia ussanguensis</i> and <i>E. griseola</i> , <i>Myrothamnus flabellifolius</i> , <i>Pentas nobilis</i> , <i>Vellozia equisetoides</i> and <i>V. tomentosa</i> and <i>Vernonia bellinghamii</i> .
13. Kalahari Woodland	Derived from destruction of <i>Baikiaea</i> forest, is a two-storeyed woodland with an open or partially closed, deciduous or semi deciduous overwood 18 to 24 metres high characterised by <i>Amblygonocarpus andongensis</i> , <i>Burkea africana</i> , <i>Combretum collinum</i> , <i>Cryptosepalum exfoliatum</i> ssp. <i>Pseudotaxus</i> , <i>Dialium englerianum</i> , <i>Erythrophleum africanum</i> , <i>Guibourtia coleosperma</i> , <i>Parinari curatellifolia</i> , and <i>Terminalia sericea</i> .
14. Mopane Woodland	One-storeyed woodland with an open deciduous canopy 6 to 18 metres high. The dominant <i>Colophospermum mopane</i> is pure or almost pure. Scattered elements of Munga woodland occur here and there represented chiefly by <i>Acacia nigrescens</i> , <i>Adansonia digitata</i> , <i>Combretum imberbe</i> , <i>Kirkia acuminata</i> , and <i>Lannea stuhlmannii</i> . The python vine <i>Fockea multiflora</i> is usually present.

15. Munga Woodland	Coined term for Savanna woodland is an open park-like 1 to 2 storeyed deciduous woodland with scattered or grouped emergents to 18 metres high characterised particularly by <i>Acacia</i> , <i>Combretum</i> , and <i>Terminalia</i> species. Occasionally it has a deciduous or semi-deciduous thicket under storey. It is varied into upper valley, lower valley and Kalahari sites.
16. Termitary Vegetation & Bush Groups	All types of vegetation, i.e. forest, woodland, thicket, scrub, and grassland that can be found on or at the bases of termitaria. They have been classified by habitat rather than by vegetation type, because to some extent one limits the other.

1.2.3 Original data

Forest area	
- Original 1974 Data	
National Classes	Area in 1000 ha
1. <i>Parinari</i>	42
2. <i>Marquesia</i>	43
3. Lake basins (<i>Chipya</i>)	1 625
4. <i>Cryptosepalum</i>	1 764
5. Kalahari Chipya	142
6. <i>Baikia</i>	843
7. <i>Itigi</i>	155
8. <i>Montane</i>	4
9. <i>Swamp</i>	153
10. <i>Riparian</i>	92
11. Miombo	35 286
12. Hill Woodland	366
13. Kalahari	9 761
14. Mopane	4 428
15. Munga	3 727
16. Termitaria vegetation and groups	2 773

17. Treeless grasslands	13 016
Total country area	74 220

Note: In the original source, summary table gives 9 742 000 ha for Kalahari . In fact, correct figure is 9 761 000 ha, when adding up the basic data.

- Original 2007 data

Major Land Use Classes	Total Area in 1 000 ha
Forest	49 968
Other Wooded Land	6 055
Other land	15 771
Inland Water	3 467

Forest expansion, reforestation See Question 2

The established plantation area in 1990 is assumed to be same as in 2000 and 2005, as between that period not planting took place.

The MTENR (2008) presents a program of plantation expansion with a target figure. The annual planting rate is assumed to be 1000 hectares. Applying this from 2008 and considering a rate of survival of 75%, it is estimated that the increase of forest plantations could be 1 500 ha, wit.

1.3 Analysis and processing of national data

1.3.1 Adjustment

Forest area

- Calibration for 1974

National land area in 1000 ha	74 220
FAO stats in 1000 ha	74 339
Calibrating factor	1.001603341

National Classes	Calibrated area in ha
1. <i>Parinari</i>	42 067
2. <i>Marquesia</i>	43 069
3. Lake basins (<i>Chipya</i>)	1 627 605
4. <i>Cryptosepalum</i>	1 766 828
5. Kalahari Chipya	142 228
6. <i>Baikiae</i>	844 352
7. <i>Itigi</i>	155 249
8. <i>Montane</i>	4 006
9. <i>Swamp</i>	153 245
10. <i>Riparian</i>	92 148
11. <i>Miombo</i>	35 342 576
12. Hill Woodland	366 587
13. <i>Kalahari</i>	9 776 650
14. <i>Mopane</i>	4 435 100
15. <i>Munga</i>	3 732 976
16. <i>Termitariavegetation and bush groups</i>	2 777 446
17. <i>Treeless grasslands</i>	13 036 869
Total	74 339 000

- Calibration for 2006-2007

It is considered that Forest and OWL areas do not need calibration.

Regarding the Inland water area, which is completely different from the official figure of FAOStat (922 000 ha), decision taken is to still refer to the official data of 922 000 ha. Necessary adjustment has been done within OL class. Therefore the results are the following.

Major Land Use Classes	Total Area in 1 000 ha
Forest	49 968
Other Wooded Land	6 055
Other land	18 316
Inland Water	922

1.3.2 Estimation and forecasting

Forest area

Estimation and forecasting to the FRA 2010 reporting years were done based on the above original data and resulted in the following table: (Plantations is included in forests – 57,000 ha)

FRA	Area in 1000 hectares			
	1990	2000	2005	2010
Forests	52800	51134	50301	49468
OWL	5943	6009	6042	6075
OL	15596	17196	17996	18796
Total	74 339	74 339	74 339	74 339

1.3.3 Reclassification

Forest area

Reclassifying 1974 data

	Forest	OWL	OL
1. <i>Parinari</i>	100%		
2. <i>Marquesia</i>	100%		
3. Lake basins (<i>Chipya</i>)	100%		
4. <i>Cryptosepalum</i>	100%		
5. Kalahari Chipya	100%		
6. <i>Baikia</i>	100%		
7. <i>Itigi</i>	100%		
8. <i>Montane</i>	100%		
9. <i>Swamp</i>	100%		
10. <i>Riparian</i>	100%		
11. <i>Miombo</i>	100%		
12. Hill Woodland (1)	80%	20%	
13. <i>Kalahari</i>	100%		
14. <i>Mopane</i>	100%		
15. <i>Munga</i> (2)	20%	80%	
16. <i>Termitariavegetation and bush groups</i>		100%	
17. <i>Treeless grasslands</i>			100%

Notes:

1. Classification slightly changes compared to FRA 2005. It is allocated 80% Forest and 20% OWL, where forests are taken by shrubs.

2. An open park (like 1 to 2 storeyed deciduous woodland with scattered or grouped emergent with scattered or group emergent to 18m high characterised particularly by *Acacia*, *Combretum* and *Terminalia* species) was allocated 20% Forests and 80% OWL.

Results after reclassifying 1974 data

National Classes	Area in hectares		
	Forests	OWL	OL
1. <i>Parinari</i>	42 067		
2. <i>Marquesia</i>	43 069		
3. Lake basins (<i>Chipya</i>)	1 627 605		
4. <i>Cryptosepalum</i>	1 766 828		
5. Kalahari Chipya	142 228		
6. <i>Baikiae</i>	844 352		
7. <i>Itigi</i>	155 249		
8. <i>Montane</i>	4 006		
9. <i>Swamp</i>	153 245		
10. <i>Riparian</i>	92 148		
11. <i>Miombo</i>	35 342 576		
12. Hill Woodland	293 270	73 317	
13. <i>Kalahari</i>	9 776 650		
14. <i>Mopane</i>	4 435 100		
15. <i>Munga (1)</i>	746 595	2 986 381	
16. Termitaria vegetation and bush groups		2 777 446	
17. <i>Treeless grasslands</i>			13 036 869
Total land area	55 464 988	5 837 144	13 036 869

- Summary of 1974 and 2007 data

FRA Categories	Area in 1000 hectares	
	1974	2007
Forests	55 465	49 968
OWL	5 837	6 055
OL	13 037	18 316
Total	74 339	74 339

1.4 Data

Table 1a













Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	52800	51134	50301	49468	48635
	Other wooded land	5943	6009	6042	6075	6108
	Other land	15596	17196	17996	18796	19596
	... of which with tree cover	N/A	N/A	N/A	N/A	N/A
	Inland water bodies	922	922	922	922	922
	TOTAL	75261.00	75261.00	75261.00	75261.00	75261.00

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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... 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	250	250	250	287	287	287	287	287
	Reforestation	1	1	1	1.5	N/A	N/A	N/A	N/A
	... of which artificial	1	1	1	1.5	2	3	5	5

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 3	Tier 2
Other wooded land	Tier 3	Tier 2
Forest expansion	N/A	Tier 2
Deforestation	Tier 2	Tier 1
Reforestation	Tier 2	Tier 1

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	ILUA 1 statistics has been used regarding forest	There is a slight forest decrease, but the real problem is the forest degradation.
Other wooded land	ILUA 1 statistics has been used regarding forest	N/A
Other land	ILUA 1 and Forest Support Program statistics has been used regarding forest	N/A
Other land with tree cover	FAO Stat has been used regarding the inland water bodies.	N/A
Inland water bodies	N/A	N/A
Forest expansion	ILUA 1 and Forest Department and Zambia Forest and Forestry Industries Cooperation (ZAFFICO) annual report has been used regarding forest Expansion	N/A

Deforestation	ILUA 1 and Forest Support Program statistics has been used regarding regarding forest	N/A
Reforestation	N/A	N/A

Other general comments to the table

The Integrated Land Use Assessment (ILUA) project undertaken in Zambia from 2005 – 2008 with the support of FAO (TCP), limited additional funding provided by the FAO Netherlands Partnership Program (FNPP), Government of Zambia (counter funds) and Government of Finland, which compiles a wide array of statistical and spatial data on the land-use situation in Zambia, is the first of its kind in the country.

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	MENR 1998 (a). Zambia Forestry Action Plan. Ministry of Environment and Natural Resources	Plantation area	1992	N/A
2	MENR 2008. Plantation expansion programme	Program of new plantation establishment	2008	N/A
3	N/A	N/A	N/A	N/A

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

2.2.3 Original data

<p>Plantation area in 1992: 60 000 ha approximately (Source 1)</p> <p>The plantation area in 1990 is assumed to be the same as in 1992 (60 000 ha).</p>

2.3 Analysis and processing of national data

2.3.1 Adjustment

--

2.3.2 Estimation and forecasting

<p>The established plantation area in 1990 is assumed to be same as in 2000 and 2005, as between that period not planting took place.</p> <p>The MTENR (2008) presents a program of plantation expansion with a target figure. The annual planting rate is assumed to be 1000 hectares. Applying this from 2008 and considering a rate of survival of 75%, it is estimated that the increase of forest plantations could be 1 500 ha.</p>

2.3.3 Reclassification

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2.4 Data

Table 2a

Categories	Forest area (000 hectares)
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


		1990	2000	2005	2010	2015
	Primary forest	0	0	0	0	0
	Other naturally regenerated forest	52740	51074	50241	49406	48571
	... 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	60	60	60	62	64
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
TOTAL		52800.00	51134.00	50301.00	49468.00	48635.00

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)	0	0	0	0	0
... of which planted	0	0	0	0	0

Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 2	Tier 1
Other naturally regenerated forest	Tier 2	Tier 1
Planted forest	Tier 2	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	No more primary forest.	N/A
Other naturally regenerating forest	N/A	N/A
Planted forest	N/A	N/A
Mangroves	No Mangrove forest	N/A

Other general comments to the table

Planted forest not captured during ILUA field assessment (2005-2008).

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	Zambia Forestry Department, 2009, Integrated Land Use Assessment (ILUA)	Growing stock, Biomass	2006-2007	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				
- From Question 1				
FRA	Area in 1000 hectares			
	1990	2000	2005	2010
Forests	52800	51134	50301	49468
OWL	5943	6009	6042	6075
- Areas and Growing stock (above source)				
	Forests	OWL		
Area (1 000 ha)	49 968	6 055		
Total GS (million m3)	2 785	58		
GS/ha (m3/ha)	55.7	9.6		
Total Commercial GS (million m3)	340.1	9.3		
Commercial GS/ha (m3/ha)	6.8	1.5		

Biomass stock

From Question 1.

From the above source, it is known that the Above-ground Biomass density (tonnes/ha) are :

- for forest, 83.8 tonnes/ha;
- OWL , 29,7 tonnes/ha.

Carbon stock

From Question 1 and data on biomass stock.

3.3 Analysis and processing of national data

3.3.1 Adjustment

3.3.2 Estimation and forecasting

Growing stock

To obtain the total and commercial GS, areas have been multiplied by GS/ha.

Biomass stock

Below-ground biomass

$$\text{BGB} = \text{AGB} \times \text{R}$$

$$\text{Root shoot ratio (R)} = 0.24$$

Carbon stock

A/- Based on the results of table 7 (Biomass), the assumption of Carbon stock could be estimated using the standard factor of 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 (Using 2006 IPCC Guidelines as the country has a tropical moist climate, with LAC soils)

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	2940.96	2848.17	2801.78	2755.38	2708.98	57.05	57.68	58	58.32	58.67
	... 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>Julbernardia paniculata</i>	Mutondo	N/A	N/A	333	311.19
2 nd	<i>Brachystegia spiciformis</i>	Muputu	N/A	N/A	328	307.19
3 rd	<i>Brachystegia boehmii</i>	Musamba	N/A	N/A	244	243
4 th	<i>Colophospermum mopane</i>	Mupani	N/A	N/A	236	235
5 th	<i>Isoberlinia angolensis</i>	Mutobo	N/A	N/A	178	177

6 th	Diplorhynchus condylocarpon	Mwenge	N/A	N/A	145	145
7 th	Pseudolachnostylis maprouneifolia	Musangati	N/A	N/A	103	103
8 th	Pterocarpus angolensis	Mulombwa	N/A	N/A	100	99
9 th	Erythrophleum africanum	N/A	N/A	N/A	96	96
10 th	Parinari curatellifolia	Mupundu	N/A	N/A	76	76
Remaining			N/A	N/A	963	963
TOTAL			.00	.00	2802.00	2755.38

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)	5cm	ILUA II revised minimum diameter (cm) dbh
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	10cm	N/A
Minimum diameter (cm) of branches included in growing stock (W)	5cm	N/A
Volume refers to above ground (AG) or above stump (AS)	AG	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)
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		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Above ground biomass	4424.64	4285.03	4215.24	4145.44	4145.44	176.51	178.46	179.45	180.43	181.41
	Below ground biomass	1061.91	1028.41	1011.66	994.91	978.16	42.36	42.83	43.07	43.3	43.53
	Dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		5486.55	5313.44	5226.90	5140.35	5123.60	218.87	221.29	222.52	223.73	224.94

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	2079.58	2013.96	1981.16	1948.36	1948.36	82.96	83.88	84.34	84.8	85.25
	Carbon in below ground biomass	499.1	483.35	475.48	467.61	459.74	19.91	20.13	20.24	20.35	20.46
	<i>Subtotal Living biomass</i>	2578.68	2497.32	2456.64	2415.96	2375.28	102.87	104.01	104.58	105.15	105.72
	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	110.88	107.38	105.63	103.88	102.13	12.48	12.62	12.69	12.76	13.43
	<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	2481.6	2403.3	2364.16	2325.01	2285.86	279.32	282.41	283.97	285.53	287.09
TOTAL		5171.16	5007.99	4926.43	4844.86	4796.09	394.67	399.04	401.24	403.44	406.23

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 2	Tier 1

Net annual increment	N/A	N/A
Above ground biomass	Tier 2	Tier 1
Below ground biomass	Tier 2	Tier 1
Dead wood	Tier 2	Tier 1
Carbon in above-ground biomass	Tier 2	Tier 1
Carbon in below ground biomass	Tier 2	Tier 1
Carbon in dead wood and litter	Tier 2	Tier 1
Soil carbon	Tier 2	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	Statistics generated by Forestry Department ILUA 1	N/A
Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	Statistics generated by Forestry Department ILUA 1	N/A
Net annual increment	Statistics generated by Forestry Department ILUA 1	N/A
Above-ground biomass	Statistics generated by Forestry Department ILUA 1	N/A
Below-ground biomass	Statistics generated by Forestry Department ILUA 1	N/A
Dead wood	Statistics generated by Forestry Department ILUA 2	N/A
Carbon in above-ground biomass	Statistics generated by Forestry Department ILUA 1 and 2	N/A
Carbon in below-ground biomass	N/A	N/A
Carbon in dead wood	Statistics generated by Forestry Department ILUA 1	N/A
Carbon in litter	Statistics generated by Forestry Department ILUA 2	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	Zambia Forestry Dpt, 2009, Integrated Land Use Assessment (ILUA)	Forest management rights	2006-2007	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

From the interviews made during the ILUA field assessments, seven different designations of protection status for the natural forests were recorded: forests designated strictly as reserve 6.5%; forests known to be designated as national parks 9.1%, forests designated for natural monuments 0.3%; forests designated for habitat management 5.5%, forests designated for multipurpose 16.9%; forests designated for production 23.7%. Approximately 16% of the natural forests assessed could not be identified under any designation while 21.8% of the area was unanswered for in terms of protection status.

4.3 Analysis and processing of national data

4.3.1 Adjustment

4.3.2 Estimation and forecasting

From ILUA, forest area is 49 968 000 ha in 2007. Besides, it is known that forest plantation is estimated to be about 60 000 ha (see table T4). Consequently, natural forest is 49 908 000 ha and the following could be said about its functions:

Forests designated strictly as reserve	Forests known to be designated as national parks	Forests designated for natural monuments	Forests designated for habitat management	Forests designated for multipurpose	Forests designated for production	Forest unknown functions
6.5%	9.1%	0.3%	5.5%	16.9%	23.7%	38.0%
3244020 ha	4541628 ha	149724 ha	2744940 ha	8434452 ha	11828196 ha	18965040 ha

4.3.3 Reclassification

It is assumed that:

ILUA Classes	FRA Classes
Natural forest designated for production	Production
Forestplantations	Production
Forests designated strictly as reserve	Conservation of biodiversity
Forests known to be designated as national parks	Conservation of biodiversity
Forests designated for natural monuments	Conservation of biodiversity
Forests designated for habitat management	Conservation of biodiversity
Forests designated for multipurpose	Multiple use

In the reporting years (of 2000, 2005 and 2010), it is considered that the areas of forest designated as Conservation of biodiversity remains constant, with 10 680 312 ha. It is assumed that at least 11 888 196 ha of forest have been dedicated for production and at least 8 434 452 ha of forest for multiple use. The remaining area will be classified as unknown.

4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	N/A	11888	11888	11888	11888
	Multiple use forest	N/A	8434	8434	8434	8434

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	Timber	Pterocapusangolensis	N/A	N/A

2 nd	Timber	Baikiaaplurijuga	N/A	N/A
3 rd	Timber	Rosewood	N/A	N/A
4 th	Timber	Pinekesiya	N/A	N/A
5 th	Poles	Eucalyptus	N/A	N/A
6 th	Veneer	Brachystegiafloribunda	N/A	N/A
7 th	Particleboard	Brachystegiafloribunda	N/A	N/A
8 th	Blockboard	Brachystegiafloribunda	N/A	N/A
9 th	Railsleepers	Baikiaaplurijuga	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			.00	

2010	
Name of local currency	Zambian Kwacha

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	7119.1	6443.11
1991	7322.9	6589.86
1992	7521.4	6729.39
1993	7731.3	6834.33
1994	8109.6	7044.56
1995	8207.3	7257.33
1996	8176.6	7315.55
1997	8238.4	7427.35
1998	8377.9	7554.88
1999	8523.8	7689.75
2000	8384.9	7827.89
2001	8230.7	7945.74
2002	8523.2	8066.23
2003	8815.4	8189.42
2004	9169.4	8315.37
2005	9441.1	8444.13
2006	9898	8572.99
2007	10029.9	8704.87
2008	10164.9	8839.86

2009	10303	8978.03
2010	10444.4	9119.45
2011	10444.4	9119.45

Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 1	Tier 1
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	N/A
Multiple use forest	N/A	N/A
Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

Other general comments to the table

The current analysis and processing of data are not compared with the 2005 FRA report. There is no comprehension information for 1990.

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

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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
	Protection of soil and water	0	0	0	0	0
	... of which production of clean water	0	0	0	0	0
	... of which coastal stabilization	0	0	0	0	0

	... of which desertification control	0	0	0	0	0
	... of which avalanche control	0	0	0	0	0
	... of which erosion, flood protection or reducing flood risk	0	0	0	0	0
	... of which other (please specify in comments below the table)	0	0	0	0	0

Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values					
...of which public recreation	0	0	0	0	0
...of which carbon storage or sequestration	10680	10680	10680	10680	10680
...of which spiritual or cultural services	0	0	0	0	0
...of which other (please specify in comments below the table)	0	0	0	0	0

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 2	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
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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	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	Includes temple forests or other religious areas, spirit forests, sacred areas, burial grounds, initiation areas, taboo areas or other forms of community spiritual or cultural practices.	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
--

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	Zambia Forestry Dpt, 2009, Integrated Land Use Assessment (ILUA)	Forest management rights	2006-2007	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

See 4.2.3.

6.3 Analysis and processing of national data

6.3.1 Adjustment

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6.3.2 Estimation and forecasting



See 4.3.2.

6.3.3 Reclassification

See 4.3.3.

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	N/A	10680	10680	10680	10680
	Forest area within protected areas	10680	10680	10680	10680	10680

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 1	Tier 1
Forest area within protected areas	Tier 2	Tier 1

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	It is assumed that the area is equal to the area of Conservation of biodiversity.	N/A
Forest area within protected areas	N/A	N/A

Other general comments to the table

The current analysis and processing of data are not compared with the 2005 FRA report. There is no comprehension information for 1990.

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	Ministry of Agriculture	N/A	N/A	N/A
2	Forestry Department	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.	N/A	N/A
2.	N/A	N/A
3.	N/A	N/A
4.	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	N/A	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	19012	N/A	18642	N/A	20059	N/A	17813	N/A	17772	N/A
	... of which forest area burned	2239	N/A	2421	N/A	2536	N/A	3048	N/A	2217	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	18505	N/A	14291	N/A	17237	N/A	15491	N/A	16017	N/A
	... of which forest area burned	3213	N/A	1725	N/A	2090	N/A	1753	N/A	1892	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 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
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	1238

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

--

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 department- Forest Policy	N/A	1998	N/A
2	Forests Act No. 39	N/A	1973	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	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			
... of which, in <u>publicly</u> owned forests				
... of which, in <u>privately</u> owned forests				
Legislation and regulations supporting sustainable forest management				
... of which, in <u>publicly</u> owned forests				
... of which, in <u>privately</u> owned forests				

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	Forest Policy, Environmental Policy
Legislation and regulations supporting sustainable forest management	The Forests Act

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	Forest Policy	1998	Provide a platform for community and stakeholders participation in forest management. The Policy was revised in 2010, not yet in force
2	Forests Act, No. 7- Cap 199 of Laws of Zambia	1999	Not activated. This Act was to create Zambia Forestry Commission
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	Forestry Forum, Organised by Academia, Copperbelt University and Non- Governmental Organization and the Forestry Department

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	Zambia Forestry Department Annual Report, 2008-2008 Integrated Land Use Assessment (ILUA) Report	Forest management rights	2006-2007/2008	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

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

See 4.2.3.

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	3244

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
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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
Permanent forest estate	Permanent forest estate

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	Forestry Department Annual Reports	N/A	N/A	N/A
2	Integrated Land Use Assessment 2005-2008 Report	N/A	N/A	N/A
3	Zambia Forest Action Plan (ZFAP)	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	2013		yes				
Other field assessments	100	2003						
Updates to other sources	N/A	N/A						
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	
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
N/A	N/A
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	Zambia Forestry Department, 2009, Integrated Land Use Assessment (ILUA)	Forest management rights	2006-2007	N/A
2	Zambia Forestry Dept – Forest Support Programme	Forest management rights	2003	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	11479
... of which for production	1722
... of which for conservation	9757

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	8
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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	It is considered that the information from ILUA could be applied since 2000.
N/A	The current analysis and processing of data are not compared with the 2005 FRA report.
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	
3. Review of operations	

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
N/A	N/A
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	0.98	0.98	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

--

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 Department Annual Report	N/A	N/A	N/A
2	Government Yellow Book (Expenditure)	N/A	N/A	N/A
3	Funding profile	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	1899899	4634409	521072
Public expenditure on forestry	N/A	N/A	N/A
	2000	2005	2010
Name of Local Currency	Z.K.	Z.K.	Z.K.

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Mainly from licencing of forest products, and services
Public expenditure on forestry	No comprehensive information available
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	Lands Act	Land rights	1995	N/A
2	Forests Act No. 7	Forest rights	1999	Not activated
3	Zambia Forestry Department, 2009, Integrated Land Use Assessment (ILUA)	Forest management rights	2006-2007	N/A
4	N/A	N/A	N/A	N/A

18.2.2 Classification and definitions

National class	Definition
State Land	All land in Zambia is vested in the President of the Republic of Zambia and owned by the State. All Forest Reserves, National Parks, National Monuments are under the Jurisdiction of the State.
Customary Land	All other land not in the category above has been classified as Customary Land.
N/A	N/A
N/A	N/A

18.2.3 Original data

- From Question 1.							
(source ILUA)							
	Private Individual ownership	Private Industrial ownership	Other private ownership	State ownership	Customary ownership	Other/ Unknown ownership	Total
Forests	3 581	659	1 043	11 825	30 751	2 109	49 968
%	7.2	1.3	2.1	23.7	61.5	4.2	100
Based on what is explained in the different official acts, private and customary ownerships refer mainly lease titles for land use and management rights.							

18.3 Analysis and processing of national data

18.3.1 Adjustment

The state owns all the land, woodlands, forest stands and trees outside forests,. This prevailing land tenure system notwithstanding, permits could be granted for harvesting of forest resources by private commercial enterprises or by the local community for domestic consumption, under prescribed circumstances.

The new National Forest Policy of 1998 and the Forest Act No. 7 of 1999 are the policy/legal instruments that guide forest administration in the country. At the policy level, Zambia through the Lands Act of 1995 has recognised customary land as eligible for state registration and thus its citizens can get leasehold title on customary land.

It is assumed that management rights of public forests have been implemented since 2000.




Nat. Cla.	Private Individual ownership	Private Industrial ownership	Other private ownership	State ownership	Customary ownership	Other/ Unknown ownership
FRA Cla	Management rights by Individuals	Management rights by Private corporations and institutions		Management rights by Public Administration	Management rights by Communities	Management rights by Others

18.3.2 Estimation and forecasting

18.3.3 Reclassification

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	N/A	12119	11921	11531
	... of which owned by the state at national scale	N/A	N/A	N/A	N/A
	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A

CFRQ	Private ownership	N/A	36868	36285	36194
CFRQ	... of which owned by individuals	N/A	3682	3622	3981
CFRQ	... of which owned by private business entities and institutions	N/A	1739	1710	2073
CFRQ	... of which owned by local, tribal and indigenous communities	N/A	31447	30953	30140
CFRQ	Unknown ownership	N/A	2147	2095	1743
TOTAL		.00	51134.00	50301.00	49468.00

Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 2	Tier 1
Private ownership	Tier 2	Tier 1
Unknown ownership	Tier 2	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	N/A	12119	11921	11531
Individuals	N/A	N/A	N/A	N/A
Private companies	N/A	N/A	N/A	N/A
Communities	N/A	N/A	N/A	N/A
Other	N/A	N/A	N/A	N/A

TOTAL	.00	12119.00	11921.00	11531.00
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Category	Tier for reported trend	Tier for status
Public Administration	Tier 1	Tier 2
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	The state owns all the land, woodlands, forest stands and trees outside forests,. This prevailing land tenure system notwithstanding, permits could be granted for harvesting of forest resources by private commercial enterprises or by the local community for domestic consumption, under prescribed circumstances.	Zambia will implement land audit in 2014 results that is expected to give update information on land ownership. In all cases statistics is based on what responsible institutions reports.
Private ownership	N/A	Zambia will implement land audit in 2014 results that is expected to give update information on land ownership
Unknown ownership	N/A	Zambia will implement land audit in 2014 results that is expected to give update information on land ownership
Management rights	Land managed under private and customary titles as leased lands from the State.	Zambia will implement land audit in 2014 results that is expected to give update information on land ownership

Other general comments to the table

Zambia will implement land audit in 2014 results that is expected to give update information on land ownership

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	The contribution of the Forest sector to the national economy and poverty reduction in Zambia, by Esa Puustjarvi, Guni Mickels-Kokwe and Moses Chakanga, Forestry Department and Ministry for Foreign Affairs of Finland	Employment in Forest Sector	2005	N/A
2	Treads and current status of the contribution of the forest sector to national economies (FAO, 2003)	Employment in primary production of goods	1990 and 2000	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

The state owns all the land, woodlands, forest stands and trees outside forests,. This prevailing land tenure system notwithstanding, permits could be granted for harvesting of forest resources by private commercial enterprises or by the local community for domestic consumption, under prescribed circumstances.



The new National Forest Policy of 1998 and the Forest Act No. 7 of 1999 are the policy/legal instruments that guide forest administration in the country. At the policy level, Zambia through the Lands Act of 1995 has recognised customary land as eligible for state registration and thus its citizens can get leasehold title on customary land.

It is assumed that management rights of public forests have been implemented since 2000.

Nat. Cla.	Private Individual ownership	Private Industrial ownership	Other private ownership	State ownership	Customary ownership	Other/ Unknown ownership
FRA Cla	Management rights by Individuals	Management rights by Private corporations and institutions		Management rights by Public Administration	Management rights by Communities	Management rights by Others

19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	0.955	1.275	1.903	2.201
	... 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	N/A	N/A

Other general comments to the table

No comprehensive information has been available on the self-employment.

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)	11900.936	Zambiakwacha	2010

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	Forestry Department Annual Report	N/A	2011	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	48662	48672

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	5000

21.4 Comments

Category	Comments
Government target/aspiration for forest area	To plant 1,000 hectares of plantation annually

Forests earmarked for conversion	5,000 for various developmental projects including infrastructure such as roads
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Other general comments

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