



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Report

Zambia

Rome, 2020



FAO has been monitoring the world's forests at 5 to 10 year intervals since 1946. The Global Forest Resources Assessments (FRA) are now produced every five years in an attempt to provide a consistent approach to describing the world's forests and how they are changing. The FRA is a country-driven process and the assessments are based on reports prepared by officially nominated National Correspondents. If a report is not available, the FRA Secretariat prepares a desk study using earlier reports, existing information and/or remote sensing based analysis.

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TABLE OF CONTENTS

Introduction

1. Forest extent, characteristics and changes
2. Forest growing stock, biomass and carbon
3. Forest designation and management
4. Forest ownership and management rights
5. Forest disturbances
6. Forest policy and legislation
7. Employment, education and NWFP
8. Sustainable Development Goal 15

Introduction

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Introductory text

Zambia is a landlocked country found in the southern region of Africa. It has a land surface area of 752,614 Km² most of which forms the highest parts of the plateau. Zambia’s altitude puts it in the broad belt of temperate highlands, which moderates what would otherwise be a harsh tropical climate. The temperatures range from 16° to 27° C in the cool season and dry season from 27° C to 38° C in the hot and wet season.

These characteristics result into two major climatic extremes, namely the semi-arid western region and the swampy Lake Bangweulu area in the north-eastern part of the country. Average annual rainfall is 600–900 mm in the south and more than 1 250 mm in the north. In the FAO global map of ecological zone Zambia belongs to tropical moist forest, tropical dry forest and tropical mountain.

Forests cover occupy a large area of our country and is estimated to be 61% of the total land area. Forests and woodlands provide the majority of the Zambian population with various products for their livelihoods, and are therefore of significant importance to Zambia's social economic and cultural development. Open woodlands, such as Miombo, Kalahari, Mopani, and Munga woodlands, cover extensive area of the country along with several relic of closed forest types. The main species include *Brachystegia speciformis*, *Brachystegia longifolia* *Julbernardia paniculata* and *Entandrophragma delevoyi*. Forest plantations covers an estimated area of 50,000 hectare with about 80% of plantations being Pinus spp. and the rest are Eucalyptus spp.

The changes in deforestation suggest an increase in unsustainable forest resource use. The drivers of deforestation have been identified as being agricultural expansion, timber extraction, bush fires, mining, land use and infrastructure development. The National Forestry Policy of 2014 therefore, encourages participatory forest management which is anchored on the active participation of all stakeholders.

Further, the National Strategy to Reduce Deforestation and Forest Degradation (REDD+) which was developed in 2014 focuses on tackling different drivers of deforestation in both the forestry and other identified key sectors in particular, agriculture, energy, mining and infrastructure. The vision of the strategy is to contribute to a prosperous climate change resilient economy by 2030, anchored upon sustainable management and utilisation of the nation’s natural resources towards improved livelihoods. Zambia therefore envisage a Sustainable Forest Management programme, implementing forest enhancement including natural regeneration, afforestation/reforestation, sustainable charcoal production to include improved kilns, participatory forest management, agroforestry and forest fire management.^[1]

^[1] UNFCCC Nationally Determined Contribution (NDC) Zambia. December 09, 2016. Retrieved May 23, 2017.

1 Forest extent, characteristics and changes

1a Extent of forest and other wooded land

National data

Data sources

2000	References	Integrated Land Use Assessment Phase II – Report for Zambia. The Food and Agriculture Organization of the United Nations and the Forestry Department, Ministry of Lands and Natural Resources, Lusaka, Zambia.; Ng’andwe, P., C. Nshingo, D. Chungu, A. Yambayamba, R. Vinya (eds) (2017). The 2016 Forest Plantation Inventory Report. Copperbelt University, School of Natural Resources, Kitwe, Zambia
	Methods used	National Forest Inventory, Full-cover forest/vegetation maps
	Additional comments	The report provides the findings of the Integrated Land-Use Assessment Project Phase Two (ILUA-II) conducted from 2010 to 2016 and The 2016 Forest Plantation Inventory Report for ZAFFICO

2010	References	Integrated Land Use Assessment Phase II – Report for Zambia. The Food and Agriculture Organization of the United Nations and the Forestry Department, Ministry of Lands and Natural Resources, Lusaka, Zambia.; Ng’andwe, P., C. Nshingo, D. Chungu, A. Yambayamba, R. Vinya (eds) (2017). The 2016 Forest Plantation Inventory Report. Copperbelt University, School of Natural Resources, Kitwe, Zambia
	Methods used	National Forest Inventory, Full-cover forest/vegetation maps
	Additional comments	Integrated Land Use Assessment Phase II (ILUA II) Forest Resource Assessment for Zambia covering the (2011-2016) has been taken as Data point for 2015 and include the Forest Plantation Area (47,149 ha) under ZAFFICO for year 2016

2014	References	Integrated Land Use Assessment Phase II – Report for Zambia. The Food and Agriculture Organization of the United Nations and the Forestry Department, Ministry of Lands and Natural Resources, Lusaka, Zambia.; Ng’andwe, P., C. Nshingo, D. Chungu, A. Yambayamba, R. Vinya (eds) (2017). The 2016 Forest Plantation Inventory Report. Copperbelt University, School of Natural Resources, Kitwe, Zambia
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Classifications and definitions

2000	National class	Definition
	Settlement	Land covered mainly by densely populated and organized or irregular settlement patterns surrounding cities, towns, chiefdoms and rural centres commonly referred to as urban and rural built-up areas.
	Cropland	Land actively used to grow agriculture (annual and perennial) crops which may be irrigated or rain feed for commercial, peasant and small scale farms around urban and rural settlements
	Grassland	Land that includes wooded rangeland that may be covered mainly by grasslands, plains, dambos, pans found along major river basins and water channels.
	Forests	

		This is land covered both by natural and planted forest meeting the threshold of 10% canopy cover growing over a minimum area of 0.5 ha with trees growing above 5m height.
	Wetlands	Land which is waterlogged, may be wooded such as marshland, perennial flooded plains and swampy areas (surface water bodies included).
	Other land	Barren land covered by natural bare earth / soil such as sandy dunes, beach sand, rocky outcrops and may include old open quarry sites for mines and related infrastructure outside settlements.
	Other wooded land	Same as FAO

2010	National class	Definition
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	Other wooded land	Same as FRA

2014	National class	Definition
	Settlement	Land covered mainly by densely populated and organized or irregular settlement patterns surrounding cities, towns, chiefdoms and rural centres commonly referred to as urban and rural built-up areas.
	Cropland	Land actively used to grow agriculture (annual and perennial) crops which may be irrigated or rain feed for commercial, peasant and small scale farms around urban and rural settlements
	Grassland	Land that includes wooded rangeland that may be covered mainly by grasslands, plains, dambos, pans found along major river basins and water channels.
	Forests	This is land covered both by natural and planted forest meeting the threshold of 10% canopy cover growing over a minimum area of 0.5 ha with trees growing above 5m height.

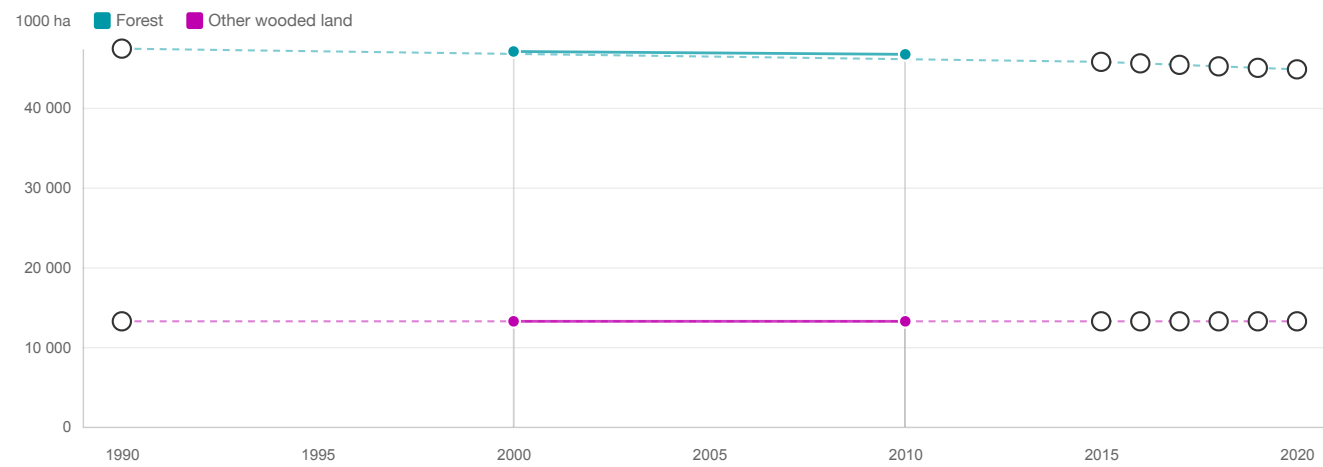
	Wetlands	Land which is waterlogged, may be wooded such as marshland, perennial flooded plains and swampy areas (surface water bodies included).
	Other land	Barren land covered by natural bare earth / soil such as sandy dunes, beach sand, rocky outcrops and may include old open quarry sites for mines and related infrastructure outside settlements.
	Other wooded land	Same as FRA

Original data and reclassification

2000	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Settlement	137.00	0.00 %	0.00 %	100.00 %
	Cropland	6 467.00	0.00 %	0.00 %	100.00 %
	Grassland	16 426.00	0.00 %	0.00 %	100.00 %
	Forests	47 054.00	100.00 %	0.00 %	0.00 %
	Wetlands	5 041.00	0.00 %	0.00 %	100.00 %
	Other land	136.00	0.00 %	0.00 %	100.00 %
	Other wooded land	13 219.00	0.00 %	100.00 %	0.00 %
	Total	88 480.00	47 054.00	13 219.00	28 207.00

2010	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Settlement	208.00	0.00 %	0.00 %	100.00 %
	Cropland	6 745.00	0.00 %	0.00 %	100.00 %
	Grassland	16 375.00	0.00 %	0.00 %	100.00 %
	Forests	46 696.00	100.00 %	0.00 %	0.00 %
	Wetlands	5 093.00	0.00 %	0.00 %	100.00 %
	Other land	144.00	0.00 %	0.00 %	100.00 %
	Other wooded land	13 219.00	0.00 %	100.00 %	0.00 %
	Total	88 480.00	46 696.00	13 219.00	28 565.00

2014	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Settlement	502.00	0.00 %	0.00 %	100.00 %
	Cropland	7 183.00	0.00 %	0.00 %	100.00 %
	Grassland	16 390.00	0.00 %	0.00 %	100.00 %
	Forests	45 943.00	100.00 %	0.00 %	0.00 %
	Wetlands	5 078.00	0.00 %	0.00 %	100.00 %
	Other land	166.00	0.00 %	0.00 %	100.00 %
	Other wooded land	13 219.00	0.00 %	100.00 %	0.00 %
	Total	88 481.00	45 943.00	13 219.00	29 319.00



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	47 412.00	47 054.00	46 696.00	45 755.10	45 566.80	45 378.67	45 190.46	45 002.24	44 814.03
Other wooded land (a)	13 219.00	13 219.00	13 219.00	13 219.00	13 219.00	13 219.00	13 219.00	13 219.00	13 219.00
Other land (c-a-b)	13 708.00	14 066.00	14 424.00	15 364.90	15 553.20	15 741.33	15 929.54	16 117.76	16 305.97
Total land area (c)	74 339.00	74 339.00	74 339.00	74 339.00	74 339.00	74 339.00	74 339.00	74 339.00	74 339.00

The FAOSTAT land area figure for the year 2015 is used for all reference years

Climatic domain	% of forest area 2015	Override value
Boreal	0.00	
Temperate	0.00	
Sub-tropical	0.00	
Tropical	100.00	

Comments

1b Forest characteristics

National Data

Data sources + type of data source eg NFI, etc

Integrated Land Use Assessment Phase II – Report for Zambia. The Food and Agriculture Organization of the United Nations and the Forestry Department, Ministry of Lands and Natural Resources, Lusaka, Zambia.; Ng’andwe, P., C. Nshingo, D. Chungu, A. Yambayamba, R. Vinya (eds) (2017). The 2016 Forest Plantation Inventory Report. Copperbelt University, School of Natural Resources, Kitwe, Zambia

National classification and definitions

National Forest Inventory

Original data

	2000	2010	2014
Settlements (Built-up)	137,245	208,346	501,658
Cropland Area (Ha)	6,466,555	6,745,080	7,182,896
Grassland Area (Ha)	16,426,337	16,375,028	16,390,183
Forest land Area (Ha)	47,054,148	46,696,174	45,943,316
Wetland Area (Ha)	5,041,472	5,092,781	5,077,626
Other land Area (Ha)	135,643	143,991	165,721
Total land Area (Ha)	75,261,400	75,261,400	75,261,400

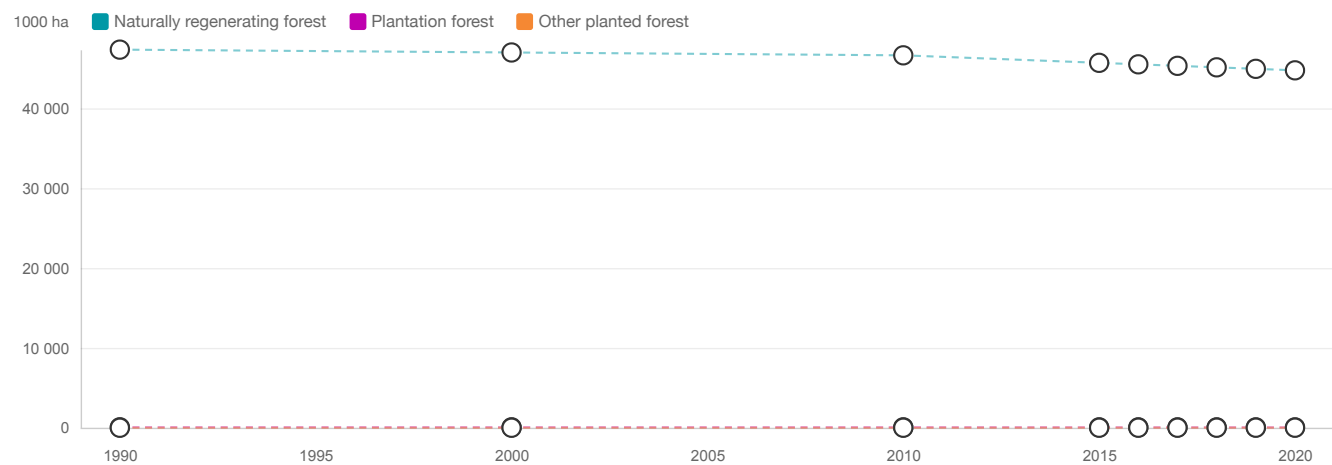
Analysis and processing of national data

Estimation and forecasting

FRA category	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest	47,412	47,054	46,696	45,755	45,567	45,379	45,190	45,002	44,814
Other wooded land	13,219	13,219	13,219	13,219	13,219	13,219	13,219	13,219	13,219
Other land	13,708	14,066	14,424	15,365	15,553	15,741	15,930	16,118	16,306
TOTAL	74,339	74,339	74,339	74,339	74,339	74,339	74,339	74,339	74,339

Reclassification into FRA 2020 categories

Data already Reported in FRA categories



FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	47 355.00	46 999.00	46 641.53	45 701.76	45 513.99	45 326.22	45 137.45	44 949.68	44 761.91
Planted forest (b)	57.00	55.00	54.47	53.24	53.01	52.78	52.55	52.32	52.09
Plantation forest	57.00	55.00	53.37	49.38	48.59	47.80	47.01	46.22	45.43
...of which introduced species	57.00	55.00	53.37	49.38	48.59	47.80	47.01	46.22	45.43
Other planted forest	0.00	0.00	1.10	3.86	4.42	4.98	5.54	6.10	6.66
Total (a+b)	47 412.00	47 054.00	46 696.00	45 755.00	45 567.00	45 379.00	45 190.00	45 002.00	44 814.00
Total forest area	47 412.00	47 054.00	46 696.00	45 755.10	45 566.80	45 378.67	45 190.46	45 002.24	44 814.03

Comments

Integrated Land Use Assessment Phase II (ILUA II) Forest Resource Assessment for Zambia covering the (2011-2016) has been taken as Data point for 2015 and include the Forest Plantation Area (47,149 ha) under ZAFFICO for year 2016

1c Primary forest and special forest categories

National Data

Data sources + type of data source eg NFI, etc

Forestry Department Annual Reports

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

N/A

Analysis and processing of national data

Estimation and forecasting

N/A

Reclassification into FRA 2020 categories

N/A

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Primary forest					
Temporarily unstocked and/or recently regenerated					
Bamboos					
Mangroves	0.00	0.00	0.00	0.00	0.00
Rubber wood		0.50	1.00	1.00	

Comments

1d Annual forest expansion, deforestation and net change

National Data

Data sources + type of data source eg NFI, etc

Integrated Land Use Assessment (ILUA) Zambia (2005-2008) – Phase I Report for Zambia. , Ngandwe, P., Njovu, F., and Chisanga, E (2011) Zambia Forestry and Forest Industries Corporation Limited (ZAFFICO) Forest Plantation Management Plan 2012 - 2016

Ng’andwe, P., C. Nshingo, D. Chungu, A. Yambayamba, R. Vinya (eds) (2017). The 2016 Forest Plantation Inventory Report. Copperbelt University, School of Natural Resources, Kitwe, Zambia

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Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

N/

Analysis and processing of national data

Estimation and forecasting

N/A

Reclassification into FRA 2020 categories

N/A

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Forest expansion (a)		0.45	1.50	1.50
...of which afforestation				
...of which natural expansion				
Deforestation (b)		36.25	189.68	189.71
Forest area net change (a-b)	-35.80	-35.80	-188.18	-188.21

Comments

1e Annual reforestation

National Data

Data sources + type of data source eg NFI, etc

Zambia Forestry and Forest Industries Corperation Limited (ZAFFICO) (2008) Forest Plantation Management Plan 2008 - 2013

National classification and definitions

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Original data

N/A

Analysis and processing of national data

Estimation and forecasting

N/A

Reclassification into FRA 2020 categories

N/A

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Reforestation		0.45	1.75	3.50

Comments

1f Other land with tree cover

National Data

Data sources + type of data source eg NFI, etc

Integrated Land Use Assessment (ILUA) Zambia (2005-2008) – Phase I Report for Zambia.

National classification and definitions

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Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
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Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

N/A

Analysis and processing of national data

Estimation and forecasting

N/A

Reclassification into FRA 2020 categories

N/A

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Palms (a)					
Tree orchards (b)					
Agroforestry (c)					
Trees in urban settings (d)					
Other (specify in comments) (e)					
Total (a+b+c+d+e)	–	–	–	–	–
Other land area	13 708.00	14 066.00	14 424.00	15 364.90	16 305.97

Comments

2 Forest growing stock, biomass and carbon

2a Growing stock

National Data

Data sources + type of data source eg NFI, etc

Ng'andwe, P., C. Nshingo, D. Chungu, A. Yambayamba, R. Vinya (eds) (2017). <i>The 2016 Forest Plantation Inventory Report</i> . Copperbelt University, School of Natural Resources, Kitwe, Zambia,
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Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

The ILUA II report, table 18, indicates the following growing stock per hectare:

Vegetation types and other areas	Growing stock volume (m³/ha)
1. Dry evergreen forest	105.5
2. Dry deciduous forest	52.4
3. Moist evergreen forest	47.2
4. Forest woodland	64.7
5. Forest plantation	169.5

The growing stock per hectare in naturally regenerated forest was estimated at 66.0 m3/ha, by calculating the area-weighted average of the four first forest types.

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Growing stock m³/ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	66.00	66.00	66.00	66.00	66.00	66.00	66.00	66.00	66.00
Planted forest	169.50	169.50	169.50	169.50	169.50	169.50	169.50	169.50	169.50
...of which plantation forest	169.50	169.50	169.50	169.50	169.50	169.50	169.50	169.50	169.50
...of which other planted forest	169.50	169.50	169.50	169.50	169.50	169.50	169.50	169.50	169.50
Forest	66.12	66.12	66.12	66.12	66.12	66.12	66.12	66.12	66.12
Other wooded land	7.70	7.70	7.70	7.70	7.70	7.70	7.70	7.70	7.70

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	3 125.43	3 101.93	3 078.34	3 016.32	3 003.92	2 991.53	2 979.07	2 966.68	2 954.29
Planted forest	9.66	9.32	9.23	9.02	8.99	8.95	8.91	8.87	8.83
...of which plantation forest	9.66	9.32	9.05	8.37	8.24	8.10	7.97	7.83	7.70
...of which other planted forest	0.00	0.00	0.19	0.65	0.75	0.84	0.94	1.03	1.13
Forest	3 135.09	3 111.25	3 087.57	3 025.34	3 012.91	3 000.48	2 987.98	2 975.55	2 963.12
Other wooded land	101.79	101.79	101.79	101.79	101.79	101.79	101.79	101.79	101.79

Comments

Growing stock for plantation forest has been estimated by using the Annual Allowable Cut of 391,706m³/ha before 2000 and 150,401m³/ha after 2016. The growing stocks for Natural forests has been estimated from the per hectare volume and the extent of forest from table 1a

2b Growing stock composition

National Data

Data sources + type of data source eg NFI, etc

Integrated Land Use Assessment (ILUA) Zambia (2005-2008) and
Zambia Forestry and Forest Industries Corporation Limited (ZAFFICO) (2008) Forest Plantation Management Plan 2008 - 2013

National classification and definitions

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Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

FRA categories	Scientific name	Common name	Growing stock in forest (million m³ over bark)				
Native tree species			1990	2000	2010	2015	2020
#1 Ranked in terms of volume	Julbernadia paniculata		340.57	336.63	332.70	330.73	328.77
#2 Ranked in terms of volume	Brachystegia spiciforms		335.86	331.98	328.10	326.16	324.22
#3 Ranked in terms of volume	Brachystegia boehmii		249.47	246.58	243.70	242.26	240.82
#4 Ranked in terms of volume	Colophospermum mopane		241.37	238.59	235.80	234.41	233.01
#5 Ranked in terms of volume	Isoberlinia angolensis		182.62	180.51	178.40	177.35	176.29
#6 Ranked in terms of volume	Diplorhynchus condylocarpon		147.92	146.21	144.50	143.65	142.79
#7 Ranked in terms of volume	Pseudolachnostylis maprounefolia		105.44	104.22	103.00	102.39	101.78
#8 Ranked in terms of volume	Pterocarpus angolensis		102.47	101.28	100.10	99.51	98.92
#9 Ranked in terms of volume	Erythrophleum africanum		98.58	97.44	96.30	95.73	95.16
#10 Ranked in terms of volume	Parinari curatellifolia		78.10	77.20	76.30	75.85	75.40
Remaining native tree species			1,243.03	1,241.29	1,239.44	1,188.27	1,137.13
Total volume of native tree species			3,125.43	3,101.93	3,078.34	3,016.31	2,954.29
Introduced tree species							
#1 Ranked in terms of volume	Pinus kesiya		4.90	4.73	4.68	4.58	4.48
#2 Ranked in terms of volume	Pinus oocarpa		2.15	2.07	2.05	2.01	1.97
#3 Ranked in terms of volume	Eucalyptus grandis		1.64	1.58	1.57	1.53	1.50
#4 Ranked in terms of volume	Eucalyptus cloeziana		0.31	0.30	0.30	0.29	0.28
#5 Ranked in terms of volume	Pinus michocana		0.34	0.33	0.32	0.32	0.31

Remaining introduced tree species			0.32	0.31	0.31	0.30	0.29
Total volume of introduced tree species			9.66	9.32	9.23	9.02	8.83
Total growing stock			3,135.09	3,111.25	3,087.57	3,025.34	2,963.12

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

Data already in FRA Classes

FRA categories	Scientific name	Common name	Growing stock in forest (million m³ over bark)				
			1990	2000	2010	2015	2020
Native tree species							
#1 Ranked in terms of volume	Julbernadia paniculata		340.57	336.63	332.70	330.73	328.77
#2 Ranked in terms of volume	Brachystegia spiciformis		335.86	331.98	328.10	326.16	324.22
#3 Ranked in terms of volume	Brachystegia boehmii		249.47	246.58	243.70	242.26	240.82
#4 Ranked in terms of volume	Colophospermum mopane		241.37	238.59	235.80	234.41	233.01
#5 Ranked in terms of volume	Isoberlinia angolensis		182.62	180.51	178.40	177.35	176.29
#6 Ranked in terms of volume	Diplorhynchus condylocarpon		147.92	146.21	144.50	143.65	142.79
#7 Ranked in terms of volume	Pseudolachnostylis maprounefolia		105.44	104.22	103.00	102.39	101.78
#8 Ranked in terms of volume	Pterocarpus angolensis		102.47	101.28	100.10	99.51	98.92
#9 Ranked in terms of volume	Erythrophleum africanum		98.58	97.44	96.30	95.73	95.16
#10 Ranked in terms of volume	Parinari curatellifolia		78.10	77.20	76.30	75.85	75.40
Remaining native tree species			1 243.03	1 241.29	1 239.44	1 188.27	1 137.13
Total volume of native tree species			3 125.43	3 101.93	3 078.34	3 016.31	2 954.29
Introduced tree species							

FRA categories	Scientific name	Common name	Growing stock in forest (million m³ over bark)				
			1990	2000	2010	2015	2020
Native tree species							
#1 Ranked in terms of volume	Pinus kesiya		4.90	4.73	4.68	4.58	4.48
#2 Ranked in terms of volume	Pinus oocarpa		2.15	2.07	2.05	2.01	1.97
#3 Ranked in terms of volume	Eucalyptus grandis		1.64	1.58	1.57	1.53	1.50
#4 Ranked in terms of volume	Eucalyptus cloeziana		0.31	0.30	0.30	0.29	0.28
#5 Ranked in terms of volume	Pinus michocana		0.34	0.33	0.32	0.32	0.31
Remaining introduced tree species			0.32	0.31	0.31	0.30	0.29
Total volume of introduced tree species			9.66	9.32	9.23	9.03	8.83
Total growing stock			3 135.09	3 111.25	3 087.57	3 025.34	2 963.12

Comments

Data on introduced species is obtained from ZAFFICO plantation inventory and management plans for the periods 2007, 2011 and 2016 indicated in years 2000, 2010 and 2015 respectively

2c Biomass stock

National Data

Data sources + type of data source eg NFI, etc

Ngandwe, P., Njovu, F., and Chisanga, E (2011) Zambia Forestry and Forest Industries Corperation Limited (ZAFFICO) Forest Plantation Management Plan 2012 - 2016

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

The ILUA II report, tables 20 and 30, indicate the following stocks in tonnes per hectare which have been used throughout the entire time series:

	t/ha
Above-ground biomass	44.0
Below-ground biomass	12.3
Dead wood	1.9

Analysis and processing of national data

Estimation and forecasting

	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0	44.0
Below-ground biomass	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3	12.3
Dead wood	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9

Reclassification into FRA 2020 categories

National Classes already reported in the FRA class

FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	44.00	44.00	44.00	44.00	44.00	44.00	44.00	44.00	44.00
Below-ground biomass	12.30	12.30	12.30	12.30	12.30	12.30	12.30	12.30	12.30
Dead wood	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90

Comments

2d Carbon stock

National Data

Data sources + type of data source eg NFI, etc

- Ng’andwe, P., C. Nshingo, D. Chungu, A. Yambayamba, R. Vinya (eds) (2017). *The 2016 Forest Plantation Inventory Report*. Copperbelt University, School of Natural Resources, Kitwe, Zambia
- Integrated Land Use Assessment (ILUA I) Zambia (2005-2008) – Phase I Report for Zambia. ;
- Integrated Land Use Assessment (ILUA II) Zambia (2011-2016) – Phase II Report for Zambia.
- Ngandwe, P., Njovu, F., and Chisanga, E (2011) Zambia Forestry and Forest Industries Corperation Limited (ZAFFICO) Forest Plantation Management Plan 2012 - 2016

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

The ILUA II report, tables 20 and 30 indicate the following C stocks per hectare:

	t/ha
Carbon in Above-ground biomass	21.5
Carbon in below-ground biomass	6.1
Carbon in dead wood	0.99

Furthermore, the ILUA II soil database indicate the following stocks of soil organic carbon:

Major vegetation type	C t/Ha
Dry deciduous forest	45.5
Dry evergreen forest	27.6
Forest woodlands	36.7
Moist evergreen forest	49.3
Area-weighted average - Forest	36.7

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Forest carbon (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Carbon in above-ground biomass	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50	21.50
Carbon in below-ground biomass	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10	6.10
Carbon in dead wood	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99	0.99
Carbon in litter									
Soil carbon	36.70	36.70	36.70	36.70	36.70	36.70	36.70	36.70	36.70

Soil depth (cm) used for soil carbon estimates	30.00
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Comments

3 Forest designation and management

3a Designated management objective

National Data

Data sources + type of data source eg NFI, etc

Integrated Land Use Assessment (ILUA II) Zambia (2011-2016) – Phase II Report for Zambia and Forestry Department Annual Reports

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Production (a)	-	-	-	-	-
Protection of soil and water (b)	8,077	8,077	7,055.00	6,910.00	6,861.00
Conservation of biodiversity (c)	23,754.23	23,754.23	24,530.16	24,392.30	24,392.30
Social Services (d)	-	-	-	-	-
Multiple use (e)	15,580.77	15,222.77	17,882.84	12,967.70	12,632.70
Other (specify in comments) (f)	-	-	-	-	-
None/unknown (g)	-	-	-	-	-
Total Forest Area	47,412.00	47,054.00	49,468.00	44,270.00	43,886.00

Analysis and processing of national data

Estimation and forecasting

Actual data of Gazetted Game Managent Areas and National Parks used

Reclassification into FRA 2020 categories

N/A

Primary designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production (a)					
Protection of soil and water (b)	8 077.00	8 077.00	7 055.00	6 910.00	6 861.00
Conservation of biodiversity (c)	23 754.23	23 754.23	24 530.16	24 392.30	24 392.30
Social Services (d)	0.00	0.00	0.00		
Multiple use (e)	15 580.77	15 222.77	15 110.84	12 967.70	12 632.70
Other (specify in comments) (f)	0.00	0.00	0.00		
None/unknown (g)	0.00	0.00	0.00	1 485.10	928.03
Total forest area	47 412.00	47 054.00	46 696.00	45 755.10	44 814.03

Total area with designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production					
Protection of soil and water					
Conservation of biodiversity					
Social Services					
Other (specify in comments)					

Comments

Gazetted Protected Forest Areas serve the purpose of protecting the soils and water catchment areas with National Parks are for conservation of biodiversity. Concession areas for production constitute about 700,000 hectares.

3b Forest area within protected areas and forest area with long-term management plans

National Data

Data sources + type of data source eg NFI, etc

Annual Reports

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest area within protected areas	31,831	31,831	31,831	31,831	31,831	31,831	31,831	31,831	31,831
Forest area with long-term forest management plan	31,831	31,831	31,831	31,831	31,831	31,831	31,831	31,831	31,831
...of which in protected areas	31,831	31,831	31,831	31,831	31,831	31,831	31,831	31,831	31,831

Analysis and processing of national data

Estimation and forecasting

The data is based on the gazetted Forest Estates, National Parks and Game Management Areas

Reclassification into FRA 2020 categories

N/A

FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest area within protected areas	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00
Forest area with long-term forest management plan	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00
...of which in protected areas	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00	31 831.00

Comments

4 Forest ownership and management rights

4a Forest ownership

National Data

Data sources + type of data source eg NFI, etc

Integrated Land Use Assessment (ILUA I) Zambia (2005-2008) and
Integrated Land Use Assessment (ILUA II) Zambia (2011-2016) – Phase II Report for Zambia.

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

Estimated From ILUA II Country Report

Ownership	Percentage (%)	2000	2010	2015
Private	5.4	2,761	2,671	2,391
Industries	0.3	153	148	133
Other private	0.9	460	445	398
Public	24	12,272	11,872	10,625
Local Govt	3.1	1,585	1,534	1,372
Communal land	63.3	32,368	31,313	28,023

Estimates made from ILUA I Report

Ownership	Percentage (%)	1990
Customary land	61	32208
Stateland	19	10032
Private Owership	7	3696
Others/Not known	13	6864

Analysis and processing of national data

Estimation and forecasting

Estmates were done using data from ILUA I and ILUA II Reports

Reclassification into FRA 2020 categories

N/A

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Private ownership (a)	3 696.00	3 375.00	3 265.00	2 922.00
...of which owned by individuals		2 761.00	2 671.00	2 391.00
...of which owned by private business entities and institutions		153.00	148.00	133.00
...of which owned by local, tribal and indigenous communities				
Public ownership (b)	10 032.00	13 857.00	13 406.00	11 997.00
Unknown/other (specify in comments) (c)	33 684.00	29 822.00	30 025.00	30 836.10
Total forest area	47 412.00	47 054.00	46 696.00	45 755.10

Comments

Ownership and administration

The forest land/areas in Zambia are either under customary or state land tenure system. This is where all protected areas (i.e. forest reserves, game management areas, national parks, bird sanctuaries, conservancies, and heritage sites) are located. However, some non-protected forest land may be owned under title by individuals, companies, other institutions and local councils though all trees (forests) on such land according to the Forest Act No.4 of 2015, are vested in the hands of the President on behalf of the general public.(ILUA, 2016)

4b Holder of management rights of public forests

National Data

Data sources + type of data source eg NFI, etc

Integrated Land Use Assessment (ILUA II) Zambia (2011-2016) – Phase II Report for Zambia.

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

-

Analysis and processing of national data

Estimation and forecasting

N/A

Reclassification into FRA 2020 categories

N/A

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Public Administration (a)				
Individuals (b)				
Private business entities and institutions (c)				
Local, tribal and indigenous communities (d)				
Unknown/other (specify in comments) (e)	10 032.00	13 857.00	13 406.00	11 997.00
Total public ownership	10 032.00	13 857.00	13 406.00	11 997.00

Comments

Ownership and administration

The forest land/areas in Zambia are either under customary or state land tenure system. This is where all protected areas (i.e. forest reserves, game management areas, national parks, bird sanctuaries, conservancies, and heritage sites) are located. However, some non-protected forest land may be owned under title by individuals, companies, other institutions and local councils though all trees (forests) on such land according to the Forest Act No.4 of 2015, are vested in the hands of the President on behalf of the general public.

5 Forest disturbances

5a Disturbances

National Data

Data sources + type of data source eg NFI, etc

Integrated Land Use Assessment (ILUA) Zambia (2005-2008), National Forestry Inventory

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

-

Analysis and processing of national data

Estimation and forecasting

N/A

Reclassification into FRA 2020 categories

N/A

FRA categories	Area (1000 ha)																	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Insects (a)																		
Diseases (b)																		
Severe weather events (c)																		
Other (specify in comments) (d)																		
Total (a+b+c+d)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total forest area	47 054.00	–	–	–	–	–	–	–	–	–	46 696.00	–	–	–	45 943.00	45 755.10	45 566.80	45 378.67

Comments

Forest disturbance in Zambia is mainly due to human activities. The disturbances due to diseases and insects are normally insignificant or negligible.

It is estimated that 91.7% of the trees assessed across the country under ILUA II Forest Resources Assessment are regarded as healthy (or are growing in normal condition). Only 7.2% of the trees were considered unhealthy (injured or diseased) but they are determinant and living, and they are likely to recover.

5b Area affected by fire

National Data

Data sources + type of data source eg NFI, etc

FRA Geospatial Tools and MODIS Burned Area

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

FRA categories	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Total land area affected by fire	15,130	13,725	16,053	19,586	19,061	20,827	18,118	18,047	19,000	14,790
...of which on forest	12,484	11,662	14,114	16,745	15,798	17,823	15,309	14,916	15,999	12,208
FRA categories	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total land area affected by fire	1,900	14,790	17,863	17,863	18,018	18,946	17,299	18,015	17,474	
...of which on forest	15,999	12,208	14,799	14,582	14,645	15,528	14,248	15,077	14,253	

Analysis and processing of national data

Estimation and forecasting

No Estimation as the actual data is entered

Reclassification into FRA 2020 categories

Data already reported in FRA classes

FRA categories	Area (1000 ha)																	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total land area affected by fire	15 130.00	13 725.00	16 053.00	19 586.00	19 061.00	20 827.00	18 118.00	18 047.00	19 000.00	14 790.00	17 863.00	17 863.00	18 018.00	18 946.00	17 299.00	18 015.00	17 474.00	
...of which on forest	12 484.00	11 662.00	14 114.00	16 745.00	15 798.00	17 823.00	15 309.00	14 916.00	15 999.00	12 208.00	14 799.00	14 582.00	14 645.00	15 528.00	14 248.00	15 077.00	14 253.00	

Comments

5c Degraded forest

Does your country monitor area of degraded forest		Yes
If "yes"	What is the national definition of "Degraded forest"?	Forest degradation is the reduction from 100% canopy cover to 10% and or altering the natural ecosystem (GRZ 1975). “It includes change of and or within an indigenous forest which negatively affect the stand or site, and in particular, lowers the productive function in terms of its biodiversity capacity.
	Describe the monitoring process and results	The monitoring process involves mapping the drivers of forest degradation using very high resolution remote sensing data. For instance, some charcoal hot-spots, forest concession area including some subsistence farming activities were mapped and data collected to produce some forest degradation maps. The data collected will be consolidated with biomass extraction data from stump data for timber, poles and other wood forest products both from indigenous and plantation forests.

Comments

6 Forest policy and legislation

6a Policies, Legislation and national platform for stakeholder participation in forest policy

National Data

Data sources + type of data source eg NFI, etc

National Forestry Policy 2014

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

Indicate the existence of:	Boolean (Yes/No)	
	National	Sub-National
Policy supporting SFM	YES	NO
Legislation and or regulations supporting SFM	YES	NO
Platform that promotes or allows for stakeholder participation in forest policy development	YES	YES
Traceability system for wood products	YES	NO

Indicate the existence of	Boolean (Yes/No)	
	National	Sub-national
Policies supporting SFM	Yes	No
Legislations and regulations supporting SFM	Yes	No
Platform that promotes or allows for stakeholder participation in forest policy development	Yes	Yes
Traceability system(s) for wood products	Yes	No

Comments

6b Area of permanent forest estate

National Data

Data sources + type of data source eg NFI, etc

Forestry Department Annual Reports

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

FRA 2020 categories	Forest Area (1000 ha)					
Area of permanent forest estate	Applicable	1990	2000	2010	2015	2020
	YES	8,077	8,077	7,055	6,910	6,861

FRA 2020 categories	Forest area (1000 ha)					
	Applicable?	1990	2000	2010	2015	2020
Area of permanent forest estate	Yes	8 077.00	8 077.00	7 055.00	6 910.00	6 861.00

Comments
Permanent Forest Estates include the gazetted forest areas that have been set aside as Protected Forest Areas and include both the National Forests as well as the Local Forests.

7 Employment, education and NWFP

7a Employment in forestry and logging

National Data

Data sources + type of data source eg NFI, etc

Forestry Department Annual Reports and Data from Zambia Forestry and Forest Industries Corporation Limited (ZAFFICO)

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

-

FRA 2020 categories	Full-time equivalents (1000 FTE)											
	1990			2000			2010			2015		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Employment in forestry and logging	0.96			1.28			2.20			2.28		
...of which silviculture and other forestry activities												
...of which logging												
...of which gathering of non wood forest products												
...of which support services to forestry												

Comments

Most institutions involved in forestry and logging have not yet provided the data requested on employment in forestry and logging

7b Graduation of students in forest-related education

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-

FRA 2020 categories	Number of graduated students											
	1990			2000			2010			2015		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Doctoral degree												
Master's degree												
Bachelor's degree												
Technician certificate / diploma												
Total												

Comments

7c Non wood forest products removals and value 2015

National Data

Data sources + type of data source eg NFI, etc

Integrated Land Use Assessment (ILUA II) Zambia (2011-2016) – Phase II Report for Zambia.

National classification and definitions

National Class	Definition
Forest land	Forest covers an area of 0.5 ha or more with trees of 10% or more canopy cover and at least 5 m height at maturity in situ.
Other Wooded Land	Area occupying 0.5 ha or more with trees of 5-10% canopy cover or shrubs / bushes with at least 10% canopy cover.
Other Land	Include trees with less than 5% canopy cover or shrubs / bushes with less than 10% canopy cover

Original data

	Name of NWFP product	Key species	Quantity	Unit	Value (1000 currency)	NWFP category
1st	Honey					Food
2nd	Mushroom	<i>Amanita loosei (Amanita zambiana), Cantharellus symoensii, Lactarius xerampelinus, Termitomyces striatus, Termitomyces titanicus and Cantharellus afrociarius</i>				Food
3rd	Catepillar	Gynanisa maja, Gonmbrasia zambesia, imbrasia spp.				Food
4th	Fruits	Uapaca kirkiana, Adasonia digitata, Anisophyllea boehmii				Food
5th	Medicine	Diplorhynchus condylocarpon, Acacia erioloba, Ficus capensis, Brachystegia boehmii, Pseudolachostylis maprouneifolia				Raw material for medicine
6th	Fine Grass					Raw material for construction
7th	Tubers					Food
8th	Fibre					Raw material
9th	Dye					Raw material
10th						
All other plant products						
All other animal products						
Total						

	Name of NWFP product	Key species	Quantity	Unit	Value (1000 local currency)	NWFP category
#1	Honey					
#2	Mushroom	Amanita loosei (Amanita zambiana), Cantharellus symoensii, Lactarius xerampelinus, Termitomyces striatus, Termitomyces titanicus and Cantharellus afrocibarius				
#3	Catepillar	Gynanisa maja, Gonmbrasia zambesia, imbrasia spp.				
#4	Fruits	Uapaca kirkiana, Adasonia digitata, Anisophyllea boehmii				
#5	Medicine	Diplorhynchus condylocarpon, Acacia erioloba, Ficus capensis, Brachystegia boehmii, Pseudolachostylis maprouneifolia				
#6	Fine Grass					
#7	Tubers					
#8	Fibre					
#9	Dye					
#10						
All other plant products						
All other animal products						

	Name of NWFP product	Key species	Quantity	Unit	Value (1000 local currency)	NWFP category
Total					–	

Name of currency	Kwacha
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Comments

The top NWFPs collected in 2015 included mushrooms, fruits, nuts, seeds, berries, roots, tubers, plant medicines, honey and fibre ropes.

8 Sustainable Development Goal 15

8a Sustainable Development Goal 15

SDG Indicator 15.1.1 Forest area as proportion of total land area 2015

Indicator	Percent							
	2000	2010	2015	2016	2017	2018	2019	2020
Forest area as proportion of total land area 2015	63.30	62.81	61.55	61.30	61.04	60.79	60.54	60.28

Name of agency responsible	MLNR - Forestry Department
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SDG Indicator 15.2.1 Progress towards sustainable forest management

Sub-Indicator 1	Percent						
	2000-2010	2010-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Forest area annual net change rate	-0.08	-0.41	-0.41	-0.41	-0.42	-0.42	-0.42

Name of agency responsible	MLNR - Forestry Department
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Sub-Indicator 2	Forest biomass (tonnes/ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass stock in forest	44.00	44.00	44.00	44.00	44.00	44.00	44.00	44.00

Name of agency responsible	MLNR - Forestry Department
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Sub-Indicator 3	Percent (2015 forest area baseline)							
	2000	2010	2015	2016	2017	2018	2019	2020
Proportion of forest area located within legally established protected areas	69.57	69.57	69.57	69.57	69.57	69.57	69.57	69.57

Name of agency responsible	MLNR - Forestry Department
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Sub-Indicator 4	Percent (2015 forest area baseline)							
	2000	2010	2015	2016	2017	2018	2019	2020
Proportion of forest area under long-term forest management plan	69.57	69.57	69.57	69.57	69.57	69.57	69.57	69.57

Name of agency responsible	MLNR - Forestry Department
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Sub-Indicator 5	Forest area (1000 ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Forest area under independently verified forest management certification schemes	0.00	0.00	0.00	0.00	0.00	0.00	–	–