



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Report

Botswana

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

Report preparation and contact persons

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Introductory text

Forest Resources Assessment (FRA) provides essential information for understanding the extent of forest resources, their condition, management and uses. Forests are more than trees and fundamental for food security and improved livelihoods. They contribute to resilience of communities by regulating water flows, providing food, wood energy, shelter and fodder, generate income and employment as well as biodiversity. Furthermore, forests support sustainable agriculture and human well-being by stabilizing soils and climate.

1 Forest extent, characteristics and changes

1a Extent of forest and other wooded land

National data

Data sources

2016	References	Enhancing National Forest Monitoring System for the Promotion of Sustainable Natural Resources Management Report- December 2017
	Methods used	National Forest Inventory
	Additional comments	Other land is 79.10% it consists of all other classes except Woodland, Riparian and Typical Forests

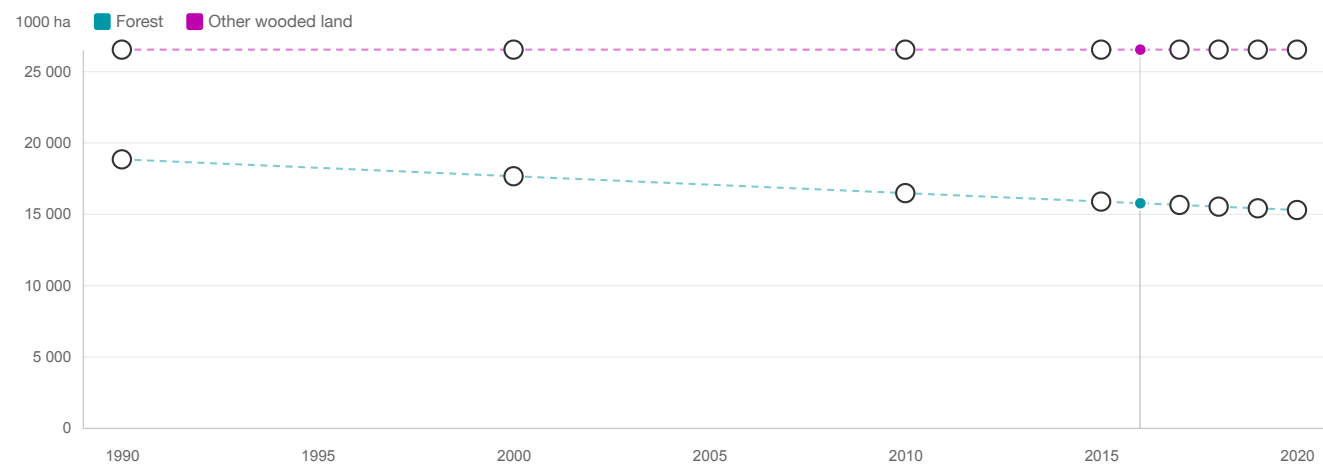
Classifications and definitions

2016	National class	Definition
	Riparian Forest	Forests structured as multi-layers of the canopy with closed to neighbouring trees. Riparian forest stand beside the water body
	Typical Forest	Forests structured as multi-layers of the canopy with closed to neighbouring trees. Typical forest does not stand beside the water body
	Woodland	Land spanning more than 1 hectare with trees of top layer higher than 5 meters or trees able to reach these thresholds in situ
	Bush/Shrub	Vegetation types where the dominant woody elements are shrubs i.e. woody perennial plants, generally less than 5 meters in height at maturity and without a definite crown.
	Grassland/Forbs/Savanna	Consists of all open land, used primarily for pasture and grazing. Savanna is structured as scattering tree with grass covering on the floor
	Marsh/Wetland	Land covered wet grass/forbs
	Desert/Sand dunes	land covered sand
	Waterbody/Pan	Pan is a land covered bare sands/grasses during dry season, and covered water, bare sands or grasses during rainy season. Waterbody is covered water, such as river, lake, pond, and so on.
	Bare land/Build up	Bareland is a land covered bare soil with less herbal vegetation, such as clearing, mining and rocky area. build up is a land covered build up area such as settlement and urban, and industrial area.

Original data and reclassification

2016	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Riparian Forest	155.20	100.00 %	0.00 %	0.00 %

	Typical Forest	3 651.70	100.00 %	0.00 %	0.00 %
	Woodland	11 921.00	100.00 %	0.00 %	0.00 %
	Bush/Shrub	26 490.60	0.00 %	100.00 %	0.00 %
	Grassland/Forbs/Savanna	12 013.40	0.00 %	0.00 %	100.00 %
	Marsh/Wetland	766.10	0.00 %	0.00 %	100.00 %
	Desert/Sand dunes	700.80	0.00 %	0.00 %	100.00 %
	Waterbody/Pan	1 387.50	0.00 %	0.00 %	100.00 %
	Bare land/Build up	890.50	0.00 %	0.00 %	100.00 %
	Total	57 976.80	15 727.90	26 490.60	15 758.30



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	18 803.70	17 620.70	16 437.70	15 846.20	15 727.90	15 609.60	15 491.30	15 373.00	15 254.70
Other wooded land (a)	26 490.60	26 490.60	26 490.60	26 490.60	26 490.60	26 490.60	26 490.60	26 490.60	26 490.60
Other land (c-a-b)	11 378.70	12 561.70	13 744.70	14 336.20	14 454.50	14 572.80	14 691.10	14 809.40	14 927.70
Total land area (c)	56 673.00	56 673.00	56 673.00	56 673.00	56 673.00	56 673.00	56 673.00	56 673.00	56 673.00

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

THE FRA2015 REPORT USED OLD DATA FROM 1990 BUT FOR FRA2020 DATA USED IS FROM THE 2016 NATIONAL FOREST INVENTORY. OTHER WOODED LAND AREA CHANGE ESTIMATES ARE NOT AVAILABLE SO THE SAME FIGURE WAS REPORTED FOR ALL THE YEARS. THE FOREST AREA CHANGE RATE OF -118 300 HA/YR REPORTED IN FRA 2015 WAS USED TO ESTIMATE THE CHANGE IN FOREST AREA.

1b Forest characteristics

National data

Data sources

2016	References	Enhancing National Forest Monitoring System for the Promotion of Sustainable Natural Resources Management Report- December 2017
	Methods used	National Forest Inventory
	Additional comments	Other land is 79.10% it consists of all other classes except Woodland, Riparian and Typical Forests

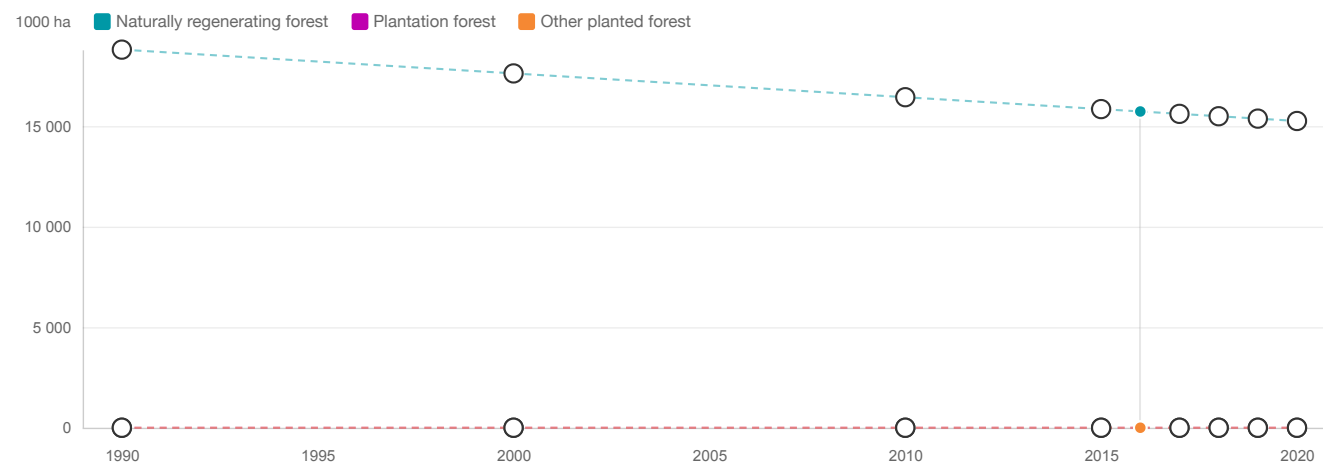
Classifications and definitions

2016	National class	Definition
	Riparian Forest	Forests structured as multi-layers of the canopy with closed to neighbouring trees. Riparian forest stand beside the water body
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	Woodland	Land spanning more than 1 hectare with trees of top layer higher than 5 meters or trees able to reach these thresholds in situ
	Bush/Shrub	Vegetation types where the dominant woody elements are shrubs i.e. woody perennial plants, generally less than 5 meters in height at maturity and without a definite crown.
	Grassland/Forbs/Savanna	Consists of all open land, used primarily for pasture and grazing. Savanna is structured as scattering tree with grass covering on the floor
	Marsh/Wetland	Land covered wet grass/forbs
	Desert/Sand dunes	land covered sand
	Waterbody/Pan	Pan is a land covered bare sands/grasses during dry season, and covered water, bare sands or grasses during rainy season. Waterbody is covered water, such as river, lake, pond, and so on.
	Bare land/Build up	Bareland is a land covered bare soil with less herbal vegetation, such as clearing, mining and rocky area. build up is a land covered build up area such as settlement and urban, and industrial area.

Original data and reclassification

2016	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Riparian Forest	155.20	100.00 %	0.00 %	0.00 %
	Typical Forest	3 651.70	100.00 %	0.00 %	0.00 %

	Woodland	11 921.00	100.00 %	0.00 %	0.00 %
	Total	15 727.90	15 727.90	0.00	0.00



FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	18 803.70	17 620.70	16 437.70	15 846.20	15 727.90	15 609.60	15 491.30	15 373.00	15 254.70
Planted forest (b)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which introduced species	0.00	0.00	0.00	0.00		0.00	0.00	0.00	0.00
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (a+b)	18 803.70	17 620.70	16 437.70	15 846.20	15 727.90	15 609.60	15 491.30	15 373.00	15 254.70
Total forest area	18 803.70	17 620.70	16 437.70	15 846.20	15 727.90	15 609.60	15 491.30	15 373.00	15 254.70

Comments

1c Primary forest and special forest categories

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

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Original data

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Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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

Comments

1d Annual forest expansion, deforestation and net change

National Data

Data sources + type of data source eg NFI, etc

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National classification and definitions

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Original data

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Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Forest expansion (a)				
...of which afforestation				
...of which natural expansion				
Deforestation (b)				
Forest area net change (a-b)	-118.30	-118.30	-118.30	-118.30

Comments

1e Annual reforestation

National Data

Data sources + type of data source eg NFI, etc

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National classification and definitions

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Original data

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Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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

Comments

1f Other land with tree cover

National Data

Data sources + type of data source eg NFI, etc

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National classification and definitions

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Original data

-

Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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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	11 378.70	12 561.70	13 744.70	14 336.20	14 927.70

Comments

2 Forest growing stock, biomass and carbon

2a Growing stock

National Data

Data sources + type of data source eg NFI, etc

Source: Botswana Forest Distribution Map (BFDM) 2015, Department of Forestry and Range Resources (DFRR)-JICA NFMS Botswana Project. Preliminary results obtained by the Training (2016 update)

National classification and definitions

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Original data

-

Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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FRA categories	Growing stock m³/ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	103.50	103.50	103.50	103.50	103.50	103.50	103.50	103.50	103.50
Planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	103.50	103.50	103.50	103.50	103.50	103.50	103.50	103.50	103.50
Other wooded land									

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	1 946.18	1 823.74	1 701.30	1 640.08	1 627.84	1 615.59	1 603.35	1 591.11	1 578.86
Planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	1 946.18	1 823.74	1 701.30	1 640.08	1 627.84	1 615.59	1 603.35	1 591.11	1 578.86
Other wooded land									

Comments

Source: Botswana Forest Distribution Map (BFDM) 2015, Department of Forestry and Range Resources (DFRR)-JICA NFMS Botswana Project. Preliminary results obtained by the Training (2016 update)

2b Growing stock composition

National Data

Data sources + type of data source eg NFI, etc

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National classification and definitions

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Original data

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Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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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	Baikiaea plurijuga	Mukusi					
#2 Ranked in terms of volume	Colophospermum mopane	Mopane					
#3 Ranked in terms of volume	Pterocarpus angolensis	Mukwa					
#4 Ranked in terms of volume	Burkea africana	Wild syringa					
#5 Ranked in terms of volume							
#6 Ranked in terms of volume							
#7 Ranked in terms of volume							
#8 Ranked in terms of volume							
#9 Ranked in terms of volume							
#10 Ranked in terms of volume							
Remaining native tree species							
Total volume of native tree species			–	–	–	–	
Introduced tree species							
#1 Ranked in terms of volume							
#2 Ranked in terms of volume							
#3 Ranked in terms of volume							
#4 Ranked in terms of volume							
#5 Ranked in terms of volume							
Remaining introduced tree species							
Total volume of 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							
Total growing stock			–	–	–	–	–

Comments

CHOBE FOREST RESERVE INVENTORY REPORT, JULY 2008

2c Biomass stock

National Data

Data sources + type of data source eg NFI, etc

FRA 2020 Biomass and carbon calculator

National classification and definitions

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Original data

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Analysis and processing of national data

Estimation and forecasting

Insert the percentages of Growing stock by IPCC forest type for each of the FRA forest categories									
IPCC forest types	FRA forest categories								
	Naturally regenerating forest	Plantation forest	Other planted forest						
	% of Growing stock								
Broadleaved humid									
Broadleaved dry	100%								
Coniferous									
	100%	0%	0%	Must add up to 100%					
Insert Carbon fraction used by country (IPCC default = 0.47)									
Carbon Fraction	47%								
Biomass conversion and expansion factors (BCEF)									
Naturally regenerating forest	1990	2000	2010	2015	2016	2017	2018	2019	2020
Broadleaved humid	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Broadleaved dry	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Coniferous	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76

Plantation forest									
Broadleaved humid	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Broadleaved dry	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Coniferous	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Other planted forest									
Broadleaved humid	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Broadleaved dry	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Coniferous	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Weighted BCEF									
Naturally regenerating forest	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Plantation forest									
Other planted forest									
Root-shoot ratios									
Naturally regenerating forest	1990	2000	2010	2015	2016	2017	2018	2019	2020
Broadleaved humid	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Broadleaved dry	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Coniferous	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Plantation forest									
Broadleaved humid	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Broadleaved dry	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Coniferous	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Other planted forest									
Broadleaved humid	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Broadleaved dry	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Coniferous	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Weighted RS ratio									
Naturally regenerating forest	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Plantation forest									
Other planted forest									

Above-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	155.25	155.25	155.25	155.25	155.25	155.25	155.25	155.25	155.25
Plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	155.25	155.25	155.25	155.25	155.25	155.25	155.25	155.25	155.25
Below-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	43.47	43.47	43.47	43.47	43.47	43.47	43.47	43.47	43.47
Plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	43.47	43.47	43.47	43.47	43.47	43.47	43.47	43.47	43.47

Reclassification into FRA 2020 categories

-

FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	155.25	155.25	155.25	155.25	155.25	155.25	155.25	155.25	155.25
Below-ground biomass	43.47	43.47	43.47	43.47	43.47	43.47	43.47	43.47	43.47
Dead wood									

Comments

2d Carbon stock

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-

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	72.97	72.97	72.97	72.97	72.97	72.97	72.97	72.97	72.97
Carbon in below-ground biomass	20.43	20.43	20.43	20.43	20.43	20.43	20.43	20.43	20.43
Carbon in dead wood									
Carbon in litter									
Soil carbon									

Soil depth (cm) used for soil carbon estimates	
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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

Expert estimate

National classification and definitions

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Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

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Primary designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production (a)	0.00	0.00	0.00	0.00	0.00
Protection of soil and water (b)	0.00	0.00	0.00	0.00	0.00
Conservation of biodiversity (c)	0.00	0.00	0.00	0.00	0.00
Social Services (d)	0.00	0.00	0.00	0.00	0.00
Multiple use (e)	18 803.70	17 620.70	16 437.70	15 846.20	15 254.70
Other (specify in comments) (f)	0.00	0.00	0.00	0.00	0.00
None/unknown (g)	0.00	0.00	0.00	0.00	0.00
Total forest area	18 803.70	17 620.70	16 437.70	15 846.20	15 254.70

Total area with designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production	18 803.70	17 620.70	16 437.70	15 846.20	15 254.70
Protection of soil and water					
Conservation of biodiversity	18 803.70	17 620.70	16 437.70	15 846.20	15 254.70
Social Services	18 803.70	17 620.70	16 437.70	15 846.20	15 254.70
Other (specify in comments)					

Comments

There is no production purpose since 1992 due to moratorium suspending roundwood trade in Botswana. Forests are now under multiple use in the form of consumptive use such as hunting, photographic safari, game drives to see wild animals, biological conservation and so on.

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

Expert estimate

National classification and definitions

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Original data

-

Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest area within protected areas	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11
Forest area with long-term forest management plan	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11
...of which in protected areas	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11	1 713.11

Comments

Protected areas is estimated to cover 45% of the national forest classes Riparian forest and Typical forest 3806.90 thousand ha.

4 Forest ownership and management rights

4a Forest ownership

National Data

Data sources + type of data source eg NFI, etc

EU/FAO 1998

National classification and definitions

-

Original data

Based on the FRA 2005 report (which had used the EU/FAO 1998, as source), there are basically three types of land tenure in Botswana: - State: This type constitutes 24% of Botswana. - Freehold: This makes up 5% of the total land area of Botswana. - Tribal: This land covers 71% of the country.

Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

Due to lack of other information, the above percentages have been applied to the forest area of table T1a. This assumption is correct, according to knowledgeable people of Department of Forestry & Range Resources/Botswana. National Classification FRA Classification State 100% public Freehold 100% private Tribal 100% private

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Private ownership (a)	14 290.81	13 391.73	12 492.65	12 043.11
...of which owned by individuals	0.00	0.00	0.00	0.00
...of which owned by private business entities and institutions	940.19	881.04	821.89	792.31
...of which owned by local, tribal and indigenous communities	13 350.63	12 510.70	11 670.77	11 250.80
Public ownership (b)	4 512.89	4 228.97	3 945.05	3 803.09
Unknown/other (specify in comments) (c)	0.00	0.00	0.00	0.00
Total forest area	18 803.70	17 620.70	16 437.70	15 846.20

Comments

4b Holder of management rights of public forests

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

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FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Public Administration (a)	4 512.89	4 228.97	3 945.05	3 803.09
Individuals (b)	0.00	0.00	0.00	0.00
Private business entities and institutions (c)	0.00	0.00	0.00	0.00
Local, tribal and indigenous communities (d)	0.00	0.00	0.00	0.00
Unknown/other (specify in comments) (e)	0.00	0.00	0.00	0.00
Total public ownership	4 512.89	4 228.97	3 945.05	3 803.09

Comments

All forests under public ownership are managed by the public administration.

5 Forest disturbances

5a Disturbances

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

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	17 620.70	-	-	-	-	-	-	-	-	-	16 437.70	-	-	-	-	15 846.20	15 727.90	15 609.60

Comments

5b Area affected by fire

National Data

Data sources + type of data source eg NFI, etc

FRA 2020 Geospatial tool Module 3 Burned area (uploaded in Links and Repository)

National classification and definitions

-

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

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	3 068.23	3 994.11	2 821.51	503.64	927.12	588.40	3 771.93	1 373.05	4 227.46	1 232.40	7 440.67	8 263.73	2 780.66	1 614.80	1 690.39	903.68	965.30	2 101 950.00
...of which on forest	150.89	120.98	178.40	87.33	82.72	81.40	183.25	119.50	224.28	69.15	153.50	233.63	186.91	180.22	106.36	142.92	100.50	

Comments

5c Degraded forest

Does your country monitor area of degraded forest		No
If "yes"	What is the national definition of "Degraded forest"?	
	Describe the monitoring process and results	

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 classification and definitions

-

Original data

-

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

Comments

6b Area of permanent forest estate

National Data

Data sources + type of data source eg NFI, etc

Expert estimate

National classification and definitions

-

Original data

-

FRA 2020 categories	Forest area (1000 ha)					
	Applicable?	1990	2000	2010	2015	2020
Area of permanent forest estate	Yes	3 806.90	3 806.90	3 806.90	3 806.90	3 806.90

Comments

7 Employment, education and NWFP

7a Employment in forestry and logging

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

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							1.65			7.94		
...of which silviculture and other forestry activities				0.48	0.11	0.36	0.42	0.01	0.41	0.52	0.15	0.37
...of which logging												
...of which gathering of non wood forest products							1.23			7.42		0.30
...of which support services to forestry												

Comments

7b Graduation of students in forest-related education

National Data

Data sources + type of data source eg NFI, etc

Department of Forestry and Range Resources (DFRR) and Botswana University of Agriculture and Natural Resources (BUAN)

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	0.00	0.00	0.00	6.00	1.00	5.00	3.00	0.00	3.00	2.00	1.00	1.00
Master's degree	0.00	0.00	0.00	3.00	1.00	2.00	9.00	3.00	6.00	12.00	5.00	7.00
Bachelor's degree	0.00	0.00	0.00	15.00	4.00	11.00	23.00	3.00	20.00	7.00	1.00	6.00
Technician certificate / diploma	3.00	1.00	2.00	29.00	6.00	23.00	35.00	14.00	21.00	13.00	6.00	7.00
Total	3.00	1.00	2.00	53.00	12.00	41.00	70.00	20.00	50.00	34.00	13.00	21.00

Comments

The data was collected from Department of Forestry and Range Resources (DFRR) and Botswana University of Agriculture and Natural Resources (BUAN)

7c Non wood forest products removals and value 2015

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-

	Name of NWFP product	Key species	Quantity	Unit	Value (1000 local currency)	NWFP category
#1	Firewood	Combetum imberbe	24 878 665		16 087	8 Other plant products
#2	Thatching grass	Eragrostis pallens	1 835 952		15 089	8 Other plant products
#3	Phane	Colophospermum mopane	401 534		12 629	1 Food
#4	Marula	Sclerocarya Birrea	445 419		1 791	1 Food
#5	Wood products	Colophospermum mopane	510 013		824	5 Raw material for utensils handicrafts construction
#6	Grapple	Harpagophytum procumbens	6 227		129	3 Raw material for medicine and aromatic products
#7	Palm leaves	Hyphaene petersiana	17 600		341	5 Raw material for utensils handicrafts construction
#8	Mmilo	Vangueria Infausta	10 842		173	1 Food
#9	Morama	Tylosema esculentum	19 810		162	1 Food
#10						
All other plant products						
All other animal products						
Total					47 225	

Name of currency	Botswana Pula
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Comments

Economic Valuation of Forest and Range Resources in Botswana, December 2017

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	31.09	29.00	27.96	27.75	27.54	27.33	27.13	26.92

Name of agency responsible	Department of Forestry and Range Resources
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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	-0.69	-0.73	-0.75	-0.76	-0.76	-0.77	-0.78

Name of agency responsible	Department of Forestry and Range Resources
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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	155.25	155.25	155.25	155.25	155.25	155.25	155.25	155.25

Name of agency responsible	Department of Forestry and Range Resources
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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	10.81	10.81	10.81	10.81	10.81	10.81	10.81	10.81

Name of agency responsible	Department of Forestry and Range Resources
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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	10.81	10.81	10.81	10.81	10.81	10.81	10.81	10.81

Name of agency responsible	Department of Forestry and Range Resources
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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	—	—