



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Report

Kenya

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

Place an introductory text on the content of this report

1 Forest extent, characteristics and changes

1a Extent of forest and other wooded land

National data

Data sources

1990	References	Report on Land Use and Land Cover Mapping for System for Estimating Land based Emission in Kenya (SLEEK) 2018,
	Methods used	Full-cover forest/vegetation maps
	Additional comments	Data acquisition – Calibrated Landsat surface reflectance products, covering the period 2000-2018 were provided by the United States National Aeronomics and Space Administration (NASA). They were sourced from different sensors; Thematic Mapper [TM] (operating on Landsat 4 and 5), Landsat 7 ETM and Landsat 8 OLI. Each image was accompanied by ‘mask quality image’ which is an automated ‘cloud mask’ generated in the processing. The approach applied the Supervised Classification using the Maximum Likelihood. The Conditional Probability Network (CPN) and the EM algorithm methods were used for improving spatial and temporal consistency in the presence of noise and missing data as well as making predictions of class labels where data is absent. Accuracy assesment was informed by the Methods and Guidance Document (GFOI MGD) by Global Forest Observation Initiative (GFOI) . Ground validation and truthing was done and the overall accuracy for the base year (2018) is 76.04% This exercise was based on partial inventory based on Permanent and Temporary Sample Plots.
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Classifications and definitions

1990	National class	Definition
	Public Natural forests	Public Natural forests A group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 2m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. The area is legally delineated through gazettelement and includes Central government, County government forests National parks/Reserves or under National monuments Act.
	Private natural Forests	Private natural forests are a group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 2m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. These are under private tenure of individuals, companies, or community conservation units.
	Public Plantations	Public plantations are all areas of systematically planted, man-managed tree resource composed of primarily exotic species. Categories include both young and mature plantations that have been established for commercial wood production. It includes clear felled areas within plantations and excludes all plantations of non-timber such as tea and coffee. It includes associated land cover/use such as roads, fire-breaks and building infrastructure if they are too small to be clearly mapped off the satellite imagery. The area is legally delineated through gazettelement.
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	Farmalnd with trees	Trees on private tenure where the land use is predominantly agriculture.

	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.
	Mangroves	

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	Mangroves	

Original data and reclassification

1990	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Public Natural forests	1 239.09	100.00 %	%	%
	Private natural Forests	2 405.66	100.00 %	%	%
	Public Plantations	152.79	100.00 %	%	%
	Private Plantations	0.00	0.00 %	%	%
	Farmalnd with trees	0.00	0.00 %	%	%
	Wooded Land	34 850.25	%	100.00 %	%
	Mangroves	61.00	100.00 %	%	%
	Total	38 708.79	3 858.54	34 850.25	0.00

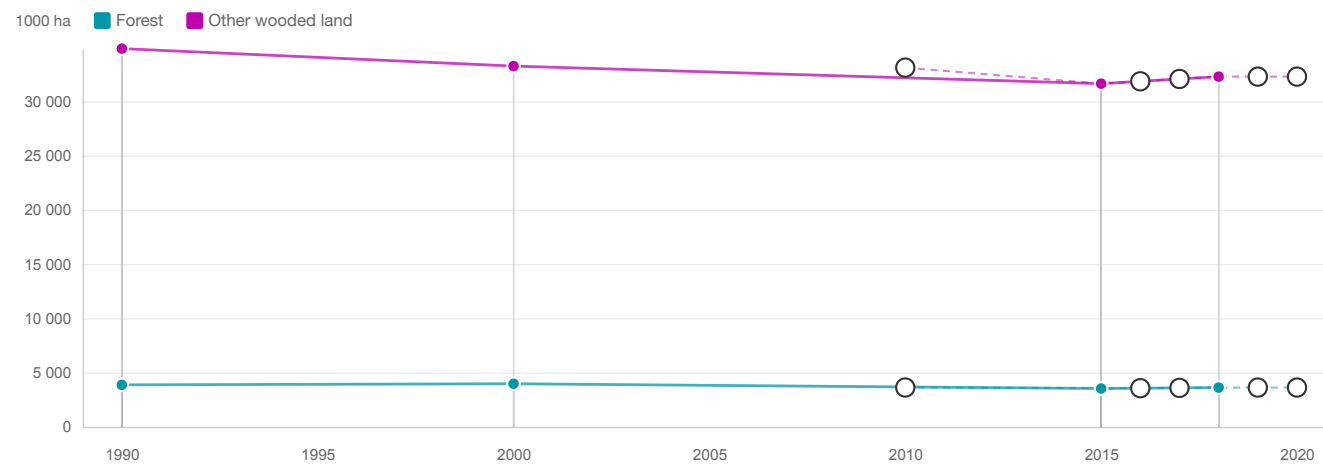
2000	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Public Natural forests	1 152.67	100.00 %	0.00 %	0.00 %
	Private Natural forests	2 595.73	100.00 %	0.00 %	0.00 %
	Public Plantation Forests	152.79	100.00 %	0.00 %	0.00 %
	Private Forest Plantations	0.00	0.00 %	0.00 %	100.00 %
	Farmlands with Trees	0.00	10.00 %	0.00 %	90.00 %
	Wooded land	33 240.61	0.00 %	100.00 %	0.00 %
	Mangroves	60.00	100.00 %	0.00 %	0.00 %
	Total	37 201.80	3 961.19	33 240.61	0.00

2009	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Public Natural forests	1 145.20	100.00 %	0.00 %	0.00 %
	Private Natural forests	2 257.85	100.00 %	0.00 %	0.00 %
	Public Plantation Forests	152.79	100.00 %	0.00 %	0.00 %

	Private Forest Plantations	0.00	100.00 %	0.00 %	0.00 %
	Farmlands with Trees	0.00	10.00 %	0.00 %	90.00 %
	Wooded land	33 099.15	0.00 %	100.00 %	0.00 %
	Mangroves	60.50	100.00 %	0.00 %	0.00 %
	Total	36 715.49	3 616.34	33 099.15	0.00

2015	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Public Natural forests	1 173.50	100.00 %	0.00 %	0.00 %
	Private Natural forests	2 135.12	100.00 %	0.00 %	0.00 %
	Public Plantation Forests	152.79	100.00 %	0.00 %	0.00 %
	Private Forest Plantations	0.00	%	%	%
	Farmlands with Trees	0.00	%	%	%
	Wooded land	31 622.00	0.00 %	100.00 %	0.00 %
	Mangroves	61.00	100.00 %	0.00 %	0.00 %
	Total	35 144.41	3 522.41	31 622.00	0.00

2018	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Public Natural forests	1 178.47	100.00 %	0.00 %	0.00 %
	Private natural Forests	2 218.83	100.00 %	0.00 %	0.00 %
	Public Plantations	152.79	100.00 %	0.00 %	0.00 %
	Private Plantations	0.00	%	%	%
	Farmalnd with trees	0.00	%	%	%
	Wooded Land	32 271.45	%	100.00 %	%
	Mangroves	61.00	100.00 %	0.00 %	0.00 %
	Total	35 882.54	3 611.09	32 271.45	0.00



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	3 858.54	3 961.19	3 616.34	3 522.41	3 551.97	3 581.53	3 611.09	3 611.09	3 611.09
Other wooded land (a)	34 850.25	33 240.61	33 099.15	31 622.00	31 838.48	32 054.97	32 271.45	32 271.45	32 271.45
Other land (c-a-b)	18 205.21	19 712.20	20 198.51	21 769.59	21 523.55	21 277.50	21 031.46	21 031.46	21 031.46
Total land area (c)	56 914.00	56 914.00	56 914.00	56 914.00	56 914.00	56 914.00	56 914.00	56 914.00	56 914.00

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 difference in forest area compared to what was reported to FRA 2015 is because new and better data have become available. the data for 2009 were used to estimate 2010, values for 2016 and 2017 are interpolations between 2015 and 2018, while 2019 and 2020 repeat the 2018 values.

1b Forest characteristics

National data

Data sources

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	Private natural Forests	Private natural forests are a group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 2m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. These are under private tenure of individuals, companies, or community conservation units.
	Public Plantations	Public plantations are all areas of systematically planted, man-managed tree resource composed of primarily exotic species. Categories include both young and mature plantations that have been established for commercial wood production. It includes clear felled areas within plantations and excludes all plantations of non-timber such as tea and coffee. It includes associated land cover/use such as roads, fire-breaks and building infrastructure if they are too small to be clearly mapped off the satellite imagery. The area is legally delineated through gazettment.
	Private Plantations	All areas of systematically planted, man-managed tree resource composed of primarily exotic species. Categories include both young and mature plantations that have been established for commercial wood production. It includes clear felled areas within plantations and excludes all plantations of non-timber such as tea and coffee. It includes associated land cover/use such as roads, fire-breaks and building infrastructure if they are too small to be clearly mapped off the satellite imagery. These are under private tenure of individuals, companies, or community conservation units.
	Farmalnd with trees	Trees on private tenure where the land use is predominantly agriculture.

	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.
	Mangroves	

2000	National class	Definition
	Public Natural forests	Public Natural forests A group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 2m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. The area is legally delineated through gazettelement and includes Central government, County government forests National parks/Reserves or under National monuments Act.
	Private Natural forests	A group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 2m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. These are under private tenure of individuals, companies, government institutions or community conservation units.
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	Private Forest Plantations	All areas of systematically planted, man-managed tree resource composed of primarily exotic species. Categories include both young and mature plantations that have been established for commercial wood production. It includes clear felled areas within plantations and excludes all plantations of non-timber such as tea and coffee. It includes associated land cover/use such as roads, fire-breaks and building infrastructure if they are too small to be clearly mapped off the satellite imagery. These are under private tenure of individuals, companies, government institutions or community conservation units.
	Farmlands with Trees	Trees on private tenure where the land use is predominantly agriculture.
	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.
	Mangroves	

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	Public Natural forests	Public Natural forests A group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 2m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. The area is legally delineated through gazettelement and includes Central government, County government forests National parks/Reserves or under National monuments Act.
	Private Natural forests	

		A group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 2m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. These are under private tenure of individuals, companies, government institutions or community conservation units.
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	Mangroves	

2015	National class	Definition
	Public Natural forests	A group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 5m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. The area is legally delineated through gazettelement and includes Central government, County government forests National parks/Reserves or under National monuments Act.
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	Private Forest Plantations	

		All areas of systematically planted, man-managed tree resource composed of primarily exotic species. Categories include both young and mature plantations that have been established for commercial wood production. It includes clear felled areas within plantations and excludes all plantations of non-timber such as tea and coffee. It includes associated land cover/use such as roads, fire-breaks and building infrastructure if they are too small to be clearly mapped off the satellite imagery. These are under private tenure of individuals, companies, government institutions or community conservation units.
	Farmlands with Trees	Trees on private tenure where the land use is predominantly agriculture.
	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.
	Mangroves	

2018	National class	Definition
	Public Natural forests	Public Natural forests A group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 2m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. The area is legally delineated through gazettelement and includes Central government, County government forests National parks/Reserves or under National monuments Act.
	Private natural Forests	Private natural forests are a group of trees whose crowns are largely contiguous and include the ecosystem that makes it up to a tree canopy cover of over 15% , minimum area of 0.5Hac and minimum height of 2m or with potential to reach 2m. The vegetation is predominantly of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The area includes Mangroves and bamboo ecosystems. These are under private tenure of individuals, companies, or community conservation units.
	Public Plantations	Public plantations are all areas of systematically planted, man-managed tree resource composed of primarily exotic species. Categories include both young and mature plantations that have been established for commercial wood production. It includes clear felled areas within plantations and excludes all plantations of non-timber such as tea and coffee. It includes associated land cover/use such as roads, fire-breaks and building infrastructure if they are too small to be clearly mapped off the satellite imagery. The area is legally delineated through gazettelement.
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	Farmalnd with trees	Trees on private tenure where the land use is predominantly agriculture.
	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.
	Mangroves	

Original data and reclassification

1990	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Public Natural forests	1 239.09	100.00 %	0.00 %	0.00 %
	Private natural Forests	2 405.66	100.00 %	0.00 %	0.00 %
	Public Plantations	152.79	0.00 %	100.00 %	0.00 %
	Mangroves	61.00	100.00 %	0.00 %	0.00 %
	Total	3 858.54	3 705.75	152.79	0.00

Plantation forest	Area (1000 ha)	...of which introduced
Public Plantations	152.79	100.00 %
Total	152.79	152.79

2000	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Public Natural forests	1 152.67	100.00 %	0.00 %	0.00 %
	Private Natural forests	2 595.73	100.00 %	0.00 %	0.00 %
	Public Plantation Forests	152.79	0.00 %	100.00 %	0.00 %
	Farmlands with Trees	0.00	0.00 %	0.00 %	0.00 %
	Mangroves	60.00	100.00 %	0.00 %	0.00 %
	Total	3 961.19	3 808.40	152.79	0.00

Plantation forest	Area (1000 ha)	...of which introduced
Public Plantation Forests	152.79	100.00 %
Total	152.79	152.79

2009	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Public Natural forests	1 145.20	100.00 %	0.00 %	0.00 %

	Private Natural forests	2 257.85	100.00 %	0.00 %	0.00 %
	Public Plantation Forests	152.79	0.00 %	100.00 %	0.00 %
	Private Forest Plantations	0.00	%	100.00 %	0.00 %
	Farmlands with Trees	0.00	%	%	%
	Mangroves	60.50	100.00 %	%	%
	Total	3 616.34	3 463.55	152.79	0.00

Plantation forest	Area (1000 ha)	...of which introduced
Public Plantation Forests	152.79	100.00 %
Private Forest Plantations	0.00	100.00 %
Total	152.79	152.79

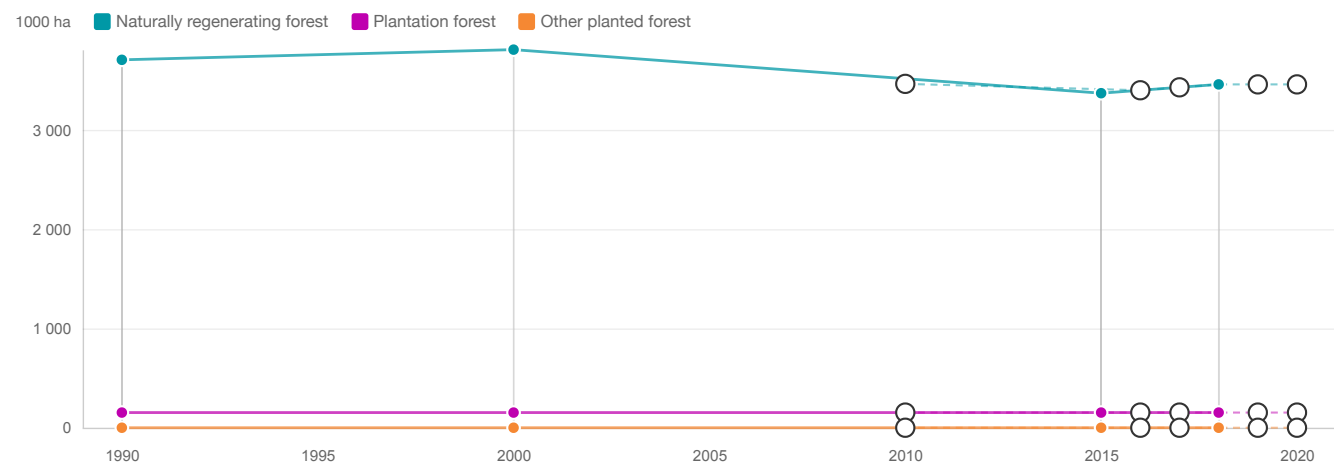
2015	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Public Natural forests	1 173.50	100.00 %	0.00 %	0.00 %
	Private Natural forests	2 135.12	100.00 %	0.00 %	0.00 %
	Public Plantation Forests	152.79	0.00 %	100.00 %	0.00 %
	Mangroves	61.00	100.00 %	0.00 %	0.00 %
	Total	3 522.41	3 369.62	152.79	0.00

Plantation forest	Area (1000 ha)	...of which introduced
Public Plantation Forests	152.79	100.00 %
Total	152.79	152.79

2018	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Public Natural forests	1 178.47	100.00 %	0.00 %	0.00 %
	Private natural Forests	2 218.83	100.00 %	0.00 %	0.00 %

	Public Plantations	152.79	0.00 %	100.00 %	0.00 %
	Mangroves	61.00	100.00 %	0.00 %	0.00 %
	Total	3 611.09	3 458.30	152.79	0.00

Plantation forest	Area (1000 ha)	...of which introduced
Public Plantations	152.79	100.00 %
Total	152.79	152.79



FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	3 705.75	3 808.40	3 463.55	3 369.62	3 399.18	3 428.74	3 458.30	3 458.30	3 458.30
Planted forest (b)	152.79	152.79	152.79	152.79	152.79	152.79	152.79	152.79	152.79
Plantation forest	152.79	152.79	152.79	152.79	152.79	152.79	152.79	152.79	152.79
...of which introduced species	152.79	152.79	152.79	152.79	152.79	152.79	152.79	152.79	152.79
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (a+b)	3 858.54	3 961.19	3 616.34	3 522.41	3 551.97	3 581.53	3 611.09	3 611.09	3 611.09
Total forest area	3 858.54	3 961.19	3 616.34	3 522.41	3 551.97	3 581.53	3 611.09	3 611.09	3 611.09

Comments

Plantation forests refer to land that is delineated for purpose of plantation forest development while planted forests refer to total area already planted and has forests.

Introduced species refer to areas under planted forests with exotic tree species mainly Cypress, Eucalypts and Pines. Some areas are also planted with Grevillea and Bischovia Javonica .

The plantation forests reported here are all public plantations. There are also some private plantations, but the extent is unknown.

1c Primary forest and special forest categories

National Data

Data sources + type of data source eg NFI, etc

Report on National Forest Resource Mapping and Capacity Development (NFRMCD) For The Republic of Kenya : Volume 2, (2013)

Report on Land Use and Land Cover Mapping for System for Estimating Land based Emission in Kenya (SLEEK) 2018,

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)				
	1990	2000	2010	2015	2020
Primary forest					
Temporarily unstocked and/or recently regenerated					
Bamboos	56.00	73.00	59.00	60.00	60.00
Mangroves	61.00	60.00	60.50	61.00	61.00
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

-

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/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)	10.27	-34.49	-18.79	17.74

Comments

1e Annual reforestation

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/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

-

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)				
	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	18 205.21	19 712.20	20 198.51	21 769.59	21 031.46

Comments

2 Forest growing stock, biomass and carbon

2a Growing stock

National Data

Data sources + type of data source eg NFI, etc

Report on National Forest Resource Mapping and Capacity Development (NFRMCD) For The Republic of Kenya : Volume 2, (2013)

Report on Land Use and Land Cover Mapping for System for Estimating Land based Emission in Kenya (SLEEK) 2018

National classification and definitions

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 1 cm, excluding branches.

Net Annual Increment (NAI): The 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

Original data

Data acquisition – Calibrated Landsat surface reflectance products, covering the period 2000-2018 were provided by the United States National Aeronautics and Space Administration (NASA). They were sourced from different sensors; Thematic Mapper [TM] (operating on Landsat 4 and 5), Landsat 7 ETM and Landsat 8 OLI. Each image was accompanied by ‘mask quality image’ which is an automated ‘cloud mask’ generated in the processing. The approach applied the Supervised Classification using the Maximum Likelihood. The Conditional Probability Network (CPN) and the EM algorithm methods were used for improving spatial and temporal consistency in the presence of noise and missing data as well as making predictions of class labels where data is absent.

Accuracy assessment was informed by the Methods and Guidance Document (GFOI MGD) by Global Forest Observation Initiative (GFOI) . Ground validation and truthing was done and the overall accuracy for the base year (2018) is 76.04%

This exercise was based on partial inventory based on Permanent and Temporary Sample Plots dating from 2014.

Analysis and processing of national data

Estimation and forecasting

Landsat images were classified using unsupervised methodology. The Ground truthing sample points were generated out using stratified random sampling

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	211.00	211.00	211.00	211.00	211.00	211.00	211.00	211.00	211.00
Planted forest	284.00	284.00	284.00	284.00	284.00	284.00	284.00	284.00	284.00
...of which plantation forest	284.00	284.00	284.00	284.00	284.00	284.00	284.00	284.00	284.00
...of which other planted forest									
Forest	213.89	213.81	214.08	214.17	214.14	214.11	214.09	214.09	214.09
Other wooded land									

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	781.91	803.57	730.81	710.99	717.23	723.46	729.70	729.70	729.70
Planted forest	43.39	43.39	43.39	43.39	43.39	43.39	43.39	43.39	43.39
...of which plantation forest	43.39	43.39	43.39	43.39	43.39	43.39	43.39	43.39	43.39
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	825.30	846.96	774.20	754.38	760.62	766.85	773.09	773.09	773.09
Other wooded land									

Comments

ICFRA plot data was used to generate volumes for naturally regenerating forest using the volumes for dense forest in montane, coastal and dry forest categories.

ICFRA plot data was used to generate volumes planted forest using an average value from dense, moderate and open forest categories

2b Growing stock composition

National Data

Data sources + type of data source eg NFI, etc

Report on National Forest Resource Mapping and Capacity Development (NFRMCD) For The Republic of Kenya : Volume 2, (2013)

Report on Land Use and Land Cover Mapping for System for Estimating Land based Emission in Kenya (SLEEK) 2018

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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

Original data

Data acquisition – Calibrated Landsat surface reflectance products, covering the period 2000-2018 were provided by the United States National Aeronomics and Space Administration (NASA). They were sourced from different sensors; Thematic Mapper [TM] (operating on Landsat 4 and 5), Landsat 7 ETM and Landsat 8 OLI. Each image was accompanied by ‘mask quality image’ which is an automated ‘cloud mask’ generated in the processing. The approach applied the Supervised Classification using the Maximum Likelihood. The Conditional Probability Network (CPN) and the EM algorithm methods were used for improving spatial and temporal consistency in the presence of noise and missing data as well as making predictions of class labels where data is absent.

Accuracy assesment was informed by the Methods and Guidance Document (GFOI MGD) by Global Forest Observation Initiative (GFOI) . Ground validation and truthing was done and the overall accuracy for the base year (2018) is 76.04%

This exercise was based on partial inventory based on Permanent and Temporary Sample Plots dating from 2014.

Analysis and processing of national data

Estimation and forecasting

Values obtained from intergrated Analysis from the National Forest Resource Mapping and Capacity Development For The Republic of Kenya 2013, The natural resouce mapping project (World Bank) and the AFRICOVER data 2000 and 2010.

Reclassification into FRA 2020 categories

-

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	Cupressus Lusitanica	Cypress	27.17	19.20	22.31	21.30	18.48
#2 Ranked in terms of volume	Other conifers	Pines,Casuarina	27.17	19.20	22.31	21.30	18.48
#3 Ranked in terms of volume	N/A	N/A	0.00	0.00	0.00	0.00	0.00
#4 Ranked in terms of volume	N/A	N/A	0.00	0.00	0.00	0.00	0.00
#5 Ranked in terms of volume	N/A	N/A	0.00	0.00	0.00	0.00	0.00
#6 Ranked in terms of volume	N/A	N/A	0.00	0.00	0.00	0.00	0.00
#7 Ranked in terms of volume	N/A	N/A	0.00	0.00	0.00	0.00	0.00
#8 Ranked in terms of volume	N/A	N/A	0.00	0.00	0.00	0.00	0.00
#9 Ranked in terms of volume	N/A	N/A	0.00	0.00	0.00	0.00	0.00
#10 Ranked in terms of volume	N/A	N/A	0.00	0.00	0.00	0.00	0.00
Remaining native tree species			770.96	808.56	729.58	711.78	736.13
Total volume of native tree species			825.30	846.96	774.20	754.38	773.09
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			–	–	–	–	–
Total growing stock			825.30	846.96	774.20	754.38	773.09

Comments

2c Biomass stock

National Data

Data sources + type of data source eg NFI, etc

Report on National Forest Resource Mapping and Capacity Development (NFRMCD) For The Republic of Kenya : Volume 2, (2013)

National classification and definitions

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):The 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

Original data

Data from tables 1b and 2a were used as input to the biomass calculator.

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	50%	0%	0%					
Broadleaved dry	50%	0%	0%					
Coniferous	0%	100%	100%					
	100%	100%	100%	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	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Broadleaved dry	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Coniferous	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Plantation forest									
Broadleaved humid	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Broadleaved dry	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Coniferous	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
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	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Plantation forest	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Other planted forest	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
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	0.24	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
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	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26	0.26
Plantation forest	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Other planted forest	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Above-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	200.45	200.45	200.45	200.45	200.45	200.45	200.45	200.45	200.45
Plantation forest	198.80	198.80	198.80	198.80	198.80	198.80	198.80	198.80	198.80
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	200.38	200.39	200.38	200.38	200.38	200.38	200.38	200.38	200.38
Below-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12	52.12
Plantation forest	39.76	39.76	39.76	39.76	39.76	39.76	39.76	39.76	39.76
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	51.63	51.64	51.59	51.58	51.59	51.59	51.59	51.59	51.59

Reclassification into FRA 2020 categories

-

FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	200.38	200.39	200.38	200.38	200.38	200.38	200.38	200.38	200.38
Below-ground biomass	51.63	51.64	51.59	51.58	51.59	51.59	51.59	51.59	51.59
Dead wood									

Comments

2d Carbon stock

National Data

Data sources + type of data source eg NFI, etc

Report on National Forest Resource Mapping and Capacity Development (NFRMCD) For The Republic of Kenya : Volume 2, (2013)

National classification and definitions

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):The 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

Original data

Data from tables 1b and 2a were used as input to the biomass calculator. Data for soil carbon are from the IPCC 2006 guidelines, tropical moist forest and HAC soils.

Analysis and processing of national data

Estimation and forecasting

See table 2c.

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	94.18	94.18	94.18	94.18	94.18	94.18	94.18	94.18	94.18
Carbon in below-ground biomass	24.27	24.27	24.25	24.24	24.25	24.25	24.25	24.25	24.25
Carbon in dead wood									
Carbon in litter									
Soil carbon	65.00	65.00	65.00	65.00	65.00	65.00	65.00	65.00	65.00

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

Soil carbon from IPCC 2006 guidelines, tropical moist forest and HAC soils.

3 Forest designation and management

3a Designated management objective

National Data

Data sources + type of data source eg NFI, etc

- 1) Report on National Forest Resource Mapping and Capacity Development For The Republic of Kenya :
Volume 2
- 2)Kenya Forestry Master Plan 1994

National classification and definitions

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. In Kenya the multiple uses include soil and water protection, and Conservation of biodiversity

Protection of soil and water: Forest area designated or managed for protection of soil and water

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

Gazetted forest plantations were reported as "Production"

Remaining natural forests, including gazetted natural forests, were reported as "Multiple use"

Primary designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production (a)	152.79	152.79	152.79	152.79	152.79
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)	3 705.75	3 808.40	3 463.55	3 369.62	3 458.30
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	3 858.54	3 961.19	3 616.34	3 522.41	3 611.09

Total area with designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production	152.00	152.00	152.00	152.00	152.00
Protection of soil and water	3 705.75	3 808.40	3 463.55	3 369.62	3 458.30
Conservation of biodiversity	3 705.75	3 808.40	3 463.55	3 369.62	3 458.30
Social Services					
Other (specify in comments)					

Comments

Production refers to the gazetted forest plantations. All natural forests, including the gazetted natural forests, are considered to be of multiple use - mainly conservation and protection of soil and water.

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

- 1) Report on Land Use and Land Cover Mapping for System for Estimating Land based Emission in Kenya (SLEEK) 2018
- 2) Report on National Forest Resource Mapping and Capacity Development For The Republic of Kenya : Volume 2
- 3)Kenya Forestry Master Plan 1994

National classification and definitions

-

Original data

The same original data as for tables 1a and 1b were used:

	Area (1000 ha)				
National class	1990	2000	2009	2015	2018
Public Natural forests	1,239.09	1,152.67	1,145.20	1,173.50	1,178.47
Private natural Forests	2,405.66	2,595.73	2,257.85	2,135.12	2,218.83
Public Plantations	152.79	152.79	152.79	152.79	152.79
Mangroves	61.00	60.00	60.50	61.00	61.00

Analysis and processing of national data

Estimation and forecasting

2009 figures were used for 2010
2016 and 2017 figures were interpolated between 2015 and 2018 data
2019 and 2020 figures repeat 2018 data

Reclassification into FRA 2020 categories

The forest area in protected areas refer to the gazetted natural forests that all are under some kind of protection.

The forest area with long-term management plan refers to the gazetted forest plantation area.

FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest area within protected areas	1 239.09	1 152.67	1 145.20	1 173.50	1 175.16	1 176.81	1 178.47	1 178.47	1 178.47
Forest area with long-term forest management plan	152.79	152.79	152.79	152.79	152.79	152.79	152.79	152.79	152.79
...of which in protected areas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Comments

It is assumed that forests within protected areas will not be degazetted due policy guidance.

4 Forest ownership and management rights

4a Forest ownership

National Data

Data sources + type of data source eg NFI, etc

Report on Land Use and Land Cover Mapping for System for Estimating Land based Emission in Kenya (SLEEK) 2018

Report on National Forest Resource Mapping and Capacity Development For The Republic of Kenya : Volume 2

National classification and definitions

Public ownership: Forest owned by the State 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

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Private ownership (a)	2 466.66	2 655.73	2 318.35	2 196.12
...of which owned by individuals				
...of which owned by private business entities and institutions				
...of which owned by local, tribal and indigenous communities				
Public ownership (b)	1 391.88	1 305.46	1 297.99	1 326.29
Unknown/other (specify in comments) (c)	0.00	0.00	0.00	0.00
Total forest area	3 858.54	3 961.19	3 616.34	3 522.41

Comments

A majority of the privately owned forests are owned by local, tribal and indigenous communities, but no exact figures are available.

4b Holder of management rights of public forests

National Data

Data sources + type of data source eg NFI, etc

Report on National Forest Resource Mapping and Capacity Development For The Republic of Kenya : Volume 2

National classification and definitions

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.

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Public Administration (a)	1 391.88	1 305.46	1 297.99	1 326.29
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	1 391.88	1 305.46	1 297.99	1 326.29

Comments

5 Forest disturbances

5a Disturbances

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

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.

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	3 961.19	-	-	-	-	-	-	-	-	3 616.34	3 616.34	-	-	-	-	3 522.41	3 551.97	3 581.53

Comments

5b Area affected by fire

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

Number of fires: Number of fires per year

Burned area Area burned per year

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	97.48	361.70	321.29	352.34	148.04	162.66	73.01	412.65	146.24	107.79	72.81	112.70	878.37	432.00	127.00	264.65	186.87	154.63
...of which on forest	1.32	37.83	69.40	4.53	2.51	8.94	5.18	2.48	5.16	3.51	0.77	8.50	18.44	35.96	19.41	3.85	2.60	2.15

Comments

This is calculated from Mondis data

5c Degraded forest

Does your country monitor area of degraded forest		Yes
If "yes"	What is the national definition of "Degraded forest"?	Forest degradation describes processes which do not convert forest lands to non-forest uses but reduce the quality or impair the functioning of forest ecosystems by interfering with structure, spatial distribution, crown cover, diversity and related attributes
	Describe the monitoring process and results	Reduction in canopy cover refers to forest areas that have undergone degradation resulting to a decrease in crown cover from dense canopy cover >65% to moderate cover (40%-65%) or to open forest (15%-40%). Calculations are based on the Natural Resource Mapping of 2013 using Landsat imagery of 1990 (30m) and ALOS AVNIR 2 2010 (10m). Ground truthing was conducted at a national level.

Comments

The national definition is from "Ministry of Forestry and Wildlife, 2013 : Analysis of drivers and underlying causes of forest cover change in the various forest types of Kenya pg 17-18"

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

The constitution of Kenya 2010

The Kenya Vision 2030 (2010)

The Forest Conservation and Management Act 2016

Participatory forest management guidelines 2015

Environmental Management and Coordination Act 2015

Forest (charcoal) rules 2015

Strategic Environmental Assessment of the Kenya Forests Act 2005 (2007)

The Kenya Forest Master Plan 1994

The Non-Governmental Organizations Coordination Act 2012 (2012)

National classification and definitions

Legislation: The act of making and enacting laws

Policy: A principle or protocol to guide decisions and achieve rational outcomes

Subsidiary legislation: Any proclamation, rule, regulation, order, resolution, notice, rule of court, by law or other instruments made under or by virtue of any ordinance and having legislative effect

Forest types (Public, community and Private): Classification of forests based on tenure systems that have been specified by the Kenya constitution 2010

Original data

-

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	No
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

Report on Land Use and Land Cover Mapping for System for Estimating Land based Emission in Kenya (SLEEK) 2018,

The constitution of Kenya 2010

The Kenya Vision 2030 (2010)

The Forest Conservation and Management Act 2016

Participatory forest management guidelines 2015

Environmental Management and Coordination Act 2015

Forest (charcoal) rules 2015

Strategic Environmental Assessment of the Kenya Forests Act 2005 (2007)

The Kenya Forest Master Plan 1994

The Non-Governmental Organizations Coordination Act 2012 (2012)

National classification and definitions

Legislation: The act of making and enacting laws

Policy: A principle or protocol to guide decisions and achieve rational outcomes

Subsidiary legislation: Any proclamation, rule, regulation, order, resolution, notice, rule of court, by law or other instruments made under or by virtue of any ordinance and having legislative effect

Forest types (Public, community and Private): Classification of forests based on tenure systems that have been specified by the Kenya constitution 2010

Area of permamnent Estate: Forest area that is designated by law or regulation to be retained as forest and may not be converted to other land use.

Original data

The data from table 3b was used for this table, obtaining the area of the Permanent Forest Estate by adding the public natural forests and the public plantations.

FRA 2020 categories	Forest area (1000 ha)					
	Applicable?	1990	2000	2010	2015	2020
Area of permanent forest estate	Yes	1 391.88	1 305.46	1 297.99	1 326.29	1 331.26

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

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).

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	21.50			20.10			27.30					
...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

The statistics are not collected in a disaggregated way. It is therefore difficult to give numeber of women and men separately

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

-

National classification and definitions

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.

Original data

-

	Name of NWFP product	Key species	Quantity	Unit	Value (1000 local currency)	NWFP category
#1	Resins and gums	Commiphoras andAcacias		NA		3 Raw material for medicine and aromatic products
#2	Tannings and Barks	Acacias		NA		4 Raw material for colorants and dyes
#3	Honey	Various trees		NA		1 Food
#4	Herbs	Various trees		NA		1 Food
#5	Fodder	Agroforestry trees		NA		2 Fodder
#6	Bamboo and Fibers	Bamboo and rattans		NA		5 Raw material for utensils handicrafts construction
#7	Wildlife products	Wildlife		NA		12 Wild meat
#8	Forest fruits and seeds Various trees	Various trees		NA		1 Food
#9	Mushrooms	Forest Ecosystems		NA		1 Food
#10	Vertebrates	Birds		NA		9 Living animals
All other plant products						
All other animal products						
Total					—	

Name of currency	
------------------	--

Comments

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	6.96	6.35	6.19	6.24	6.29	6.34	6.34	6.34

Name of agency responsible	
----------------------------	--

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	-0.91	-0.52	0.83	0.83	0.82	0.00	0.00

Name of agency responsible	Kenya Forest Service
----------------------------	----------------------

Sub-Indicator 2	Forest biomass (tonnes/ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass stock in forest	200.39	200.38	200.38	200.38	200.38	200.38	200.38	200.38

Name of agency responsible	Kenya Forest Service, Kenya Forest Research Institute
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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	32.72	32.51	33.32	33.36	33.41	33.46	33.46	33.46

Name of agency responsible	Kenya Forest Service.
----------------------------	-----------------------

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	4.34	4.34	4.34	4.34	4.34	4.34	4.34	4.34

Name of agency responsible	Kenya Forest Service
----------------------------	----------------------

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	0.20	0.00	0.00	0.00	0.00	—	—