



Forestry Department

Food and Agriculture Organization of the United Nations

**GLOBAL FOREST RESOURCES
ASSESSMENT 2010**

COUNTRY REPORT

KENYA

FRA2010/107

Rome, 2010



The Forest Resources Assessment Programme

Sustainably managed forests have multiple environmental and socio-economic functions important at the global, national and local scales, and play a vital part in sustainable development. Reliable and up-to-date information on the state of forest resources - not only on area and area change, but also on such variables as growing stock, wood and non-wood products, carbon, protected areas, use of forests for recreation and other services, biological diversity and forests' contribution to national economies - is crucial to support decision-making for policies and programmes in forestry and sustainable development at all levels.

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Forest Resources Assessment Programme. This country report forms part of the Global Forest Resources Assessment 2010 (FRA 2010).

The reporting framework for FRA 2010 is based on the thematic elements of sustainable forest management acknowledged in intergovernmental forest-related fora and includes variables related to the extent, condition, uses and values of forest resources, as well as the policy, legal and institutional framework related to forests. More information on the FRA 2010 process and the results - including all the country reports - is available on the FRA Web site (www.fao.org/forestry/fra).

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The Global Forest Resources Assessment Country Report Series is designed to document and make available the information forming the basis for the FRA reports. The Country Reports have been compiled by officially nominated country correspondents in collaboration with FAO staff. Prior to finalisation, these reports were subject to validation by forestry authorities in the respective countries.

Contents

INTRODUCTION.....	5
1 TABLE T1 – EXTENT OF FOREST AND OTHER WOODED LAND.....	7
2 TABLE T2 – FOREST OWNERSHIP AND MANAGEMENT RIGHTS.....	12
3 TABLE T3 – FOREST DESIGNATION AND MANAGEMENT.....	16
4 TABLE T4 – FOREST CHARACTERISTICS.....	19
5 TABLE T5 – FOREST ESTABLISHMENT AND REFORESTATION.....	22
6 TABLE T6 – GROWING STOCK.....	24
7 TABLE T7 – BIOMASS STOCK.....	27
8 TABLE T8 – CARBON STOCK.....	29
9 TABLE T9 – FOREST FIRES.....	31
10 TABLE T10 – OTHER DISTURBANCES AFFECTING FOREST HEALTH AND VITALITY.....	34
11 TABLE T11 – WOOD REMOVALS AND VALUE OF REMOVALS.....	35
12 TABLE T12 – NON-WOOD FOREST PRODUCTS REMOVALS AND VALUE OF REMOVALS.....	37
13 TABLE T13 – EMPLOYMENT.....	39
14 TABLE T14 – POLICY AND LEGAL FRAMEWORK.....	41
15 TABLE T15 – INSTITUTIONAL FRAMEWORK.....	43
16 TABLE T16 – EDUCATION AND RESEARCH.....	45
17 TABLE T17 – PUBLIC REVENUE COLLECTION AND EXPENDITURE.....	47

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Introduction

Generation of reliable forest resource data in Kenya continue to be hampered by the following challenges:

- Lack of standardized and harmonized data collection and management guidelines;
- Lack of a comprehensive natural resource database;
- High cost of generating natural resource data;
- Weak institutional linkages: Several public and private institutions possess a great deal of data and information on natural resources that is not shared;
- Inadequate capacities. Most of the institutions currently involved in natural resource data and information management have limited capacity to collect, analyze and store accurate scientific information on natural resources.

The Kenya report is mainly based on Kenya Forest Master plan (1994) projections owing to the fact that no comprehensive forest resource assessment has been done since then. Other forest resource assessments that were conducted later covered a few ecosystems and most of them do not have published reports.

The Kenya Forest Master Plan (KFMP) conducted national forest resource assessment between 1990 and 1994, through National Forest Plantation Inventory Project, Kenya Indigenous Forest Conservation (KIFCON) project, Department of Resource Survey and Remote Sensing (DRSRS) and KFMP staff. The KFMP is a 25 years plan that had envisaged two scenarios. One was on a do nothing – current status scenario where the projection was done on the basis that the current forest management at that time would continue for the next 25 years while the master plan scenario assumed the adoption of master plan recommendations. This report quotes figures reflecting the current scenario owing to the fact that most of the recommendations of the master plan were not implemented. These figures also provide same trend with recent studies.

Therefore in the absence of another comprehensive forest resource assessment the Master Plan projections have remained to be the most authoritative national forest resource estimates. Other references in this report include data from Kenya National Bureau of Statistics (KNBS) and management data from Kenya Forest Service.

The FAO supported AFRICOVER (2000) project data has also been considered in this report. However due to issues of definitions, the data generated requires further synthesis to be used for the purpose of this report and would require a consensus on some assumptions on land cover types to be included as forest area.

In recognition of the current challenges, the government has secured funds for Natural Resource Management (NRM) from the World Bank that has components on national forest resource assessment. This will be done in three phases. Phase I which is ongoing is expected to be complete by the end of this year and involves the inventory of all gazetted Forest Plantations. The next phase will be the inventory of all indigenous forest. Phase III will be the assessment of tree resources outside gazetted forest. The data generated will be expected to provide information that reflects the true status of forest resources in the country.

The ministry of Forest and Wildlife launched a Forestry Mainstreaming Initiative (FMI) in April 2009. One of the tasks of this initiative will be the development of Kenya Forest Resources Account through a multiphase account to capture the full value of forest resources. Other key institutions include Kenya Forest Service, Kenya National Bureau of Statistics (KNBS), Kenya Forest Research Institute (KEFRI) and Department of Resource Survey and Remote sensing (DRSRS). It is envisaged that this process will provide the main reference data for FAO FRA country reporting in future.

1 Table T1 – Extent of Forest and Other wooded land

1.1 FRA 2010 Categories and definitions

Category	Definition
Forest	Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds <i>in situ</i> . It does not include land that is predominantly under agricultural or urban land use.
Other wooded land	Land not classified as “Forest”, spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds <i>in situ</i> ; or with a combined cover of shrubs, bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use.
Other land	All land that is not classified as “Forest” or “Other wooded land”.
Other land with tree cover (Subordinated to “Other land”)	Land classified as “Other land”, spanning more than 0.5 hectares with a canopy cover of more than 10 percent of trees able to reach a height of 5 meters at maturity.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.

1.2 National data

1.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
1.Kenya Forestry Master Plan 1994			1994	The data derived from the current trend scenario which had envisaged non implementation of the plan.

1.2.2 Classification and definitions

National class	Definition
Indigenous forests	A group of trees whose crowns are largely contiguous and include the ecosystem that makes it up and a tree canopy cover of over 10% and the canopy is essentially of indigenous tree species growing under natural conditions and excludes planted indigenous plantation forests. The forest is delineated through legal gazettment. The area includes Mangroves and bamboo ecosystems.
Public Plantation Forests	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 timber 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 also legally delineated through gazettment.
Open Woodlands	Land not classified as forest with trees higher than 5 metres and canopy cover of between 5% – 10 or trees able to reach these threshold <i>in situ</i> or with a combined cover of shrubs bushes and trees above 10%. (It does not include land that is predominantly agricultural or urban land use.

Private Forest Plantations	As in public forest plantations privately owned.
Bush-lands	Communities typically composed of tall ,woody self supporting single and multi-stemmed plants branching at or near ground with in most cases no clearly definable structure. Total canopy cover >10% with canopy height between 2-5M
Grasslands	All area of grassland with less than 10% tree and /or shrub canopy cover and greater than 0.1% total vegetation cover. It is dominated by grass-like non-woody rooted herbaceous plants.
Farmlands and settlements	These are trees found on privately owned farmlands and settlements.

1.2.3 Original data

Name of variable	Area ('000Ha)			
	1990	2000	2005 (2)	2010 (3)
Indigenous closed Canopy	1 240	1 190	1 165	1140
Indigenous Mangroves	80	80	80	80
Open woodlands	2 150	2 100	2 075	2050
Public Plantation Forests (1)	170	134	119	107
Private Plantation forests (1)	68	78	83	90
Bush-land	24 800	24 635	24 570	24510
Grasslands	10 730	10 485	10 350	10350
Settlements	8 256	8 192	8 152	8202
Farms with Trees	9 420	10 020	10 320	10385
Inland water Bodies	1 123	1 123	1 123	1123
Total Area for country	58 037	58 037	58 037	58037

Notes:

1. Forest Plantation data is based on the 1991-1992 plantation survey conducted with the assistance of the FAO Forest Inventory and Statistics Project and adjustments were made to reflect clear-felling in 1992-1993 and increased mortality in plantations established after 1985 due to ban of the Taungya system as a method of establishing forest plantations.
2. 2005 based on Kenya Forest Master Plan (1994) data projection for current trend (KFMP pp 360).
3. 2010 based on Kenya Forest Master Plan (1994) data projection for current trend (KFMP pp 360).
4. The AFRICOVER study in year 2000 data could not be used as some figures demonstrated increased forest cover and the changes could not be explained since all other available indicators shows decreasing trend. (See attached summary table generated from AFRICOVER data).
5. Updated data will be available after concluding the ongoing the national forest plantation inventory and the planned Indigenous forest and trees outside gazetted forest inventory.

1.3 Analysis and processing of national data

1.3.1 Reclassification into FRA 2010 categories

Data for national classification was derived from forest inventory and tree resource assessment study undertaken through aerial and satellite imagery while preparing the forestry sector Master plan for the country between 1992-1994.

National Classes	Forests	OWL	OL	OLWTC
Indigenous closed Canopy	100%			
Indigenous Mangroves	100%			
Open woodlands	100%			
Public Plantation Forests	100%			
Private Plantation forests	100%			
Bush-land		100%		
Grasslands		40%	60%	
Settlements			100%	
Farms with Trees				100%

Note: Compared to FRA 2005, the Grassland class has been reclassified differently.

1.3.2 Estimation and forecasting

Name of variable	Area('000Ha)			
	1990	2000	2005	2010
Indigenous closed Canopy	1 240	1 190	1 165	1140
Indigenous Mangroves	80	80	80	80
Open woodlands	2 150	2 100	2 075	2050
Public Plantation Forests (1)	170	134	119	107
Private Plantation forests (1)	68	78	83	90
Sub-total (Forests)	3 708	3 582	1 447	3 467
Bush-land	24 800	24 635	24 570	24 510
Grasslands (40%)	4 292	4 194	4 140	4 140
Sub-total (OWL)	29 092	28 829	28710	28 650
Grasslands (60%)	6 438	6 291	6 210	6 210
Settlements	8 256	8 192	8 152	8 202
Farms with Trees	9 420	10 020	10 320	10 385
Sub-total (OL)	24 114	24 503	24 682	24 797

1.4 Data for Table T1

FRA 2010 categories	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	3 708	3 582	3 522	3 467
Other wooded land	29 092	28 829	28 710	28 650
Other land	24 114	24 503	24 682	24 797
...of which with tree cover	9 420	10 020	10 320	10 385
Inland water bodies	1 123	1 123	1 123	1 123
TOTAL	58 037	58 037	58 037	58 037

1.5 Comments to Table T1

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest	A group of trees whose crowns are largely contiguous and a tree canopy cover of over 10%. This includes natural and planted plantation forests in state and private land.	There is general trend of decline of forest land due to degazettement of forestland to up to 2003 and there after destruction of trust lands forest to open areas for agriculture especially Mau ecosystem.
Other wooded land	Land not classified as forest spanning more than 0.5 ha with trees higher than 5m and canopy cover of 5-10 percent. Excludes land predominantly agricultural	There is general trend of decline due to conversion of previously pasture land to crop land therefore clearing tree in mainly ASAL areas.
Other land	All other land not classified as forest or woodland	There is increase of other lands mainly affecting the expansion of towns and agricultural lands in previous woodlands under local authorities or group ranches
Other land with tree cover	Other land with tree cover includes agricultural land with tree growing mixed with crop	The increase shows positive impact of farm forestry and extension efforts
Inland water bodies	Includes lakes and water reservoirs	The has been almost constant as there is no major dam that has been constructed during the period

Other general comments to the table

(a) In the FRA 2000 main report (Appendix 3 On global Tables Pg 387), the total forest area from Kenya was reported as 17 million hectares. Other schools of thought estimate forest area in the country as less than 3 million.

The reason for this discrepancy is:

1. That most of the data has been sourced from a very rapid extensive appraisal that was done during a four year Forest Master Plan preparation between 1990-1994. During the time, and even now, most experts in the country only consider forests as only those closed canopy and gazzetted forests with an additional area from closed canopy private and plantation forests. The data is very old and processes for updating has started of will be staring soon
2. Subjective nature of reclassifying the vast woodland and bush land since more or less an expert’s opinion was used to reclassify woodland/bush land to fit the FRA definitions. Note that FRA 2000 considered woodlands/bush land/wooded grassland as 10% closed forests, 35% open forests and the rest as OWL. FRA however used the original definitions whereby bush land was considered to qualify as OWL (less than 5 m in height).

(b) Sources of Data:

All data used in this report was quoted from Kenya Forest Master Plan Study done in 1994. The same source was used widely for FRA 2000, 2005 and 2010 together with Kenya Bureau of Statistical Survey.

Expected year for completion of ongoing/planned <u>national forest inventory and/or RS survey / mapping</u>	
National Forest plantation inventory (ongoing)	2009
Natural forest survey using Remote sensing commences 2009)	2010

2 Table T2 – Forest ownership and management rights

2.1 FRA 2010 Categories and definitions

Category	Definition
Public ownership	Forest owned by the State; or administrative units of the public administration; or by institutions or corporations owned by the public administration.
Private ownership	Forest owned by individuals, families, communities, private co-operatives, corporations and other business entities, private religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.
Individuals (<i>sub-category of Private ownership</i>)	Forest owned by individuals and families.
Private business entities and institutions (<i>sub-category of Private ownership</i>)	Forest owned by private corporations, co-operatives, companies and other business entities, as well as private non-profit organizations such as NGOs, nature conservation associations, and private religious and educational institutions, etc.
Local communities (<i>sub-category of Private ownership</i>)	Forest owned by a group of individuals belonging to the same community residing within or in the vicinity of a forest area. The community members are co-owners that share exclusive rights and duties, and benefits contribute to the community development.
Indigenous / tribal communities (<i>sub-category of Private ownership</i>)	Forest owned by communities of indigenous or tribal people.
Other types of ownership	Other kind of ownership arrangements not covered by the categories above. Also includes areas where ownership is unclear or disputed.
Categories related to the holder of management rights of public forest resources	
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 institutions	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities, private co-operatives, private non-profit 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.

2.2 National data

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Kenya Forest Master plan	High	Ownership	1994	

2.2.2 Classification and definitions

National class	Definition
State forest	- Any forest declared by the Minister to be a central forest, a forest area or nature reserve as per Forests Act 2005.
Local Authority forest	- Any forest on trust land which has been set aside as forest by a local authority pursuant to the provisions of the Trust land Act. - Any arboretum, recreational park or mini forest created under section 30 of Forest Act 2005. - Any forest established as local authority forest in accordance with the provisions of section 24 of Forest Act 2005.
Private forest	- Forest owned by individuals or corporate bodies.

2.2.3 Original data

National category	Forest area '000 ha			
	1990	2000	2005	2010 (2)
State forest	1490	1404	1364	1364
Local Authority forest	2150	2100	2075	2013
Private forest	68	78	83	90
Total	3708	3582	3522	3467

Notes:

1. Based on Kenya Forest Master Plan (1994) data projection for current trend (KFMP pp 359).
2. In 2010 the area of gazetted forests has not changed for the last 4 years and the changes are mainly on trust lands and private forests. The areas subtracted from forest plantations are converted to indigenous forest zones after the forest rezonation program where all plantations that were wrongly sited were rezoned to indigenous forest areas. (expert opinion).

2.3 Analysis and processing of national data

2.3.1 Reclassification

National category	FRA Categories
State forest	Public ownership
Local Authority forest	Local communities
Private forest	Local communities of which owned by ... private business entities and institutionsIndividuals, and Private business entities and institutions

2.4 Data for Table T2

Table 2a - Forest ownership

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Public ownership	1 490	1 404	1 364	1 364
Private ownership	2 218	2 178	2 158	2 103
...of which owned by individuals	1	2	5	10
...of which owned by private business entities and institutions	67	76	78	80
...of which owned by local communities	2 150	2 100	2 075	2 013
...of which owned by indigenous / tribal communities	0	0	0	0
Other types of ownership	0	0	0	0
TOTAL	3 708	3 582	3 522	3 467

Note: If other types of ownership is reported, please specify details in comment to the table.

Does ownership of trees coincide with ownership of the land on which they are situated?	<input checked="" type="checkbox"/>	Yes
	<input type="checkbox"/>	No
If No above, please describe below how the two differ:		
Both are the same		

Table 2b - Holder of management rights of public forests

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Public Administration	1 490	1 404	1 364	1 327
Individuals	0	0	0	0
Private corporations and institutions	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	1 490	1 404	1 364	1 327

2.5 Comments to Table T2

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Public ownership	Forest owned by state and gazetted as forest reserve	The decline of public forest mainly attributed to local authority forests lost to conversion to agriculture of urban areas.
Private ownership		Individual forest increasing due to increased interest in commercial tree farming using short rotation crops like eucalypts for poles and fuel wood.
Other types of ownership		
Management rights	All public forests are managed by the government.	

Other general comments to the table

The table is based on Kenya Forest Master Plan data current scenario. Decrease in public forest is likely to be less than indicated due to enactment of the Forest Act 2005 which makes it very difficult to excise any forest land.

Management rights include the right to utilize the resource in consultation with the Kenya Forest Service the regulatory body. The management right are wholly with the forest owner. However the Forest Act 2005 gives Kenya Forest Service the right to regulate the harvesting and observance of good management practices.

3 Table T3 – Forest designation and management

3.1 FRA 2010 Categories and definitions

Term	Definition
Primary designated function	The primary function or management objective assigned to a management unit either by legal prescription, documented decision of the landowner/manager, or evidence provided by documented studies of forest management practices and customary use.
Protected areas	Areas especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.
Categories of primary designated functions	
Production	Forest area designated primarily for production of wood, fibre, bio-energy and/or non-wood forest products.
Protection of soil and water	Forest area designated primarily for protection of soil and water.
Conservation of biodiversity	Forest area designated primarily for conservation of biological diversity. Includes but is not limited to areas designated for biodiversity conservation within the protected areas.
Social services	Forest area designated primarily for social services.
Multiple use	Forest area designated primarily for more than one purpose and where none of these alone is considered as the predominant designated function.
Other	Forest areas designated primarily for a function other than production, protection, conservation, social services or multiple use.
No / unknown	No or unknown designation.
Special designation and management categories	
Area of permanent forest estate (PFE)	Forest area that is designated to be retained as forest and may not be converted to other land use.
Forest area within protected areas	Forest area within formally established protected areas independently of the purpose for which the protected areas were established.
Forest area under sustainable forest management	To be defined and documented by the country.
Forest area with management plan	Forest area that has a long-term (ten years or more) documented management plan, aiming at defined management goals, which is periodically revised.

3.2 National data

3.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Kenya Forestry Master Plan 1994	H		1994	

3.2.2 Original data

Original data from Kenya Forestry Master Plan

FRA Categories	Area in 1000 hectares			
	1990	2000	2005	2010
Productive	238	212	202	197
Conservation of biodiversity				
Protection of soil and water	3 470	3 370	3 320	3 270
Total	3 708	3 582	3 522	3 467

Note: This table is based on table 1 and it is assumed that all forests that are not earmarked for productive function are mainly for protection of soil and water catchments. This is based on KFMP Table A3.2 PP391 where this function was found to be most dominating.

Since 2005 (at least), Mt Kenya, Aberdares and Arabuko Sokoke forests have long term strategic management plans. According to expert knowledge, forest area with management plan is 149 421 ha in 2005 and may reach 824 684 ha in 2010.

3.3 Analysis and processing of national data

3.3.1 Reclassification into FRA 2010 categories

No reclassification was necessary for forests as the national Classes and FRA definitions were compatible.

3.4 Data for Table T3

Table 3a – Primary designated function

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Production	238	212	202	197
Protection of soil and water	3 470	3 370	3 320	3 270
Conservation of biodiversity	0	0	0	0
Social services	0	0	0	0
Multiple use	0	0	0	0
Other (please specify in comments below the table)	0	0	0	0
No / unknown	0	0	0	0
TOTAL	3 708	3 582	3 522	3 467

Table 3b – Special designation and management categories

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Area of permanent forest estate	1 490	1 404	1 364	1 364
Forest area within protected areas	n/a	n/a	n/a	n/a
Forest area under sustainable forest management	238	212	202	197
Forest area with management plan	n/a	n/a	149	824

3.5 Comments to Table T3

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Production	Forest area designated primarily for production of wood, fibre, bio-energy and/or non-wood forest products.	The decline is as a result of forest areas due to illegal logging.
Protection of soil and water	All natural forest are lumped together in this category	The decline of public forest mainly attributed to local authority forests lost to conversion to agriculture of urban areas.
Conservation of biodiversity	Though some forests have this function, there are no designated forest areas for biodiversity conservation.	
Social services	Though some forests have this function, there are no designated forest areas for Social services.	
Multiple use	Though some forests have this function, there are no designated forest areas for multiple use.	
Other		
No / unknown designation		
Area of permanent forest estate	Base on table T2, all state forests are permanent forest estate.	
Forest area within protected areas		
Forest area under sustainable forest management	All forest plantations both state and private are assumed to be under sustainable forest management. (see table T4)	
Forest area with management plan		

Other general comments to the table

There are no designated natural forest functions but most of the indigenous and woodland have more than one function and no delineation has been done at the national level for specific single functions. The protected area from Source 1 is assumed to be under OWL.

4 Table T4 – Forest characteristics

4.1 FRA 2010 Categories and definitions

Term / category	Definition
Naturally regenerated forest	Forest predominantly composed of trees established through natural regeneration.
Introduced species	A species, subspecies or lower taxon, occurring <u>outside</u> its natural range (past or present) and dispersal potential (i.e. outside the range it occupies naturally or could occupy without direct or indirect introduction or care by humans).
Characteristics categories	
Primary forest	Naturally regenerated forest of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.
Other naturally regenerated forest	Naturally regenerated forest where there are clearly visible indications of human activities.
Other naturally regenerated forest of introduced species (sub-category)	Other naturally regenerated forest where the trees are predominantly of introduced species.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
Planted forest of introduced species (sub-category)	Planted forest, where the planted/seeded trees are predominantly of introduced species.
Special categories	
Rubber plantations	Forest area with rubber tree plantations.
Mangroves	Area of forest and other wooded land with mangrove vegetation.
Bamboo	Area of forest and other wooded land with predominant bamboo vegetation.

4.2 National data

4.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
KFMP 1994	M	Forest characteristics	1994	
KNBS	M	Forest characteristics	2008	
FAO The World's Mangroves 1980-2005.	M	Mangroves		

4.2.2 Classification and definitions

National class	Definition
Indigenous forest	A forests which has come about by natural regeneration of trees primarily native to Kenya, and includes mangroves and Bamboo forests forming a tree canopy above 40%

Open woodland	A forests which has come about by natural regeneration of trees primarily native to Kenya, Forming a tree canopy Of between 10% – 40%
Indigenous plantation forest	A forest that has been established using tree species that are native to Kenya through Afforestation or reforestation for commercial purposes.
Exotic forest plantation	A forests that has been established using tree species that are not native to Kenya through Afforestation or reforestation for commercial purposes

4.2.3 Original data

From T1 (1.3.2).

National categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Public Plantation Forests (1)	170	134	119	107
Private Plantation forests (1)	68	78	83	90
Total	238	212	202	197

4.3 Analysis and processing of national data

4.3.1 Reclassification into FRA 2010 categories

It is assumed that only 20% of the forest has not had human interference and can be considered as primary forest.

4.4 Data for Table T4

Table 4a

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Primary forest	694	674	664	654
Other naturally regenerated forest	2 776	2 696	2 656	2 616
...of which of introduced species	n/a	n/a	n/a	n/a
Planted forest	238	212	202	197
...of which of introduced species	238	212	202	197
TOTAL	3 708	3 582	3 522	3 467

Table 4b

FRA 2010 Categories	Area (1000 hectares)			
	1990	2000	2005	2010
Rubber plantations (Forest)	0	0	0	0
Mangroves (Forest and OWL)	52	50	50	50
Bamboo (Forest and OWL)	150	150	150	150

4.5 Comments to Table T4

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Primary forest	20% of the natural forest was assumed to be primary.	
Other naturally regenerating forest		
Planted forest	The forest plantation data refers to areas with standing trees and other designated for forest plantation establishment and is currently not replanted after felling the plantation trees for commercial purposes. Areas under indigenous forest plantations have not been updated and therefore have not been able to separate from exotic forest plantations.	
Rubber plantations	There is no rubber plantation in Kenya.	
Mangroves		
Bamboo	The area under bamboo vegetation is approximation done by forest economic survey report 2008.	

Other general comments to the table

5 Table T5 – Forest establishment and reforestation

5.1 FRA 2010 Categories and definitions

Term	Definition
Afforestation	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not classified as forest.
Reforestation	Re-establishment of forest through planting and/or deliberate seeding on land classified as forest.
Natural expansion of forest	Expansion of forests through natural succession on land that, until then, was under another land use (e.g. forest succession on land previously used for agriculture).

5.2 National data

5.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Kenya Forest Service Reports	M	Plantations	2008	The data is extracted from Kenya Forest Service tree planting reports and does not include tree planting by private tree farmers

5.2.2 Classification and definitions

National class	Definition
Afforestation	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not classified as forest.
Reforestation	Re-establishment of forest through planting and/or deliberate seeding on land classified as forest mainly as forest plantation or restoration of deforested natural forest designated areas..
Natural expansion of forest	Expansion of forests through natural succession on land that, until then, was under another land use (e.g. forest succession on land previously degraded or deforested and currently grassland or bush land.

5.2.3 Original data

The data is extracted from Kenya Forest Service tree planting reports and does not include tree planting by private tree farmers.

5.3 Data for Table T5

FRA 2010 Categories	Annual forest establishment (hectares/year)			...of which of introduced species ¹⁾ (hectares/year)		
	1990	2000	2005	1990	2000	2005
Afforestation	0	0	0	0	0	0
Reforestation	1 588	2 490	5 675	1 268	1 931	4 661
...of which on areas previously planted	1 588	2 490	5 675	1 268	1 931	4 661
Natural expansion of forest	n/a	n/a	n/a	n/a	n/a	n/a

5.4 Comments to Table T5

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Afforestation	There is minimal tree planting in areas that were not forest areas. More resources are put towards reforestation	
Reforestation	Planting mainly done on forest plantation designated areas that have been cleared or enrichment planting in degraded natural forest areas. The data is extracted from Kenya Forest Service tree planting reports and does not include tree planting by private tree farmers.	The increased trend in reforestation areas is due to increased financial support from government and development partners.
Natural expansion of forest	Due to scarcity of land there is not significant expansion of forests through natural succession on land that, until then, was under another land use	

Other general comments to the table

6 Table T6 – Growing stock

6.1 FRA 2010 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees more than X cm in diameter at breast height (or above buttress if these are higher). Includes the stem from ground level or stump height up to a top diameter of Y cm, and may also include branches to a minimum diameter of W cm.
Growing stock of commercial species	Growing stock (see def. above) of commercial species.

6.2 National data

6.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
KFMP 1994	M	GS	1994	KFMP 1994

6.2.2 Original data

From the previous tables, the following data are available:

	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	3708	3582	3522	3467
<i>of which of natural forest</i>	3470	3370	3320	3270
<i>of which of forest plantation</i>	238	212	202	197
Other wooded land	29092	28829	28710	28650

Obtained from the KFMP study of woody biomass outside forests Table A2.12

The KFMP used the above assumptions to forecast the average volume m³/ha. And have used the same to forecast the 2010 woody biomass.

	Average volume m ³ /ha			
	1990	2000	2005	2010
per hectare indigenous forest	176	176	175	174
Average volume per hectare for woodlands	16	16	16	16
Average volume per hectare for plantations	347	332	317	302

6.3 Analysis and processing of national data

6.3.1 Estimation and forecasting

Applying Vol/ha to the relevant vegetation class from above gives:

	GS 1000 m3			
	1990	2000	2005	2010
Natural forest	610 720	593 120	581 000	56 980
Forest plantation	82 586	70 384	64 034	59 494
Forest	693 306	663 504	645 034	628 474
Other wooded land	465 472	461 264	459 360	458 400

6.4 Data for Table T6

Table 6a – Growing stock

FRA 2010 category	Volume (million cubic meters over bark)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Total growing stock	693.3	663.5	645.0	628.5	465.5	461.3	459.4	458.4
... of which coniferous	82.6	70.4	64.0	59.5	n/a	n/a	n/a	n/a
... of which broadleaved	610.7	593.1	581.0	569.0	n/a	n/a	n/a	n/a
Growing stock of commercial species	82.6	70.4	64.0	59.5	n/a	n/a	n/a	n/a

Table 6b – Growing stock of the 10 most common species

No data available for table T6b

FRA 2010 category / Species name			Growing stock in forest (million cubic meters)		
Rank	Scientific name	Common name	1990	2000	2005
1 st					
2 nd					
3 rd					
4 th					
5 th					
6 th					
7 th					
8 th					
9 th					
10 th					
Remaining					
TOTAL					

Note: Rank refers to the order of importance in terms of growing stock, i.e. 1st is the species with the highest growing stock. Year 2000 is the reference year for defining the species list and the order of the species.

Table 6c – Specification of threshold values

Item	Value	Complementary information
Minimum diameter (cm) at breast height ¹ of trees included in growing stock (X)	5 cm	
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	15 cm	
Minimum diameter (cm) of branches included in growing stock (W)	-	
Volume refers to “above ground” (AG) or “above stump” (AS)	-	

6.5 Comments to Table T6

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Total growing stock		
Growing stock of broadleaved / coniferous		
Growing stock of commercial species		
Growing stock composition	No data available.	

Other general comments to the table

¹ Diameter at breast height (DBH) refers to diameter over bark measured at a height of 1.30 m above ground level or 30 cm above buttresses if these are higher than 1 m.

7 Table T7 – Biomass stock

7.1 FRA 2010 Categories and definitions

Category	Definition
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 2mm 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.

7.2 National data

7.2.1 Original data

Data from table T6 have been used.

7.3 Analysis and processing of national data

Applying the following formula:

1- Above-ground biomass

$AGB = GS \times BCEF$

GS = Growing stock

AGB = Above-ground biomass

BCEF = Biomass Conversion Expansion Factor = 1.3

2- Below-ground biomass

$BGB = AGB \times R$

Root shoot ratio (R) = 0.24

7.4 Data for Table T7

FRA 2010 category	Biomass (million metric tonnes oven-dry weight)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Above-ground biomass	901.3	862.6	838.5	817.1	605.2	599.7	597.2	595.9
Below-ground biomass	216.3	207.0	201.2	196.1	145.2	143.9	143.3	143.0
Dead wood	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
TOTAL	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

7.5 Comments to Table T7

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Above-ground biomass	Default factors were used to estimate the biomass above ground. The above ground biomass was a product of the growing stock multiplied with the Biomass Conversion Expansion Factor of 1.3 tonnes/m ³ .	The above ground biomass shows a declining trend due to decreased forest area.
Below-ground biomass	Default factors were used to estimate the biomass below ground. The below ground biomass is a product of above ground biomass multiplied by default root-shoot ratio of (R) = 0.24	The belowground biomass shows a declining trend due to decreased forest area.
Dead wood	There is no data on dead wood available and therefore nil return has been submitted.	

Other general comments to the table

8 Table T8 – Carbon stock

8.1 FRA 2010 Categories and definitions

Category	Definition
Carbon in above-ground biomass	Carbon in all living biomass above the soil, including stem, stump, branches, bark, seeds, and foliage.
Carbon in below-ground biomass	Carbon in all biomass of live roots. Fine roots of less than 2 mm diameter are excluded, because these often cannot be distinguished empirically from soil organic matter or litter.
Carbon in dead wood	Carbon in all non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots, and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in litter	Carbon in all non-living biomass with a diameter less than the minimum diameter for dead wood (e.g. 10 cm), lying dead in various states of decomposition above the mineral or organic soil.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a specified depth chosen by the country and applied consistently through the time series.

8.2 National data

8.2.1 Original data

Data from tables T1 and T7 have been used.

8.3 Analysis and processing of national data

A conversion factor of 0.47 for converting biomass to carbon has been used as suggested by IPCC 2006 good practice guidelines.

- B/- Carbon in the litter has been estimated, based on the standard factor of 2.1 t/ha (tropical), and
- Soil carbon has been estimated, based on the factor of 65 t/ha (tropical moist).

The biomass/ hectare values are then applied to the forest and other wooded land areas values in table T1 to get the biomass for the reporting years.

8.4 Data for Table T8

FRA 2010 Category	Carbon (Million metric tonnes)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Carbon in above-ground biomass	423.6	405.4	394.1	384.0	284.4	281.9	280.7	280.1
Carbon in below-ground biomass	101.7	97.3	94.6	92.2	68.3	67.6	67.4	67.2
Sub-total: Living biomass	525.3	502.7	488.7	476.2	352.7	349.5	348.1	347.3
Carbon in dead wood	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Carbon in litter	7.8	7.5	7.4	7.3	61.1	60.5	60.3	60.2
Sub-total: Dead wood and litter	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Soil carbon	241.0	232.8	228.9	225.4	1891.0	1873.9	1866.2	1862.2
TOTAL	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

Soil depth (cm) used for soil carbon estimates	30
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8.5 Comments to Table T8

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Carbon in above-ground biomass (CAGB)		
Carbon in below-ground biomass (CBGB)		
Carbon in dead wood	National data on carbon in dead wood are not available and therefore submit nil return.	
Carbon in litter (CL)		
Soil carbon (SC)		

Other general comments to the table

9 Table T9 – Forest fires

9.1 FRA 2010 Categories and definitions

Category	Definition
Number of fires	Average number of vegetation fires per year in the country.
Area affected by fire	Average area affected by vegetation fires per year in the country.
Vegetation fire (supplementary term)	Any vegetation fire regardless of ignition source, damage or benefit.
Wildfire	Any unplanned and/or uncontrolled vegetation fire.
Planned fire	A vegetation fire regardless of ignition source that burns according to management objectives and requires limited or no suppression action.

9.2 National data

9.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Kenya Forest Service - Fire Report	H	forest fires	1998 - 2008	Data generated by Forest Fires Unit from filed reports

9.2.2 Classification and definitions

National definitions are similar to the FRA ones.

9.2.3 Original data

Area burned and Number of fires : Kenya 1980 – 2008

Year	Fires		
	Plantation in ha	Natural Forest in ha	No. of fires
1988	188.00	155.00	30
1989	231.00	175.00	46
1990	85.00	331.00	36
1991	1,705.00	236.00	64
1992	6,170.00	5,494.00	180
1993	1,731.00	515.00	48
1994	690.00	69.00	40
1997	4,726.00	2,961.00	121
1999	1449.00	317.00	59
2000	861.00	1,229.82	38
2001	601.00	486.8	67
2002	783.4	4,229.00	89
2003	301.6	2,361.00	72
2004	214.00	893.00	56
2005	1068.30	4683.00	163
2006	n/a	n/a	n/a
2007	2.0	5.0	3
2008	1020.3	146.6	9

9.3 Analysis and processing of national data

9.3.1 Estimation and forecasting

The fire damage for 1990 is an average of 1988, 1989, 1990, 1991, and 1992, while fire damage of 2000 is the average of 1997, 1999, 2000, 2001, and 2002, and fire damage of 2005 is the average of 2003, 2004, 2005, 2007, and 2008 (2006 data are not available)

Area in hectares		
Avg.1990	Avg.2000	Avg.2005
2,954.0	3,528.8	2,139.0

Number of fires		
Avg.1990	Avg.2000	Avg.2005
71.2	74.8	60.6

9.4 Data for Table T9

Table 9a

FRA 2010 category	Annual average for 5-year period					
	1990		2000		2005	
	1000 hectares	number of fires	1000 hectares	number of fires	1000 hectares	number of fires
Total land area affected by fire	n/a	n/a	n/a	n/a	n/a	n/a
... of which on forest	2.95	71	3.53	75	2.14	61
... of which on other wooded land	n/a	n/a	n/a	n/a	n/a	n/a
... of which on other land	n/a	n/a	n/a	n/a	n/a	n/a

Note: The figures for the reporting years refer to the averages for the 5-year periods 1988-1992, 1998-2002 and 2003-2007 respectively.

The data available cover gazetted forests owned by government.

Table 9b

FRA 2010 category	Proportion of forest area affected by fire (%)		
	1990	2000	2005
Wildfire	100%	100%	100%
Planned fire	0	0	0

9.5 Comments to Table T9

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Area affected by fire	The data available cover gazetted forests owned by government.	There is reduced fire incidences and area burnt due to good weather recently.
Number of fires	The data available cover gazetted forests owned by government.	There is reduced fire incidences and area burnt due to good weather recently.
Wildfire / planned fire		

Other general comments to the table

10 Table T10 – Other disturbances affecting forest health and vitality

No data available for this table.

11 Table T11 – Wood removals and value of removals

11.1 FRA 2010 Categories and definitions

Category	Definition
Industrial roundwood removals	The wood removed (volume of roundwood over bark) for production of goods and services other than energy production (woodfuel).
Woodfuel removals	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

11.2 National data

11.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
FAO year book	M	Industrial roundwood and Fuelwood removal	1988 to 2007	

11.2.2 Original data

Year	Industrial round wood (m3 ub)	Fuel wood (m3 ub)
1988	1672000	16050412
1989	1714000	16420361
1990	1743000	16792606
1991	1775000	17247700
1992	1804000	17753655
1998	1956000	19386779
1999	1977000	19520854
2000	1977000	19658247
2001	1871000	19826903
2002	1842000	20001528
2003	1842000	20182351
2004	1760000	20369621
2005	1792000	25600000
2006	1114000	26400000
2007	1246000	26400000

Source: FAO Statistics

11.3 Analysis and processing of national data

11.3.1 Estimation and forecasting

Average volume for round wood and fuel wood

Year	Round wood volume (m ³)		Fuel wood volume (m ³)	
	Under bark (ub)	Over bark (ob)	Under bark (ub)	Over bark (ob)
1990	1741600	2002840	16852947	19380889
2000	1924600	2213290	19678862	22630692
2005	1431600	1646340	23790394	27358954

Note: The average figures for the reporting years refer to the averages of annually affected areas for the 5-year periods 1988-1992, 1998-2002 and 2003-2007 respectively

11.4 Data for Table T11

FRA 2010 Category	Industrial roundwood removals			Woodfuel removals		
	1990	2000	2005	1990	2000	2005
Total volume (1000 m ³ o.b.)	2 002.8	2 213.3	1 646.3	19 380.9	22 630.7	27 359.0
... of which from forest	2 002.8	2 213.3	1 646.3	19 380.9	22 630.7	27 359.0
Unit value (local currency / m ³ o.b.)	n/a	n/a	n/a	n/a	n/a	n/a
Total value (1000 local currency)	n/a	n/a	n/a	n/a	n/a	n/a

Note: The figures for the reporting years refer to the averages of annually affected areas for the 5-year periods 1988-1992, 1998-2002 and 2003-2007 respectively.

	1990	2000	2005
Name of local currency	Kenya shillings	Kenya shillings	Kenya shillings

11.5 Comments to Table T11

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Total volume of industrial roundwood removals		
Total volume of woodfuel removals		
Unit value		
Total value		

Other general comments to the table

12 Table T12 – Non-wood forest products removals and value of removals

12.1 FRA 2010 Categories and definitions

Term	Definition
Non-wood forest product (NWFP)	Goods derived from forests that are tangible and physical objects of biological origin other than wood.
Value of NWFP removals	For the purpose of this table, value is defined as the market value at the site of collection or forest border.

NWFP categories

Category
<u>Plant products / raw material</u>
1. Food
2. Fodder
3. Raw material for medicine and aromatic products
4. Raw material for colorants and dyes
5. Raw material for utensils, handicrafts & construction
6. Ornamental plants
7. Exudates
8. Other plant products
<u>Animal products / raw material</u>
9. Living animals
10. Hides, skins and trophies
11. Wild honey and bee-wax
12. Wild meat
13. Raw material for medicine
14. Raw material for colorants
15. Other edible animal products
16. Other non-edible animal products

12.2 National data

12.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
KEFRI (NGARA)	High	NWFP	2005	Gum Resins production
KEFRI	High	NWFP	2002	Frankincense commercialisation
KEFRI	High	NWFP	2008	Aloe plant commercialisation

12.2.2 Classification and definitions

National class	Definition
NWFPs (Non-Wood Forest Products) include:	- Gums, Resins and Latexes of plant origin employed in a wide range of food and pharmaceutical products.
	- Aloes are important plants that have received great attention as a source of human healthcare products, and for their role in environmental protection and rehabilitation of degraded areas.

12.3 Data for Table T12

Rank	Name of product	Key species	Unit	NWFP removals 2005		NWFP category
				Quantity (2004)	Value (1000 local currency)	
1 st		<i>Aloe vera</i>	Kg.	1 500	600.000	8
2 nd		<i>yushania alpine</i>	pcs	200	100.000	5
3 rd		<i>Acacia</i>	Ton	1 338	98.343	7
4 th		<i>Boswellia</i>		n/a	n/a	7
5 th		<i>Acacia</i>		n/a	n/a	4
6 th		<i>Aloe ferox</i>		n/a	(Ksh160/Kg)	7
7 th		<i>Aloe secundiflora</i>		n/a	n/a	4
8 th		Most Aloes species		n/a	n/a	3
9 th						
All other plant products					n/a	
All other animal products					n/a	
TOTAL					n/a	

	2005
Name of local currency	Ksh

12.4 Comments to Table T12

Variable / category	Comments related to data, definitions, etc.
10 most important products	Incomplete information
Other plant products	
Other animal products	
Value by product	
Total value	

Other general comments to the table

13 Table T13 – Employment

13.1 FRA 2010 Categories and definitions

Category	Definition
Full-time equivalents (FTE)	A measurement equal to one person working full-time during a specified reference period.
Employment	Includes all persons in paid employment or self-employment.
Paid employment	Persons who during a specified reference period performed some work for <u>wage or salary</u> in cash or in kind.
Self-employment	Persons who during a specified reference period performed some work for <u>profit or family gain</u> in cash or in kind (e.g. employers, own-account workers, members of producers' cooperatives, contributing family workers).

13.2 National data

13.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Trends and current status of the contribution of the forest sector to national economies” (FAO, 2003)	L	Employment in primary production of goods	1990 and 2000	
Central Bureau of statistics: statistical abstract 2006, Kenya Forest service IPPD	M	Employment		Integrated Payroll and Personnel Database

13.2.2 Classification and definitions

National class	Definition
Public sector	Number of employees in management of protected areas.
Private sector	Number of employees by industry and employment groups.

13.3 Data for Table T13

FRA 2010 Category	Employment (1000 years FTE)			
	1990	2000	2005	2008
Employment in primary production of goods	1.9	1.7	1.8	n/a
...of which paid employment	n/a	n/a	n/a	n/a
...of which self-employment	n/a	n/a	n/a	n/a
Employment in management of protected areas	n/a	n/a	n/a	5.4

13.4 Comments to Table T13

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Employment in primary production of goods	Number of employees by industries excluding central Government, private households and dormant establishments.	There is a fluctuation of reduction and increase of employment of staff.
Paid employment / self-employment		
Employment in management of protected areas	Employment noted in Kenya Forest Service Organisation concerned with management and conservation of public forests.	The number of staff has drastically decreased.

Other general comments to the table

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14 Table T14 – Policy and legal framework

14.1 FRA 2010 Categories and definitions

Term	Definition
Forest policy	A set of orientations and principles of actions adopted by public authorities in harmony with national socio-economic and environmental policies in a given country to guide future decisions in relation to the management, use and conservation of forest and tree resources for the benefit of society.
Forest policy statement	A document that describes the objectives, priorities and means for implementation of the forest policy.
National forest programme (nfp)	A generic expression that refers to a wide range of approaches towards forest policy formulation, planning and implementation at national and sub-national levels. The national forest programme provides a framework and guidance for country-driven forest sector development with participation of all stakeholders and in consistence with policies of other sectors and international policies.
Law (Act or Code) on forest	A set of rules enacted by the legislative authority of a country regulating the access, management, conservation and use of forest resources.

14.2 Data for Table T14

Indicate the existence of the following (2008)			
Forest policy statement with national scope	<input checked="" type="checkbox"/>	Yes	
	<input type="checkbox"/>	No	
If Yes above, provide:	Year of endorsement	Draft	
	Reference to document	2006	
National forest programme (nfp)	<input checked="" type="checkbox"/>	Yes	
	<input type="checkbox"/>	No	
If Yes above, provide:	Name of nfp in country	Integrated Natural Resource Assessment (INRA)	
	Starting year	Pilot project done in 2007-08	
	Current status	<input type="checkbox"/>	In formulation
		<input type="checkbox"/>	In implementation
		<input checked="" type="checkbox"/>	Under revision
Reference to document or web site	Process temporarily suspended		
Law (Act or Code) on forest with national scope	<input checked="" type="checkbox"/>	Yes, specific forest law exists	
	<input type="checkbox"/>	Yes, but rules on forests are incorporate-rated in other (broader) legislation	
	<input type="checkbox"/>	No, forest issues are not regulated by national legislation	
If Yes above, provide:	Year of enactment	2005	
	Year of latest amendment	None	
	Reference to document	Forest Act 2005, (see www.kenyaforestservice.org)	

In case the responsibility for forest policy- and/or forest law-making is decentralized, please indicate the existence of the following and explain in the comments below the table how the responsibility for forest policy- and law-making is organized in your country.		
Sub-national forest policy statements	<input type="checkbox"/>	Yes
	<input checked="" type="checkbox"/>	No
If Yes above, indicate the number of regions/states/provinces with forest policy statements		
Sub-national Laws (Acts or Codes) on forest	<input type="checkbox"/>	Yes
	<input checked="" type="checkbox"/>	No
If Yes above, indicate the number of regions/states/provinces with Laws on forests		

14.3 Comments to Table T14

Variable / category	Comments related to data, definitions, etc.
Forest policy statement with national scope	
National forest programme (nfp)	
Law (Act or Code) on forest with national scope	The Forest Act No. 7 of 2005 is become operational in 2006 and repealed CAP385 which has been operational since independence
Sub-national forest policy statements	Kenya has no sub national forest policy statements and all forest estates are governed based on the proposed Forest Policy 2007.
Sub-national Laws (Acts or Codes) on forest	All national forest are governed by the forest Act 2005. However Local Authorities have by-laws that govern the local authority forests within their jurisdiction.

Other general comments to the table

15 Table T15 – Institutional framework

15.1 FRA 2010 Categories and definitions

Term	Definition
Minister responsible for forest policy-making	Minister holding the main responsibility for forest issues and the formulation of the forest policy.
Head of Forestry	The Head of Forestry is the Government Officer responsible for implementing the mandate of the public administration related to forests.
Level of subordination	Number of administrative levels between the Head of Forestry and the Minister.
University degree	Qualification provided by University after a minimum of 3 years of post secondary education.

15.2 Data for Table T15

Table 15a – Institutions

FRA 2010 Category	2008	
Minister responsible for forest policy formulation : please provide full title	Minister of Forestry and Wildlife	
Level of subordination of Head of Forestry within the Ministry		1 st level subordination to Minister
		2 nd level subordination to Minister
	X	3 rd level subordination to Minister
		4 th or lower level subordination to Minister
Other public forest agencies at national level	Kenya Forest Research Institute (KEFRI)	
Institution(s) responsible for forest law enforcement	Kenya Forest Service	

Table 15b – Human resources

FRA 2010 Category	Human resources within public forest institutions					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Total staff	n/a	n/a	n/a	n/a	5 351	20%
...of which with university degree or equivalent	n/a	n/a	n/a	n/a	123	16%

Notes:

1. Includes human resources within public forest institutions at sub-national level
2. Excludes people employed in State-owned enterprises, education and research, as well as temporary / seasonal workers.

Source : Kenya Forest service IPPD (Integrated Payroll and Personnel Database)

15.3 Comments to Table T15

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Minister responsible for forest policy formulation	Minister, Ministry of Forestry and Wildlife.	
Level of subordination of Head of Forestry within the Ministry	Director, Kenya Forest Service (KFS) is in level 3 below the assistant minister and the Permanent secretary.	
Other public forest agencies at national level	Kenya Forestry Research Institute (KEFRI) is the national institution mandated to undertake forestry development research	
Institution(s) responsible for forest law enforcement	Kenya Forest Service (KFS) organisation responsible for enactment of Forest Act 2005.	
Human resources within public forest institutions	The personnel include: <ul style="list-style-type: none"> • Director of forests(Head) • Conservators of forest • Foresters • Discipline staff(Forest rangers) • Productive staff(Administration personnel, Financial personnel, Support staff,Drivers,Artisans etc) 	
Other general comments to the table		

16 Table T16 – Education and research

16.1 FRA 2010 Categories and definitions

Term	Definition
Forest-related education	Post-secondary education programme with focus on forests and related subjects.
Doctor's degree (PhD)	University (or equivalent) education with a total duration of about 8 years.
Master's degree (MSc) or equivalent	University (or equivalent) education with a total duration of about five years.
Bachelor's degree (BSc) or equivalent	University (or equivalent) education with duration of about three years.
Technician certificate or diploma	Qualification issued from a technical education institution consisting of 1 to 3 years post secondary education.
Publicly funded forest research centers	Research centers primarily implementing research programmes on forest matters. Funding is mainly public or channelled through public institutions.

16.2 National data

16.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Moi University	High	Degree	2005/06	Forest-related education graduates -Phd-3; -Mphil-3; -BSc Forestry-32; -BSc Wildlife-32; -BSc Woodscience and Technology-21
Kenya Forestry College(KFC)	High	Diploma,Certificate	2008/09	Total Graduates: 81
Kenya Forestry Research Institute (KEFRI)	High	Research	2005	Total staff strength of 1,174.This include 87 research scientists(PhD,17;MSc,56;BSc,14)
KEFRI Strategic Plan 2005-2010	high	Research		

16.3 Data for Table T16

FRA 2010 Category	Graduation ¹⁾ of students in forest-related education					
	2005		2006		2008	
	Number	%Female	Number	%Female	Number	%Female
Master's degree (MSc) or equivalent	n/a	n/a	12	33%	n/a	n/a
Bachelor's degree (BSc) or equivalent	n/a	n/a	85	22%	n/a	n/a
Forest technician certificate / diploma	n/a	n/a	n/a	n/a	81	n/a
FRA 2010 Category	Professionals working in publicly funded forest research centres ²⁾					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Doctor's degree (PhD)	11	n/a	17	n/a	17	n/a
Master's degree (MSc) or equivalent	51	n/a	56	n/a	56	n/a
Bachelor's degree (BSc) or equivalent	33	n/a	14	n/a	14	n/a

Notes:

1. Graduation refers to the number of students that have successfully completed a Bachelor's or higher degree or achieved a certificate or diploma as forest technician.
2. Covers degrees in all sciences, not only forestry.

16.4 Comments to Table T16

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Graduation of students in forest-related education		
Professionals working in public forest research centres		

Other general comments to the table

It should be noted that Egerton University has 262 BSc studying in its Faculty of Natural Resource Management (2005/2006), and Kenyatta University 476 BSc in its Faculty of Environmental Studies.

17 Table T17 – Public revenue collection and expenditure

No data available for this table.