



**Forestry Department**

**Food and Agriculture Organization of the United Nations**

**GLOBAL FOREST RESOURCES  
ASSESSMENT 2010**

**COUNTRY REPORT**

**LESOTHO**

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## 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](http://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.....	6
2 TABLE T2 – FOREST OWNERSHIP AND MANAGEMENT RIGHTS.....	11
3 TABLE T3 – FOREST DESIGNATION AND MANAGEMENT.....	14
4 TABLE T4 – FOREST CHARACTERISTICS.....	17
5 TABLE T5 – FOREST ESTABLISHMENT AND REGENERATION.....	19
6 TABLE T6 – GROWING STOCK.....	21
7 TABLE T7 – BIOMASS STOCK.....	24
8 TABLE T8 – CARBON STOCK.....	26
9 TABLE T9 – FOREST FIRES.....	28
10 TABLE T10 – OTHER DISTURBANCES AFFECTING FOREST HEALTH AND VITALITY.....	28
11 TABLE T11 – WOOD REMOVALS AND VALUE OF REMOVALS.....	29
12 TABLE T12 – NON-WOOD FOREST PRODUCTS REMOVALS AND VALUE OF REMOVALS.....	31
13 TABLE T13 – EMPLOYMENT.....	32
14 TABLE T14 – POLICY AND LEGAL FRAMEWORK.....	34
15 TABLE T15 – INSTITUTIONAL FRAMEWORK.....	36
16 TABLE T16 – EDUCATION AND RESEARCH.....	38
17 TABLE T17 – PUBLIC REVENUE COLLECTION AND EXPENDITURE.....	40

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## Introduction

Lesotho is a small, very mountainous, constitutional Monarchy in southern Africa with a land area of about 3 millions ha.

Lesotho's productive natural forest is better described as 'woody vegetation'. It occurs to varying degrees of density on non-arable land (74% or so of Lesotho) on shallow soiled hills and escarpments at the lower altitudes. Any part of this 'natural forest' may contain several of just 32 plant species that can grow with single main trunks and to heights of at least 5 metres. The total forest area is estimated to be about 43 000 ha.

Essentially, Lesotho's very small area of tree plantations comprises exotic species, and are of two types. The first category of plantations are those grown primarily for wood production (mainly Government-owned woodlots), and the second comprises those planted by the present and past Governments mainly for erosion stabilisation but self-regenerating and now regularly harvested by rural people for firewood and poles.

There is virtually no deforestation for the expansion of arable agriculture because all arable land was occupied many decades ago. It is quite impossible to estimate the rate of deforestation on non-arable land because virtually all the indigenous species and most of the exotic plantation species are self-regenerating. Thus, the widespread over-harvesting of woody fuel results in the plants re-growth being cut at a younger age. Stumps of the larger woody plants may be dug up for fuel, and too frequent cutting and browsing by Lesotho abundant livestock eradicates other woody species.

No forest produce from Lesotho's wood resources is manufactured and traded to appear in Trade Statistics, but a tiny proportion of the fuel-wood used is collected by the rural poor for sales to less-poor neighbours.

Forestry in Lesotho does not contribute all to the official revenue figures in the national economy.

The greatest threat by far to forest resources in Lesotho is from the browsing of the re-growth of harvested woody plants by its huge population of freely-grazed domestic livestock. The second threat is from resource harvesting for household fuel at all level considerably in excess of the regenerative capacity of the forest resources.

The enactment of the Forestry Act 1998 together with the new Forest Policy 2008 and the Environment Act 2001 and their subsequent legislation under the respective ministries provides the legal framework to the appropriate institutions for supporting sustainable forest management in the country. The main Government body responsible for the coordinating forestry affairs is the Forestry Department under the new Ministry of Forestry and Land Reclamation, whereas the Environment Act falls under the portfolio of the Ministry of Environment, Tourism and Culture.

# 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
<b>1. Millington, A., and Townsend, J. (eds.) 1989.</b> Biomass assessment. Woody biomass in the SADC region. Earthscan Publication Ltd. London. UK	H	Definition and Land use cover	1983	
<b>2. Runze H. 1997.</b> Woodlot Inventory 1995/96; in: Lesotho Woodlot Data /Management Book, Forestry Division – Planning Section, Maseru).	H	Inventory data	1995/96	Restricted to gazetted Forest reserves (so-called “woodlots”)
<b>3. E.D. May, 2000,</b> The indigenous forests of Lesotho; printed for the Forestry Division of Lesotho by MORIJA Printing Works, Morija – Lesotho	H	The current distribution of groves and patches of wild indigenous trees and shrubs	1995	See page 15 + 33
<b>4. National Environment Secretariat, 1997;</b> State of Environment in Lesotho, 1997” [National Environment Secretariat, Ministry of Environment, Gender and Youth Affairs, Government of Lesotho, P.O. Box10993, Maseru, Lesotho; ISBN 99911-633-0-1, first published in 1999	H	Existing forests, trees and shrub resources	1997	See page 78

<b>5. Ministry of Agriculture, 1988;</b> National Rangeland Inventory, Ministry of Agriculture and Marketing (USAID/GOL Land Conservation and Management Project, Range Management Division	H	Vegetation types of Lesotho	1988	
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## 1.2.2 Classification and definitions

### 1. Classification and definition for reference year 1983:

National class	Definition
Escarpment and riparian Woodland	<p>Escarpment woodland is found in fragmented north –east to south-west trending strip corresponding to the Western Escarpment of Lesotho. The Riparian Woodlands occurs along most of the large rivers. The few remaining areas with high growing stock and high levels of productivity are classified in this biomass class. In all this class covers 1 371 km<sup>2</sup> or 4.55 of the country. Most of the area designated as forest land (3 100km<sup>2</sup>) fall into this category, but a government estimate of the forest and woodland ( defined as tree cover greater than 10%) found in this category is actually only 6 km<sup>2</sup>, or about 0.2% of the designated forest land area (Government of Lesotho , undated). The trees are dominated by evergreens such as <i>Diospyros whyteana</i>, <i>Euclea</i> spp., <i>Halleria lucida</i>, <i>Ilex mitis</i>, <i>Maytenus</i> spp., <i>Olinia emarginata</i> and <i>Podocarpus latifolius</i> and a few deciduous and semi-deciduous species. The main woody species in the riparian woodland are <i>Celtis africana</i>, <i>Diospyros lycioides</i>, <i>Rhus lancea</i>, <i>Populus</i> spp., and <i>Salix</i> spp. In well –watered areas, the latter tree can reach heights of 7m but, generally riparian woodland is much lower than this.</p> <p>Areas of Escarpment Woodland are often rarely accessible, and both Escarpment and riparian Woodland are usually publicly or privately reserved. Both of these factors make fuelwood collection difficult.</p>
Escarpment Grassland with Scrub woodland	<p>Escarpment Grassland with Scrub woodland is mainly found along the Western Escarpment of Lesotho that is the Front and Thaba Putsoa ranges, overlooking the western Lesotho Highveld. The land covered by this class is mainly cultivated and is situated in Berea, Butha-Buthe, Leribe, Maseru and Mohale’s Hoek District. Scrub Woodland, often known as <i>shallahalla</i>, is a product of overgrazed, degraded pasture. The main shrub species is <i>Chrysocoma tenuifolia</i> but other important species includes <i>Nestlera acerosa</i> and <i>Pentzia cooperi</i>.</p>
Highveld and Riparian Grassland	<p>Highveld and Riparian Grassland is floristically rich and form 25% cover grass sward about 25 to 75cm in height. Generally the trees are stunted because of the severity of the climate and more, importantly, long-term over exploitation. In dry low-lying and undisturbed or protected areas low bushland and scrubland no higher than 5m can be found.</p>
Alpine /Sub Alpine Grassland and heathland	<p>Fire controlled Themeda –Festuca grassland dominates the sub-alpine belt but its species differ with aspect and latitudes. Another characteristic is the occurrence of grassland dominated by <i>Chrysocoma tenuifolia</i> which covers about 13% of overgrazing. There is very little vegetation in the sub-alpine belt.</p> <p>Alpine vegetation occurs in more severe conditions than the sub-alpine grassland, and is dominated by homogenous, low woody heathlands. Only the heath communities have a high proportion woody-grass species but even in the best of these communities (which are restricted to the summit of Drakensberg woody species are rarely more than 1m tall. Isolated patches of scrub are often only 2m in height.</p>

### 1.2.3 Original data

Original data for reference year 1983

National Classes	Area in km <sup>2</sup>	Area in hectares
Escarpment and riparian woodland	1 371	137 100
Escarpment Grassland with Scrub woodland	5 504	550 400
Plantations	35	3 500
Escarpment Grassland with Scrub woodland (on small farms)	2 987	298 700
Highveld and Riparian Grassland	5 995	599 500
Alpine/Sub-alpine Grassland and Heathland	14 463	1 446 300
Total	30 355	3 035 500

## 1.3 Analysis and processing of national data

### 1.3.1 Calibration

No calibration has been applied.

### 1.3.2 Reclassification into FRA 2010 categories

Reclassifying data for reference year 1983

National Classes	Forests	OWL	OL
Escarpment and riparian woodland	25.00%	75.00%	
Escarpment Grassland with Scrub woodland		10%	90%
Plantations	100%		
Escarpment Grassland with Scrub woodland (on small farms)			100%
Highveld and Riparian Grassland			100%
Alpine/Sub-alpine Grassland and Heathland			100%

Notes: Definition indicate that only 6km<sup>2</sup> is forest with more than 10% cover

Results after reclassifying data for reference year 1983

National Classes	Area in hectares		
	Forest	OWL	OL
Escarpment and riparian woodland	34 275	102 825	
Escarpment Grassland with Scrub woodland		55 040	495 360
Plantations	3 500		0
Escarpment Grassland with Scrub woodland (on small farms)			298 700
Highveld and Riparian Grassland			599 500
Alpine/Sub-alpine Grassland and Heathland			1 446 300
Total	37 775	157 865	2 839 860

## 1.4 Analysis and processing of national data

### 1.4.1 Estimation and forecasting

Based on the documentation review and national expert knowledge from the Lesotho Forestry Department, there is a strong feeling that the situation of the forest and OWL is different from the figures available in the FRA 2005 report.

Even if there is a possible loss of natural forest, the important plantation efforts, conducted year after year, have a positive impact on the forest area. It is estimated that forest increase, during these last ten years, of 2 200 ha. This positive trend of 220 ha/y has been applied to the 1983 data in order to obtain the information for the reporting years.

Regarding the OWL, general perception is that there is a significant loss of cover. In ten years, it is assumed a reduction of 22 500 ha, which means 2 250 ha/y.

Consequently, the results are:

	Area ( in hectares)				
	1983	1990	2000	2005	2010
Forest	37 775	*39315	41515	42615	43715
Other wooded land	157 865	142115	119615	108365	97115

Note: \* internal records (/expert knowledge) clearly showed, that the stocked woodlot area was slightly higher (+>6.000ha) as the average trend of 220ha/a. Therefore the figure for 1990 is put as 40 000 ha in the below table.

### 1.5 Data for Table T1

FRA 2010 categories	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	40	42	43	44
Other wooded land	142	120	108	97
Other land	2 853	2 873	2 884	2 894
...of which with tree cover	n/a	n/a	n/a	n/a
Inland water bodies	0	0	0	0
<b>TOTAL</b>	<b>3 035</b>	<b>3 035</b>	<b>3 035</b>	<b>3 035</b>

### 1.6 Comments to Table T1

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest		It is assumed that the trend for an increase on forest areas will be as steadiness as during the past years with an increase of at least 200 ha per year. To be in line with national policies, e.g. National Forest Policy 2008 or 'Vision 2020', new established forest areas even have to increase to 1000 ha per year to meet the target (from less than 1% to 5%).

Other wooded land	General perception is that there is a significant loss of cover. In ten years, it is assumed a reduction of 22 500 ha, which means 2 250 ha/a	The trends for other wooded land show a decline of roughly 2.250ha per year. As long as over-utilisation on communal land -mainly due to pressure from high grazing and use of woody biomass - continuous, the area will decrease further.
Other land		
Other land with tree cover		
Inland water bodies	Statistics for 1988 showed an area of 33 179 ha already (Lesotho Government, 1988). Although this figure might be questionable, the area of 765 ha given in “South African Land-cover Characteristics database 2000” should be somehow close to the present area of inland water bodies (Katse and Mohale dams /Lesotho Highland Water schemes) Nevertheless, 0 ha for Inland Water has been reported in this table, in accordance with the FAO Stat.	New dams are planned (Senque River valley/ phase 2 of Lesotho Highland water Scheme)

<b>Other general comments to the table</b>

<b>Expected year for completion of ongoing/planned <u>national forest inventory and/or RS survey / mapping</u></b>	
Field inventory	2010*
Remote sensing survey / mapping	

\* However, restricted to existing gazetted woodlots established during “woodlot project”

## 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 (sub-category of Private ownership)	Forest owned by individuals and families.
Private business entities and institutions (sub-category of Private ownership)	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 (sub-category of Private ownership)	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 (sub-category of Private ownership)	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.
<b>Categories related to the holder of management rights of public forest resources</b>	
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
National Rangeland Inventory, 1988	H		1988	Vegetation Types of Lesotho
Woodlot Inventory 1995/96, Forestry Division	H		1995/96	Woodlots (gazetted Forest Reserves) only
State of Environment in Lesotho	H		1997	Updated in 2002, however without more recent /reliable information

### 2.2.2 Original data

Based on the above references and expert knowledge.

## 2.3 Data for Table T2

**Table 2a - Forest ownership**

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public ownership	6	6	6
Private ownership	0	0	0
...of which owned by individuals			
...of which owned by private business entities and institutions			
...of which owned by local communities			
...of which owned by indigenous / tribal communities			
Other types of ownership	34	36	37
<b>TOTAL</b>	<b>40</b>	<b>42</b>	<b>43</b>

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 type="checkbox"/>	Yes (state owned)
	<input checked="" type="checkbox"/>	No (private)
If <b>No</b> above, please describe below how the two differ:		
Ownership for trees only, land title stays with government (all land belongs to the King). But people have full rights on the existing trees.		

**Table 2b - Holder of management rights of public forests**

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public Administration	6	6	6
Individuals	0	0	0
Private corporations and institutions	0	0	0
Communities	0	0	0
Other	0	0	0
<b>TOTAL</b>	<b>6</b>	<b>6</b>	<b>6</b>

## 2.4 Comments to Table T2

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Public ownership	Area reflects gazetted forest reserves /woodlots (plantable area) only, therefore area stays constant. The area given (6 000 ha) under public administration refers to the total stocked area not to the total gazetted woodlot area.	
Private ownership		Efforts are high to afforest /re-afforest at least an area equal to 1 000 ha/y. However survival rates often fairly low (200ha/a)
Other types of ownership	... of which of local communities. Those plantings consists mainly of plantings during social forestry period (2 000 ha in total), or of plantings done with assistance from NGOs and/or Government after sfp.[220ha/y] + natural forest areas on public land	
Management rights	... in forest reserves (central government owned woodlots) are with Central Government. However, Lesotho is in the process to hand over management and user rights of those woodlots to local communities or other interested and qualified user groups. .... in other plantings than forest reserves are mainly with communities	..... in central government owned woodlots will be gradually transferred to communities or other stakeholders

Other general comments to the table
Figures given for forest ownership are for artificial plantings (gazetted forest reserves/woodlots and community woodlots), as well as for areas dominated by indigenous trees (+-34,000ha)

### 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.
<b>Categories of primary designated functions</b>	
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.
<b>Special designation and management categories</b>	
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
www.wcmc.org	M	Protected Areas	2003	
Woodlot Inventory 1995/96, Forestry Division	H		1995/96	Woodlots (gazetted Forest Reserves) only

### 3.2.2 Original data

According to Forestry Division Woodlot Inventory 95/96, the planted forest area was about 6 000 ha planted forest in 1995. Besides, it is known that a total of 10 362 ha of woodlot have been established until 1992.

It is also assumed from T1 that, since the 1990s, +/- 220 ha of planted forest have been established every year.

### 3.3 Analysis and processing of national data

#### 3.3.1 Estimation and forecasting

Based on the above information, it is assumed that the forest plantation areas are:

in 1990, about 6 000 ha,

in 2000 => 6 000 ha + 220 ha x 10 = 8 200 ha,

in 2005 => 6 000 ha + 220 ha x 15 = 9 300 ha.

in 2010 => 6 000 ha + 220 ha x 20 = 10 400 ha.

#### Assumptions

1. Plantation areas are for production
2. The rest is multiple use.

### 3.4 Data for Table T3

**Table 3a – Primary designated function**

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Production	6.0	8.2	9.3	10.4
Protection of soil and water	0	0	0	0
Conservation of biodiversity	0	0	0	0
Social services	0	0	0	0
Multiple use	34.0	33.8	33.7	33.6
Other (please specify in comments below the table)	0	0	0	0
No / unknown	0	0	0	0
<b>TOTAL</b>	<b>40</b>	<b>42</b>	<b>43.0</b>	<b>44.0</b>

**Table 3b – Special designation and management categories**

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Area of permanent forest estate	6	6	6	6
Forest area within protected areas	0.5	1	1	1
Forest area under sustainable forest management	0	0	0	0
Forest area with management plan	0	0	0	3

### 3.5 Comments to Table T3

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Production		
Protection of soil and water		
Conservation of biodiversity		
Social services		
Multiple use		
Other		
No / unknown designation		
Area of permanent forest estate	Area reflects gazetted forest reserves /woodlots (plantable area) only, therefore area stays constant.	
Forest area within protected areas	Areas are within declared National Parks. Sources of information Dep. of Forestry and Ministry of Environment and Tourism.	Increase possible since more areas are proposed to be declared as Nat. Parks
Forest area under sustainable forest management	Government owned forest reserves (woodlots) are managed somehow, but not necessarily on a sustainable way. No records for other areas.	
Forest area with management plan	Only from 2006 onwards management plans had been drawn up. Target is 100% by 2010 for all 6.000ha gazetted woodlots; however, at this stage (June 2009) it seems fairly unlikely that the target can be reached. [assumed: max. of 3 000 ha].	By 2010, all woodlots should have management plans
<b>Other general comments to the table</b>		

## 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).
<b>Characteristics categories</b>	
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 ( <i>sub-category</i> )	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 ( <i>sub-category</i> )	Planted forest, where the planted/seeded trees are predominantly of introduced species.
<b>Special categories</b>	
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 Original data

From T3 on the planted forest.

### 4.3 Data for Table T4

Table 4a

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Primary forest	0	0	0	0
Other naturally regenerated forest	34.0	33.8	33.7	33.6
...of which of introduced species	n/a	n/a	n/a	n/a
Planted forest	6.0	8.2	9.3	10.4
...of which of introduced species	6.0	8.2	9.3	10.4
<b>TOTAL</b>	<b>40.0</b>	<b>42.0</b>	<b>43.0</b>	<b>44.0</b>

**Table 4b**

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

**4.4 Comments to Table T4**

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Primary forest	Referring to available data sources (e.g. National Rangeland Inventory, 1988 or May 2000, The indigenous forests of Lesotho) it is not quite clear if those indigenous forests are primary or secondary forests. Some refer to those areas as mainly secondary forests (as done in table 4)	
Other naturally regenerating forest	Some sources estimate that up to 28000ha private owned semi naturalised forests (e.g. <i>Popular</i> stands along river sites) may exist (however, area is not included since no reliable data available)	
Planted forest	12 000 ha plantable area within gazetted forest reserves, however, only 6 000 ha stocked in the 1990s. Additional 2 000ha had been established during “Social Forestry” period.	Since 1990s, it is considered that +/- 220 ha planted forest have been established per year.
Rubber plantations		
Mangroves		
Bamboo		Trial plantings are planned for the growing season 2009/10

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 Original data

No reliable statistics/data are available. Data given are mainly based on the national expert knowledge.

### 5.3 Data for Table T5

FRA 2010 Categories	Annual forest establishment (hectares/year)			...of which of introduced species <sup>1)</sup> (hectares/year)		
	1990	2000	2005	1990	2000	2005
Afforestation	220	220	220	220	220	220
Reforestation	n/a	n/a	n/a	n/a	n/a	n/a
...of which on areas previously planted	n/a	n/a	n/a	n/a	n/a	n/a
Natural expansion of forest	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.

#### 5.4 Comments to Table T5

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Afforestation	As it is said in table T1, it is considered that afforestation trend is about 220 ha/y.	
Reforestation	No reliable data available Statistics are kept on tree plantings almost on a weekly base, however, no follow-up on survival rates, mapping, etc.	General trend to reforest former planted areas
Natural expansion of forest	No statistics /reliable data available on semi naturalised forests (e.g. <i>Populus</i> stands along river sites). According to some national foresters, there may have +/- 100 ha of natural expansion of forest, which contribute to off set the eventual loss of forest.	More and more areas are effected by spreading of some aggressive species, however, seldom apply to the definition of forests hence to heavy uncontrolled utilisation

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
Millington, A., and Townsend, J. (eds.) 1989. Biomass assessment. Woody biomass in the SADC region. Earthscan Publication Ltd. London. UK	H	AGB	1983	
National Expert knowledge	M	GS	2005	

#### 6.2.2 Original data

- For the forest, it is used a GS of 65m<sup>3</sup>/ha, (which is considered to be a very rough estimate).

This figure is based on the following assumption that:

forest plantations (140 m<sup>3</sup>/ha) represent +/- 1/4 of the total forest, and  
natural forest (40 m<sup>3</sup>/ha) represent +/- 3/4 of the total forest.

- With the Biomass assessment study (1983), it is possible to calculate the GS for OWL, knowing that

National Class	Area (ha)	1000.tons	Above-ground biomass ton/ha
Escarpment and riparian woodland (1983)	137100	1924.9	14.04

Growing stock /ha calculated by applying:  $GS = AGB / BEF / WD$

GS =Growing stock

AGB=Above-ground biomass

BEF=Biomass expansion factor = 2.4 (average temperate and tropical broadleaved forest)

WD=Wood density = 0.58

GS for OWL = 10.09 m<sup>3</sup>/ha

### 6.2.3 Estimation and forecasting

The growing stock per hectare is then applied to total area for estimating growing stock.

## 6.3 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	2.60	2.73	2.80	2.86	1.43	1.21	1.09	0.98
... of which coniferous	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
... of which broadleaved	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
Growing stock of commercial species	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a

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

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

\*referring to plantation area only

Note: Rank refers to the order of importance in terms of growing stock, i.e. 1<sup>st</sup> 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 <sup>1</sup> of trees included in growing stock (X)	-	
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	-	
Minimum diameter (cm) of branches included in growing stock (W)	-	
Volume refers to “above ground” (AG) or “above stump” (AS)	-	

<sup>1</sup> 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.

#### 6.4 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		

Other general comments to the table

## 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

See table T6

### 7.3 Analysis and processing of national data

#### 7.3.1 Estimation and forecasting

Applying the following formula:

1- Above-ground biomass

$AGB = GS \times BEF \times WD$

GS =Growing stock

AGB=Above-ground biomass

BEF=Biomass expansion factor = 2.4 (average temperate and tropical broadleaved forest)

WD=Wood density = 0.58

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	3.62	3.80	3.90	3.98	1.99	1.68	1.52	1.36
Below-ground biomass	0.87	0.91	0.94	0.96	0.48	0.40	0.36	0.33
Dead wood	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
<b>TOTAL</b>	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		
Below-ground biomass		
Dead wood		

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

From tables T1 and T7.

### 8.3 Analysis and processing of national data

#### 8.3.1 Estimation and forecasting

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 28 (cold temperate, dry), and  
 - Soil carbon has been estimated, based on the factor of 34 (cold temperate, dry with sandy soils).

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	1.70	1.79	1.83	1.87	0.94	0.79	0.71	0.64
Carbon in below-ground biomass	0.41	0.43	0.44	0.45	0.23	0.19	0.17	0.16

<b>Sub-total: Living biomass</b>	<b>2.11</b>	<b>2.21</b>	<b>2.27</b>	<b>2.32</b>	<b>1.16</b>	<b>0.98</b>	<b>0.88</b>	<b>0.79</b>
Carbon in dead wood	n/a							
Carbon in litter	1.12	1.18	1.20	1.23	3.98	3.36	3.02	2.72
<b>Sub-total: Dead wood and litter</b>	<b>n/a</b>							
Soil carbon	1.36	1.43	1.46	1.50	4.83	4.08	3.67	3.30
<b>TOTAL</b>	<b>n/a</b>							

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

Other general comments to the table

## **9 Table T9 – Forest fires**

No data available for this table.

## **10 Table T10 – Other disturbances affecting forest health and vitality**

No comprehensive data is 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
Department of Forestry	M	Roundwood	2005	Year reports
FAO Stat	M	Fuelwood	1988-2007	

#### 11.2.2 Original data

From FAOStat  
 ub = under bark  
 ob = over bark

##### Fuel wood

Year	1988	1989	1990	1991	1992
Vol cum ub	1873600	1871500	1262000	1329000	1366000
	Average 1990 ub		1540420		
	Average 1990 ob		1771483		

Year	1998	1999	2000	2001	2002
Vol cum ub	1594000	2004000	2022000	2028100	2034300
	Average 1990 ub		1936480		
	Average 1990 ob		2226952		

Year	2003	2004	2005	2006	2007
Vol cum ub	2040400	2046600	2052800	2060500	2068300
	Average 1990 ub		2053720		
	Average 1990 ob		2361778		

### 11.3 Data for Table T11

FRA 2010 Category	Industrial roundwood removals			Woodfuel removals		
	1990	2000	2005	1990	2000	2005
Total volume (1000 m <sup>3</sup> o.b.)	n/a	n/a	0.050	1 771	2 227	2 362
... of which from forest	n/a	n/a	0.050	1 771	2 227	2 362
Unit value (local currency / m <sup>3</sup> o.b.)	n/a	n/a	1 300	17.50	22.50	22.50
Total value (1000 local currency)	n/a	n/a	65	30 993	50 108	53 145

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	Maluti	Maluti	Maluti

### 11.4 Comments to Table T11

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Total volume of industrial roundwood removals	Figure reflects only those volumes legally harvested and sawn into blanks. It is an estimated average (per year).	
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**

Neither statistics nor data are available for this 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	

### 13.3 Data for Table T13

FRA 2010 Category	Employment (1000 years FTE)		
	1990	2000	2005*
Employment in primary production of goods	0.2	0.4	2.4
...of which paid employment	0.2	0.4	2.0
...of which self-employment	n/a	n/a	0.4
Employment in management of protected areas	n/a	n/a	n/a

\*Please see comments below

### 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	For 1990 and 2000, data available are only on paid employment. For 2005, data is based on expert assumption.	

Paid employment / self-employment	Paid employment refers mainly to labourers paid for tree planting activities within the watershed development programme (+/- 2 000 out of 8 000 in total /full time job). Self-employment refers to private nursery owners (400), involved in seedling production.	
Employment in management of protected areas		

**Other general comments to the table**

Figures for 2005 are an estimation of paid labourers (not permanent gvt. employees) involved in forestry related activities during the last couple of years.  
Self-employment of private nursery owners depends mainly on commitment by government to buy forest seedlings (almost no other buyers of forest seedlings)

## 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)			
<b>Forest policy statement with national scope</b>	<input checked="" type="checkbox"/>	Yes	
	<input type="checkbox"/>	No	
If Yes above, provide:	Year of endorsement	2008	
	Reference to document	Government of Lesotho, Ministry of Forestry and land Reclamation: National Forestry Policy 2008	
<b>National forest programme (nfp)</b>	<input checked="" type="checkbox"/>	Yes	
	<input type="checkbox"/>	No	
If Yes above, provide:	Name of nfp in country	Lesotho National Forestry Programme 2008 - 2018	
	Starting year	2009	
	Current status	<input type="checkbox"/>	In formulation
		<input type="checkbox"/>	In implementation
		<input checked="" type="checkbox"/>	Under revision
Reference to document or web site	Document finalised in 11/2008, however, official approval pending.		
<b>Law (Act or Code) on forest with national scope</b>	<input checked="" type="checkbox"/>	Yes, specific forest law exists	
	<input type="checkbox"/>	Yes, but rules on forests are incorporated in other (broader) legislation	
	<input type="checkbox"/>	No, forest issues are not regulated by national legislation	
If Yes above, provide:	Year of enactment	1998 [Forestry Act 1998]	
	Year of latest amendment	[in process]	
	Reference to document	Supplement No. 1 to Gazette No. 91 of 18 <sup>th</sup> December, 1998; Government of Lesotho	

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.		
<b>Sub-national forest policy statements</b>	<input type="checkbox"/>	Yes
	<input checked="" type="checkbox"/>	No
If Yes above, indicate the number of regions/states/provinces with forest policy statements		
<b>Sub-national Laws (Acts or Codes) on forest</b>	<input checked="" type="checkbox"/>	Yes
	<input type="checkbox"/>	No
If Yes above, indicate the number of regions/states/provinces with Laws on forests	No figures available (could be up to 120)	

### 14.3 Comments to Table T14

Variable / category	Comments related to data, definitions, etc.
Forest policy statement with national scope	Policy 2008 approved by cabinet on 28 <sup>th</sup> October 2008
National forest programme (nfp)	Final document submitted in November 2008; final approval pending
Law (Act or Code) on forest with national scope	Forest Act 1998, supposed to be amended once new Forestry Policy been approved by Cabinet
Sub-national forest policy statements	n/a.
Sub-national Laws (Acts or Codes) on forest	No exact figures available, however each constituency /community can have their own 'by-law' concerning forestry related issues.

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 Land Reclamation [Hon. Lincon Ralechate ‘Mokose]
Level of subordination of Head of Forestry within the Ministry	1 <sup>st</sup> level subordination to Minister
	X 2 <sup>nd</sup> level subordination to Minister
	3 <sup>rd</sup> level subordination to Minister
	4 <sup>th</sup> or lower level subordination to Minister
Other public forest agencies at national level	Lesotho Agriculture College (LAC) [incl. a department of forestry/resource management]
Institution(s) responsible for forest law enforcement	District Forest Offices (10)

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	80	10.0%	115	7.8%
...of which with university degree or equivalent	n/a	n/a	15	18.8%	14	12.1%

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.

**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	Policy formulation is an open /participatory process where all relevant stakeholders are included [finale say stays with Minister of Forestry and Land Reclamation]	
Level of subordination of Head of Forestry within the Ministry	Head of Forestry (Director of Forestry) reports direct to Permanent Secretary (second to Minister)	
Other public forest agencies at national level	A Forestry Department (dealing with Diploma Courses on forestry and resource management) is part of the Lesotho Agriculture College	
Institution(s) responsible for forest law enforcement	Responsibility lies with the ten (10) District Forest Offices through their forestry staff (forest rangers)	
Human resources within public forest institutions	With the establishment of ‘proper’ Local authorities in 2005 most of the forestry staff has been transferred to Local government. <u>Please note:</u> Even so staff on district level falls administrative under local authorities, technical advice/responsibility is still with central forestry.	

<b>Other general comments to the table</b>
No figures/data are available for 2000, when Forestry was still a Division within the Ministry of Agriculture and Food Security

## 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 a 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
Ministry of Forestry and Land Reclamation	M	Graduation of students	2000 to 2008	

#### 16.2.2 Original data

FRA 2010 Category	Graduation <sup>1)</sup> of students in forest-related education					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
	<b>Outside the country</b>					
Master's degree (MSc) or equivalent	3	0	3	0	3	0
Bachelor's degree (BSc) or equivalent	7	0	7	35% (2)	12	42% (5)
	<b>Within the country</b>					
Forest technician certificate / diploma	25	16%(4)	28	14% (4)	31	23% (7)

### 16.3 Data for Table T16

FRA 2010 Category	Graduation <sup>1)</sup> of students in forest-related education within the country					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Master's degree (MSc) or equivalent	0	0	0	0	0	0
Bachelor's degree (BSc) or equivalent	0	0	0	0	0	0
Forest technician certificate / diploma	25	16% (4)	28	14% (4)	31	23% (7)
FRA 2010 Category	Professionals working in publicly funded forest research centres <sup>2)</sup>					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Doctor's degree (PhD)	0	0	0	0	0	0
Master's degree (MSc) or equivalent	0	0	0	0	0	0
Bachelor's degree (BSc) or equivalent	0	0	0	0	0	0

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	Only Diploma courses are offered in Lesotho.	
Professionals working in public forest research centres	No formal research centres.	

Other general comments to the table

## 17 Table T17 – Public revenue collection and expenditure

### 17.1 FRA 2010 Categories and definitions

Category	Definition
Forest revenue	All government revenue collected from the domestic production and trade of forest products and services. For this purpose, forest products include: roundwood; sawnwood; wood-based panels; pulp and paper; and non-wood forest products. As far as possible, this should include revenue collected by all levels of government (i.e. central, regional/provincial and municipal level), but it should exclude the income of publicly owned business entities.
Public expenditure	All government expenditure on forest related activities (further defined below).
Operational expenditure (sub-category to Public expenditure)	All government expenditure on public institutions solely engaged in the forest sector. Where the forest administration is part of a larger public agency (e.g. department or ministry), this should only include the forest sector component of the agency's total expenditure. As far as possible, this should also include other institutions (e.g. in research, training and marketing) solely engaged in the forest sector, but it should exclude the expenditure of publicly owned business entities.
Transfer payments (sub-category to Public expenditure)	All government expenditure on direct financial incentives paid to non-government and private-sector institutions, enterprises communities or individuals operating in the forest sector to implement forest related activities.
Domestic funding	Public expenditure funded from domestic public financial resources, including: retained forest revenue; forest-related funds; and allocations from the national budget (i.e. from non-forest sector public revenue sources).
External funding	Public expenditure funded from grants and loans from donors, non-governmental organisations, international lending agencies and international organisations, where such funds are channelled through national public institutions.

### 17.2 National data

#### 17.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
The forest revenue system and government expenditure on forestry in Lesotho, FAO working paper: FSFM/WP/03	M	revenue and expenditure	2001	(compiled by Nchemo Maile, Chief Forestry Officer, Ministry of Agriculture, Maseru, Lesotho.

### 17.3 Data for Table T17

Table 17a - Forest revenues

FRA 2010 Categories	Revenues (1000 local currency)	
	2000	2005
Forest revenue	M* 193	n/a

\*M = Maluti (with an exchange rate of 1 Maluti = 1 SA Rand)

**Table 17b - Public expenditure in forest sector by funding source**

FRA 2010 Categories	Domestic funding (1000 local currency)		External funding (1000 local currency)		Total (1000 local currency)	
	2000	2005	2000	2005	2000	2005
Operational expenditure	2 500	n/a	1 200	n/a	3 700	n/a
Transfer payments	n/a	n/a	n/a	n/a	n/a	n/a
<b>Total public expenditure</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>	<b>n/a</b>
If transfer payments are made for forest management and conservation, indicate for what specific objective(s) - Please tick all that apply.	<input type="checkbox"/>	Reforestation				
	<input type="checkbox"/>	Afforestation				
	<input type="checkbox"/>	Forest inventory and/or planning				
	<input type="checkbox"/>	Conservation of forest biodiversity				
	<input type="checkbox"/>	Protection of soil and water				
	<input type="checkbox"/>	Forest stand improvement				
	<input type="checkbox"/>	Establishment or maintenance of protected areas				
	<input type="checkbox"/>	Other, specify below				

**17.4 Comments to Table T17**

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest revenue	Figure referred to is for financial year 1999/00 (April 1999 - March 2000).	
Operational expenditure	Figures referred to are for financial year 1998/99.	
Transfer payments	No figures/data available.	

Other general comments to the table