



**Forestry Department**

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

**GLOBAL FOREST RESOURCES  
ASSESSMENT 2010**

**COUNTRY REPORT**

**ERITREA**

FRA2010/063  
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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.

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# 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
FAOSTAT	H	Country area	2005	Secondary data source
FAO. 1997. Support to Forestry and Wildlife sub-sector. Pre-investment study tcp/eri/6721	M	Definition and Land use cover	1997	Secondary data source
FRA 2000	M	Net change rate	2000	Secondary data source

### 1.2.2 Classification and definitions

National class	Definition
Closed to medium closed forest	Compound of stands of more than 5 m height composed of more than two layers of the tree species, whose crown cover exceeds 40% of the ground surface. It corresponds to the mountain forest.
Open Forest	Compound of stands of more than 5 m height composed of more than two layers of the tree species, whose crown cover ranges from 10 to 40%. It corresponds to the mountain forest
Closed to medium closed woodland	Woody vegetation composed of one or two layers of trees of touching or non touching crowns, but with more than 40% crown cover. Mean height above 5 m.
Open woodland	Woody vegetation of a single or two layers of trees with crown cover from 10 to 40%. Mean height is generally above 5 m

Grassland/wooded grassland	Bare soil with very sparse low shrubs or trees and some seasonal grass following the rains. Woody vegetation cover does not exceed 10%.
Bushland/Shrubland	Composed of woody vegetation of less than 5m height with or without scattered trees and with crown cover of over 10%
Riverine forest	Compound of stands of trees occurring on the river banks and stream beds.
Mangrove	Mangrove
Barren soil	No ground coverage, barren.
Agriculture	Land in agricultural use.
Other	Land in other uses, for example urban areas.
Not Classified	Null

### 1.2.3 Original data

#### 1997

Vegetation Description	Anseba	Maekel	D.K. Bahri	Debub	S.K. Bahri	Gash-Baka	National
	(Km <sup>2</sup> )	(Km <sup>2</sup> )	(Km <sup>2</sup> )	(Km <sup>2</sup> )	(Km <sup>2</sup> )	(Km <sup>2</sup> )	(Km <sup>2</sup> )
<b>FOREST</b>							
Closed to Medium Closed	14	77		37	463		<b>591</b>
Open	133			15	262		<b>410</b>
<b>WOODLAND</b>							
Closed to Medium Closed	523	8		448	832	2 722	<b>4 533</b>
Open	901	18	1 235	1 471	1 555	4 360	<b>9 541</b>
<b>BUSH</b>							
Grassland/Wooded Grassland	13 943	52	3 678	907	669	6 327	<b>25 577</b>
Bushland	3 950	282	9 556	1 095	29 416	9 526	<b>53 824</b>
<b>OTHER FOREST</b>							
Riverine Forest	341		43	99	110	1 272	<b>1 865</b>
Mangroves			45		19		<b>64</b>
<b>OTHER CATEGORIES</b>							
Barren Soil	1 868	3	10 344	115	4 532	1 403	<b>18 265</b>
Agriculture	527	796		3 805	857	2 726	<b>8 712</b>
Other	4	39	116		9	67	<b>234</b>
Not Classified	581					1 591	<b>2 172</b>
<b>Total<sup>1</sup></b>	<b>22 784</b>	<b>1 274</b>	<b>25 018</b>	<b>7 992</b>	<b>38 724</b>	<b>29 995</b>	<b>125 788</b>

#### FRA 2000

FRA 2000 estimated the annual net change rate in Eritrea to be -0.28%, primarily based on rates from neighbouring countries.

<sup>1</sup> Source: Interpretation of Landsat TM by FAO Project TCP/ERI/6712 (July, 1997).

Note: the surface area of 125,788 km<sup>2</sup> has been determined from the Landsat TM images; this total omits a portion of land adjacent to the western border of Eritrea with Sudan owing to the technical reason of lack of TM coverage.

### 1.3 Analysis and processing of national data

#### 1.3.1 Calibration

Calibration has been done using the total country area rather than the land area due to uncertainty as regards the area of inland water.

UN STATISTICS ('000 ha)	Area ('000 ha)
Land area	10 100
Inland water	1 660
Total Country area	11 760

Total country area according to data source (000 ha)	12 578.8
Calibration factor	0.93490635

Data after calibration gives:

Vegetation Description	Before Calibration ('000 ha)	After Calibration ('000 ha)
<b>FOREST</b>		
Closed to Medium Closed	59.1	55.3
Open	41.0	38.3
<b>WOODLAND</b>		
Closed to Medium Closed	453.3	423.8
Open	954.1	892.0
<b>BUSH</b>		
Grassland/Wooded Grassland	2557.7	2391.2
Bushland	5382.4	5032.0
<b>OTHER FOREST</b>		
Riverine Forest	186.5	174.4
Mangroves	6.4	6.0
<b>OTHER CATEGORIES</b>		
Barren Soil	1826.5	1707.6
Agriculture	871.2	814.5
Other	23.4	21.9
Not Classified	217.2	203.1
<b>Total</b>	<b>12578.8</b>	<b>11760.0</b>

### 1.3.2 Reclassification into FRA 2010 categories

Vegetation Description	Forest	OWL	OL
<b>FOREST</b>			
Closed to Medium Closed	100%		
Open	100%		
<b>WOODLAND</b>			
Closed to Medium Closed	100%		
Open	100%		
<b>BUSH</b>			
Grassland/Wooded Grassland		100%	
Bushland		100%	
<b>OTHER FOREST</b>			
Riverine Forest	100%		
Mangroves	100%		
<b>OTHER CATEGORIES</b>			
Barren Soil			100%
Agriculture			100%
Other			100%
Not Classified			100%

Results after reclassifying 1997 data

Vegetation Description	Forest (000 ha)	OWL (000 ha)	OL (000 ha)
<b>FOREST</b>			
Closed to Medium Closed	55.3		
Open	38.3		
<b>WOODLAND</b>			
Closed to Medium Closed	423.8		
Open	892.0		
<b>BUSH</b>			
Grassland/Wooded Grassland		2 391.2	
Bushland		5 032.0	
<b>OTHER FOREST</b>			
Riverine Forest	174.4		
Mangroves	6.0		
<b>OTHER CATEGORIES</b>			
Barren Soil			1 707.6
Agriculture			814.5
Other			21.9
Not Classified			203.1
<b>Total</b>	<b>1 589.7</b>	<b>7 423.2</b>	<b>2 747.0</b>



On re-arranging, this gives:

FRA Categories	Area (1000 hectares)
	1997
Forest	1 590
Other wooded land	7 423
Other land	2 747
<b>TOTAL</b>	<b>11 760</b>

### 1.3.3 Estimation and forecasting

Due to lack of further information, estimation and forecasting has been done using the calibrated areas from 1997 and the estimated net change rate from FRA 2000 of -2.8% per year. This was done after reclassification. The annual deforestation rate of 4 400 ha (FRA 2005) has been used to extrapolate the forest cover for 2010.

### 1.4 Data for Table T1

FRA 2010 categories	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	1 621	1 576	1 554	1 532
Other wooded land	7 569	7 361	7 257	7 153
Other land	910	1 163	1 289	1 415
...of which with tree cover	n/a	n/a	n/a	n/a
Inland water bodies	1 660	1 660	1 660	1 660
<b>TOTAL</b>	<b>11 760</b>	<b>11 760</b>	<b>11 760</b>	<b>11 760</b>

### 1.5 Comments to Table T1

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest		The estimated net change rate from FRA 2000 of -2.8% per year has been used.
Other wooded land		
Other land		
Other land with tree cover		

Inland water bodies		
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<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	n/a
Remote sensing survey / mapping	n/a

## 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.
<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 Data for Table T2

**Table 2a - Forest ownership**

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public ownership	n/a	n/a	n/a
Private ownership	n/a	n/a	n/a
...of which owned by individuals	n/a	n/a	n/a
...of which owned by private business entities and institutions	n/a	n/a	n/a
...of which owned by local communities	n/a	n/a	n/a
...of which owned by indigenous / tribal communities	n/a	n/a	n/a
Other types of ownership	n/a	n/a	n/a
<b>TOTAL</b>	<b>1 621</b>	<b>1 576</b>	<b>1 554</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
	<input checked="" type="checkbox"/>	No
If <b>No</b> above, please describe below how the two differ:		
According to the Land Law No58 /1994, all lands in Eritrea belong to the government. But people have use right.		

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

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

## 2.3 Comments to Table T2

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Public ownership		
Private ownership		

Other types of ownership		
Management rights		

**Other general comments to the table**

In most cases the naturally grown forests belongs to the public. However there are planted forests which are owned by individuals and communities, which at this point in time there is no concrete available data and information, as to their size.

### 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
FAO. 1997. Support to Forestry and Wildlife sub-sector. Pre-investment study tcp/eri/6721	M	Permanent closures Non-permanent closures	1997	Secondary data source
FAO 1998. Forestry Data Report on Eritrea. In: Workshop on Data Collection and Analysis	M	Area of forest plantations	1991	Secondary data source

for Sustainable Forest Management in ACP Countries. Nakuru, Kenya, October 12-16, 1998. Project GCP/INT/679/EC. Rome				
FAO 2001. Forest Resources Assessment 2000. Main report. FAO Forestry Paper 140, Rome.	M	Area of forest plantations	1997 2000	Secondary data source

### 3.2.2 Classification and definitions

National class	Definition
Permanent closures	Areas put under full protection by setting a number of measures intended to halt human pressure placed on the existing limited resources.
Non-permanent closures	Areas put under partial protection by setting a number of measures intended to limit human pressure placed on the existing limited resources.

### 3.2.3 Original data

Permanent Closures For Biodiversity Preservation	Areas (ha)
Semenawi Bahri	NDA
Debre Bizen	NDA
Debre Halib	1600
Wedg Hareg	1300
Gahyat	1300
Feresege	1000
Hade-Getsu Grat zehaye	1500
Dongolo tahtay	30
Demas	30
Metrezerit	182
Mai Himkat, Mai Hager, Girget-kidm	4500
Enkilet Korae	500
Lesa	
Mirara, Fishei, Mogio	3000
Fagen (Mekabratno)	400
Medhanit	2000
Gaeb Beezen. Mdrifelesti	40000
Ghizgza	400
Mereb	5900
Betetsion	400
Gheza Keren	250
Biete Thion	3500
Menguda	3000
Gayon (Debre Kerets)	5950
Deger Lae'le	50

<b>Permanent Closures for Biodiversity Preservation &amp; Timber Production</b>	<b>Areas (ha)</b>
Ghefasin	90
Tahtai mereb	20
Enda merequ	21
Enda Gojam	50
Kirihat hitSaadi	70
Hasawrai	20
Mesobo	35
Tiban aderget	7
Tiban Tiwen (kowho)	200
Maekelai keren	40
Kertseko-inte	70
Gerbet	250

<b>Permanent Closures for Flora, Fauna &amp; Soil Conservation</b>	<b>Areas (ha)</b>
Kishkisha	300
Babharmaz	250
Sheldeg	50
Kerset/A Senafe	140
Kush	100
Nachebe/A Los	290
Mishkla	500
Debrehel	2000
Mealdi	600
Kewakin	200
Kebabi-Habrenkeka	250
Maka	280
Habrenkeka	800
Gobotselim	60
MdriBeezen & Shim Bahri	2500
Dembe BashayKahsu	120
Weki-Zagr	200

<b>Permanent Closures for soil conservation and protection of endangered species</b>	<b>Areas (ha)</b>
Kambo Aserte	10
Nurmeda asher	52



<b>Temporal Closures to Improve Grass and Woody Biomass</b>	<b>Areas (ha)</b>
Igri-Mekel	15
Kolakul (Hibrta)	400
Adi Hawusha, IndadeuMariam, Bati inkurai	1400
Adi Arada, Adi- gebru weriz	400
Hanbelagwa	1600
Shimanugus tahtai	700
Taiber	10000
Adelba Mekerka	800
Hadagisher	52
Mahiker nara Gerden	10
Diwan (Dekidashim)	1800
Berak	20

<b>Temporal Closures To Protect Endangered Species</b>	<b>Areas (ha)</b>
Chaalo	15
Mukiti (Bareegay)	450
Meghedu Adirba (Adi hikien)	3600
Hagayto	900
Ali-Gebshai	120
Berihimer	120
Halibet	60
Berkura	200
Quahaito	15

<b>Temporal Closures To Protect Endangered Species + Seed Collection</b>	<b>Areas (ha)</b>
Mozogolozala	30
Gobo Mahder	200
DegreLimba	30
Ruba sindir	250
Adi-Hidug	35
Gaebien	50
Una Gaebien	30
MaiGobay (Biet Ghebreal)	25
Adi Habir	40
Monguda	300

Temporal Closures To Protect Endangered Species + Grass Regeneration	Areas (ha)
Nekuta (Hadamu)	1500

Area of plantation:

1991: Prior to 1991 there were more than 10 000 ha of plantations (FAO, 1998)

1997: It is estimated that 11 400 ha of plantations existed in 1997 (FAO, 2001)

2000: The total plantation area in 2000 is estimated to be 21 900 ha (FAO, 2001)

### 3.3 Analysis and processing of national data

#### 3.3.1 Calibration

The above information, after re-arranging into national classes is shown below.

National Classes	Area (ha)
Permanent Closures For Biodiversity Preservation	76 792
Permanent Closures for Biodiversity Preservation & Timber Production	873
Permanent Closures for Flora, Fauna & Soil Conservation	8 640
Permanent Closures for soil conservation and protection of endangered species	62
Temporal Closures To Improve Grass and Woody Biomass	17 197
Temporal Closures To Protect Endangered Species	5 480
Temporal Closures To Protect Endangered Species + Seed Collection	990
Temporal Closures To Protect Endangered Species + Grass Regeneration	1 500

Calibration of the areas of enclosures has been done as in T1 due to the fact that we have the same source.

UN STATISTICS ('000 ha)	Area ('000 ha)
Land area	10 100
Inland water	1 660
Total Country area	11 760
Total country area according to data source ('000 ha)	12 578.8
Calibration factor	0.93490635

Data after calibration gives:

<b>National Classes</b>	<b>Area (ha)</b>
Permanent Closures For Biodiversity Preservation	71 793
Permanent Closures for Biodiversity Preservation & Timber Production	816
Permanent Closures for Flora, Fauna & Soil Conservation	8 078
Permanent Closures for soil conservation and protection of endangered species	58
Temporal Closures To Improve Grass and Woody Biomass	16 078
Temporal Closures To Protect Endangered Species	5 123
Temporal Closures To Protect Endangered Species + Seed Collection	926
Temporal Closures To Protect Endangered Species + Grass Regeneration	1 402

### 3.3.2 Reclassification into FRA 2010 categories

<b>NATIONAL CLASSIFICATION</b>	<b>FRA CLASSIFICATION</b>		
	<b>Production</b>	<b>Conservation of biodiversity</b>	<b>Multiple purpose</b>
Permanent Closures For Biodiversity Preservation		100%	
Permanent Closures for Biodiversity Preservation & Timber Production			100%
Permanent Closures for Flora, Fauna & Soil Conservation			100%
Permanent Closures for soil conservation and protection of endangered species			100%
Temporal Closures To Improve Grass and Woody Biomass	100%		
Temporal Closures To Protect Endangered Species		100%	
Temporal Closures To Protect Endangered Species + Seed Collection			100%
Temporal Closures To Protect Endangered Species + Grass Regeneration			100%

The plantation area from 1997 (11 400 ha) is reclassified as 50% protection and 50% production. (See table 4)

The table below gives the results for the enclosures after reclassification:

FRA Categories / Designated function	1997
	(1000 ha)
Production	16.1
Protection of soil and water	
Conservation of biodiversity	76.9
Social services	
Multiple purpose	11.3

### 3.3.3 Estimation and forecasting

The original data on the enclosures from 1997 has been used for reporting years 2000 and 2005.

The plantation area for 1991 has been used for 1990, the figure from 2000 has been used directly and the area for 2005 has been calculated using a linear extrapolation. (27 850 ha), as well as for 2010 (33 600 ha). Half the area has been added to the category Production and the other half to Protection.

FRA Classification	1990	2000	2005	2010
	(000 ha)	(000 ha)	(000 ha)	(000 ha)
Productive plantations	5.000	10.950	13.925	16.800
Protective plantations	5.000	10.950	13.925	16.800

Due to insufficient information for 1990, all areas have been reported as no/unknown function for this year.

### 3.4 Data for Table T3

**Table 3a – Primary designated function**

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Production	0	27.1	30.0	32.9
Protection of soil and water	0	11.0	13.9	16.8
Conservation of biodiversity	0	76.9	76.9	76.9
Social services	0	0	0	0
Multiple use	0	11.3	11.3	11.3
Other (please specify in comments below the table)	0	0	0	0
No / unknown	1 621	1 449.7	1 421.9	1 394.1
<b>TOTAL</b>	<b>1 621</b>	<b>1 576</b>	<b>1 554</b>	<b>1 532</b>

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

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Area of permanent forest estate	n/a	0	0	0
Forest area within protected areas	n/a	n/a	n/a	55
Forest area under sustainable forest management	n/a	0	0	0
Forest area with management plan	n/a	40.7	40.7	40.7

### 3.5 Comments to Table T3

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Production		The forestry and wildlife proclamation No. 155/2006 has created conducive environment for tree planting by individuals and communities, mainly for firewood and pole production, as well as, for soil and water conservation.
Protection of soil and water		
Conservation of biodiversity		
Social services		
Multiple use		
Other		
No / unknown designation		
Area of permanent forest estate		No officially designated forest estate.
Forest area within protected areas		There is a plan to designate protected area in the green belt forest of the eastern escarpment.
Forest area under sustainable forest management		No forest under sustainable forest management.
Forest area with management plan		The riverine forest of the western lowland has management plan.

Other general comments to the table
Insufficient information is available for 1990.

## 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 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
FAO. 1997. Support to Forestry and Wildlife sub-sector. Pre-investment study tcp/eri/6721	M	Mangrove	1997	Secondary data source
Ministry of Agriculture Annual reports	M	Planted area	2000-2007	Secondary data source
Expert judgement	M	Plantation of introduced species	-	-

#### 4.2.2 Classification and definitions

### 4.2.3 Original data

From the table 3:

FRA Classification	1990	2000	2005	2010
	(000 ha)	(000 ha)	(000 ha)	(000 ha)
Productive plantations	5.0	10.95	13.925	16.80
Protective plantations	5.00	10.95	13.925	16.80
Total	10.00	21.10	27.85	33.60

There is no primary forest in Eritrea. All forests that are not planted are classified as Other naturally regenerated forests. Of the planted forests, 90% is estimated to be of introduced species.

### 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	1611	1554.9	1526.2	1498.4
...of which of introduced species	0	0	0	0
Planted forest	10.0	21.1	27.8	33.6
...of which of introduced species	9.0	18.9	25.0	30.2
<b>TOTAL</b>	<b>1 621</b>	<b>1 576</b>	<b>1 554</b>	<b>1 532</b>

**Table 4b**

FRA 2010 Categories	Area (1000 hectares)			
	1990	2000	2005	2010
Rubber plantations (Forest)	0	0	0	0
Mangroves (Forest and OWL)	6.0	6.0	6.0	6.0
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		There is no primary forest in Eritrea.
Other naturally regenerating forest		
Planted forest		The planted forest is dominated by Eucalyptus. Introduced species is estimated as 90% of the total plantation.
Rubber plantations		There is no rubber plantation in Eritrea.
Mangroves		The mangroves are found along the coast of the Red Sea and dominated by <i>Avicennia marina</i> . The data of mangrove cover was originated from FAO, 1997. Support to Forestry and Wildlife sub-sector. Pre-investment study tcp/eri/6721. This figure (expert judgement) remains more or less to be constant.
Bamboo		There is no bamboo with meaningful quantity in Eritrea.

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
Ministry of Agriculture annual reports	M	Afforested area	1998-2002 2003-2006	Secondary data
Ministry of Agriculture annual reports	M	Area of natural expansion of forest	1998-2002 2003-2006	Secondary data

#### 5.2.2 Classification and definitions

#### 5.2.3 Original data

Data reviewed by national expert and based on the Ministry of Agriculture Annual Reports.

### 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	n/a	1 445	2 005	n/a	1 300	1 804
Reforestation	n/a	0	0	n/a	0	0
...of which on areas previously planted	n/a	0	0	n/a	0	0
Natural expansion of forest	n/a	16 173	78	n/a	0	0

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		
Reforestation		
Natural expansion of forest		From 1992-2000 large area was set aside, as enclosure, which indeed created good opportunity for natural expansion. However, from 2001-2005 the area set aside for natural regeneration (enclosures) was reduced.

<b>Other general comments to the table</b>
Introduced species is estimated as 90% of the total.

## **6 Table T6 – Growing stock**

No information is available (on the national average volume/ha for the Eritrean forests and other wooded lands).

## **7 Table T7 – Biomass stock**

No information available

## **8 Table T8 – Carbon stock**

No information available

## 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
Regional Annual Reports	M	Area affected by vegetation fire	1998, 1999, 2002 2005, 2006, 2007	Secondary data

#### 9.2.2 Original data

Data reviewed by national expert and based on the Regional Annual Reports.

### 9.3 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	13.9	8	2.2	12
... of which on forest	n/a	n/a	n/a	n/a	n/a	n/a
... of which on other wooded land	n/a	n/a	13.9	8	2.2	12
... of which on other land	n/a	n/a	n/a	n/a	n/a	n/a

**Table 9b**

FRA 2010 category	Proportion of forest area affected by fire (%)		
	1990	2000	2005
Wildfire	n/a	n/a	n/a
Planned fire	n/a	n/a	n/a

**9.4 Comments to Table T9**

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Area affected by fire		
Number of fires		
Wildfire / planned fire		

Other general comments to the table

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

No information available

## 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
Report from the Department of Energy of the Ministry of Energy and Mines	M	Wood fuel removals	2003-2006	Tonnes converted to M <sup>3</sup>
Report from the existing 4 sawmills	M	Industrial roundwood	2003-2007	Tonnes converted to M <sup>3</sup>

#### 11.2.2 Original data

Data reviewed by national expert and based on the reports from Department of Energy of the Ministry of Energy and Mines, and the existing 4 sawmills.

### 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	2.19	1.02	n/a	2 549	1 475
... of which from forest	n/a	2.19	1.02	n/a	2 549	1 475
Unit value (local currency / m <sup>3</sup> o.b.)	n/a	253	312	n/a	218	253
Total value (1000 local currency)	n/a	554	318	n/a	555 682	373 175

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	-	Nakfa	Nakfa

### 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	The total volume of industrial round wood is obtained from planted forest, mainly Eucalyptus.	
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
<b><u>Plant products / raw material</u></b>
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
<b><u>Animal products / raw material</u></b>
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
Customs Department, Research and Statistics Division	H	Removals of gum Arabic	2003-2007	Kg converted to MT
Ministry of Agriculture, Gash-Barka Region	H	Removals of frankincense and doum palm leaves	2005-2007	Quintals converted to MT

### 12.3 Data for Table T12

Rank	Name of product	Key species	Unit	NWFP removals 2005		NWFP category
				Quantity	Value (1000 local currency)	
1 <sup>st</sup>	Doum leaves	<i>Hyphaene thebaica</i>	MT	793	2 775.5	5
2 <sup>nd</sup>	Gum Arabic	<i>Acacia senegal</i>	MT	258	2 061.5	7
3 <sup>rd</sup>	Frankincense	<i>Boswellia papyrifera</i>	MT	17.8	178.0	7
4 <sup>th</sup>	n/a	n/a	n/a	n/a	n/a	
5 <sup>th</sup>	n/a	n/a	n/a	n/a	n/a	
6 <sup>th</sup>	n/a	n/a	n/a	n/a	n/a	
7 <sup>th</sup>	n/a	n/a	n/a	n/a	n/a	
8 <sup>th</sup>	n/a	n/a	n/a	n/a	n/a	
9 <sup>th</sup>	n/a	n/a	n/a	n/a	n/a	
10 <sup>th</sup>	n/a	n/a	n/a	n/a	n/a	
All other plant products					n/a	
All other animal products					n/a	
<b>TOTAL</b>					<b>n/a</b>	

	2005
Name of local currency	Nakfa

### 12.4 Comments to Table T12

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

Other general comments to the table

## **13 Table T13 – Employment**

No information available

## 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>		Yes	
	X	No, only in draft form	
If Yes above, provide:	Year of endorsement		
	Reference to document		
<b>National forest programme (nfp)</b>	X	Yes	
		No	
If Yes above, provide:	Name of nfp in country	Road map	
	Starting year	2008-2011	
	Current status		In formulation
		X	In implementation
			Under revision
		Process temporarily suspended	
Reference to document or web site			
<b>Law (Act or Code) on forest with national scope</b>	X	Yes, specific forest law exists	
		Yes, but rules on forests are incorporated in other (broader) legislation	
		No, forest issues are not regulated by national legislation	
If Yes above, provide:	Year of enactment	2006	
	Year of latest amendment	-	
	Reference to document	Forestry and Wildlife Development and Conservation Proclamation No. 155/2006	

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 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	The draft Forestry and Wildlife Management Policy is available under Chapter 7 of the draft “Eritrean National Agricultural Development Strategy and Policy”
National forest programme (nfp)	The national forest program is included under Agricultural Development Road Map
Law (Act or Code) on forest with national scope	Based on the Forestry and Wildlife Development and Conservation Proclamation No. 155/2006, two legal notices enacted i.e Legal Notice No.111/2006 (Regulations for the issuance of forestry permits) and Legal Notice No. 112/2006 (Regulations for the issuance of wildlife permits)
Sub-national forest policy statements	
Sub-national Laws (Acts or Codes) on forest	

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 Agriculture
Level of subordination of Head of Forestry within the Ministry	1 <sup>st</sup> level subordination to Minister
	2 <sup>nd</sup> level subordination to Minister
	X 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	
Institution(s) responsible for forest law enforcement	Ministry of Agriculture, Regulatory Services Department, National Forest and Wildlife Inspection, and Eritrean Police.

Table 15b – Human resources

FRA 2010 Category	Human resources within public forest institutions					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Total staff	38	8.6%	40	22.5 %	45	17.7 %
...of which with university degree or equivalent	9	0 %	7	28.5 %	19	10.5 %

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		
Level of subordination of Head of Forestry within the Ministry		
Other public forest agencies at national level		
Institution(s) responsible for forest law enforcement		
Human resources within public forest institutions		

Other general comments to the table
<p>The Ministry of Agriculture of the State of Eritrea has three Departments. These are:</p> <ul style="list-style-type: none"> <li>- Agricultural Promotion and Development Department (among other functions responsible for Afforestation and other forest development activities)</li> <li>- Regulatory Services Department (among other functions responsible for preparing forestry regulations and follow up their enforcement)</li> <li>- National Agriculture Research Institute (among others responsible for forestry related researches)</li> </ul>

## 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
Hamelmallo College of Agriculture (HAC)	H	Bachelor's degree	2008	Primary data
National Agricultural Research Institute (NARI)	H	Researchers	2008	Primary data
Molober/Sawa School of Agricultural Technology	H	Forest technicians	2008	Primary data

#### 16.2.2 Original data

Data based on the above reports.



### 16.3 Data for Table T16

FRA 2010 Category	Graduation <sup>1)</sup> of students in forest-related education					
	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	31	3%	33	9%
Forest technician certificate / diploma	0	0	0	0	327	11 %
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	2	0	2	0	2	0
Bachelor's degree (BSc) or equivalent	1	0	1	0	4	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	The graduated students in Bachelor's degree are in the field of "Land Resources and Environment" where many forestry courses are offered.	
Professionals working in public forest research centres		

Other general comments to the table

## **17 Table T17 – Public revenue collection and expenditure**

No information available.

Forest revenues are collected in the regions of the country. Thus, data is not readily available at the national level. Likewise, expenditures for the forestry sector is not readily available at national level