Forestry Department
Food and Agriculture Organization of the United Nations

GLOBAL FOREST RESOURCES ASSESSMENT 2010

COUNTRY REPORT

EGYPT

FRA2010/060
Rome, 2010

The Forest Resources Assessment Programme

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

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

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

The Global Forest Resources Assessment process is coordinated by the Forestry Department at FAO headquarters in Rome. The contact person for matters related to FRA 2010 is:

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Introduction

The Arab Republic of Egypt covers some 1,002,000 sq.km between latitudes 22°N and 32°N. The desert area covers 96% of the total land area of the country. The maintenance and enhancement of the productivity of existing agricultural land and the increase in the area of land available for cultivation through desert reclamation are important development priorities for Egypt. The whole country is classified within arid zone with rainfall ranging from almost 200mm rain fall along the Mediterranean coast to virtually zero in the south of the country. Whereas the temperature is within the range 8.8°C (Jan. min) to 34.8(Jul. Max) in the northern part but exceeds 40°C in the south. Relative humidity ranges from 70% (February to October) to 80% in December. Thus, both aridity and high evaporation are the critical factors restricting the distribution and growth of natural vegetation.

No natural forests exist in Egypt. Some natural woody formations can be found either in the form of scattered trees with a crown density of less than 10 percent in Gebel Elba (an estimated 19600 ha) or as mangroves along the Red Sea coast (an estimated 390 ha).

Because of the prevailing arid climate, almost all the trees that are estimated to exist in Egypt are on irrigated lands and within urban areas. The number of standing trees in 2004 was 61 million trees with an area 65000 ha. The most common tree species in Egypt are casuarinas and eucalyptus.

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 *in situ*. 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 *in situ*; 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
MOALR, Undersecretariat for Afforestation 1996. Afforestation and forestry in Egypt. Country Report.	M	Planted trees	1993	Number of planted trees and their ownership
Undersecretariat for Afforestation and Environment	M	Planted trees	2004	A set of data prepared for FRA 2005
Flora of Egypt, Techolm, 1974	L	Natural woody vegetation	1974	Area of natural woody vegetation in Gebel Elba.
The Report on Surveying Mangrove Forests in Egypt, 1996, Academy of Scientific Research and Technology, The National Authority for Remote Sensing	M	Area of mangroves	1996	Based on remote sensing.
Diagnosis of Forestry Sector in Egypt.	M	Planted trees and area	2008	A report generated from the TCP/EGY/3103 activities

1.2.2 Classification and definitions

National class	Definition
Forest	Same as FRA
OWL	Same as FRA

1.2.3 Original data

The area of the natural woody formations in Gebel Elba (an estimated 19600 ha with a crown density of less than 10 percent) and mangroves along the Red Sea coast (an estimated 390 ha) are the natural woody vegetation in Egypt.
The table below shows the number of standing trees in 1993, 2004 and 2009.

Species	Trees belong to government (1000trees)			Trees belong to individuals (1000 trees)		
	1993	2004	2009	1993	2004	2009
Casuarinas spp	14788	19400	20176	16788	22390	23285.6
Eucalyptus spp	1970	2708	2816	1883	2604	2708
Dalbergia sissoo	2485	3401	3537	624	854.44	888.6
Salix & Populus	151	207	215	1700	1655.88	1721
Morus spp	112	153	159	630	865.11	899.6
Acacia spp	517	708	736	710	972.52	1011
Cypressus spp	215	314	327	52	68.88	71
Albizzia lebbek	18	18	18	20.5	25.42	27.2
Khaya senegalensis	10	774	656	0.5	0.82	1.2
Other Species	1984	2715	2911	1184	1495.68	1555
Total	**22250**	**30398**	**31551**	**23592**	**30932.75**	**32168.2**

- Most of the growing stock in Egypt is linear plantations which are mostly less then 20 rows in width.
- Only few areas are in the form of wood lots irrigated with treated sewage water.

1.3 Analysis and processing of national data

1.3.1 Calibration

No need for calibration since the UN/FAOSTAT data on country and land area has been used.

1.3.2 Estimation and forecasting

The area of plantations was calculated based on 4X4 m for eucalypt and mahogany (600 trees/ha). For other species the spacing was considered 3X3m (1000 trees/ha).

Species	Trees belonging to government (1000 trees)			Trees belonging to individuals (1000 trees)			Plantation area belonging to government (ha)			Plantation area belonging to individuals (ha)			Total plantation area (ha)		
	1993	**2004**	**2009**	**1993**	**2004**	**2009**	**1993**	**2004**	**2009**	**1993**	**2004**	**2009**	**1993**	**2004**	**2009**
Casuarina spp	14788	19400	21176	16788	22390	24285.6	14788	19400	21176	16788	22390	24285.6	31576	41790	44461.6
Eucalyptus spp	1970	2708	2816	1883	2604	2708	3283	4513	4693	3138	4340	4513	6422	8853	9206
Dalbergia sissoo	2485	3401	3537	624	854	888.6	2485	3401	3537	624	854	888.6	3109	4255	4425.6
Salix & Populus	151	207	215	1700	1656	1721	151	207	215	1700	1656	1721	1851	1863	1936
Morus spp	112	153	159	630	865	899.6	112	153	159	630	865	899.6	742	1018	1058.6
Acacia spp	517	708	736	710	973	1011	517	708	736	710	973	1011	1227	1681	1747
Cypressus spp	215	314	327	52	69	71	215	314	327	52	69	71	267	383	398
Albizzia lebbek	18	18	18	21	25	27.2	18	18	18	21	25	27.2	39	43	45.2
Khaya senegalensis	10	774	806	1	1	1.2	17	1290	1343	1	1	2	18	1291	1345
Other Species	1984	2715	2911	1184	1496	1555	1984	2715	2911	1184	1496	1555	3168	4211	4466
Total	**22250**	**30398**	**31701**	**23592**	**30933**	**32168.2**	**23570**	**32719**	**35115**	**24848**	**32669**	**34974**	**48419**	**65388**	**69089**

The area of plantation for 1990, 2000, 2005 and 2010 was estimated through linear interpolation and extrapolation, which gave the following results:

1990 (ha)	**1993** (ha)	**2000** (ha)	**2004** (ha)	**2005** (ha)	**2010** (ha)
43790	48418	59218	65389	66932	69656

The area of mangroves and other natural forest formations (OWL) remained constant

1.3.3 Reclassification into FRA 2010 categories

All plantations are classified as forests, while mangroves and the natural woody vegetation in Gabal Elba and the plain of the Sinai Peninsula are classified as other wooded land (OWL).

1.4 Data for Table T1

FRA 2010 categories	**Area (1000 hectares)**			
	1990	**2000**	**2005**	**2010**
Forest	44	59	67	70
Other wooded land	20	20	20	20
Other land	99 481	99 466	99 458	99455
...of which with tree cover	na	na	na	35.78
Inland water bodies	600	600	600	600
TOTAL	**100 145**	**100 145**	**100 145**	**100145**

1.5 Comments to Table T1

Variable / category	**Comments related to data, definitions, etc.**	**Comments on the reported trend**
Forest	The estimate of forest area is based on the number of planted trees. It generally includes linear plantations, with a width of less than 20 rows	The increase in forest area is due to implementation of the action plan of sanitary disposal of sewage water
Other wooded land	Other wooded lands are scattered trees with density less than 10%.	No changes in the area
Other land		
Other land with tree cover	the figure mentioned represents the area planted with palm trees	
Inland water bodies		

Other general comments to the table
There is an increase in forest plantation compared to the FRA 2005. However, the rate of annual increase is less during the period 2005-2010.

Expected year for completion of ongoing/planned <u>national</u> forest inventory and/or RS survey / mapping	
Field inventory	2010
Remote sensing survey / mapping	2015

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.
Categories related to the holder of management rights of public forest resources	
Public Administration	The Public Administration (or institutions or corporations owned by the Public Administration) retains management rights and responsibilities within the limits specified by the legislation.
Individuals/households	Forest management rights and responsibilities are transferred from the Public Administration to individuals or households through long-term leases or management agreements.
Private institutions	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities, private co-operatives, private non-profit institutions and associations, etc., through long-term leases or management agreements.
Communities	Forest management rights and responsibilities are transferred from the Public Administration to local communities (including indigenous and tribal communities) through long-term leases or management agreements.
Other form of management rights	Forests for which the transfer of management rights does not belong to any of the categories mentioned above.

2.2 National data

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Undersecretariat for Afforestation & Environment	M	Area of forest plantation	2005	FRA 2005 data
Diagnosis of Forestry Sector in Egypt.	M	Planted trees and area	2008	A report generated from the TCP/EGY/3103 activities

2.2.2 Classification and definitions

National class	Definition
Private ownership	The same as FRA
Public ownership	The same as FRA

2.2.3 Original data

Table 1.2.3 was used as a source for the data of this table as follows:

Plantation area belonging to government (ha)			Plantation area belonging to individuals (ha)		
1993	2004	2009	1993	2004	2009
23570	32719	35115	24848	32669	33974

2.3 Analysis and processing of national data

2.3.1 Estimation and forecasting

Linear inter- and extrapolation was made to get data for years 2000 and 2005.

2.4 Data for Table T2

Table 2a - Forest ownership

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public ownership	nd	29.7	33.6
Private ownership	nd	29.3	33.4
...of which owned by individuals	nd	nd	nd
...of which owned by private business entities and institutions	nd	nd	nd
...of which owned by local communities	nd	nd	nd
...of which owned by indigenous / tribal communities	nd	nd	nd
Other types of ownership	nd	0	0
TOTAL	**44**	**59**	**67**

Note: No data is available for 1990. All windbreaks are private ownership.

Does ownership of trees coincide with ownership of the land on which they are situated?	√	Yes
		No
If **No** above, please describe below how the two differ:		

Table 2b - Holder of management rights of public forests

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public Administration	nd	29.7	33.6
Individuals	nd	0	0
Private corporations and institutions	nd	0	0
Communities	nd	0	0
Other	nd	0	0
TOTAL	**nd**	**29.7**	**33.6**

2.5 Comments to Table T2

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Public ownership	Most of linear plantations are public ownership	Increase in public ownership rate of development due to forest plantation
Private ownership	Field windbreaks are private ownership	
Other types of ownership		
Management rights		

Other general comments to the table

3 Table T3 – Forest designation and management

3.1 FRA 2010 Categories and definitions

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

3.2 National data

3.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
MOALR, Undersecretariat for Afforestation 1996. Afforestation and forestry in Egypt. Country Report.	M	Planted trees Ownership	1993	Number of planted trees and their ownership
Undersecretariat for Afforestation and Environment	M	Planted trees Ownership	2004	A set of data prepared for FRA 2005
Flora of Egypt, Techolm, 1974	L	Natural woody vegetation	1974	Area of natural woody vegetation in Gebel Elba.

The Report on Surveying Mangrove Forests in Egypt, 1996, Academy of Scientific Research and Technology, The National Authority for Remote Sensing	M	Area of mangroves	1996	Based on remote sensing.
Undersecretariat for Afforestation and Environment	M	Area of woodlots for wood production	2000 2005	A set of data prepared for FRA
Egyptian Environment Affairs Agency (EEAA). Personal communications.	L	OWL in protected area	2005	Expert estimate of the area of mangroves and other natural woody vegetation in Protected Area
Diagnosis of Forestry Sector in Egypt	M	Planted trees and area	2008	A report generated from the TCP/EGY/3103 activities

3.2.2 Original data

Table 1.3 and table T2 were used as input to this table in addition to the following information:
2000 ha of OWL are located in protected areas (EEAA, personal communications)
Areas of wood lots established for wood production (in feddan)

Location	**Year**		
	2000	**2005**	**2010**
Qena	200	450	450
Luxor	80	250	750
Edfu	200	300	450
Kharga -oassis	200	350	380
Paris	-	60	60
El-Rashda	-	30	30
El-Saff	-	120	300
Gamassa	-	120	120
Serabium	-	300	600
Sadat city	250	450	600
Wadi El-Natroon	40	80	80
El-Tour	100	200	200
West. Suhag Awlad Azaz	-	100	267
East.Suhag Alkola	-	40	310
Balana and Nasr El-Nuba	-	100	290
El-Alakki	-	200	200
Assuit	-	45	45
Hurgada			200
Marsa Matrouh			300
Al-Areesh			200
Mut (New Valley)			260
Abo Teeg (Asiut)			30
Toshka			35
Abo simple (1)			90
Abo simple (2)			40
Darb Alarbeen			30
Total	**1070**	**3195**	**8327**

One feddan = 0.42 ha

3.3 Analysis and processing of national data

3.3.1 Estimation and forecasting

Total area of wood lots established for wood production = Total area in the table above converted to hectares using the conversion factor, one feddan = 0.42 ha)

Year	Area in ha
2000	449
2005	1342

It is assumed that all wood lots for wood production were established after 1990

3.3.2 Reclassification into FRA 2010 categories

All of the above woodlots are classified as productive forests. All remaining plantations owned by the Government are classified as multiple purpose.

All plantations owned by individuals are classified as protection forests, as their main purpose is the conservation of soil and water.

2000 ha of OWL are located in protected areas and have been classified for conservation of biodiversity..

3.4 Data for Table T3

Table 3a – Primary designated function

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Production	0	0.4	1.3	1.5
Protection of soil and water	22.6	29.5	33.5	34.1
Conservation of biodiversity	0	0	0	2
Social services	0	0	0	0
Multiple use	21.4	29.1	32.2	32.4
Other (please specify in comments below the table)	0	0	0	0
No / unknown	0	0	0	0
TOTAL	**44**	**59**	**67**	**70**

Table 3b – Special designation and management categories

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Area of permanent forest estate	44	59	67	70
Forest area within protected areas	19.6	19.6	19.6	19.6
Forest area under sustainable forest management	0	0.4	1.3	4.4
Forest area with management plan	0	0.4	1.3	4.4

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	All private plantations are for protection of soil.	slight increase
Conservation of biodiversity		
Social services		
Multiple use	Multipurpose trees are planted for environmental protection such as high roads protection, sand dune fixation, and protection of irrigation and drainage canals beside wood production at the end of the rotation.	There is an increase in the area
Other		
No / unknown designation		
Area of permanent forest estate		
Forest area within protected areas	19.600 ha refers to Gebel Elba	
Forest area under sustainable forest management		
Forest area with management plan		

Other general comments to the table

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

4.2 National data

4.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Undersecretariat for Affor.& Env.	M		2005	FRA 2010
National action plan	M		2010	FRA 2010
Diagnosis of Forest Sector in Egypt	M	Planted trees and area	2008	A report generated from the TCP/EGY/3103 activities

4.2.2 Original data

Four of the main planted species/genera are introduced: *Casuarina, Eucalyptus, Cypressus* and *Khaya*. Data on area of these were extracted from the table in chapter 1.3.2

Introduced species / genera	Total plantation area (ha)		
	1993	2004	2009
Casuarina spp	31576	41790	44461.6
Eucalyptus spp	6422	8853	9206
Cypressus spp	267	383	398
Khaya senegalensis	18	1291	1345
TOTAL	**38283**	**52317**	**55410.6**

4.3 Analysis and processing of national data

4.3.1 Estimation and forecasting

The data above were estimated/forecasted to the reporting years.

4.4 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	0	0	0	0
...of which of introduced species	0	0	0	0
Planted forest	44	59	67	70
...of which of introduced species	35	46	52	58
TOTAL	**44**	**59**	**67**	**70**

Table 4b

FRA 2010 Categories	Area (1000 hectares)			
	1990	2000	2005	2010
Rubber plantations (Forest)	0	0	0	0
Mangroves (Forest and OWL)	0.39	0.39	0.39	0.39
Bamboo (Forest and OWL)	0	0	0	0

4.5 Comments to Table T4

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Primary forest		
Other naturally regenerating forest		
Planted forest	A set of data prepared by the Undersecretariat for Afforestation and Environment for FRA 2010	
Rubber plantations		
Mangroves	A set of data prepared by the Undersecretariat for Afforestation and Environment for FRA 2010	
Bamboo		

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
Diagnosis of Forest Sector in Egypt.	M	Planted trees and area	2008	A report generated from the TCP/EGY/3103 activities

5.2.2 Classification and definitions

National class	Definition
Afforestation	Same as FRA

5.2.3 Original data

Reported figures are expert estimates.

5.3 Data for Table T5

FRA 2010 Categories	Annual forest establishment (hectares/year)			...of which of introduced species [1] (hectares/year)		
	1990	2000	2005	1990	2000	2005
Afforestation	n.d	1500	1600	n.d	n.d	1152
Reforestation	n. d	n. d	n. d	n. d	n. d	n. d
...of which on areas previously planted	n. d	n. d	n. d	n. d	n. d	n. d
Natural expansion of forest	0	0	0	0	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	No data is available before 1990 Introduced species are: Neem, Khaya, Jatropha, jojoba and dwarf varieties of mulberry.	
Reforestation		
Natural expansion of forest		

Other general comments to the table
There is no collected data on reforestation, however mature trees are mostly removed. Introduced species are those species recently introduced to the country.

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

The same estimated volume/ ha for casuarinas and eucalypt were used for the tear 2010

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Megahed,M.M and M.H. El-lakany	H	Stem volume of young Casuarina plantations	1986	Biomass characteristics of young Casuarina plantations in northwestern region of Egypt
El-Osta M.L.M., M.M.Megahed, M.HEl-Lakany and S.S. Hegazy	H	Stem volume of mature Casuarina windbreaks	1992	Estimates of above- ground biomass and its distribution for casuarinas windbreak trees in northwestern region of Egypt
Saenger, P. 2002. Ecological Assessment of Mangroves in Egypt. Consultancy Report TCP/EGY/0168: Rehabilitation, Conservation and Sustainable Utilization of Mangroves In Egypt. FAO, Rome.	M	Basal area, height and diameter of mangroves	2002	Based on limited field sampling.
Undersecretariat for Afforestation and Environment	M	Planted trees	2004	A set of data prepared for FRA 2005
Diagnosis of Forest Sector in Egypt.	M	Planted trees and area	2008	A report generated from the TCP/EGY/3103 activities

6.2.2 Classification and definitions

National class	Definition
Growing stock	Same as FRA

6.2.3 Original data

Estimated volume of *Casuarina glauca*

Type of plantation	Volume (m3/ha)	Year of estimation
Woodlots	120	1986
Wind breaks	134	1992

Estimated volume of *Eucalyptus camaldulensis*.

Type of plantation	Volume (m3/ha)	Year of estimation
Woodlots	140	1992

(From 1.3)

FRA Categories / Species name (Scientific name and common name)	Total planted area (ha)		
	1993	2004	2009
Casuarina spp (Gasuarina)	31576	41790	43461.6
Eucalyptus spp (Kafour)	6422	8853	9206
Dalbergia sisoo (Sarsoa)	3109	4255	4425.6
Salix & populus (safsaf and Hoor)	1851	1863	1936
Morus spp(Tout)	742	1018	1058.6
Acacia spp (sunt)	1227	1681	1747
Cypressus sempervirens (sarw)	267	383	398
Albizzia lebbeck (labbakh)	39	43	45.2
Khaya senegalensis (Mahogany afriki)	18	1291	1345
other species	3168	4211	4466
TOTAL	**48418**	**65389**	**68089**

The Growing Stock per ha used in the calculations is 125 m^3 for *Casuarina* spp, 140 m^3 for *Eucalyptus* spp and *Dalbergia* sisoo ,120 m^3 for *Morus* spp and *Albizzia lebbeck*, 100 m^3 for *Acacia* spp , 80 m^3 for *Salix & populus* spp and 85 m^3 for other species.

Species	Growing stock (1000 m3)			Growing stock (%)		
	1993	2004	2009	1993	2004	2009
Casuarina spp	3947	5224	5433	66.46	65.27	67.35
Eucalyptus spp	899	1239	1288	15.14	15.49	15.97
Dalbergia sissoo	435	596	620	7.33	7.44	7.69
Salix & Populus	148	149	155	2.49	1.86	1.92
Morus spp	89	122	127	1.50	1.53	1.57
Acacia spp	123	168	175	2.07	2.10	2.16
Cypressus spp	23	33	44	0.38	0.41	0.55
Albizzia lebbek	5	5	5	0.08	0.07	0.06
Khaya senegalensis	1	110	220	0.03	1.37	2.73
Other Species	269	358	4466	4.53	4.47	2.73
Total	**5939**	**8004**	**8067**	**100.00**	**100.00**	**100.00**

6.3 Analysis and processing of national data

Based on the original data above, the average volume per hectare of forest plantations was estimated at 120 m3. This figure was then applied to the forest area in table T1.

The average volume of OWL was estimated at 11 m3/ha based on estimations done in 2002 for the LULUCF national report of Egypt and the report on mangroves.

6.4 Data for Table T6

Table 6a – Growing stock

FRA 2010 category	Volume (million cubic meters over bark)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Total growing stock	5.28	7.08	8.04	8.40	0.22	0.22	0.22	0.22
... of which coniferous	0	0.01	0.02	0.02	0	0	0	0
... of which broadleaved	5.28	7.07	8.02	8.38	0.22	0.22	0.22	0.22
Growing stock of commercial species	0	0	0	0	0	0	0	0

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
1st	*Casuarina* spp	(Gasuarina)	3.509	4.621	4.806
2nd	*Eucalyptus* spp	Kafour	0.799	1.096	1.139
3rd	*Dalbergia* sisoo	Sarsoaa	0.387	0.527	0.548
4th	*Acacia* spp	Sunt	0.109	0.149	0.155
5th	*Salix & populus*	Safsaf and Hoor	0.132	0.132	0.137
6th	*Morus* spp	Tout	0.079	0.108	0.112
7th	*Khaya* senegalensis ()	Mahogany afriki	0.001	0.097	0.102
8th	*Cypressus* sempervirens	Sarw	0.020	0.029	0.030
9th	*Albizzia lebbeck*	Labbakh	0.004	0.005	0.005
10th					
Remaining			0.24	0.316	1.006
TOTAL			**5.28**	**7.08**	**8.04**

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

Table 6c – Specification of threshold values

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

6.5 Comments to Table T6

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Total growing stock		
Growing stock of broadleaved / coniferous		
Growing stock of commercial species		
Growing stock composition		

Other general comments to the table

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

7 Table T7 – Biomass stock

7.1 FRA 2010 Categories and definitions

Category	Definition
Above-ground biomass	All living biomass above the soil including stem, stump, branches, bark, seeds, and foliage.
Below-ground biomass	All biomass of live roots. Fine roots of less than 2mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead wood	All non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots, and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.

7.2 National data

7.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
FAO. Working Paper 82. 2004. FAO/Forests department	M	Dry matter and biomass and root shoot ratio	2004	
FAO. Working Paper 81. 2004. FAO/Forests department	H	Biomass expansion factor. Root-shoot ratio	2004	
FAO, Guidelines for country reporting to FRA 2010 Working Paper 143. Rome 2008	H	Carbon Fraction, carbon in litter 2008 and soil	2008	

7.2.2 Classification and definitions

National class	Definition
Above-ground biomass	Same as FRA
Below-ground biomass	Same as FRA
Dead wood	Same as FRA

7.2.3 Original data

Data from table T6 were used as input to this reporting table.

7.3 Analysis and processing of national data

Conversion factors for tropical arid zones deciduous and broadleaved forests were used.

Basic wood density for *Casuarina* is 0.7 and for *Eucalyptus* is 0.7 Basic wood density for *Acacias* is 0.76
The average basic wood density was considered 0.7

R for broadleaf forest 75-125 ton/hectare =0.26 for forest and 0.43 for OWL

BEF = 2

Dead-live ratio = 0.14

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	7.392	9.912	11.256	11.760	0.308	0.308	0.308	0.308
Below-ground biomass	1.922	2.577	2.927	3.058	0.132	0.132	0.132	0.132
Dead wood	1.304	1.748	1.986	2.074	0.062	0.062	0.062	0.062
TOTAL	**10.618**	**14.237**	**16.169**	**16.892**	**0.502**	**0.502**	**0.502**	**0.502**

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 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
FAO. Working Paper 82. 2004. FAO/Forests department	M	Biomass Expansion factor. Root-shoot ratio	2004	
FAO. Working Paper 81. 2004. FAO/Forests department	H	Biomass Expansion factor. Root-shoot ratio	2004	
M.M. Megahed and M.L. ELOsta	H	Specific gravity	1990	
FAO, Guidelines for country reporting to FRA 2010 Working Paper 143. Rome 2008	H	Biomass expansion Factor, basic wood density and Root-shoot ratio	2008	

8.2.2 Original data

Data from table T7 was used as input for this reporting table

8.3 Analysis and processing of national data

8.3.1 Estimation and forecasting

The default factor 0.47 was used to convert the biomass stock to carbon stock for the table 7 according to 2006 IPCC guidelines.
The soil carbon was calculated for LAC and sandy soils (35 and 31 ton/ha).
The default value for carbon stock of litter in tropical forests has been used (2.1 ton C/ha).

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	3.474	4.659	5.290	5.527	0.145	0.145	0.145	0.145
Carbon in below-ground biomass	0.903	1.211	1.376	1.437	0.062	0.062	0.062	0.062
Sub-total: Living biomass	***4.378***	***5.870***	***6.666***	***6.964***	***0.207***	***0.207***	***0.207***	***0.207***
Carbon in dead wood	0.613	0.822	0.933	0.975	0.029	0.029	0.029	0.029
Carbon in litter	0.092	0.124	0.141	0.146	n.a.	n.a.	n.a.	n.a.
Sub-total: Dead wood and litter	***0.705***	***0.946***	***1.074***	***1.121***	***n.a.***	***n.a.***	***n.a.***	***n.a.***
Soil carbon	1.533	2.073	2.343	2.438	0.620	0.620	0.620	0.620
TOTAL	**6.615**	**8.888**	**10.083**	**10.523**	**n.a.**	**n.a.**	**n.a.**	**n.a.**

Soil depth (cm) used for soil carbon estimates	30 cm

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

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

No fires occur in forests and other wooded land. The extent of other vegetations fires is unknown.

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	na	na	na	na	na	na
... of which on forest	0	0	0	0	0	0
... of which on other wooded land	0	0	0	0	0	0
... of which on other land	na	na	na	na	na	na

Table 9b

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

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.

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

10.1 FRA 2010 Categories and definitions

Term	Definition
Disturbance	Damage caused by any factor (biotic or abiotic) that adversely affects the vigour and productivity of the forest and which is not a direct result of human activities.
Invasive species	Species that are non-native to a particular ecosystem and whose introduction and spread cause, or are likely to cause, socio-cultural, economic or environmental harm or harm to human health.
Category	**Definition**
Disturbance by insects	Disturbance caused by insect pests.
Disturbance by diseases	Disturbance caused by diseases attributable to pathogens, such as bacteria, fungi, phytoplasma or virus.
Disturbance by other biotic agents	Disturbance caused by biotic agents other than insects or diseases, such as wildlife browsing, grazing, physical damage by animals, etc.
Disturbance caused by abiotic factors	Disturbances caused by abiotic factors, such as air pollution, snow, storm, drought, etc.

10.2 National data

10.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Undersecretariat for Afforestation and Environment	M	Forest diseases and insects	2005	A set of data prepared for the FRA 2005

10.2.2 Original data

Data are based on expert estimates. The figures refer to the annual affected area. Other disturbance refers to grazing of small plants and mangroves by camels and goats

Insects and host plants

- Red spider (Khaya *senegalensis*).
- *Stromatium fulume* (*casuarinas* sp).
- *Macrotoma palmata* (many tree species).
- *Phoracantha spp*. (*Eucalyptus* spp).
- *Zeuzera pyrina* (Populus spp).
- Dry wood termites (*Cryptotermes brevis*), (*calotermes siniacus and caloternes flavicollis*).
- *Hyminopter gall maker (Aprostectus spp).*

No woody invasive species are present in Egypt.

10.3 Data for Table T10

Table 10a – Disturbances

FRA 2010 category	Affected forest area (1000 hectares)		
	1990	2000	2005
Disturbance by insects	na	0.5	0.7
Disturbance by diseases	na	0.2	0.3
Disturbance by other biotic agents	na	0	0.2
Disturbance caused by abiotic factors	na	0	0
Total area affected by disturbances	**na**	**0.7**	**1.2**

Notes: 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.

The total area affected by disturbances is not necessarily the sum of the individual disturbances as these may be overlapping.

Table 10b – Major outbreaks of insects and diseases affecting forest health and vitality

Description / name	Tree species or genera affected (scientific name)	Year(s) of latest outbreak	Area affected (1000 hectares)	If cyclic, approx. cycle (years)
Red spider	*Khaya senegalensis*	2005	0.002	5
Swelling of growing tip	*Eucalyptus spp*	2008	1.00	annually
Phoracatha cemipunctata	*Eucalyptus spp*	2008	0.01	annually
Melanophilla picte	*Populus spp.*	2008	0.01	annually

Note: Area affected refers to the total area affected during the outbreak.

Table 10c – Area of forest affected by woody invasive species

Scientific name of woody invasive species	Forest area affected 2005 (1000 hectares)
Total forest area affected by woody invasive species	0

Note: The total forest area affected by woody invasive species is not necessary the sum of the values above, as these may be overlapping.

10.4 Comments to Table T10

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Disturbance by insects		
Disturbance by diseases		
Disturbance by other biotic agents		
Disturbance caused by abiotic factors		
Major outbreaks		
Invasive species		

Other general comments to the 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
Undersecretariat for Afforestation and Environment	M	Wood removals	2005	A set of data prepared for the FRA 2005
Diagnosis of Forest Sector in Egypt.	M	Planted trees and area	2008	A report generated from the TCP/EGY/3103 activities

11.2.2 Original data

The data provided are expert estimates. The removal figures provided in FAOSTAT are considered to be too high, particularly regarding woodfuel removals.

11.3 Data for Table T11

FRA 2010 Category	Industrial roundwood removals			Woodfuel removals		
	1990	2000	2005	1990	2000	2005
Total volume (1000 m^3 o.b.)	n.a.	75	80	n.a.	110	120
... of which from forest	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Unit value (local currency / m^3 o.b.)	n.a.	300	350	n.a.	200	250
Total value (1000 local currency)	n.a.	22500	28000	n.a.	22000	30000

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	L.E.	L.E.	L.E.

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		there is a slight increase
Total volume of woodfuel removals	Removals are from OWL	there is a slight increase
Unit value	L.E. / m3	L.E. / m3
Total value	1 US$ = 5.61 L.E. (May 2009)	

Other general comments to the table
Data for 1990 is not available

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
Plant products / raw material
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
Animal products / raw material
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
Undersecretarait for afforestation & environment	M		2007	A set of data prepared for the FRA

12.3 Data for Table T12

Rank	Name of product	Key species	Unit	NWFP removals 2005		NWFP category
				Quantity	Value (1000 local currency)	
1st	Mulberry (fruits)	Morus alba	Tonnes	25000	3725	1
2nd	Ficus sycamorus (fruits)	Ficus sycamorus	Tonnes	25000	3725	1
3rd	Mulberry leaves	Morus alba	Tonnes	1000	100	2
4th	Acacia leaves	Acacia salegna	Tonnes	9200	430	2
5th						
6th						
7th						
8th						
9th						
10th						
All other plant products						
All other animal products						
TOTAL				60200	**7980**	

	2005
Name of local currency	L.E. (1$ = 5.61 L.E)

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

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 wage or salary in cash or in kind.
Self-employment	Persons who during a specified reference period performed some work for profit or family gain 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
Undersecretariat for Afforestation & Environment,	M		2008	Set of data prepared for the FRA

13.2.2 Original data

Data are based on expert estimates and include employment in both public and private sectors. The figures include full time government paid persons and persons working in the private nurseries. Seedling production is labour-intensive (filling bags and irrigation).

13.3 Data for Table T13

FRA 2010 Category	Employment (1000 years FTE)		
	1990	2000	2005
Employment in primary production of goods	na	10	12
...of which paid employment	na	5	6
...of which self-employment	na	5	6
Employment in management of protected areas	na	1	1

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		
Paid employment / self-employment		
Employment in management of protected areas		

Other general comments to the table

14 Table T14 – Policy and legal framework

14.1 FRA 2010 Categories and definitions

Term	Definition
Forest policy	Forest policy is the 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 the society.
Forest law	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)			
1. Forest policy statement with national scope			Yes
		√	No
If Yes above, provide:	Year of endorsement		
	Reference to document		
2. National forest programme (nfp)		√	Yes
			No
If Yes above, provide:	Name of nfp in country	The National program for afforestation	
	Starting year	2000	
	Current status		In formulation
		√	In implementation
			Under revision
			Process temporarily suspended
	Reference to document or web site		
3. Law (Act or Code) on forest with national scope			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		
	Year of latest amendment		
	Reference to document	law No. 4 for year 1994 about protecting the environment	

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.		
4. Sub-national forest policy statements		Yes
	√	No
If Yes above, indicate the number of regions/states/provinces with forest policy statements		
5. Sub-national Laws (Acts or Codes) on forest		Yes
	√	No
If Yes above, indicate the number of regions/states/provinces with Laws on forests		

Explanatory notes to the reporting table:

1. The national forest policy document or statement describes the objectives, priorities and means for implementation of the forest policy. It is endorsed when it is officially recognised as a government policy or instruction. The endorsement is formalised by the Minister in charge of forests by a dated and signed document.
2. The term "national forest programme" is a generic expression referring to a wide range of approaches towards forest policy formulation, planning and implementation at national and sub-national levels and providing a framework and guidance for country-driven forest sector development in consultation and participation of all stakeholders and in consistence with policies of other sectors and international policies.
3. The term "law on forest" refers to a Law (Act or Code) providing specific rules on forests and forest sector management, such as access, management and use of forest resources. The Law is enacted when the legislative authority adopted its text.
4. Same as (1) but the policy documents or statements refer to sub-national administrative units, e.g. States in a Federation or Autonomous Regions or Provinces.
5. Same as (3) but indicate if specific Laws on forests exist at sub-national level (at the level of regions/states/provinces).

14.3 Comments to Table T14

Variable / category	Comments related to data, definitions, etc.
Forest policy statement with national scope	Forests in Egypt are not of first priority because the government gives much more attention to food production. There is a policy statement formulated through the FAO project TCP/EGY/3103 (Assistance to forest policy formulation, legislation and institutional reorganization).
National forest programme (nfp)	The programme is applied for the safe disposal of sewage water by using it in irrigation of forest plantations
Law (Act or Code) on forest with national scope	
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

FRA 2010 Category	2008	
Minister responsible for forest policy formulation : please provide full title	H.E : Amin Abaza Minister of Agriculture and Land Reclamation	
Level of subordination of Head of Forestry within the Ministry	√	1st level subordination to Minister
		2nd level subordination to Minister
		3rd level subordination to Minister
		4th or lower level subordination to Minister
Other public forest agencies at national level		
Institution(s) responsible for forest law enforcement	Ministry of Justice	

Table 15b

FRA 2010 Category	Human resources within public forest institutions					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Total staff	5000	30	5700	32	6500	34
...of which with university degree or equivalent	200	25	250	27	280	29

Note: 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	There is a direct link between the head of the Under-Secretariat for Afforestation & Environment (UAE) and the Minister	
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

16 Table T16 – Education and research

16.1 FRA 2010 Categories and definitions

Term	Definition
Annual graduation of students	Number of students that have successfully completed a Bachelor's or higher degree in forest science or achieved a certificate or diploma as forest technician.
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 implementing research programmes on forest matters. Funding is 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
Undersecretariat for Afforestation & Environment (UAE)	M	Education	2007	

16.3 Data for Table T16

FRA 2010 Category	Annual graduation of students within the country					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Master's degree in Forest Science	5	20	6	33	4	25
Bachelor's degree in Forest Science	30	25	20	25	24	25
Forest technician certificate / diploma	nd	nd	nd	nd	32	40
FRA 2010 Category	**Professionals working in public forest research centres**					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Doctor's degree (PhD)	8	30	10	30	12	30
Master's degree (MSc) or equivalent	10	30	12	30	15	33
Bachelor's degree (BSc) or equivalent	15	30	16	32	18	33

16.4 Comments to Table T16

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Annual graduation of students within the country		
Professionals working in public forest 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
Undersecretariat for Afforestation & Environment (UAE)	M	Revenue / Expenditure	2007	

17.3 Data for Table T17

Table 17a - Forest revenues

FRA 2010 Categories	Revenues (1000 local currency)	
	2000	2005
Forest revenue	52480	65980

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	30000	35000	na	na	30000	35000
Transfer payments	0	0	0	0	0	0
Total public expenditure	30000	35000	na	na	30000	35000

If transfer payments are made for forest management and conservation, indicate for what specific objective(s) - Please tick all that apply.		
		Reforestation
		Afforestation
		Forest inventory and/or planning
		Conservation of forest biodiversity
		Protection of soil and water
		Forest stand improvement
		Establishment or maintenance of protected areas
		Other, specify below

17.4 Comments to Table T17

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest revenue		
Operational expenditure		
Transfer payments		

Other general comments to the table