Forestry Department
Food and Agriculture Organization of the United Nations

GLOBAL FOREST RESOURCES ASSESSMENT

COUNTRY REPORTS

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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 2005 (FRA 2005), which is the most comprehensive assessment to date. More than 800 people have been involved, including 172 national correspondents and their colleagues, an Advisory Group, international experts, FAO staff, consultants and volunteers. Information has been collated from 229 countries and territories for three points in time: 1990, 2000 and 2005.

The reporting framework for FRA 2005 is based on the thematic elements of sustainable forest management acknowledged in intergovernmental forest-related fora and includes more than 40 variables related to the extent, condition, uses and values of forest resources. More information on the FRA 2005 process and the results - including all the country reports - is available on the FRA 2005 Web site (www.fao.org/forestry/fra2005).

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 2005 is:

Mette Løyche Wilkie
Senior Forestry Officer
FAO Forestry Department
Viale delle Terme di Caracalla
Rome 00100, Italy

E-mail: Mette.LoycheWilkie@fao.org

Readers can also use the following e-mail address: fra@fao.org

Report preparation and contact person

This report has been prepared by:

Mr. Akmurad Atamuradov
Head of the Forest Seed Growing and Natural Parks Protection Service
Ministry of Nature Protection of Turkmenistan
Wodnikov Str. 4, 744016 Ashgabat
Tel.: + 00 993 12 366 271 // 36 63 21
Fax: + 00 993 12 36 62 71
E-mail: shirinkarryeva@mail.ru
E-mail: vk@untuk.org

Mrs. Shirin Karryeva
Head of the International Projects Coordination Department
E-mail: shirinkarryeva@mail.ru,

Abbreviations

FRA-2000	-	Global Forest Resources Assessment 2000
FRA-2005	-	Global Forest Resources Assessment 2005
FAO	-	Food and Agriculture Organization of the United Nations
NIDPAK	-	National Institute of Deserts, Plant and Animal Kingdom
NAPPE	-	National Action Plan for the Protection of the Environment
SFF	-	State Forest Fund
OWL	-	Other wooded land
OLTC	-	Other land with tree cover
SPNT	-	Specifically Protected Nature Territories
H	-	High quality (*of data/ information*)
M	-	Medium quality
L	-	Low quality
ID	-	Insufficient Data
N/A	-	Not applicable
NDA	-	No Data Available
TM	-	Turkmenistan
EE	-	Expert estimates
USD $	-	US Dollar

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Background Information

The description and studying of forests in Turkmenistan began at the end of XVIII century, and forests were totally covered by the forest management and planning activities by the end of the 1860s in the XIX century. After the disintegration of the USSR (Soviet Union), all the forest management and planning enterprises were left outside the Turkmenistan, and on that reason this work has not been implemented in the country forests since 1990. The latest country-wide Forest Account was implemented by the Baikal Forest Management and Planning Enterprise in 1988, and those data were mainly used for the preparation of the FRA 2005 Country Report.

All the Turkmenistan forests according to the Governmental Decree belong to the First Group of Forests, i.e. protective forests, and that is why the main cuttings are not being implemented or planned. All the wood supply is provided only from the sanitary fellings which constitute not more than 10 thousand m3 annually.

The natural gas is available for the population free of charges that is why the number of illegal logging cases during the recent years has decreased. The paper producing plant was put into the operation in 2004 with the annual capacity of 50 thousand tons of paper, bur the cotton fibre and straws are used as raw material for this production. The cattle grazing is limited, especially in the areas were this might influence the forest in a negative way, especially near the young planted forests.

The forests of Turkmenistan are located in the arid climatic zones, and have a paramount ecological importance. That is why in the new economic conditions the importance of forests is steadily growing, which demands to define the practical objectives for this branch of the economy, and the reliable account is needed to have the comprehensive information.

The current national FRA 2005 Country Report has been prepared on the basis of all the available materials on account and reporting on forests, and with the participation of experts (specialists) from some other national economy branches linked with forestry of Turkmenistan. In the process of the preparation of the Country Report the experts estimates from a group of practitioners, as well as from researchers from the scientific and research institutions, especially the National Institute of Deserts, Plant and Animal Kingdom (NIDPAK), were applied. We express our gratitude to specialists of the Ministry of Agriculture and the Ministry of the Nature Protection of Turkmenistan, as well as to the Joint-stock Company AO "*Gök Gushak*", for the assistance in the preparation of the Country Report.

We hope that the present Report corresponds to the requirements of the FAO Forestry Department and the ongoing global Forest Resources Assessment 2005 (FRA 2005), and that the analysis of the material will help to the further development of the forestry of the country and the region.

1 Table T1 – Extent of Forest and Other wooded land

1.1 FRA 2005 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

The following list contains the sources of information and literature used for compiling the FRA 2005 Country Report.

i) Forests of the USSR. Volume 5, Moscow, 1970
ii) Murzaev E.M. Middle Asia. Moscow, 1961
iii) Babaev A.G. Problems of the development of deserts. Ashgabat, 1995
iv) Forest Encyclopaedia. Moscow, 1985-1986
v) Forests of Middle Asia. Tashkent, 1992
vi) National Action Plan for the Protection of the Environment by the President of Turkmenistan Mr. Saparmurat Turkmenbashi (NAPPE). Ashgabat, 2002
vii) Protection of the Environment of Turkmenistan, Ashgabat, 1978
viii) Zepljaev V.P. Forests of the USSR. Moscow, 1961
ix) Global Ecological Review (GER-3).National Reports from Countries of Central Asia (1972-2002), Ashgabat, 2001
x) Forest Fund of the Turkmenistan SSR according to the Account of 01.01.1988.Irkutsk, 1988
xi) Social and Economic situation in Turkmenistan 2004, Ashgabat, 2005
xii) Availability and Distribution of Land in Turkmenistan (status 01.01.04). Ashgabat, 2004
xiii) Kachalov A.A. Trees and bushes, Reference book. Moscow. 1970
xiv) Ablaev C.M. Pistachio. Moscow, 1987
xv) Vegetation Productivity of Central Kara-Kum with regard to different utilisation regimes. Moscow, 1979

1.2.2 Classification and definitions

National class	Definition
Forest	Land spanning more than 0.5 hectares with trees higher than 3 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. Explanatory notes 1. Forest is determined both by the presence of trees and the absence of other predominant land uses. The trees should be able to reach a minimum height of 3 meters *in situ*. Areas under reforestation that have not yet but are expected to reach a canopy cover of 10 percent and tree height of 3 m are included, as are temporarily unstocked areas, resulting from human intervention or natural causes that are expected to regenerate. 2. Includes forest roads, firebreaks and other small open areas; forest in national parks, nature reserves and other protected areas. 3. Excludes trees in agricultural production systems, for example in fruit plantations and agro-forestry-amelioration systems. The term also excludes trees in urban parks and gardens.

1.3 Analysis and processing of national data

1.3.1 Estimation and forecasting

The same data has been used for all three reporting years.

1.4 Reclassification into FRA 2005 classes

Forest: State Forest Fund, Stocked (closed) forests
Total area and Inland water: FAOSTAT data
Other land: Estimated as difference

1.5 Data for National reporting table T1

FRA 2005 Categories	Area (1000 hectares)		
	1990	**2000**	**2005**
Forest	4127	4127	4127
Other wooded land	0	0	0
Other land	42866	42866	42866
...of which with tree cover	NDA	NDA	NDA
Inland water bodies	1817	1817	1817
TOTAL	**48810**	**48810**	**48810**

1.6 Comments to national reporting table T1

The dominating species on the areas classified as forest are Saxauls (*Haloxylon spp*.) and furthermore the growing stock per hectare is very low. This indicates that part of the areas classified as forest may actually be Other wooded land according to the FRA 2005 definitions. However, as no information is available that allows for an subdivision of the area into Forest and Other wooded land, all this area has been classified as Forest.

2 Table T2 – Ownership of Forest and Other wooded land

2.1 FRA 2005 Categories and definitions

Category	Definition
Private ownership	Land owned by individuals, families, private co-operatives, corporations, industries, religious and educational institutions, pension or investment funds, and other private institutions.
Public ownership	Land owned by the State (national, state and regional governments) or government-owned institutions or corporations or other public bodies including cities, municipalities, villages and communes.
Other ownership	Land that is not classified either as "Public ownership" or as "Private ownership".

2.2 National data

All forests in Turkmenistan are owned by the state.

2.3 Data for National reporting table T2

FRA 2005 Categories	Area (1000 hectares)			
	Forest		Other wooded land	
	1990	2000	1990	2000
Private ownership	0	0	0	0
Public ownership	4127	4127	0	0
Other ownership	0	0	0	0
TOTAL	**4127**	**4127**	**0**	**0**

3 Table T3 – Designated function of Forest and Other wooded land

3.1 FRA 2005 Categories and definitions

Types of designation

Category	Definition
Primary function	A designated function is considered to be primary when it is significantly more important than other functions. This includes areas that are legally or voluntarily set aside for specific purposes.
Total area with function	Total area where a specific function has been designated, regardless whether it is primary or not.

Designation categories

Category / Designated function	Definition
Production	Forest / Other wooded land designated for production and extraction of forest goods, including both wood and non-wood forest products.
Protection of soil and water	Forest / Other wooded land designated for protection of soil and water.
Conservation of biodiversity	Forest / Other wooded land designated for conservation of biological diversity.
Social services	Forest / Other wooded land designated for the provision of social services.
Multiple purpose	Forest / Other wooded land designated to any combination of: production of goods, protection of soil and water, conservation of biodiversity and provision of social services and where none of these alone can be considered as being significantly more important than the others.
No or unknown function	Forest / Other wooded land for which a specific function has not been designated or where designated function is unknown.

3.2 National data

3.2.1 Data sources

See chapter 1.2.1.

3.2.2 Original data

Data from table T1 used as input. 104 000 hectares of forests are found in Specially Protected Nature Territories (SPNT).

3.3 Reclassification into FRA 2005 classes

The “Specifically Protected Nature Territories – SPNT” have been classified as “Conservation of Biodiversity”. Remaining areas are classified as “Protection of soil and water” as all forests according to a Governmental Decree are mainly designated for this purpose. All area except for the SPNT area can also be used for NWFP collection so they have been classified as production forests under “Total area with function”.

3.4 Data for National reporting table T3

FRA 2005 Categories / Designated function	Area (1000 hectares)					
	Primary function			Total area with function		
	1990	2000	2005	1990	2000	2005
Forest						
Production**	0	0	0	4023	4023	4023
Protection of soil and water	4023	4023	4023	4023	4023	4023
Conservation of biodiversity*	104	104	104	104	104	104
Social services	NDA	NDA	NDA	NDA	NDA	NDA
Multiple purpose	0	0	0	not appl.	not appl.	not appl.
No or unknown function	0	0	0	not appl.	not appl.	not appl.
Total - Forest	**4127**	**4127**	**4127**	**not appl.**	**not appl.**	**not appl.**
Other wooded land						
Production	0	0	0	0	0	0
Protection of soil and water	0	0	0	0	0	0
Conservation of biodiversity	0	0	0	0	0	0
Social services	0	0	0	0	0	0
Multiple purpose	0	0	0	not appl.	not appl.	not appl.
No or unknown function	0	0	0	not appl.	not appl.	not appl.
Total – Other wooded land	**0**	**0**	**0**	**not appl.**	**not appl.**	**not appl.**

* - SPNT - Specifically Protected Nature Territories
** - Non-wood forest products use

3.5 Comments to National reporting table T3

All the Turkmenistan forests according to the Governmental Decree belong to the First Group of Forests, i.e. protective forests, and that is why the main cuttings are not being implemented. Collection of non-wood forest products is allowed in all forests except for the Specifically Protected Nature Territories, which are designated for conservation purposes.

4 Table T4 – Characteristics of Forest and Other wooded land

4.1 FRA 2005 Categories and definitions

Category	Definition
Primary	Forest / Other wooded land of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.
Modified natural	Forest / Other wooded land of naturally regenerated native species where there are clearly visible indications of human activities.
Semi-natural	Forest / Other wooded land of native species, established through planting, seeding or assisted natural regeneration.
Productive plantation	Forest / Other wooded land of introduced species, and in some cases native species, established through planting or seeding mainly for production of wood or non wood goods.
Protective plantation	Forest / Other wooded land of native or introduced species, established through planting or seeding mainly for provision of services.

4.2 National data

4.2.1 Original data

Data from table T1 and T3 are used as input to this table.

4.3 Reclassification into FRA 2005 classes

The "Specifically Protected Nature Territories – SPNT" have been classified as "Primary". There are no productive plantations. The remaining area has been classified as modified natural forest and may include some areas which would fall under the category semi-natural. However, it is currently not possible to distinguish between these two categories.

4.4 Data for National reporting table T4

FRA 2005 Categories	Area (1000 hectares)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Primary	104	104	104	0	0	0
Modified natural	4023	4023	4023	0	0	0
Semi-natural	ID	ID	ID	0	0	0
Productive plantation	0	0	0	0	0	0
Protective plantation	NDA	NDA	NDA	0	0	0
TOTAL	**4127**	**4127**	**4127**	**0**	**0**	**0**

4.5 Comment to National reporting table T4

The "Specifically Protected Nature Territories – SPNT" have been classified as "Primary". There are no productive plantations. The remaining area has been classified as modified natural forest and may include some areas which would fall under the category semi-natural. However, it is currently not possible to distinguish between these two categories.

5 Table T5 – Growing stock

5.1 FRA 2005 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.
Commercial growing stock	The part of the growing stock of species that are considered as commercial or potentially commercial under current market conditions, and with a diameter at breast height of Z cm or more.

5.2 National data

5.2.1 Data sources

See Chapter 1.2.1.

5.3 Reclassification into FRA 2005 classes

Not applied

5.4 Data for National reporting table T5

FRA 2005 Categories	Volume (million cubic meters over bark)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Growing stock	13.9	14	14.5*	0	0	0
Commercial growing stock	0	0	0	0	0	0

* - Expert estimates

Specification of country threshold values	**Unit**	**Value**	**Complementary information**
1. Minimum diameter at breast height of trees included in Growing stock (X)	cm		
2. Minimum diameter at the top end of stem (Y) for calculation of Growing stock	cm		
3. Minimum diameter of branches included in Growing stock (W)	cm		
4. Minimum diameter at breast height of trees in Commercial growing stock (Z)	cm		
5. Volume refers to “Above ground” (AG) or “Above stump” (AS)	AG / AS		
6. Have any of the above thresholds (points 1 to 4) changed since 1990	Yes/No		
7. If yes, then attach a separate note giving details of the change	Attachment		

6 Table T6 – Biomass stock

6.1 FRA 2005 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 living 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 biomass	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.

6.2 National data

6.2.1 Data sources

See Chapter 1.2.1.

6.3 Analysis and processing of national data

Calculation of Biomass Stock of leaving trees for the year 2000

Tree Species	Growing Stock (million m3)	Basic density (tons/m3)	Stem biomass (MILLION TONS)	BEF	AG biomass (million tons)	Root/ Shoot Ratio	BG biomass (million tons)
Holoxilon persikum	7.5	1.0	7.5	1.4	10.50	1.0	10.50
Holoxilon aphillum	1.8	1.07	1.93	1.4	2.70	1.0	2.70
Juniperus spp	1.5	0.63	0.94	1.3	1.22	1.5	1.83
Pistacia - Pistachio	0.15	1.1	0.165	1.4	0.23	3.0	0.69
Calligonum - Kandym	0.06	1.0	0.06	1.4	0.08	0.43	0.034
Soljanka	0.04	0.5	0.02	1.4	0.028	0.43	0.012
Derjziderevo	0.07	0.85	0.06	1.4	0.08	0.43	0.034
Acer - Maple	0.020	0.7	0.014	1.4	0.02	0.43	0.009
Ulmus spp. - Elm	0.015	0.62	0.01	1.4	0.014	0.43	0.006
Remainder of species	2.845	0.5	1.4	1.4	1.96	0.43	0.84
Total, year 2000	**14**		**12.10**		**16.83**		**16.66**

6.3.1 Estimation and forecasting

As there has not been any significant change in the species composition by wood volume, it was possible to estimate biomass stock using weighted conversion factors in accordance with the FRA 2005 Guidelines:

Calculating weighted conversion factors for year 2000
Conversion factor (AGB) = 16.83/14 = 1.202
Conversion factor (BGB) = 16.66/14 = 1.190

These factors were applied to calculate the values for 1990 and 2005:

Estimations for 1990
AGB = 13.9*1.202 = 16.71
BGB = 13.9*1.190 = 16.54

Estimations for 2005
AGB = 14.5*1.202 = 17.43
BGB = 14.5*1.190 = 17.26

The deadwood biomass stock (for each year) was calculated by multiplying the conversion factor 0.14 to the total biomass stock (AGB + BGB) according to the FRA 2005 Guidelines, deciduous biome.

6.4 Data for National reporting table T6

FRA 2005 Categories	Biomass (million metric tonnes oven-dry weight)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Above-ground biomass	16.71	16.83	17.43	NDA	NDA	NDA
Below-ground biomass	16.54	16.66	17.26	NDA	NDA	NDA
Dead wood biomass	4.66	4.69	4.86	NDA	NDA	NDA
TOTAL	**37.91**	**38.18**	**39.55**	NDA	NDA	NDA

7 Table T7 – Carbon stock

7.1 FRA 2005 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 living 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 biomass	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 a minimum diameter chose by the country for lying dead (for example 10 cm), in various states of decomposition above the mineral or organic soil. This includes the litter, fumic, and humic layers.
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.

7.2 National data

7.2.1 Data sources

See Chapter 1.2.1.

7.3 Analysis and processing of national data

The IPCC-GPG default conversion factor from biomass to carbon was used. Likewise, the IPCC-GPG default values for carbon in litter and soil carbon were used.

a) Calculation of Carbon Stock in Biomass of growing trees and dead wood

FRA 2005 Categories	Biomass stock (Million tonnes)			IPCC-GPG conversion factor	Carbon stock (Million tonnes)		
	1990	2000	2005		1990	2000	2005
Above-ground biomass	16.71	16.83	17.43	0.50	8.36	8.42	8.72
Below-ground biomass	16.54	16.66	17.26	0.50	8.27	8.33	8.63
Dead wood biomass	4.66	4.69	4.86	0.50	2.33	2.35	2.43

b) Calculation of Carbon Stock in litter (million ton)

Forest Types	Area, 1000 ha			Carbon Stock in litter (tons/ha)	Carbon stock (Million tonnes)		
	1990	2000	2005		1990	2000	2005
Coniferous	25	25	25	20	0.5	0.5	0.5
Broad-leaved	4102	4102	4102	28	115	115	115
TOTAL	4127	4127	4127		115.5	115.5	115.5

Using the IPCC-GPG default values for estimating litter carbon result in a considerable overestimation, hence litter carbon is reported as Insufficient Data in the final reporting table.

c) Calculation of Carbon Stock in soil (million ton)

Soil type	Areas, 1000 ha			Carbon stock on 1 ha, tons	Carbon stock, Million tons		
	1990	2000	2005		1990	2000	2005
CARBON STOCK IN HAC SOIL	25	25	25	24	0.6	0.6	0.6
Sandy soils	4102	4102	4102	19	78	78	78
TOTAL	4127	4127	4127		78.6	78.6	78.6

7.4 Data for National reporting table T7

FRA 2005 Categories	Carbon (Million metric tonnes)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Carbon in above-ground biomass	8.36	8.42	8.72	NDA	NDA	NDA
Carbon in below-ground biomass	8.27	8.33	8.63	NDA	NDA	NDA
Sub-total: Carbon in living biomass	**16.63**	**16.75**	**17.35**	NDA	NDA	NDA
Carbon in dead wood	2.33	2.35	2.43	NDA	NDA	NDA
Carbon in litter	ID	ID	ID	NDA	NDA	NDA
Sub-total: Carbon in dead wood and litter	**2.33**	**2.35**	**2.43**	NDA	NDA	NDA
Soil carbon to a depth of _____ cm	78.6	78.6	78.6	NDA	NDA	NDA
TOTAL CARBON	**97.6**	**97.7**	**98.4**	NDA	NDA	NDA

8 Table T8 – Disturbances affecting health and vitality

8.1 FRA 2005 Categories and definitions

Category	Definition
Disturbance by fire	Disturbance caused by wildfire, independently whether it broke out inside or outside the forest/OWL.
Disturbance by insects	Disturbance caused by insect pests that are detrimental to tree health.
Disturbance by diseases	Disturbance caused by diseases attributable to pathogens, such as a bacteria, fungi, phytoplasma or virus.
Other disturbance	Disturbance caused by other factors than fire, insects or diseases.

8.2 National data

8.2.1 Data sources

See Chapter 1.2.1.

8.3 Data for National reporting table T8

FRA-2005 Categories	Average annual area affected (1000 hectares)			
	Forests		Other wooded land	
	1990	2000	1990	2000
Disturbance by fire	NDA	NDA	NDA	NDA
Disturbance by insects	NDA	NDA	NDA	NDA
Disturbance by diseases	NDA	NDA	NDA	NDA
Other disturbance	NDA	NDA	NDA	NDA

8.4 Comments to National reporting table T8

Due to corresponding preventive and control measures, the fires are rapidly localized, and they bring only insignificant disturbances.

9 Table T9 – Diversity of tree species

9.1 FRA 2005 Categories and definitions

Category	Definition
Number of native tree species	The total number of native tree species that have been identified within the country.
Number of critically endangered tree species	The number of native tree species that are classified as "Critically endangered" in the IUCN red list.
Number of endangered tree species	The number of native tree species that are classified as "Endangered" in the IUCN red list.
Number of vulnerable tree species	The number of native tree species that are classified as "Vulnerable" in the IUCN red list.

9.2 National data

9.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Red Book of Turkmenistan, 1999	H	The number of endangered and vulnerable tree species	1999	
IUCN Red List				

9.3 Data for National reporting table T9

FRA 2005 Categories	Number of species (year 2000)
Native tree species	47
Critically endangered tree species	0
Endangered tree species	0
Vulnerable tree species	0

9.4 Comments to National reporting table T9

The national list of endangered species has listed 6 species as critically endangered, 1 species as endangered and 3 species as vulnerable.

10 Table T10 – Growing stock composition

10.1 FRA 2005 Categories and definitions

List of species names (scientific and common names) of the ten most common species.

10.2 National data

10.2.1 Data sources

See Chapter 1.2.1.

10.3 Data for National reporting table T10

FRA 2005 Categories / Species name (Scientific name and common name)	Growing Stock in Forests (million cubic meters)	
	1990	2000
Holoxilon persikum – White holoxilon	7.5	7.5
Holoxilon aphillum - Black holoxilon	1.8	1.8
Juniperus spp - Juniper	1.5	1.5
Pistacia - Pistachio	0.15	0.15
Calligonum - Kandym	0.06	0.06
Soljanka	0.04	0.04
Derjziderevo	0.07	0.07
Acer turkmenica - Maple	0.020	0.020
Ulmus spp. - Elm	0.015	0.015
Remainder of species	2.745	2.845
TOTAL	**13.9**	**14.0**

11 Table T11 – Wood removal

11.1 FRA 2005 Categories and definitions

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

11.2 National data

11.2.1 Data sources

See Chapter 1.2.1.

11.3 Data for National reporting table T11

FRA 2005 Categories	Volume in 1000 cubic meters of roundwood over bark					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Industrial roundwood	0	0	0	0	0	0
Woodfuel	10	10	10	NDA	NDA	NDA
TOTAL for Country	10	10	10	NDA	NDA	NDA

11.4 Comments to National reporting table T11

All the Turkmenistan forests according to the Governmental Decree belong to the First Group of Forests, i.e. protective forests, and that is why the main cuttings are not being implemented or planned. All the wood supply is provided only from the sanitary fellings which constitute not more than 10 thousand m3 annually.

12 Table T12 – Value of wood removal

12.1 FRA 2005 Categories and definitions

Category	Definition
Value of industrial wood removal	Value of the wood removed for production of goods and services other than energy production (woodfuel).
Value of woodfuel removal	Value of the wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

12.2 National data

12.2.1 Data sources

See Chapter 1.2.1.

12.3 Data for National reporting table T12

FRA 2005 Categories	Value of roundwood removal (1000 USD)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Industrial roundwood	0	0	0	0	0	0
Woodfuel	12	12	12	NDA	NDA	NDA
TOTAL for Country	12	12	12	NDA	NDA	NDA

13 Table T13 – Non-wood forest product removal

No data are available for this reporting table

14 Table T14 – Value of non-wood forest product removal

No data are available for this reporting table

15 Table T15 – Employment in forestry

15.1 FRA 2005 Categories and definitions

Category	Definition
Primary production of goods	Employment in activities related to primary production of goods, like industrial roundwood, woodfuel and non-wood forest products.
Provision of services	Employment in activities directly related to services from forests and woodlands.
Unspecified forestry activities	Employment in unspecified forestry activities.

15.2 National data

15.2.1 Data sources

See Chapter 1.2.1.

15.3 Data for National reporting table T15

FRA 2005 Categories	Employment (1000 person-years)	
	1990	2000
Primary production of goods	NDA	2.2
Provision of services	NDA	0
Unspecified forestry activities	NDA	0
TOTAL	NDA	**2.2**