Forestry Department
Food and Agriculture Organization of the United Nations

GLOBAL FOREST RESOURCES ASSESSMENT

COUNTRY REPORTS

ROMANIA

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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).

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Forest Research and Management Institute;
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Contents

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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Ministry of Silviculture, Forest inventory 1985	H	Forests; Other wooded land; Other land	1985	Is the last national forest inventory data.
Annually Statistical Report	H	"	1990	The national statistical report of National Statistics Institute
Ministry of Waters, Forest and Environment, Forest statistics report 2000 (unpublished)	H	"	2000	Annually forest reports, sent to National Statistics Institute by the national authority for forests
Ministry of Waters, Forest and Environment, Forest statistics report 2003 (unpublished)	H	"	2003	"
FAOSTAT	H	Land area	1990,2000	

1.2.2 Classification and definitions

National class	Definition
Forest land	Land covered by forest vegetation (trees) with an area more than 0.25 ha, classified as forests and land for reforestation, forest roads, buildings, nurseries etc., all of them for the needs of forest management.
Other wooded land	Land outside of national forest land, covered with forest vegetation, with a consistency more than 0.4
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 rivers, lakes and swamps.

1.2.3 Original data

National class	Area 1000 hectares					
	1985	**1990**	**2000**	**2001**	**2002**	**2003**
Forest and Other wooded land	NDA	6685.4	6600.2	6605.7	NDA	NDA
…Of which Forest land	6343.1	6371.0	6366.0	6366.7	6367.8	6368.5
…Of which OWL	NDA	314.4	234.2	239	NDA	NDA
Other land	NDA	16249.6	15503	NDA	NDA	NDA
Inland water bodies	NDA	904.1	867.8	NDA	NDA	NDA
Total Country area	23839.1	23839.1	23839.1	23839.1	23839.1	23839.1

1.3 Analysis and processing of national data

The estimation and forecasting is carried out before the calibration in the analysis and processing of national data. The reason for this is that Romania correcting and reporting a new Total land area figure for every year.

1.3.1 Estimation and forecasting

In the period 1986-1990 a large surface of degraded surfaces was included in forestland for afforestation and a part of it was also restored to old owners and excluded from forest use. A linear extrapolation forecast of 2005 using 1985 and 1990 figures would not generate a realistic value. For this reason, the forest land (subordinated to forest and other wooded land) for 2005 was forecasted by linear extrapolation of the years 2000, 2001, 2002 and 2003. The other wooded land (subordinated to forest and other wooded land) for 2005 was forecasted by linear extrapolation of the years 2000 and 2001.

National class	Area 1000 hectares		
	1990	**2000**	**2005**
Forest land (subordinated to forest and other wooded land)	6371.0	6366.0	6370.3
Other wooded land (subordinated to forest and other wooded land)	314.4	234.2	258.2

1.3.2 Calibration

National data and FAOSTAT data	1000 ha
National data Total land area 1990 (Total country area – Inland water bodies)	22935
FAOSTAT Total land area 1990	22935
National data Total land area 2000 (Total country area – Inland water bodies)	22103.2
FAOSTAT Total land area 2000	22971
Difference FAOSTAT land area minus National data land area	867.8
FAOSTAT Total land area 2002 (latest available FAOSTAT figure)	22987

Calibration is not needed for 1990.

For 2000 the difference FAOSTAT Total land area minus Total land area national data was added to the category Other land. The Inland water was calculated as the difference Total country area minus Total land area.
For 2005 the Other land area was calculated as the difference FAOSTAT Total land area (2002) minus total area of forest and other wooded land (2005). The inland water area was calculated as the difference FAOSTAT Total country area minus Total land area.

Calibrated national data

National class	Area 1000 hectares		
	1990	**2000**	**2005**
Forest and Other wooded land	6685.4	6600.2	6628.5
…Of which Forest land	6371.0	6366.0	6370.3
…Of which OWL	314.4	234.2	258.2
Other land	16249.6	16370.8	16358.5
Inland water bodies	904	868	852
Total Country area	23839	23839	23839

1.4 Reclassification into FRA 2005 classes

The difference of definition is not a reason to reclassification. The surface of 0.25 ha mentioned in national definition is mostly for describing the forest vegetation in management plans. There are no surfaces, practically, in compact forest, less than 0.5 ha, as is in FRA definition. The forest outside national forest land is more or less consistency but, for the reason of missing data, it was included in other wooded land.
Considering forest all the national forest land, as it is defined by the forest law, it is not necessary the reclassification.

1.5. Data for National reporting table T1

FRA 2005 Categories	**Area (1000 hectares)**		
	1990	**2000**	**2005**
Forest	6371	6366	6370
Other wooded land	314	234	258
Other land	16250	16371	16359
…of which with tree cover [1)]	NDA	NDA	NDA
Inland water bodies	904	868	852
TOTAL	23839	23839	23839

1) Area of "Other land with tree cover" is included in the area reported under "Other land" and should therefore be excluded when calculating the total area for the country.

1.5 Comments to National reporting table T1

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

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Forest statistics report	H	Ownership	1990, 2000	

2.2.2 Classification and definitions

There are no different classes and definitions.

2.2.3 Original data

National categories	Area (1000 hectares)			
	Forest		Other wooded land	
	1990	2000	1990	2000
Private ownership	0	361.9	0	234.2
TOTAL	**6371**	**6366.0**	**314.4**	**234.2**

2.3. Analysis and processing of national data

2.3.1 Calibration

Not needed, the Original data of "Private ownership" was deducted from the total area of Forest in T1.

2.3.2 Estimation and forecasting

Before 1991 all the forest land was public ownership. In 1991, after the application of the Law 18/1991, a part of forest land was restored to old owners (355.7 thousand ha) and the Other wooded land was restored "*in integrum*". In 2000, accordingly to the new law of the restitution of ownership right on the land, it has begun the process of restitution. At the end of 2000 it was restored the ownership right for 6.2 thousand ha that, together with the old surface, touched 355.7 thousand ha. 1113.8 thousand ha where in the private ownership at the end of 2003.

2.4. Reclassification into FRA 2005 classes

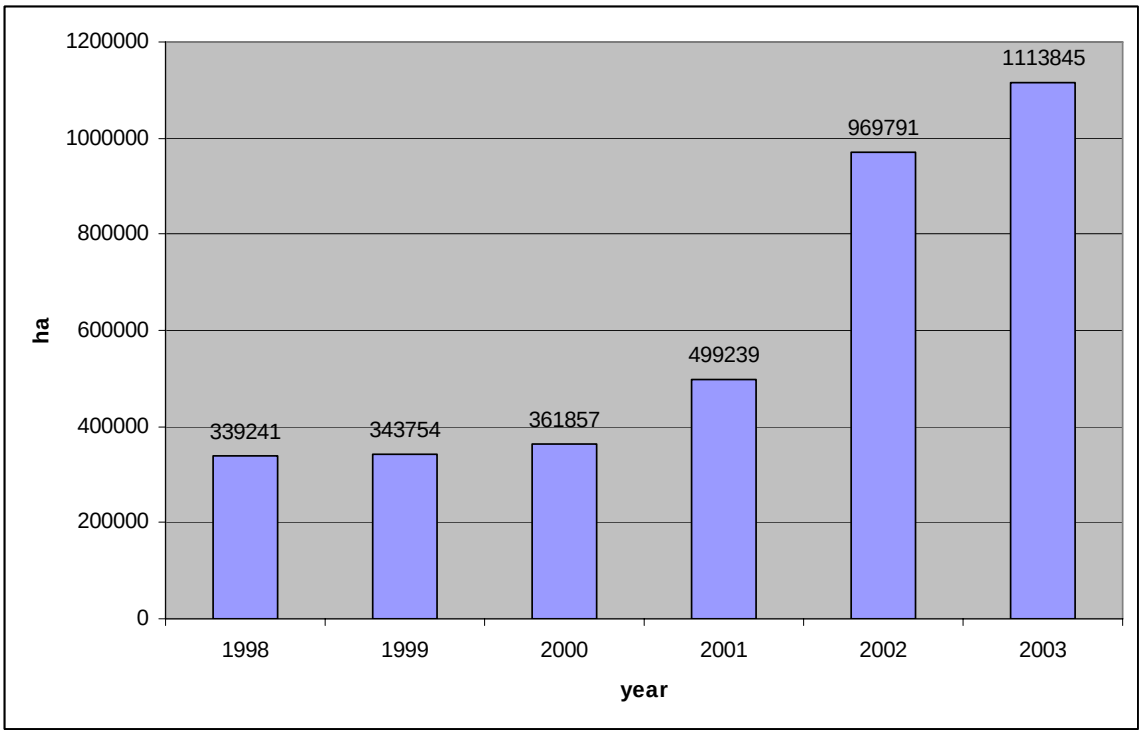
Not needed.

2.5. Data for National reporting table T2

FRA 2005 Categories	Area 1000 hectares			
	Forest		Other wooded land	
	1990	2000	1990	2000
Private ownership	0	362	0	234
Public ownership	6371	6004	314	0
Other ownership	0	0	0	0
TOTAL	**6371**	**6366**	**314**	**234**

2.6. Comments to National reporting table T2

The evolution of restoring forest property is done in the follow picture:



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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Ministry of Silviculture, Forest inventory 1985	H	Protective functions; Productive functions	1985	Only for grouping in wood productive and protective functions
Ministry of Agriculture, Forests and Rural Development, 2003, Forest statistics report	H	Protective functions; Productive functions	1990, 2000, 2003	Only for grouping in wood productive and protective functions
Criteria and indicators for sustainable management of Romanian forests, 2002; Author: Forest Research and Management Institute (unpublished)	H	Protective functions	1999	It is included different periods in analyze.

3.2.2 Classification and definitions

National class	Definition
Special protection function (protected areas)	Forest land designated mainly for specially protection functions. It is the object of total protection and is included in protected areas.
Production and protection functions	Forest land designated for production and extraction of forest goods, including both wood and non-wood products and secondary.
Protection and production functions	Forest land designated for protection functions, where is applied a special management depending on the intensity of protection function designated. By this management it could be possible production of wood or non-wood products.

3.2.3 Original data

General classification accordingly with the primary function

National class	Area 1000 hectares				
	1985	**1990**	**1999**	**2000**	**2003**
Protection	1668.2	2185.2	3323.6	3323	3100.7
Production	4001.7	4185.8	3043.4	3043	3267.8
Total forest land	6343.1	6371.0	6367.0	6366.0	6368.5

In 1999, accordingly with forest management plans in use, it was synthesized the area with special protective functions (included in protection class in the picture above). There were included the values for 1999 for estimating the proportion of different categories of protective functions, by area and percent from total area with protective functions.

National categories for protective function (year 1999)	**1000 hectares**	***% total forest land protection***
Protection of water	1052.0	*32*
Protection of soils	1433.0	*43*
Protection against climatic and industrial damaging factors	166.5	*5*
Social function	364.2	*11*
Scientific and biodiversity conservation	307.9	*9*
…of which protected areas (subord. to biodiv. conserv.)	(127.7)	*(4)*
Total forest land with protective functions	**3323.6**	***100***

The percent of different categories of protective functions is used for the estimation of protective categories in years 1990 and 2005 for the total area with function.

Data is not available for Other wooded land.

3.3. Analysis and processing of national data

3.3.1 Calibration

The Total forest land area for 2003 is calibrated to match the Total area of forest in T1 for the year 2005. The difference between the T1 forecasted Total area of forest (2005) and the Total area of forest in section 3.2.3 (2003) is 1 500 hectares. The difference is proportionally shared between the national classes of Protection (49%) and Production (51%).

National class	Area 1000 hectares
	Calibrated 2003 data for 2005
Protection	3101.4
Production	3268.6

3.3.2 Estimation and forecasting

Because the data for each year is separated in two big categories, only the production function was put into consideration for estimating at 2005's period, being identifiable each year.
For 1985 and 2003 data, the classification includes only two categories, depending on primary function: productive or protective.

National categories for protective function	**1990**	**2000**[1]	**2005**[2]
Protection of water	699.3	1052.0	992.4
Protection of soils	939.6	1433.0	1333.6
Protection against climatic and industrial damaging factors	109.3	166.5	155.1
Social function	240.4	364.2	341.2
Scientific and biodiversity conservation	196.7	307.9	279.1
…of which protected areas (subord. to biodiv. conserv.)	(87.4)	(127.7)	(124.1)
Total forest land with protective functions	2185.3	**3323.6**	**3101.4**

[1] 1999 used for 2000
[2] 2003 used for 2005

For 1999, it was synthesized the area with special protective functions designated by management plans in use. Because the proportion between different categories of protective function is not significant changeable, it was calculated the percent of each categories from the total area with protective functions, as in the picture above. For each type of function and the need of protection, there is adopting, by management rules, different types of silvicultural measures:

- Type I – includes the forest with special function for the protection of nature and, by law, there is interdict any kind of wood removal actions;
- Type II – includes forests with special function of protection, in difficult ecological conditions and other forests from with the wood removal is not permitted; there is possible only special works for conservation;
- Type III – includes forests with special function of protection and the wood removal is permitted applying only the system "close to nature";
- Type IV – includes forests with special function of protection and where is permitted the wood removal applying special measures (intensive silvicultural treatments).

Area (1000 ha) of forests with special function by types of silvicultural measures (1999)

Primary	TI	TII	TIII+TIV	Tot. area	% of area where is permitted wood removal
Protection of water	0	26.4	1025.6	1052.0	98
Protection of soils	0	937.7	495.3	1433.0	35
Total protection of water and soils	0	964.1	1520.9	2485.0	61
Protection against climatic and industrial damaging factors	0	85.1	81.4	166.5	49
Social function	0	103.5	260.7	364.2	72
Scientific and biodiversity conservation	127.7	100.6	79.6	307.9	26
Total forests with protective functions	127.7	1253.3	1942.6	3323.6	58

Calculated area of protected forests where wood removal is permitted	**Area 1000 hectares**		
	1990	**2000[1]**	**2005[2]**
Protection of water	685.3	1031.0	972.6
Protection of soils	328.9	501.6	466.8
Protection against climatic and industrial damaging factors	53.6	81.6	76.0
Social function	173.1	262.2	245.7
Scientific and biodiversity conservation	51.1	80.1	72.6
Total area of protected forest where wood removal is permitted	**1292.0**	**1956.5**	**1833.7**

The percent of protective categories were wood removal is permitted is used for estimation of Total area with function in section 3.5.
The 1999 data is used for 2000 and 2003 data is used for 2005.
For the years 1990 and 2005, the same percent for the protective forests was maintained for the total area of forests.
The percent of productive function is adopted for the area where is possible the wood removal, by management plans.
The percent for the other functions are based on expert estimate.

Analysis of total area with functions

Primary function	1000 ha	Percentage of area serving other functions			
		Production	Protection of water and soils	Conservation of biodiversity	Social services
Production	3043.4	100		10	10
Total protection of water and soils	2485.0	61	100	10	10
Protection against climatic and industrial damaging factors	166.5	49	100		10
Conservation of biodiversity	307.9	26		100	30
Social services	364.2	72			100

3.4. Reclassification into FRA 2005 classes

The FRA category Protection of soil and water = The sum of national categories: Protection of water, Protection of soil, and Protection against climatic and industrial damaging factors.

For the protective functions of other wooded land, where is no data for each field of protection, they were included in FRA category as multiple function. All forest land has a primary function designated by management plans.

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	4186	3043	3269	5479	5000	5102
Protection of soil and water	1748	2652	2481	1748	2652	2481
Conservation of biodiversity	197	307	279	790	877	854
Social services	240	364	341	893	1026	1000
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	**6371**	**6366**	**6370**	**not appl.**	**not appl.**	**not appl.**
Other wooded land						
Production	0	0	0	NDA	NDA	NDA
Protection of soil and water	0	0	0	NDA	NDA	NDA
Conservation of biodiversity	0	0	0	NDA	NDA	NDA
Social services	0	0	0	NDA	NDA	NDA
Multiple purpose	314	234	258	not appl.	not appl.	not appl.
No or unknown function	0	0	0	not appl.	not appl.	not appl.
Total – Other wooded land	**314**	**234**	**258**	**not appl.**	**not appl.**	**not appl.**

3.5. Comments to National reporting table T3

In the category of multiple purposes was included area of other wooded land.
All forest land has a primary function designated by management plans.

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 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Criteria and indicators for sustainable management of Romanian forests, 2002; Author: Forest Research and Management Institute (unpublished)	M	Primary, modified natural, semi-natural, plantations	1999	Data obtained from "Research concerning forest vegetation in Romania"; V. Giurgiu, scientific report, 1994, Forest Research and Management Institute.

4.2.2 Classification and definitions

National class	Definition
Natural fundamental forests	Forest land of: - native species, where are no clearly visible indication of human activities and the ecological processes are not significantly disturbed; - native species where is clearly visible indication of human activities but the process of regeneration is natural or follows the natural regeneration model; - native species through planting or seeding, aiming the natural regeneration, following the natural structure.
Derived forests	Forest land of natural regenerated native species, even through planting aiming the natural regeneration, more or less with different species as natural regenerated ones.
Artificial forests	Forest land established through planting, seeding, following the natural structure in similar ecological conditions.
Undefined forests	Forest land of introduced or native species, mainly for production of wood or non-wood products, or for provision of services (protective plantations).

Note: If different national data sources use different classes and definitions, a table such as above is needed for each relevant data source.

4.2.3 Original data

National class	1999 (% from total forest land)	1999 forest land (1000 ha)
Natural fundamental type of forest	68%	4329.5
Derived forests	10%	636.7
Artificial forests	21%	1337.1
Undefined	1%	63.7
Total forest land	100%	6367

There are no data for other wooded land.

Accordingly with classification given by management plans description, it was established, in 1999, the forest area of each type of forest, as they were described in National definition. From Natural fundamental type, it was included as primary and modified natural the virgin and quasi-virgin forest, as they were given in the same source (Criteria and indicators for sustainable management forests in Romania, 1999). The participation was calculated following each surface and the difference was added to semi-natural category. The same method was used for the artificial and undefined forests: from the total of artificial, was assumed that the surface of seed orchards and poplar plantation are included in productive plantations and the afforestation of degraded land is considered as protective plantation. For undefined forest, from the total, it was included in productive plantation the surface of plantations too young to be defined, and in protective plantation category, the young plantation in degraded land.

4.3. Analysis and processing of national data

Following the proportion of different types of forest, it was calculated the surface for each type of forest. As between 1999 and 2000 the difference of surface is not significant, it is assumed that the data are available for 2000, too.

4.3.1 Calibration

4.3.2 Estimation and forecasting

There are no data available for 1990. For the estimation of this year, it was calculated the area of each type of forest using the percent obtained from the classification of 1999 year, mentioned in picture above (4.2.3). For 2000's estimation it was adjusted the biggest surface of semi-natural forests with the difference between total surface of 1999 and 2000 year. Considering that the type of forest is not possible to be modified in few years, it is possible to adopt the same proportion for the forest land estimated for 2005.

4.4. Reclassification into FRA 2005 classes (%)

National class	Natural fundamental	Derived	Artificial	Undefined
FRA 2005 class				
Primary	5.4			
Modified natural	15			
Semi-natural	79.6	100	91	54.6
Productive plantation			6.8	1.6
Protective plantation			2.2	43.8
Total	100	100	100	100

4.5. Data for National reporting table T4

FRA 2005 Categories	**Area (1000 hectares)**					
	Forest			**Other wooded land**		
	1990	**2000**	**2005**	**1990**	**2000**	**2005**
Primary	233	233	233	NDA	NDA	NDA
Modified natural	651	650	651	NDA	NDA	NDA
Semi-natural	5339	5334	5339	NDA	NDA	NDA
Productive plantation	92	92	92	NDA	NDA	NDA
Protective plantation	57	57	57	NDA	NDA	NDA
TOTAL	**6372**	**6366**	**6372**			

4.6. Comments to National reporting table T4

Values of different categories were deducted using the proportion defined in Forest Research and Management Study. Values for productive plantations are those of poplars hybrids and seed orchards.
Values of protective plantations were distinguished those in degraded area.
Semi-natural forest includes mostly of productive forest and a part of protective ones.
Totals in T1 and T4 should be the same. They may not tally completely with the sums due to rounding.

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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Ministry of Silviculture, Forest inventory, 1985	H	growing stock	1985	
Criteria and indicators for sustainable management of Romanian forests, 2002; Author: Forest Research and Management Institute (unpublished)	M	Age distribution of growing stock	1985	

5.2.2 Classification and definitions

There are no differences of classification and definitions

5.2.2 Original data

Categories	Forest area and Growing stock 1985
Growing stock (mill. M3)	1341.4
Forest area (1000 ha)	6343.1

5.3. Analysis and processing of national data

At the end of 1985, the growing stock was evaluated (Forest Inventory-1985). For the next period, 1990, 2000 and 2005 it was estimated, using the relationship between area and the growing stock by unit of area (211.5 m3 per hectare), adjusting the growing stock under the forest area variation.
The commercial growing stock was calculated as part of total growing stock, putting into consideration the growing stock of the first age-class and the participation in total forest land of each group of forest species (coniferous and broadleaves).

5.3.1 Calibration

No calibration is necessary.

5.3.2 Estimation and forecasting

For years 1990, 2000, and 2005 the value of growing stock is the result of estimation, under the variation of forest area, reported at 1985 values. For the commercial growing stock, it was assumed that the growing stock from the first age-class (1-20 years) is able to be commercialized only 50% from total. In Forest Inventory in 1985, the growing stock in the first-age class is 4% that mean a commercial growing stock 2% from the total growing stock. The commercial growing stock was calculated as 98% from total growing stock.

5.4. Reclassification into FRA 2005 classes

Not necessary.

5.5. 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	1347.5	1346.4	1347.3	NDA	NDA	NDA
Commercial growing stock	1320.6	1319.5	1320.4	NDA	NDA	NDA

Specification of country threshold values	Unit	Value	Complementary information
1. Minimum diameter at breast height of trees included in Growing stock (X)	cm	8	
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	8	
5. Volume refers to “Above ground” (AG) or “Above stump” (AS)	AG / AS	AS	
6. Have any of the above thresholds (points 1 to 4) changed since 1990	Yes/No	No	
7. If yes, then attach a separate note giving details of the change	Attachment	-	

5.6. Comments to National reporting table T5

For other wooded land there are no data. Without the possibility of account it, it was decided to avoid from national report.

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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Forest Inventory	H	Growing stock	1985	

6.2.2 Classification and definitions

No different definitions or classification

6.2.3 Original data

Year 1985			Calculation of living biomass					
Species	*Surface*	*Growing stock million m^3*	Basic density (tonnes/m^3)	Stem biomass (million tonnes)	Biomass Exp.Fact.	A.G.biomass (million tonnes)	Root-Shoot Ratio	B.G. biomass (million tonnes)
Fagus	*1790.4*	*472.6656*	0.58	274.146	1.4	383.8045	0.24	92.11307
Picea	*1390.7*	*386.6146*	0.4	154.6458	1.3	201.0396	0.23	46.23911
Quercus	*596.5*	*102.598*	0.58	59.50684	1.3	77.35889	0.35	27.07561
Abies	*312.3*	*123.6708*	0.4	49.46832	1.4	69.25565	0.23	15.9288
Robinia	*146.5*	*10.841*	0.58	6.28778	1.3	8.174114	0.43	3.514869
Quercus	*125.4*	*22.4466*	0.58	13.01903	1.3	16.92474	0.35	5.923658
Populus	*117.6*	*16.6992*	0.35	5.84472	1.3	7.598136	0.26	1.975515
Tilia	*87.4*	*19.1406*	0.43	8.230458	1.3	10.6996	0.24	2.567903
Pinus	*82.1*	*7.2248*	0.42	3.034416	1.4	4.248182	0.32	1.359418
Fraxinus	*40.5*	*5.832*	0.57	3.32424	1.3	4.321512	0.35	1.512529
Others	*1653.7*	173.667	0.52	90.30684	1.3	117.3989	0.26	30.52371
Total		**1341.4002**		**667.8145**		**900.8238**		**228.7342**

6.3. Analysis and processing of national data

Values of biomass were calculated on the 1985's data about species, surfaces of each species and basic densities, then applying general formulas from Guidelines for country reporting to FRA 2005. For reporting years it was used the conversion factors following information from table T5.

6.3.1 Calibration

Not necessary

6.3.2 Estimation and forecasting

Values obtained after calculation are presented at chapter 6.2.3.
For estimation at reporting years, it was used weighted conversion factors:
WCF_{agb}=0.671 and WCF_{bgb}=0.170

Year	**1990**	**2000**	**2005**
Growing stock	1347.5	1346.4	1347.3

6.4. Reclassification into FRA 2005 classes

Not necessary.

6.5. 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	904.173	903.434	904.038	no data	no data	no data
Below-ground biomass	229.075	228.888	229.041	no data	no data	no data
Total living biomass	1133.248	1132.322	1133.079	no data	no data	no data
Dead wood biomass*	179.636	181.286	181.392	no data	no data	no data
TOTAL	**1312.884**	**1313.608**	**1314.471**	no data	no data	no data

* it was calculated using dead-life ratios (table 5.6.) reporting at the species' participation.

Thresholds used by the country are the following:

- Growing stock from T5;
- Surface of species or grouping species from T10;
- Basic wood density from Appendix 5 Table 5.2.;
- Biomass expansion factors from Table 5.4;
- Root-shoot Ratio from Table 5.5. Conifers and temperate broadleaf forests (mean).

6.6. Comments to National reporting table T6

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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Criteria and indicators for sustainable management of Romanian forests, 2002; Author: Forest Research and Management Institute (unpublished)	M		1984,1999	Data from Study concerning carbon stock in forest ecosystems in Romania, 1999, Forest Research and Management Institute

7.2.2 Classification and definitions

It is not necessary

7.2.3 Original data

FRA 2005 Categories	Carbon (Million metric tonnes)		
	Forest		Other wooded land
	1984	1999	
Sub-total: Carbon in living biomass	498	502	**NDA**
Soil carbon to a depth of __50__ cm	NDA	723	
TOTAL CARBON	**NDA**	**1225**	

7.3. Analysis and processing of national data

For the reason few data, the carbon stock was calculated using the global conversion factor of 0.5 applied to Biomass stock figures in T6.

7.3.1 Calibration

Since the national data are not for all categories of carbon stock, it is considered that it is not necessary the calibration of calculated data through the national values of total carbon stock and soil carbon.

7.3.2 Estimation and forecasting

	Carbon (Million metric tonnes)		
Year	*1990*	*2000*	*2005*
Carbon stock of above-ground biomass	452.087	451.717	452.019
Carbon stock of bellow-ground biomass	114.538	114.444	114.521
Carbon stock in living biomass	566.625	566.161	566.540
Carbon stock of dead wood	89.818	90.643	90.696
Total carbon stock in living biomass and dead wood	656.443	656.804	657.236
Carbon in litter	58.884	58.884	58.884
Soil carbon to a depth of 50 cm	723.000	723.000	723.000
Total carbon			

The difference between the national evaluation of total carbon stock and the calculated value is probably due to an over evaluation in carbon stock in living biomass and missing data of carbon stock in dead wood and in litter.

7.4. Reclassification into FRA 2005 classes

Not needed.

7.5. 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	452.087	451.717	452.019	NDA		
Carbon in below-ground biomass	114.538	114.444	114.521			
Sub-total: Carbon in living biomass	**566.625**	**566.161**	**566.540**			
Carbon in dead wood	89.818	90.643	90.696			
Carbon in litter	58.884	58.884	58.884			
Sub-total: Carbon in dead wood and litter	**148.702**	**149.527**	**149.580**			
Soil carbon to a depth of __50_ cm	**723**	**723**	**723**			
TOTAL CARBON	**1438.327**	**1438.688**	**1439.120**			

7.6. Comments to National reporting table T7

Since data is the result of calculation on general coefficients, the value have to be considered approximated.

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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Forest Monitoring; Forest Research and Management Institute, 2003	H	insect disturbances, fire disturbances	1990- 2003	
Forest Fire Monitoring; Forest Research and Management Institute; 2002 (unpublished)	H	Forest fire disturbances	1999-2003	Study to evaluate the risk to fire for forest land in Romania
Forest Fire Monitoring; Forest Research and Management Institute; 2003 (unpublished)	H	Forest fire disturbances	2003	Data for the National Report of the forest land
Forest Department; Annually National Report on wind damages in forest (unpubl.)	H	Wind disturbances	1999 -2002	Report of Forest Department as synthesis of forest land status

8.2.2 Classification and definitions

No different classes and definitions

8.2.3 Original data

Proportion of trees (% from total) attacked in different intensities by defoliators in 1990-2003 period

Year of evaluation	Class (group of class) of attack	
	intense and very intense (3 – 4)	moderate, intense and very intense (2 – 4)
1990	1,0	13,0
1991	1,3	9,7
1992	3,7	16,7
1993	2,6	20,5
1994	3,1	21,3
1995	2,0	16,4
1996	2,1	16,8
1997	2,0	15,1
1998	1,4	12,3
1999	1,3	12,7
2000	1.5	14.3
2001	1.3	13.3
2002	1.5	13.5
2003	1,5	12,6

Fires registered in forest land in 1999-2003 period

Year	Surface affected	Number of fires
1999	360.92	136
2000	3603.0	688
2001	952.2	265
2002	3567.7	515
2003	703.0	193

Data for wind damages in forest land is available only for the period 2001-2003. In this period was affected by wind breakings a total surface of 78.2 thousand hectares, that means 26.1 thousand hectare/year.

8.3. Analysis and processing of national data

The original data does not permit to make an assessment of the area affected by defoliators. No data is available on areas affected by forest fires for reference year 1990.

8.3.1 Estimation and forecasting

For area disturbed by fire for reference year 2000 the average area was calculated as the mean of 1999, 2000 and 2001.

For the wind damages, the annual mean of the surface affected is no relevant because of dispersal character of them; for the year 2000 as reference, it was calculated the mean of damages for the 2001-2003 period as they are mentioned in original data as information.

8.4. Reclassification into FRA 2005 classes

Not needed.

8.5. 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	1.64	NDA	NDA
Disturbance by insects	NDA	NDA	NDA	NDA
Disturbance by diseases	NDA	NDA	NDA	NDA
Other disturbance (wind)	ID	26.1	NDA	NDA

8.6. Comments to National reporting table T8

There are not available data for the period requested. After the multi-annual analyze of fire disturbances, the Romanian forests are classified on low risk to fire. The most surface affected was in 2002 when, after a long dry period, it was a big surface affected (3603 ha burned). The evolution of fire disturbances is correlated to dry years.

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
Inventory and strategy for sustainable management and protection of virgin forest in Romania (PINMATRA/2001/018), Forest Research and Management Institute, Bucharest, 2002	H	Diversity of tree species		
IUCN Red list of endangered species	H	Endangered tree species	2000	

9.2.2 Classification and definitions

Not necessary

9.2.3 Original data

Accordingly with national evaluation, there are 58 species of trees identified overall Romanian forest land. Under the IUCN Red List, in Romania there is 1 species classified as vulnerable (*Betula oycoviensis*).

9.3. Data for National reporting table T9

FRA 2005 Categories	Number of species (year 2000)
Native tree species	58
Critically endangered tree species	0
Endangered tree species	0
Vulnerable tree species	1

9.4. Comments to National reporting table T9

In 1995 it was established the national red list but it is not published.
Under the IUCN Red List, in Romania there is 1 species classified as vulnerable (*Betula oycoviensis*).

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

References to sources of information	**Quality (H/M/L)**	**Variable(s)**	**Year(s)**	**Additional comments**
Forest Inventory 1985	H	Surface, growing stock/species/ha	1985	
Forest statistics 2002	H	surface/species	2002	

10.2.2 Original data

Year 1985		
Scientific name	**Common name**	***Growing stock million m^3***
Fagus sylvatica	Beech	472.6656
Picea abies	Norway spruce	386.6146
Quercus petraea	Sessile oak	102.598
Abies alba	Silver fir	123.6708
Robinia pseudacacia	Black locust	10.841
Quercus fobur	Oak	22.4466
Populus sp.	Poplars	16.6992
Tilia sp.	Lime	19.1406
Pinus sylvestris	Red pine	7.2248
Fraxinus excelsior	Ash	5.832
Others		173.667
Total		**1341.4002**

10.3. Analysis and processing of national data

10.3.1 Calibration

Not needed.

10.3.2 Estimation and forecasting

Scientific name	**Common name**	***Growing stock million m^3***	***% of total growing stock***	
Fagus sylvatica	Beech	472.6656	35.2	
Picea abies	Norway spruce	386.6146	28.8	
Quercus petraea	Sessile oak	102.598	7.6	
Abies alba	Silver fir	123.6708	9.2	
Robinia pseudacacia	Black locust	10.841	0.8	
Quercus fobur	Oak	22.4466	1.7	
Populus sp.	Poplars	16.6992	1.2	
Tilia sp.	Lime	19.1406	1.4	
Pinus sylvestris	Red pine	7.2248	0.5	
Fraxinus excelsior	Ash	5.832	0.4	
Others		173.667	12.9	13.2
Total		**1341.4002**	**99.7**	**100**

The category others was adjusted to tally with T5.

The percentage of total growing stock by species (1985) was multiplied by growing stock in T5.

Scientific name	Common name	**1990**		**2000**
Fagus sylvatica	Beech	*0.352%*	474.32	473.9328
Picea abies	Norway spruce	*0.288%*	388.08	387.7632
Quercus petraea	Sessile oak	*0.076%*	102.41	102.3264
Abies alba	Silver fir	*0.092%*	123.97	123.8688
Robinia pseudacacia	Black locust	*0.008%*	10.78	10.7712
Quercus fobur	Oak	*0.017%*	22.9075	22.8888
Populus sp.	Poplars	*0.012%*	16.17	16.1568
Tilia sp.	Lime	*0.014%*	18.865	18.8496
Pinus sylvestris	Red pine	*0.005%*	6.7375	6.732
Fraxinus excelsior	Ash	*0.004%*	5.39	5.3856
Others		*0.132%*	177.87	177.7248
Total			1347.5	1346.4

10.4. Data for National reporting table T10

Scientific name	**Common name**	**1990**	**2000**
Fagus sylvatica	Beech	474.32	473.93
Picea abies	Norway spruce	388.08	387.76
Abies alba	Silver fir	123.97	123.87
Quercus petraea	Sessile oak	102.41	102.33
Quercus fobur	Oak	22.91	22.89
Tilia sp.	Lime	18.87	18.85
Populus sp.	Poplars	16.17	16.16
Robinia pseudacacia	Black locust	10.78	10.77
Pinus sylvestris	Red pine	6.74	6.73
Fraxinus excelsior	Ash	5.39	5.39
Remaining	Remaining	177.87	177.72
Total		**1347.5**	**1346.4**

10.5. Comments to National reporting table T10

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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
FAOSTAT	H	industrial wood removal; fuel wood removal	1988-1992; 1998-2002	under bark volume
Annually Statistical Report	H	wood removal	1988-1992, 1998-2002	over bark volume
National Institute of Statistics; 2004; Wood removal by economic companies in 2003	H	Round wood removed; industrial roundwood; wood fuel	2003	over bark volume
Victor Giurgiu, Ilie Decei, Dorin Draghiciu: Modele si tabele dendrometrice; Ed. Ceres, 2004	H	Primary sort of wood removed		It was estimated the proportion between under bark round wood and the bark of the stem.

11.2.2 Classification and definitions

National class	Definition
wood removed by economic companies	Wood removed over bark by forest companies, in which is included about 80% industrial round wood and about 20% wood fuel.
wood removed for own needs	Wood removed from less quality forests, for own needs and in wich is included about 30% industrial round wood and about 70% wood fuel.

11.2.3 Original data

National class	1990	2000
Total wood removed	17218	14285

From the data obtained meaning the values of Annex 3.-1 and 3.-2 of Guidelines for country reporting to FRA 2005, the volume under bark of industrial and fuel wood in Romania, it was obtained:

11.3. Analysis and processing of national data

11.3.1 Estimation and forecasting

From the wood removed by economic companies, the report of industrial/fuel wood use is 80.1/19.9. For the wood removed for own needs, the report of industrial/fuel wood use is 30/70.

From total of removed wood, about 66% is for industrial use and 34% for energy production. The wood removed by economic companies have a better quality and the percent of industrial wood is more than the own needs one.

11.4. Reclassification into FRA 2005 classes

Not needed.

11.5. 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 round wood	11363.6	9428	11418	ID	ID	ID
Woodfuel	5854.2	4857	5882	ID	ID	ID
TOTAL for Country	**17217.8**	**14285**	**17300**	ID	ID	ID

11.6. Comments to National reporting table T11

Percentages for reclassification into FRA 2005 classes for the wood obtained from own needs category are informative. The differences between the values obtained from Guidelines for country reporting FRA 2005 and data obtained from National Statistical Yearbook is due to the bark included in the last source.
The estimation for 2005 is not linear; it was considered the government decision which approves the maximum volume to be removed in 2005 which is closely with the volume approved and removed in the last two years.

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 (wood fuel).
Value of wood fuel 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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Forest statistics	H	mean value of a m^3 wood to be removed by economic companies	1990, 2000, 2005	Data obtained from National Administration of Forests

12.2.2 Classification and definitions

No necessary.

12.2.3 Original data

Category	1990	2000	2005**
Total value of wood removed (ROL*/m^3) by the National Administration of Forests	124	283594	668000

*ROL: Romanian currency

** The value is the mean of contracts value for approximately 40% of total wood approved to be removed in 2005.

12.3. Analysis and processing of national data

There is no information about the value of industrial wood or wood fuel, separately, either for other years, so is not possible to calculate the mean of five years for the reference year.

12.3.1 Estimation and forecasting

It was assumed the mean price of wood removal from National Administration of Forest and it was calculated the value of total wood removed as it was mentioned in Table 11.

Category	1990	2000	2005
Total wood removal	17217.8	14285	17300
Mean value (USD/m^3)	3.6	10.9	24.4
Total value (USD)	61985	155706	422120

*exchange rate in February 15, 2005

12.4. Reclassification into FRA 2005 classes

12.5. Data for National reporting table T12

FRA 2005 Categories	Value of round wood removal (1000 USD)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Industrial roundwood	ID	ID	ID	ID		
Woodfuel	ID	ID	ID			
TOTAL for Country	**61.985**	**155.706**	**422.120**			

12.6. Comments to National reporting table T12

13. Table T13 – Non-wood forest product removal

13.1. FRA 2005 Categories and definitions

The following categories of non-wood forest products have been defined:

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. Bush meat
13. Raw material for medicine
14. Raw material for colorants
15. Other edible animal products
16. Other non-edible animal products

13.2. National data

13.2.1 Data sources

References to sources of information	**Quality (H/M/L)**	**Variable(s)**	**Year(s)**	**Additional comments**
National Institute of Statistics, Bucharest, 2004; National Forest Land	H	all	1999-2003	

13.2.2 Classification and definitions

Not necessary

13.2.3 Original data

Data is obtained from statistical reports of National Institute of Statistics, about the forest land information, for the period 1999-2003.

FRA 2005 Categories	Scale factor	**Unit**	**NWFP removal**				
			1999	**2000**	**2001**	**2002**	**2003**
Plant products / raw material							
1. Food (forest fruit, seeds and mushrooms)	1	tonnes	8531	6072	10653	7919	8903
2. Fodder			0	0	0	0	0
3. Raw material for medicine and aromatic products	1	tonnes	313	218	310	279	543
4. Raw material for colorants and dyes			0	0	0	0	0
5. Raw material for utensils, handicrafts & construction	1	tonnes	10814	9176	5499	5491	5338
6. Ornamental plants (Christmas trees)	1000	pieces	1264	255	338	266	1104
7. Exudates			0	0	0	0	0
8. Other plant products (forest	1000	pieces	14276	14304	63498	39121	43341

seedlings)							
Animal products / raw material							
9. Living animals	1	pieces					
10. Hides, skins and trophies	1	pieces					
11. Wild honey and bee-wax	1	tonnes					
12. Bush meat							
13. Raw material for medicine							
14. Raw material for colorants							
15. Other edible animal products							
16. Other non-edible animal products							

13.3. Analysis and processing of national data

It is considered that the non-wood product can't be interpolated/extrapolated on the reference years of FRA 2005. If the mean of years 1999-2003 is accepted as reference year 2000, then the table 13.5 is able to be completed for 2000 year. The average weight of a Christmas tree is estimated to be 10 kg. The average weight of other plants is estimated to be 0.1 tones/1000 pieces.

13.4. Reclassification into FRA 2005 classes

13.5. Data for National reporting table T13

Insufficient data

FRA 2005 Categories	**Scale factor**	**Unit**	**NWFP removal**		
			1990	**2000**	**2005**
Plant products / raw material					
1. Food	1	tonnes	ID	8416	ID
2. Fodder			0	0	0
3. Raw material for medicine and aromatic products	1	tonnes	ID	333	ID
4. Raw material for colorants and dyes			0	0	0
5. Raw material for utensils, handicrafts & construction	1	tonnes	ID	7264	ID
6. Ornamental plants	1	tonnes	ID	64.5	ID
7. Exudates			0	0	0
8. Other plant products	1	tonnes	ID	3491	ID
Animal products / raw material					
9. Living animals			ID	ID	ID
10. Hides, skins and trophies			ID	ID	ID
11. Wild honey and bee-wax			ID	ID	ID
12. Bush meat			ID	ID	ID
13. Raw material for medicine			ID	ID	ID
14. Raw material for colorants			ID	ID	ID
15. Other edible animal products			ID	ID	ID
16. Other non-edible animal products			ID	ID	ID

13.6. Comments to National reporting table T13

Due to impossibility to estimate the production of non-wood products for reference years of FRA 2005, the amount of products is presented only like mean of production in the1999-2003 period.

Table T14 – Value of non-wood forest product removal

14.1. FRA 2005 Categories and definitions

The following categories of non-wood forest products have been defined:

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. Bush meat
13. Raw material for medicine
14. Raw material for colorants
15. Other edible animal products
16. Other non-edible animal products

14.2. National data

14.2.1 Data sources

References to sources of information	**Quality (H/M/L)**	**Variable(s)**	**Year(s)**	**Additional comments**
Forest statistics	M	all	2002	

14.2.2 Classification and definitions

Not necessary

14.2.3 Original data

As it was mentioned in table 13, the data for estimation the non-wood product at level of years asked by table 14 are more insufficient, because only the value of products for 2002 are communicated.

14.3. Analysis and processing of national data

14.4. Reclassification into FRA 2005 classes

14.5. Data for National reporting table T14

Insufficient data

FRA 2005 Categories	**Value of the of NWFP removed (1000 USD)**		
	1990	**2000**[1]	**2005**
Plant products / raw material			
1. Food		3553.58	
2. Fodder			
3. Raw material for medicine and aromatic products		179.82	
4. Raw material for colorants and dyes			
5. Raw material for utensils, handicrafts & construction		1750.34	
6. Ornamental plants		590.5	
7. Exudates			
8. Other plant products		1490.11	
Animal products / raw material 9. Living animals		525.86	
10. Hides, skins and trophies		0.24	
11. Wild honey and bee-wax		37.47	
12. Bush meat			
13. Raw material for medicine			
14. Raw material for colorants			
15. Other edible animal products			
16. Other non-edible animal products			
TOTAL		**8127.92**	

[1] The value for 2002 is used for 2000.

14.6. Comments to National reporting table T14

In the case when the non-wood products reported are not correlated with the natural potential of forest land and this potential were never evaluated, the Tables 13 and 14 are completed for years 2001 and, respectively, 2002, only for information (the values are used for 2000).

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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Annually statistical report	M	employment in forestry	1990, 2000	

15.2.2 Classification and definitions

National class	Definition
Silviculture, forest harvesting and hunting economy	Employment in activities related to primary production of goods, services from forests and woodlands and hunting economy

15.2.3 Original data

Category	1000 person years	
	Year 1990	Year 2000
Silviculture, forest harvesting and hunting economy	89	47

15.3. Analysis and processing of national data

The data are not possible to be reclassified into FRA 2005 classes, because of lack of information.

15.4. Reclassification into FRA 2005 classes

Not needed.

15.5. Data for National reporting table T15

FRA 2005 Categories	Employment (1000 person-years)	
	1990	2000
Primary production of goods	ID	ID
Provision of services	ID	ID
Unspecified forestry activities (silviculture, forest harvesting and hunting)	89	47
TOTAL	**89**	**47**

16. Thematic reporting tables

If countries would like to submit additional reporting tables, these should be included here. (See the chapter on thematic reporting in the Guidelines for Country Reporting).