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).

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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
Austrian Forest Inventory, Federal Research and Training Centre for Forests, Natural Hazards and Landscape (BFW), Vienna, http://bfw.ac.at/700/700.html	H	Forest area, OWL area	1988, 1994, 2001	Assessments 1986/90, 1992/96 and 2000/02

1.2.2 Classification and definitions

National class	Definition
Waldfläche (Forest and other wooded land)	Land with tree species according the Austrian Forest Act 1975 or shrub and bushes spanning more than 0,05 hectares (minimum width: 10 meter) and a canopy cover of more than 30 percent.
Strauchfläche (Other wooded land)	Land with shrub and bushes spanning more than 0.05 hectares (minimum width: 10 meter), including areas with pinus mugo and alnus viridis.

1.2.3 Original data

FRA 2005 Categories	Area (1000 hectares)		
	1988	1994	2001
Forest	3,759	3,809	3,843
Other wooded land	119	115	117
TOTAL (Forest + OWL)	**3,878**	**3,924**	**3,960**

Remark:
Other wooded land = "Strauchfläche" in all "Betriebsarten" (sylvicultural systems) (including those in "Schutzwald außer Ertrag" (protective forest without yield)).
Forest = "Waldfläche" without "Strauchfläche".

1.3 Analysis and processing of national data

1.3.1 Calibration

Not needed since the UN/FAOSTAT figures were used.

1.3.2 Estimation and forecasting

Linear interpolation/extrapolation is used.
Figures for 1990 and 2000 are interpolated between 1988 (1986/90), 1994 (1992/96) and 2001 (2000/02) with the exception of "Strauchfläche" in "Schutzwald außer Ertrag" (OWL in protective forest without yield). This part of OWL figure is extrapolated for 1990, as there was no assessment in 1986/90 for this category.

1.4 Reclassification into FRA 2005 classes

Not needed.

1.5 Data for National reporting table T1

FRA 2005 Categories	Area (1000 hectares)		
	1990	2000	2005
Forest	3776	3838	3862
Other wooded land	118	117	118
Other land	4379	4318	4293
...of which with tree cover [1)]	NDA	NDA	NDA
Inland water bodies	113	113	113
TOTAL	**8,386**	**8,386**	**8,386**

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.

1.6 Comments to National reporting table T1

The Austrian minimum Forest + OLW area is 0.05 hectares. This causes a larger area in comparison with the FRA 2005 definition of 0.5 hectares.
The Austrian minimum Forest + OWL canopy cover is 30 percent. This causes a smaller area in comparison with the FRA 2005 definition of 10 percent.
It is assumed that both differences cancel out each other.

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
Austrian Forest Inventory		Forest and OWL area		See Table T1.
Austrian Forest Statistics, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Vienna, www.lebensministerium.at	H	Ownership of Forest and OWL	1990, 2000	The basis for forest ownership statistics is the Austrian land register (Kataster).

2.2.2 Classification and definitions

National class	Definition
Private forests	Private forests (including Church forests) + Community forests
Public forests	Provincial forests + Municipal forests + Österreichische Bundesforste AG (Austrian Federal Forests) + Other publicly owned forests

2.2.3 Original data

Figures based on Austrian land register

	Hectares	%
2000		
TOTAL (Forest + OWL)	**3,576,638**	**100.00**
Private forests < 200 hectares	1,770,979	
Private forests > 200 hectares	770,542	
Community forests	333,830	
SUM Private ownership	**2,875,351**	**80.39**
Municipal forests	81,629	
Provincial forests	44,082	
Austrian Federal Forests and other publicly owned forests	575,577	
SUM Public ownership	**701,288**	**19.61**
1990		
TOTAL (Forest + OWL)	**3,492,173**	**100.00**
Private forests < 50 hectares	1,360,481	
Private forests > 50 hectares	911,788	
Church forests	144,782	
Community forests	330,081	
SUM Private ownership	**2,747,132**	**78.67**

Municipal forests	88,636	
Provincial forests	46,033	
Austrian Federal Forests	570,137	
Other publicly owned forests	40,235	
SUM Public ownership	**745,041**	**21.33**

2.3 Analysis and processing of national data

2.3.1 Calibration

Not needed.

2.3.2 Estimation and forecasting

The percentages above have been applied to the area of forest and other wooded land from table T1. As there are no figures for Forest and OWL separately available, it is assumed, that the ownership distribution is equal in both categories.

2.4 Reclassification into FRA 2005 classes

Not needed. The national classes can be used directly.

2.5 Data for National reporting table T2

FRA 2005 Categories	Area (1000 hectares)			
	Forest		Other wooded land	
	1990	2000	1990	2000
Private ownership	2,970	3,085	93	94
Public ownership	805	753	25	23
Other ownership	0	0	0	0
TOTAL	**3,776**	**3,838**	**118**	**117**

2.6 Comments to National reporting table T2

As there are no figures for Forest and OWL separately available, it is assumed, that the ownership distribution is equal in both categories.

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
Waldentwicklungsplan (Forest Development Plan), Federal Ministry of Agriculture, Forestry, Environment and Water Management, Vienna.	M	Key forest function areas (economic, protective, beneficial, recreational)	1991	No distinction between forests and OWL.
Forests in Protected Areas in Austria. Classification of Protected Forest Areas according to the Criteria of the Ministerial Conference on the Protection of Forests in Europe (MCPFE) (SCHWARZL B. & AUBRECHT P., 2003). Federal Environment Agency Vienna.	H	Forest areas in protected areas according to MCPFE classification	2003	No distinction between forests and OWL.
„Jagdliche Sperrgebiete" Mögliche Einengung der im Forstgesetz 1975 festgelegten freien Begehbarkeit	H	prohibited forest area due to hunting laws	1999	No distinction between forests and OWL.

des Waldes zu Erholungszwecken - Zusammenfassung der derzeitigen Vollzugssituation auf Grundlage der Länderberichte. Federal Ministry of Agriculture and Forestry, Vienna, 1999.				
Written information. Federal Ministry of Defence. April 2005.	H	Forest area in military areas	2005	No distinction between forests and OWL.
Austrian Forest Inventory	H	regeneration area with trees up to 3 m height	2000-2002	No distinction between forests and OWL.

3.2.2 Classification and definitions

National class	Definition
Key forest function (Forest Development Plan)	The Austrian Forest Act defines four functions: economic, protective, beneficial and recreational function. The key forest function is those with the prior public benefit.

3.2.3 Original data

Primary function

1991

Key forest function (Forest Development Plan)	km²	%	Equivalent to FRA 2005 category
Economic function	22,172.92	69.42	Production
Protective function	8,351.03	26.14	Protection of soil and water
Beneficial function	1,116.78	3.50	Protection of soil and water
Recreational function	299.68	0.94	Social purpose
TOTAL Forest area according to Forest Development Plan	31,940.41	100.00	

2003

	km²	%	Equivalent to FRA 2005 category
Total Protected Area	19,831		
Total Forest Area according to ÖK50 (1:50,000)	38,835	100.00	
Forests in Protected Areas – SUM	10,191		
MCPFE class 1.x (1.1 + 1.2 + 1.3)	1,167	3.00	Conservation of biodiversity

Intersection	km²	%	Equivalent to FRA 2005 category
Class (MCPFE) 1.x x Economic key function	247.03	**25.49**	Conservation of biodiversity
Class (MCPFE) 1.x x Protective key function	630.87	65.10	Protection of soil and water
Class (MCPFE) 1.x x Beneficial key function	84.19	8.69	Protection of soil and water
Class (MCPFE) 1.x x Recreational key function	6.94	**0.72**	Conservation of biodiversity
TOTAL	969.03	100.00	

Total area with function

	km²	%	Equivalent to FRA 2005 category
Total Forest Area according to ÖK50 (1:50,000)	38,835	100.00	
MCPFE class 1.x (1.1 + 1.2 + 1.3)	1,167	3.00	Conservation of biodiversity
MCPFE class 1.1	0	0.00	Excludes production
MCPFE class 1.2	281	0.72	Excludes production
MCPFE class 1.3	885	2.28	Production allowed

Austrian Forest Inventory classes	Area (1000 hectares)
Wuchsklasse "Jugend I" (stage of development class "Youth I") (up to 1.3 m height)	99
Wuchsklasse "Jugend II" (stage of development class "Youth II") (> 1.3 m height to 10.4 cm maximum diameter at breast height)	730
Calculated area of "Jugend II" up to 3 m height including bushes	141
Regenerations area with trees up to 3 m height	**240**

Prohibited areas due to hunting laws: 0.8 percent of the total forest area.
Military areas: 10 200 hectares.

3.3 Analysis and processing of national data

The percentages from 1991 (forest Development Plan) and 2003 (Protected areas) have been applied to the combined area of forest and other wooded land for 2000 from Table T1.

Primary function

	%	km²	%	Equivalent to FRA 2005 category
Class (MCPFE) 1.x	**100.00**	**1,167**	**3.00**	
Class (MCPFE) 1.x x Economic key function	25.49	297.47	0.77	Conservation of biodiversity
Class (MCPFE) 1.x x Protective key function	65.10	759.72	1.96	Protection of soil and water
Class (MCPFE) 1.x x Beneficial key function	8.69	101.41	0.26	Protection of soil and water
Class (MCPFE) 1.x x Recreational key function	0.72	8.40	0.02	Conservation of biodiversity
Total Forest Area according to ÖK50 (Map of Austria 1:50,000)		**38,835**	**100.00**	

	%	1000 hectares	Equivalent to FRA 2005 category
Class (MCPFE) 1.x	**3.00**	**118.85**	
Class (MCPFE) 1.x x Economic key function	0.77	30.29	Conservation of biodiversity
Class (MCPFE) 1.x x Protective key function	1.96	77.37	Protection of soil and water
Class (MCPFE) 1.x x Beneficial key function	0.26	10.33	Protection of soil and water
Class (MCPFE) 1.x x Recreational key function	0.02	0.86	Conservation of biodiversity
Forest + OWL in 20000 according to Table T1	**100.00**	**3,955.00**	

Key forest function (Forest Development Plan)	%	1000 hectares	Equivalent to FRA 2005 category
Economic function	69.42	2,745.56	Production
Protective function	26.14	1,033.84	Protection of soil and water
Beneficial function	3.50	138.43	Protection of soil and water
Recreational function	0.94	37.18	Social purpose
Forest + OWL in 2000 according to Table T1	**100.00**	**3,955.00**	

Total area with function

	%	1000 hectares	Equivalent to FRA 2005 category
Class (MCPFE) 1.x	**3.00**	**118.85**	
MCPFE class 1.1	0.00	0	excludes production
MCPFE class 1.2	0.72	28.48	excludes production
MCPFE class 1.3	2.28	90.17	
Forest + OWL according to Table T1	**100.00**	**3,955.00**	

3.3.1 Calibration

Not needed.

3.3.2 Estimation and forecasting

3.4 Reclassification into FRA 2005 classes

Primary function

Breakdown of Forest+OWL area (Austrian Forest Inventory) was done according to the Forest Development Plan key functions (economic, protective, beneficial and recreational function). Conservation of biodiversity area was generated by intersection of Forest Development key functions and MCPFE protected forest area class 1.x according to following prioritisation rule:

1. Protective key function and beneficial key function (Protection of soil and water)
2. Class (MCPFE) 1.x (Conservation of biodiversity)
3. Recreation key function (Social purpose)
4. Economic key function (Production)

Production = 2,745.56 – 30.29 = 2,715.27
Protection of soil and water = 1,033.84 + 138.43 = 1,172.27
Conservation of biodiversity = 30.29 + 0.86 = 31.15
Social purpose = 37.18 – 0.86 = 36.32

Total area with function

Total area with production function = 3,955 – (MCPFE class 1.1 + 1.2: 28.48) = 3,926.52
Total area with social function = 3,955 – (prohibited areas due to hunting laws: 3,955 * 0,008) – (military areas: 10.2) – (regenerations areas with trees up to 3 m height: 240) = 3,673.16

3.5 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 + OWL						
Production	ID	2715	ID	ID	3927	ID
Protection of soil and water	ID	1172	ID	3894	3955	3980
Conservation of biodiversity	ID	31	ID	3894	3955	3980
Social services	ID	36	ID	ID	3673	ID
Multiple purpose	ID	0	ID	not appl.	not appl.	not appl.
No or unknown function	ID	0	ID	not appl.	not appl.	not appl.
Total – Forest + OWL	**3,894**	**3,955**	**3,980**	**not appl.**	**not appl.**	**not appl.**

Other wooded land						
Production						
Protection of soil and water						
Conservation of biodiversity						
Social services						
Multiple purpose				not appl.	not appl.	not appl.
No or unknown function				not appl.	not appl.	not appl.
Total – Other wooded land				**not appl.**	**not appl.**	**not appl.**

3.6 Comments to National reporting table T3

Splitting into “Forest” and “Other wooded land” is not possible. The total area with function Social services is the total forest area where access is allowed.

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
Hemerobie österreichischer Waldökosysteme (Hemeroby of Austrian Forest Ecosystems), Österreichische Akademie der Wissenschaften. G. Grabherr … - Innsbruck: Wagner, 1998. (Veröffentlichung des Österreichischen MaB-Programms; Bd. 17)	H	Percentage of forest cover at each level of naturalness (Hemeroby classes 1-9 or 5 reduced classes: natural, seminatural, moderately altered, altered, artificial)	1995	Hemeroby study was realised in co-operation with the Austrian Forest Inventory.

Classification and definitions

Reduced classes of naturalness	Hemeroby values	Hemeroby classes	BLUME & SUKOPP 1976
Natural	9	Ahemerob	Ahemerob
Seminatural	8	Gamma-oligohemerob	Ahemerob
Seminatural	7	Beta-oligohemerob	Oligohemerob
Moderately altered	6	Alpha-oligohemerob	Oligohemerob
Moderately altered	5	Beta-mesohemerob	Oligohemerob
Altered	4	Alpha-mesohemerob	Mesohemerob
Altered	3	Beta-euhemerob	Mesohemerob
Artificial	2	Alpha-euhemerob	Alpha-, beta-euhemerob
Artificial	1	Polyhemerob	Polyhemerob
			Metahemerob

The naturalness level (hemeroby value) is the result of a logical combination of 11 individual criteria:

- Naturalness of tree composition
- Naturalness of ground flora
- Typ of tree-regeneration
- Clearcut areas
- Recent impact of man
- State of development
- Age structure
- Dead wood

- Stand structure
- Diversity of tree species
- Diversity of the ground layer

4.2.2 Original data

National class	%	FRA 2005 Categories
Natural	3	Primary
Seminatural	22	Modified natural
Moderately altered	41	Semi-natural
Altered	27	
Altered, forest exploitation less intensive (relative utilization intensity 6-9)	8.64 (32% of altered)	Semi-natural
Altered, forest exploitation intensive – moderately intensive (relative utilization intensity 1-5)	18.36 (68% of altered)	Productive plantation
Artificial	7	Productive plantation
Total forest area (forest + OWL)	100	

4.3 Analysis and processing of national data

4.3.1 Calibration

4.3.2 Estimation and forecasting

The percentages from the 1995 study have been applied to the area of forest and other wooded land for 1990 and 2000 from Table T1.

4.4 Reclassification into FRA 2005 classes

See section 4.2.2

4.5 Data for National reporting table T4

FRA 2005 Categories	Area (1000 hectares)					
	Forest + OWL			Other wooded land		
	1990	2000	2005	1990	2000	2005
Primary	117	119	ID			
Modified natural	857	870	ID			
Semi-natural	1933	1963	ID			
Productive plantation	988	1003	ID			
Protective plantation	0	0	ID			
TOTAL	**3,894**	**3,955**	**ID**			

4.6 Comments to National reporting table T4

Splitting into “Forest” and “Other wooded land” is not possible.

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
Austrian Forest Inventory	H	Volume Growing stock	1994, 2001	Assessments 1992/96 and 2000/02

5.2.2 Classification and definitions

National class	Definition
Growing stock	Volume of all standing trees (living + dead trees) in forests in yield. Specifications of country threshold values see below.
Special calculation: Growing stock in protective forest without yield	Volume of all standing trees (living + dead trees).

5.2.3 Original data

Austrian Forest Inventory	1992/96	2000/02
	1000 m³ o.b.	
Growing stock Forests in yield (Ertragswald))	987.910	1.094.732
Dead wood trees	15.147	20.587
Living trees	972.763	1.074.145
Growing stock Protective forest without yield (Schutzwald außer Ertrag (SaE))	30.511	28.463

5.3 Analysis and processing of national data

5.3.1 Calibration

5.3.2 Estimation and forecasting

Interpolation and extrapolation between 1994 (NFI 1992/96) and 2001 (NFI 2000/02).

Austrian Forest Inventory	1990	**1994**	2000	**2001**	2005
	1,000 m³ o.b.				
Growing stock Forests in yield (Ertragswald))	926,869	**987,910**	1,079,472	**1,094,732**	1,155,773
Dead wood trees	12,038	**15,147**	19,810	**20,587**	23,696

Living trees	914,830	**972,763**	1,059,662	**1,074,145**	1,132,078
Growing stock Protective forest without yield (Schutzwald außer Ertrag (SaE))	31,681	**30,511**	28,756	**28,463**	27,293

5.4 Reclassification into FRA 2005 classes

FRA 2005 Growing stock = NFI Growing stock (forests in yield) - Dead wood trees + Estimated growing stock in protective forest without yield.
FRA 2005 Commercial growing stock = NFI Growing stock (forests in yield) – Dead wood trees.

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	947	1088	1159	ID	ID	ID
Commercial growing stock	915	1060	1132	ID	ID	ID

Specification of country threshold values	**Unit**	**Value**	**Complementary information**
1.Minimum diameter at breast height of trees included in Growing stock (X)	cm	5	
2. Minimum diameter at the top end of stem (Y) for calculation of Growing stock	cm	0	
3. Minimum diameter of branches included in Growing stock (W)	cm	-	No branches are included.
4. Minimum diameter at breast height of trees in Commercial growing stock (Z)	cm	5	
5. Volume refers to “Above ground” (AG) or “Above stump” (AS)	AG / AS	AG	
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

Other wooded land areas were not assessed concerning growing stock parameters.

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
Austrian Forest Inventory	H	div.	1988, 1994, 2001	Assessments 1986/90, 1992/96 and 2000/02

6.2.2 Classification and definitions

6.2.3 Original data

6.3 Analysis and processing of national data

6.3.1 Calibration

6.3.2 Estimation and forecasting

6.4 Reclassification into FRA 2005 classes

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						
Below-ground biomass						
Dead wood biomass	NDA	NDA	NDA			
TOTAL	**655**	**724**	**773[1)]**			

[1)] The value for 2005 is estimated by applying the coefficient of growing stock 2000/biomass stock for 2000 * growing stock 2005.

6.6 Comments to National reporting table T6

The data in table 6 are based on the results of the National Forest Inventory (NFI, see 6.2.1). Conversion factors are used to convert the measured m^3 stem wood over bark to t biomass of the whole tree (including also below ground biomass). Therefore the data in table 7 are not divided into above-ground and below-ground values. The calculation of the used conversion factors are based on the species and age class composition of increment and harvest according

to NFI and literature values for the wood densities for all individual tree species (compiled in [KOLLMANN, 1982], [LOHMANN, 1987]), literature values on the dry mass relations of stem wood to the other tree compartments for the main tree species in Austria and for individual age classes (compiled in [KÖRNER et al., 1993]) and literature values on C contents for individual tree compartments and species. Further details on the approach and methodology are given in [WEISS et al., 2000].

The conversion factor - m^3 stem wood over bark to t biomass – is for coniferous trees 0.60 and for deciduous trees 0.81.

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
Austrian Forest Inventory	H	div.	1988, 1994, 2001	Assessments 1986/90, 1992/96 and 2000/02
Forest Soil Inventory Austrian Federal Forestry Research Institute (FBVA), 1992	H	OC	1988	Assessment 1987-1989

7.2.2 Classification and definitions

7.2.3 Original data

See 6.8.1.

7.3 Analysis and processing of national data

7.3.1 Calibration

7.3.2 Estimation and forecasting

7.4 Reclassification into FRA 2005 classes

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						
Carbon in below-ground biomass						

Sub-total: Carbon in living biomass	**320**	**354**	**379**[2)]			
Carbon in dead wood	NDA	NDA	NDA			
Carbon in litter						
Sub-total: Carbon in dead wood and litter						
Soil carbon to a depth of 50 cm	463	471[1)]	474[1)]			
TOTAL CARBON	**783**	**825**	**853**			

1) The soil carbon for 2000 and 2005 is estimated as soil carbon per hectare in 1990 * area forest for 2000 and 2005.
2) Estimated as 49% of biomass stock.

7.6 Comments to National reporting table T7

The data in table 7 are based on the results of the National Forest Inventories (NFI) and the Forest Soil Inventory (see 7.2.1). So far, there has been no repetition of the Forest Soil Inventory, therefore the soil carbon content is calculated for the year 1990 only.
Conversion factors are used to convert the measured m^3 stem wood over bark to t carbon of the whole tree (including also below ground biomass). Therefore the data in table 7 are not divided into above-ground and below-ground values. The calculation of the used conversion factors are based on the species and age class composition of increment and harvest according to NFI and literature values for the wood densities for all individual tree species (compiled in [KOLLMANN, 1982], [LOHMANN, 1987]), literature values on the dry mass relations of stem wood to the other tree compartments for the main tree species in Austria and for individual age classes (compiled in [KÖRNER et al., 1993]) and literature values on C contents for individual tree compartments and species. Further details on the approach and methodology are given in [WEISS et al., 2000].

The conversion factor - m^3 stem wood over bark to t carbon – is for coniferous trees 0.30 and for deciduous trees 0.39.

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
Österreichischer Waldbericht 1996 (Austrian Forest Report 1996), Federal Ministry of Agriculture and Forestry, Vienna, 1998.	M	See 8.2.3	1988-1992	Based on enquiries and estimations made by local forest authorities.
www.lebensministerium.at (Forst/Publikationen/Forst/Waldbericht) Datensammlung zum Waldbericht 2003, Federal Ministry of Agriculture and Forestry, Vienna, 2004.	M	See 8.2.3	1998-2002	Based on enquiries and estimations made by local forest authorities.

8.2.2 Classification and definitions

National class	Definition
Forest damages (without game and grazing)	Reduced damaged areas (= total affected area * damage intensity (percentage of damaged area or trees)). Categories see 8.2.3.

8.2.3 Original data

Categories	Annual area affected (hectares)					
	Forests + OWL					
	1988	1989	1990	1991	1992	Average 1988-1992
Disturbance by fire	87	52	200	53	95	**97**
Disturbance by insects						**26,210**
Beetles	3,814	3,069	2,822	4,252	18,365	6,464
Other insects	28,351	26,195	20,120	15,240	8,821	19,745
Disturbance by diseases						**61,258**
Fungi	53,076	49,364	47,466	57,859	25,775	46,708
Other diseases	not collected				14,550	14,550
Other disturbance						**21,881**
Disturbance by storm, snow, avalanches and hoarfrost	15,234	13,845	45,361	11,309	6,216	18,393
Other abiotic disturbances	1,635	1,998	3,071	3,019	7,717	3,488

Categories	Annual area affected (hectares)					
	Forests + OWL					
	1998	1999	2000	2001	2002	Average 1998-2002
Disturbance by fire	55	6	38	18	67	**37**
Disturbance by insects						**13,299**
Beetles	6,801	5,100	3,321	3,769	6,020	5,002
Other insects	4,434	5,049	4,993	16,431	10,579	8,297
Disturbance by diseases						**24,848**
Fungi	16,265	27,889	16,568	13,275	12,253	17,250
Other diseases	14,167	10,030	4,039	2,313	7,442	7,598
Other disturbance						**22,497**
Disturbance by storm, snow, avalanches and hoarfrost	8,015	7,905	9,366	4,430	17,440	9,431
Other abiotic disturbances	19,625	20,129	14,447	8,119	3,009	13,066

8.3 Analysis and processing of national data

8.3.1 Estimation and forecasting

The averages for the periods 1988-1992 and 1998-2002 have been used for reporting years 1990 and 2000 respectively.

8.4 Reclassification into FRA 2005 classes

The national classes have been used directly.

Data for National reporting table T8

FRA-2005 Categories	Average annual area affected (1000 hectares)			
	Forests + OWL		Other wooded land	
	1990	2000	1990	2000
Disturbance by fire	0.097	0.037		
Disturbance by insects	26.2	13.3		
Disturbance by diseases	61.3	24.8		
Other disturbance	21.8	22.5		

8.5 Comments to National reporting table T8

Splitting into “Forest” and “Other wooded land” is not possible.

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
Rote Listen gefährdeter Pflanzen Österreichs. Zweite, neu bearbeitete Auflage. Gesamtleitung: Nikelfeld Harald. Grüne Reihe des Bundesministerium für Umwelt, Jugend und Familie, Band 10, 1999.	H	Degree of endangerment (0-4) List of species	1999	
IUCN	H	IUCN red list species	2000	

9.2.2 Classification and definitions

National class	Definition
1 Vom Aussterben bedroht	Is equivalent to IUCN-category CR = Critical
2 Stark gefährdet	Is equivalent to IUCN-category EN = Endangered
3 Gefährdet	Is equivalent to IUCN-category VU = Vulnerable

9.3 Original data

FRA 2005 Categories	Number of species (year 2000)
Native tree species	51
Critically endangered tree species	0
Endangered tree species	5
Vulnerable tree species	6

List of tree species. Criteria for "tree": Height of 8 m at maturity *in situ*.

1. Fichte - Picea abies
2. Weißtanne - Abies alba - **3**
3. Europ Lärche - Larix decidua
4. Weißkiefer - Pinus sylvestris
5. Schwarzkiefer - Pinus nigra

6. Zirbe - Pinus cembra
7. Spirke - Pinus uncinata
8. Eibe - Taxus baccata - **3**
9. Rotbuche - Fagus sylvatica
10. Stieleiche - Quercus robur
11. Traubeneiche - Quercus petraea
12. Flaumeiche - Quercus pubescens
13. Zerreiche - Quercus cerris
14. Hainbuche - Carpinus betulus
15. Waldesche - Fraxinus excelsior
16. Mannaesche - Fraxinus ornus
17. Quirlesche - Fraxinus parvifolia
18. Bergahorn - Acer pseudoplatanus
19. Spitzahorn - Acer platanoides
20. Feldahorn - Acer campestre
21. Bergulme - Ulmus glabra
22. Flatterulme - Ulmus laevis
23. Feldulme - Ulmus carpinifolia - **3**
24. Edelkastanie - Castanea sativa
25. Vogelkirsche - Prunus avium
26. Traubenkirsche - Prunus padus
27. Eberesche - Sorbus aucuparia
28. Elsbeere - Sorbus torminalis
29. Speierling - Sorbus domestica - **2**
30. Mehlbeere - Sorbus aria
31. österr.Mehlbeere - Sorbus austriaca
32. Vogesen-Mehlbeere - Sorbus mougeuti - **3**
33. Hardegg-Mehlbeere - Sorbus hardeggensis - **2**
34. Walnuss - Juglans regia
35. Hopfenbuchenarten - Ostrya sp.
36. Apfelarten - Malus domestica - **2**
37. Birnenarten - Pyrus pyraster
38. Schneebirne - Pyrus nivalis - **2**
39. Sandbirke - Betula pendula
40. Moorbirke - Betula pubescens - **3**
41. Schwarzerle - Alnus glutinosa
42. Grauerle - Alnus incana
43. Sommerlinde - Tilia platyphyllos
44. Winterlinde - Tilia cordata
45. Aspe - Populus tremula
46. Silberpappel - Populus alba
47. Schwarzpappel - Populus nigra - **3**
48. Silberweide - Salix alba
49. Bruchweide - Salix fragilis
50. Salweide - Salix caprea
51. Loorbeerweide - Salix pentandra - **2**

9.4 Data for National reporting table T9

FRA 2005 Categories	**Number of species (year 2000)**
Native tree species	51
Critically endangered tree species	0
Endangered tree species	0
Vulnerable tree species	0

9.5 Comments to National reporting table T9

The national red list differs from the IUCN Red List. It contains 5 endangered and 6 vulnerable tree species, while the IUCN Red List includes the following four plant species, not of which are trees:

Endangered:
Anthoceros neesii
Distichophyllum carinatum

Vulnerable:
Jamesoniella undulifolia
Orthotrichum scanicum

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
Austrian Forest Inventory	H	Volume Growing stock according to tree species	1994, 2001	Assessments 1992/96 and 2000/02

10.2.2 Original data

See 10.4.

10.3 Analysis and processing of national data

10.3.1 Calibration

10.3.2 Estimation and forecasting

Interpolation and extrapolation between 1994 (NFI 1992/96) and 2001 (NFI 2000/02).

10.4 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
Fichte - Picea abies	568	664
Rotbuche - Fagus sylvatica	85	100
Weißkiefer - Pinus sylvestris	75	77
Europ Lärche - Larix decidua	64	73
Weißtanne - Abies alba	44	48
unbestimmt - Quercus sp.	21	26
Esche unbestimmt - Fraxinus sp.	13	19
Ahorn unbestimmt - Acer sp.	9	13
Schwarzkiefer - Pinus nigra	9	10
Hainbuche - Carpinus betulus	6	8
Remainder of species	32	43
TOTAL	**927**	**1,079**

10.5 Comments to National reporting table T10

Growing stock = Growing stock of forests in yield including dead wood trees.
Growing stock in protective forest without yield is unaccounted for.

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
Holzeinschlagsmeldung (official annual removal statistics), Federal Ministry of Agriculture, Forestry, Environment and Water Management, Vienna	H	Removal (industrial roundwood, woodfuel)	1988-1992, 1998-2002, 2003, 2004	Based on enquiries and samples made by local forest authorities. Due to methodical reasons removal is not 100% on target.

11.2.2 Classification and definitions

National class	Definition
Removal	Recorded is only the logged wood destined for sale, private consumption or for covering wood purchasing rights. Only wood on forested areas (forest + OWL) according to the Forest Act is recorded. Only above ground wood above 7cm top diameter o.b. is recorded. The figures are expressed in cubic metres under bark.

11.2.3 Original data

REMOVAL	1992	1991	1990	1989	1988	1988-1992	Bark conv. factor	1988-1992	Corr. factor I	**1988-1992**
	m³ u.b.							m³ o.b.		m³ o.b.
Industrial roundwood	9,254,827	9,054,621	12,939,075	11,145,916	10,041,906	10,487,269	1.15	12,060,359	1.14	**13,748,810**
Woodfuel	2,994,363	2,437,397	2,771,510	2,676,107	2,734,236	2,722,723	1.15	3,131,131	1.14	**3,569,489**
TOTAL	12,249,230	11,492,028	15,710,597	13,822,036	12,776,155	13,210,009	1.15	15,191,511	1.14	**17,318,322**

REMOVAL	2002	2001	2000	1999	1998	1998-2002	Bark conv. factor	1998-2002	Corr. factor II	**1998-2002**
	m³ u.b.							m³ o.b.		m³ o.b.
Industrial roundwood	11,809,468	10,561,209	10,416,319	10,988,277	10,857,877	10,926,630	1.15	12,565,625	1.05	**13,193,906**
Woodfuel	3,035,971	2,905,316	2,859,935	3,095,596	3,175,572	3,014,478	1.15	3,466,650	1.05	**3,639,982**
TOTAL	14,845,440	13,466,525	13,276,255	14,083,908	14,033,478	13,941,121	1.15	16,032,289	1.05	**16,833,904**

REMOVAL	2007 Estimation	2006 Estimation	2005 Estimation	2004	2003	2003-2007	Bark conv. factor	2003-2007	Corr. factor II	**2003-2007**
	m³ u.b.							m³ o.b.		m³ o.b.

Industrial roundwood	13,000,000	13,000,000	13,000,000	12,943,750	13,719,063	13,132,563	1.15	15,102,447	1.05	**15,857,569**
Woodfuel	3,700,000	3,600,000	3,500,000	3,539,637	3,336,173	3,535,162	1.15	4,065,436	1.05	**4,268,708**
TOTAL	16,700,000	16,600,000	16,500,000	16,483,387	17,055,236	16,667,725	1.15	19,167,883	1.05	**20,126,277**

Correction factors I and II: The official annual removal statistics do not cover the removal completely. Therefore the correspondent has introduced correction factors I and II. Factor II is smaller because of an improvement in 1991/1992. A sample system for small forest enterprises was introduced in Carinthia, Lower Austria and Upper Austria. Very small forest enterprises are still not included in most provinces.

11.3 Analysis and processing of national data

11.3.1 Estimation and forecasting

See 11.2.3.

11.4 Reclassification into FRA 2005 classes

11.5 Data for National reporting table T11

FRA 2005 Categories	**Volume in 1000 cubic meters of roundwood over bark**					
	Forest + OWL			**Other wooded land**		
	1990	**2000**	**2005**	**1990**	**2000**	**2005**
Industrial roundwood	13749	13194	15858			
Woodfuel	3569	3640	4269			
TOTAL for Country	**17,318**	**16,834**	**20,126**			

11.6 Comments to National reporting table T11

Splitting into “Forest” and “Other wooded land” is not possible.

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

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Forstwirtschaftliche Gesamtrechnung (Economic Accounts for Forestry), Statistics Austria, Vienna, 2005	H	Production values at current prices (EUR and ATS)	1988-1992, 1998-2002, 2003	Calculations of the Institute of Agricultural and Forestry Economics of the University of Natural Resources and Applied Life Sciences on behalf of Statistics Austria..
Österreichische Nationalbank (OeNB), Statistisches Monatsheft	H	Exchange rate Wiener Börse USD/ATS	1988-1992, 1998	Annual average rates.
The European Central Bank	H	Exchange reference rate USD	1999-2004	Annual average rates.

12.2.2 Classification and definitions

12.2.3 Original data

	1988	1989	1990	1991	1992	1988-1992
1 USD = x ATS	12.348	13.231	11.370	11.671	10.989	
Timber for industrial uses						
Value at producer price in ATS	9,255,549	11,409,367	12,992,404	8,847,099	8,715,354	
Value at producer price in USD	749,579	862,343	1,142,708	758,038	793,074	**861,148**
Firewood						
Value at producer price in ATS	2,085,010	2,006,152	2,046,651	1,787,091	2,165,633	
Value at producer price in USD	168,859	151,629	180,007	153,122	197,067	**170,137**

	1998	1999	2000	2001	2002	1998-2002
1 EUR = x USD	1.112	1.067	0.924	0.896	0.945	
1 USD = x ATS	12.379					
Timber for industrial uses						
Value at producer price in EUR	728,411	732,419	664,950	665,307	764,621	
Value at producer price in ATS	10,023,148					
Value at producer price in USD	809,690	781,344	614,413	595,849	722,491	**704,757**
Firewood						
Value at producer price in EUR	166,034	164,845	152,002	155,912	160,593	
Value at producer price in ATS	2,284,681					
Value at producer price in USD	184,561	175,856	140,449	139,634	151,744	**158,449**

	2003	2004	2003-2007 Estimation
1 EUR = x USD	1.131	1.243	1.200
Timber for industrial uses			
Value at producer price in EUR	820,505		
Value at producer price in ATS			
Value at producer price in USD	927,909		**950,000**
Firewood			
Value at producer price in EUR	177,338		
Value at producer price in ATS			
Value at producer price in USD	200,551		**225,000**

12.3 Analysis and processing of national data

12.3.1 Estimation and forecasting

2003-2007 estimations made in 12.2.3 are based on following assumptions:

	Diff. 1998/2002 - 2003/2007
USD	+ 21 %
Industrial roundwood	
Removal (see T 11)	+ 20 %
Price	- 7 %
Woodfuel	
Removal (see T 11)	+ 17 %
Price	+ 1 %

12.4 Reclassification into FRA 2005 classes

12.5 Data for National reporting table T12

FRA 2005 Categories	Value of roundwood removal (1000 USD)					
	Forest + OWL			Other wooded land		
	1990	2000	2005	1990	2000	2005
Industrial roundwood	861148	704757	950000			
Woodfuel	170137	158449	225000			
TOTAL for Country	**1,031,285**	**863,206**	**1,175,000**			

12.6 Comments to National reporting table T12

Splitting into “Forest” and “Other wooded land” is not possible.

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

13.2.2 Classification and definitions

13.2.3 Original data

13.3 Analysis and processing of national data

13.3.1 Estimation and forecasting

13.4 Reclassification into FRA 2005 classes

13.5 Data for National reporting table T13

Insufficient data

13.6 Comments to National reporting table T13

14 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

14.2.2 Classification and definitions

14.2.3 Original data

14.3 Analysis and processing of national data

14.3.1 Estimation and forecasting

14.4 Reclassification into FRA 2005 classes

14.5 Data for National reporting table T14

Insufficient data

14.6 Comments to National reporting table T14

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
Österreichischer Waldbericht 1996 (Austrian Forest Report 1996), Federal Ministry of Agriculture and Forestry, Vienna, 1998.	H	Employees and civil servants with training in the field of forestry	1990	Based on enquiries and estimations done by local forest authorities.
		Forest workers	1990	Source: Hauptverband der österreichischen Sozialversicherungsträger (Association of Austrian social insurance agencies)
Österreichischer Waldbericht 2001 (Austrian Forest Report 2001), Federal Ministry of Agriculture and Forestry, Vienna, 2002.	H	Employees and civil servants with training in the field of forestry	2000	Based on enquiries and estimations done by local forest authorities.
		Forest workers	2000	Source: Hauptverband der österreichischen Sozialversicherungsträger (Association of Austrian social insurance agencies)

15.2.2 Classification and definitions

National class	Definition
Forest Workers	blue-collar workers
Employees and civil servants with training in the field of forestry	white-collar employees and civil servants

15.2.3 Original data

	1900	2000
Forest Workers	6,172	4,906
Employees and civil servants with training in the field of forestry	3,788 (including 183 employees in research and education as well as 119 in unspecified forestry activities)	3,062 (including 208 employees in research and education)

15.3 Analysis and processing of national data

15.3.1 Estimation and forecasting

15.4 Reclassification into FRA 2005 classes

Employees 1990:
Primary production of goods = 6,172 + 0,5 * (3,788 - 183 - 119) = 7,915
Provision of services = 0,5 * (3,788 - 183 - 119) = 1,743

Employees 2000:
Primary production of goods = 4,906 + 0,5 * (3,062 - 208) = 6,333
Provision of services = 0,5 * (3,062 - 208) = 1,427

15.5 Data for National reporting table T15

FRA 2005 Categories	**Employment (1000 person-years)**	
	1990	**2000**
Primary production of goods	7.91	6.33
Provision of services	1.74	1.43
Unspecified forestry activities	0.12	ID
TOTAL	**9.77**	**7.76**

15.6 Comments to National reporting table T15

It is not possible to implement a proper allocation of Austrian employees to the above mentioned categories. It is i.e. not known how much of their working time employees and civil servants spend for category 1 or 2. For that reason, in each case 50% of “employees and civil servants with training in the field of forestry” are allocated to cat.1 and 50% to cat.2 (in each case exclusive employees in research and education and those in unspecified forest activities.

All forest workers (blue-collar workers) are allocated to the category “Primary production of goods”.

For 2000, no numbers of employees in unspecified forest activities are available.