

Forestry statistics

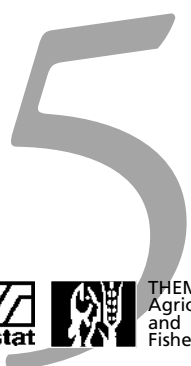
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Introduction

The aim of this pocketbook is to present updated information on the forest sector in the EU, EFTA and candidate countries. It should not be seen as an exhaustive collection of all available data but may be considered a compendium of the most relevant Eurostat data sets concerning the Forest Sector. To provide the reader with a broader view of this sector, this publication contains useful information produced and usually published by other international organisations involved in the collection and analysis of data on forests and related subjects.

Data on forest resources have thus been taken from a previous publication of the UNECE, while JRC has provided forest maps and additional information on forest resources, as well as the whole chapter on forest fires. In addition, the chapter on forest condition was drawn up by ICP forests.

This pocketbook is divided into two main parts. The first gives a general description of forest resources, forest ownership, forest condition, employment in the forest sector, the contribution of this sector to national GDP formation and the share of energy produced using woody material.

The second part is devoted to the production and trade of wood and wood products and is based on data from the Joint Forest Sector Questionnaire, which is the result of cooperation among Eurostat, UNECE, FAO and ITTO. This section of the pocketbook also contains supply balance sheets concerning the production and trade of wood, wood-based panels, paper and paperboard.

Tables and figures based on Eurostat data refer mainly to the Eurostat database NewCronos at the time of writing and as far as possible to the last available update.

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Symbols and abbreviations

symbols

:	no data available
.	not applicable
0	figure less than half of the unit used
-	nil (zero)
%	percentage

units of measurements

d.b.h.	(diameter at breast height, 1.3 m)
ha	hectare
m	metre
m ³	cubic metre
m ³ o.b.	cubic metre, overbark
mt	metric tonne

country abbreviations (EU)

EU15	fifteen Member States of the EU
B	Belgium
DK	Denmark
D	Germany
EL	Greece
E	Spain
F	France
IRL	Ireland
I	Italy
L	Luxembourg
NL	Netherlands
A	Austria
P	Portugal
FIN	Finland
S	Sweden
UK	United Kingdom

other countries

IS	Iceland
LI	Liechtenstein
NO	Norway
CH	Switzerland
CZ	Czech Republic
EE	Estonia
CY	Cyprus
LV	Latvia

LT	Lithuania
HU	Hungary
PL	Poland
SI	Slovenia
SK	Slovakia
BG	Bulgaria
RO	Romania
TR	Turkey
CA	Canada
RU	Russian Federation
US	United States

other abbreviations

EFI	European Forest Institute
EFFIS	European Forest Fire Information System
EFTA	European Free Trade Association
FAO	Food and Agricultural Organisation of the United Nations
FOWL	Forest and other wooded land
FRA	Forest Resources Assessment(s)
ICP Forests	International Cooperative Programme of Assessment and Monitoring of Air Pollution Effects on Forests
ITTO	International Tropical Timber Organisation
JRC	Joint Research Centre
NACE	"Nomenclature statistique des Activités économiques dans la Communauté Européenne" - Statistical classification of economic activities in the European Community
NOAA	National Oceanic and Atmospheric Administration
OSB	Oriented Standard Board
TBFRA	Temperate and Boreal Forest Resources Assessment(s)
UNECE (ECE)	United Nations Economic Commission for Europe

1. Forest Resources and Ownership

This chapter provides a brief overview of forest resources and their development in the 1990s. The information in this chapter is based on the final results of the Temperate and Boreal Forest Resources Assessment (TBFRA) 2000, which is the latest in a series of surveys of the temperate and boreal countries carried out every ten years by ECE and FAO. TBFRA 2000 is a part of the global Forest Resources Assessment (FRA) process led by the FAO Forestry Department.

The TBFRA process covers the whole ECE region, thus including the EU Member States, the other EEA countries, Switzerland and the candidate countries. The terms used for the TBFRA have all been agreed internationally and the principal forest resource definitions are as follows:

Forest is defined as land with tree crown cover (or equivalent stocking level) of more than 10% and area of more than 0.5 ha. The trees should be able to reach a minimum height of 5 m at maturity in situ. It may consist either of closed forest formations where trees of various storeys and undergrowth cover a high proportion of the ground; or of open forest formations with a continuous vegetation cover in which tree crown cover exceeds 10%. Young natural stands and all plantations established for forestry purposes which have yet to reach a crown density of 10% or a tree height of 5 m are included under forest, as they are areas normally forming part of the forest area which are temporarily unstocked as a result of human intervention or natural causes but which are expected to revert to forest.

Other wooded land is land either with a tree crown cover (or equivalent stocking level) of 5-10% of trees able to reach a height of 5 m at maturity in situ; or a crown cover (or equivalent stocking level) of more than 10% of trees not able to reach a height of 5 m at maturity in situ (e.g. dwarf or stunted trees) and shrub or bush cover.

Forest available for wood supply is forest where any legal, economic, or specific environmental restrictions do not have a significant impact on the supply of wood. This includes areas where, although there are no such restrictions, harvesting is not taking place, e.g. areas included in long-term utilisation plans or intentions.

Forest not available for wood supply is forest where legal, economic or specific environmental restrictions prevent any significant supply of wood.

Growing stock is the living tree component of the standing volume.

Standing volume is the volume of standing trees, living or dead, above-stump, measured overbark to top. This includes all trees with diameter over 0 cm (d.b.h., diameter at breast height).

Net annual increment is defined as average annual volume over the given reference period of gross increment, less that of natural losses on all trees to a minimum diameter of 0 cm (d.b.h.).

The relation of annual fellings to annual removals is the following:

Annual fellings are the average annual standing volume of all trees, living or dead, measured overbark to a minimum diameter of 0 cm (d.b.h.), that are felled during the given reference period, including the volume of trees or parts of trees that are not removed from the forest, other wooded land or other felling site. It includes silvicultural and pre-commercial thinnings and cleanings left in the forest; and trees killed or damaged by natural causes, e.g. fire, windblow, insects and diseases (*natural losses*) that are recovered (harvested).

Annual removals are the average annual volume of those fellings that are removed from the forest, other wooded land or other felling site during the given reference period. It includes removals during the given reference period of trees felled during an earlier period and natural losses. (Generally, removals are measured in m³ under bark).

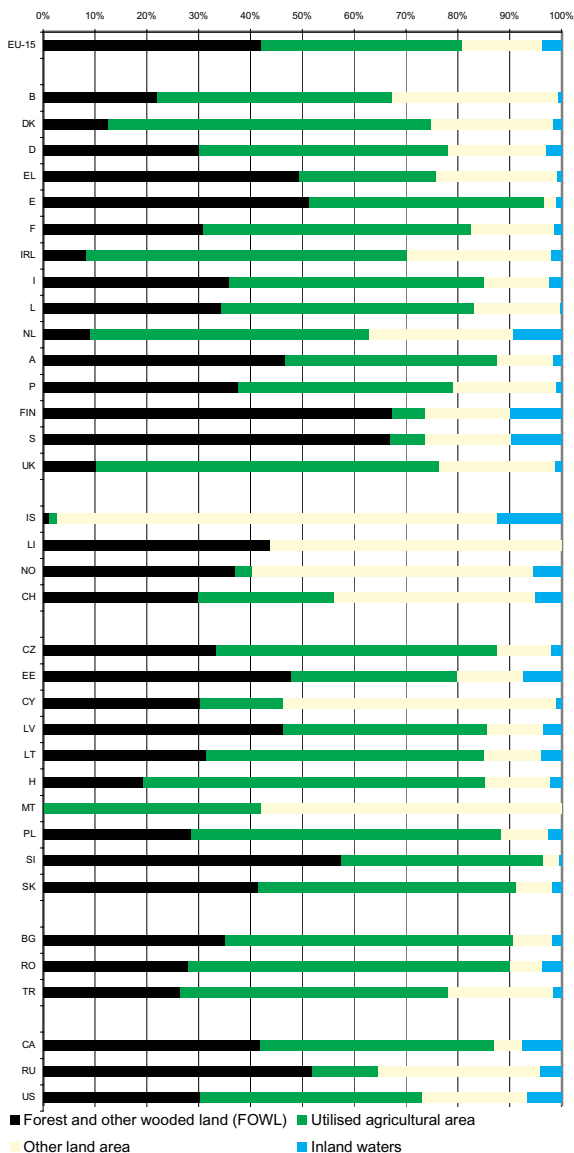
Private ownership: Forest and other wooded land owned by individuals, families, cooperatives and corporations which may be engaged in agriculture or other occupations as well as forestry; private forest enterprises and industries; private corporations and other institutions (religious and educational institutions, pension and investment funds, nature conservation societies, etc).

Public ownership: Forest and other wooded land belonging to the State or other public bodies. This comprises forest and other wooded land owned by national, state and regional governments, or by government-owned corporations.

Forest holding means one or more parcels of forest and other wooded land which constitute a single unit from point of view of management or utilisation. Under any category of ownership, other than state-owned, one holding may be the property of one or more owners.

Although the terms and definitions for FRA and TBFRA have been agreed internationally, the original data have in all cases been collected at the national level using national definitions and measurement and sampling techniques which are in all cases different from the international definitions. These aspects and different reference periods have to be borne in mind when the comparability and consistency of country figures are assessed.

Principal area categories, 2000



Principal area categories, 2000

	Total area	Inland waters	Total land area	Forest and other wooded land (FOWL)	
	(1000 ha)	(1000 ha)	(1000 ha)	(1000 ha)	(%)
EU-15	323,963	12,111	311,852	136,204	43.68
B	3,053	22	3,030	672	22.17
DK	4,309	70	4,239	538	12.70
D	35,702	1,089	34,613	10,740	31.03
EL	13,196	120	13,076	6,513	49.81
E	50,596	541	50,055	25,984	51.91
F	54,919	771	54,148	16,989	31.38
IRL	7,029	139	6,890	591	8.58
I	30,132	720	29,412	10,842	36.86
L	259	1	258	89	34.35
NL	3,735	347	3,388	339	10.01
A	8,387	135	8,252	3,924	47.55
P	9,204	99	9,105	3,467	38.08
FIN	33,814	3,360	30,454	22,768	74.76
S	45,218	4,375	40,843	30,259	74.09
UK	24,410	322	24,088	2,489	10.33
IS	10,295	1,271	9,024	130	1.44
LI	16	0	16	7	46.25
NO	32,376	1,751	30,625	12,000	39.18
CH	4,129	213	3,916	1,234	31.51
CZ	7,887	159	7,728	2,630	34.03
EE	4,523	336	4,187	2,162	51.64
CY	925	9	916	280	30.57
LV	6,459	237	6,222	2,995	48.14
LT	6,530	263	6,267	2,050	32.71
HU	9,303	210	9,093	1,811	19.92
MT	32	0	32	0	1.10
PL	31,268	833	30,435	8,942	29.38
SI	2,027	11	2,016	1,166	57.84
SK	4,903	93	4,810	2,031	42.22
BG	11,098	202	10,895	3,903	35.83
RO	23,839	890	22,949	6,680	29.11
TR	77,945	1,216	76,729	20,713	27.00
CA	997,061	75,518	921,543	417,584	45.31
RU	1,709,761	72,028	1,637,733	886,538	54.13
US	980,963	65,022	915,941	298,135	32.55

Source : TBFRA

Principal area categories, 2000 (cont.)

	Utilised agricultural area		Other land area		FOWL/ capita
	(1000 ha)	(%)	(1000 ha)	(%)	ha/capita
EU-15	126,045	40.4	49,603	15.9	0.36
B	1,383	45.6	976	32.2	0.07
DK	2,689	63.4	1,013	23.9	0.10
D	17,160	49.6	6,713	19.4	0.13
EL	3,499	26.8	3,064	23.4	0.61
E	22,984	45.9	1,087	2.2	0.66
F	28,331	52.3	8,828	16.3	0.29
IRL	4,342	63.0	1,957	28.4	0.16
I	14,833	50.4	3,737	12.7	0.19
L	127	49.1	43	16.5	0.21
NL	2,011	59.3	1,038	30.7	0.02
A	3,415	41.4	913	11.1	0.48
P	3,822	42.0	1,816	19.9	0.35
FIN	2,172	7.1	5,514	18.1	4.42
S	3,109	7.6	7,475	18.3	3.41
UK	16,169	67.1	5,430	22.5	0.04
IS	143	1.6	8,751	97.0	0.47
LI	:	:	9	56.3	0.23
NO	1,023	3.3	17,602	57.5	2.72
CH	1,083	27.7	1,599	40.8	0.17
CZ	4,276	55.3	822	10.6	0.26
EE	1,454	34.7	571	13.6	1.51
CY	148	16.2	488	53.3	0.36
LV	2,540	40.8	687	11.0	1.24
LT	3,513	56.1	704	11.2	0.55
HU	6,122	67.3	1,160	12.8	0.18
MT	13	41.1	18	57.8	0.00
PL	18,707	61.5	2,786	9.2	0.23
SI	788	39.1	62	3.1	0.59
SK	2,446	50.9	333	6.9	0.38
BG	6,159	56.5	833	7.6	0.47
RO	14,798	64.5	1,471	6.4	0.30
TR	40,149	52.3	15,867	20.7	0.33
CA	450,725	48.9	53,234	5.8	13.66
RU	219,609	13.4	531,586	32.5	6.01
US	420,250	45.9	197,556	21.6	1.09

Source : TBFRA

Forest and other wooded land

	Reference period	Forest and other wooded land (FOWL)			Average annual change of forest land (±1000ha)
		Forest land	Other wooded land	Total	
		(1000 ha)			
EU-15		113,567	22,637	136,204	-
B	1997	646	26	672	-1
DK	1990	445	93	538	1
D	1987	10,740	0	10,740	22
EL	1992	3,359	3,154	6,513	30
E	1990	13,509	12,475	25,984	86
F	1997	15,156	1,833	16,989	62
IRL	1996	591	0	591	17
I	1995	9,857	985	10,842	30
L	1994-97	86	3	89	0
NL	1992-96	339	0	339	1
A	1992-96	3,840	84	3,924	8
P	1995	3,383	84	3,467	57
FIN	1991-96	21,883	885	22,768	8
S	1992-96	27,264	2,995	30,259	1
UK	1995	2,469	20	2,489	20
IS	1998	30	100	130	1
LI	1995	7	1	7	0
NO	1994-96	8,710	3,290	12,000	31
CH	1993-95	1,173	61	1,234	4
CZ	1995	2,630	0	2,630	1
EE	1996	2,016	146	2,162	13
CY	1996	117	163	280	0
LV	1997	2,884	111	2,995	13
LT	1996	1,978	72	2,050	5
HU	1996	1,811	0	1,811	7
MT	1996	0	0	0	0
PL	1992-96	8,942	0	8,942	11
SI	1996	1,099	67	1,166	2
SK	1996	2,016	15	2,031	7
BG	1995	3,590	314	3,903	20
RO	1995-97	6,301	379	6,680	15
TR	1996	9,954	10,759	20,713	46
CA	1994	244,571	173,013	417,584	0
RU	1993	816,538	70,000	886,538	-1,090
US	1992	217,333	80,802	298,135	588

Source: TBFRA

Forest and other wooded land (cont.)

	Forest available for wood supply		Average annual change of forest available for wood supply
	Total	Percent of total forest	
	(1000 ha)	(%)	(±1000ha)
EU-15	95,525	84.11	-
B	639	98.97	-1
DK	440	98.86	1
D	10,142	94.43	21
EL	3,094	92.11	28
E	10,479	77.57	41
F	14,470	95.47	37
IRL	580	98.14	17
I	6,013	61.00	19
L	86	100.00	0
NL	314	92.63	2
A	3,352	87.29	4
P	1,897	56.07	5
FIN	20,675	94.48	-47
S	21,236	77.89	-10
UK	2,108	85.38	17
IS	14	46.67	1
LI	4	57.97	0
NO	6,609	75.88	8
CH	1,060	90.37	6
CZ	2,559	97.30	1
EE	1,932	95.83	11
CY	43	36.92	0
LV	2,413	83.67	17
LT	1,686	85.24	3
HU	1,702	93.98	3
MT	0	0.00	0
PL	8,300	92.82	-11
SI	1,035	94.18	2
SK	1,706	84.62	1
BG	3,124	87.02	-10
RO	5,617	89.14	-19
TR	8,635	86.75	-4
CA	125,863	51.46	0
RU	525,191	64.32	-9,558
US	198,123	91.16	505

Source: TBFRA

Volume of the growing stock

	Reference Period 1	Reference Period 2	On forest		
			Reference Period 1	Reference Period 2	Average annual change
			(1000m ³ overbark)		(±1000m ³ o.b./year)
EU-15			:	14,817,261	-
B	1982	1997	122,047	141,033	1,266
DK	1980	1990	43,200	55,200	1,200
D	1961	1987	:	2,880,000	35,000
EL	:	1992	:	151,788	:
E	1970	1990	456,721	594,111	6,870
F	1987	1997	2,538,961	2,891,777	35,282
IRL	1987	1996	25,000	42,000	1,700
I	1985	1995	712,447	1,428,742	71,630
L	1985	1997	20,377	20,217	160
NL	1988–92	199–95	52,191	54,209	672
A	1986–90	1992–96	1,080,121	1,097,307	2,864
P	1985	1995	201,021	275,760	7,474
FIN	1980–89	1991–96	1,753,000	1,940,000	19,700
S	1985–89	1992–96	2,715,115	2,928,117	30,429
UK	1980	1995	241,000	317,000	5,067
IS	1,990	1998–98	760	800	5
LI	1,975	1995	1,570	1,750	9
NO	1980–86	1994–96	621,332	771,448	11,547
CH	1983–85	1993–95	361,286	395,450	3,383
CZ	1986	1995	639,873	683,806	4,393
EE	1988	1996	259,680	314,537	6,857
CY	1981	1991	:	:	40
LV	1988	1997	432,000	502,000	7,000
LT	1987	1996	326,820	362,637	3,582
HU	1990	1996	288,004	314,667	4,443
MT	:	1996	:	80	:
PL	1987–91	1992–96	1,797,258	1,908,019	22,152
SI	1986	1996	208,500	310,577	10,208
SK	1988	1996	413,945	510,948	12,125
BG	1985	1995	404,800	467,345	6,255
RO			:	:	:
TR	1963–72	1973–96	1,044,602	1,349,323	12,697
CA	1980	1994	28,294,000	29,364,059	76,400
RU	1988	1993	86,053,552	85,486,752	-113,360
US	1987	1992	28,754,000	29,656,000	180,400

Source: TBFRA

Volume of the growing stock (cont.)

	On forest available for wood supply			
	Reference Period 1	Reference Period 2	Average annual change	Per hectare, Period 2
	(1000m ³ overbark)		(±1000m ³ o.b./year)	(m ³ /ha)
EU-15	:	13,419,213	-	140
B	121,245	139,835	1,239	219
DK	43,200	55,200	1,200	123
D	:	2,820,000	35,000	278
EL	:	139,800	:	45
E	411,049	486,815	3,788	47
F	2,489,756	2,835,655	34,590	196
IRL	24,000	41,000	1,700	74
I	557,000	876,744	31,974	146
L	20,377	20,217	160	238
NL	50,070	52,088	672	166
A	1,020,121	1,037,307	2,864	310
P	144,153	188,020	4,386	99
FIN	1,713,000	1,867,000	16,200	90
S	2,389,748	2,566,532	25,255	121
UK	217,000	293,000	5,067	139
IS	338	370	4	26
LI	1,260	1,400	7	350
NO	534,717	671,412	10,515	102
CH	320,605	354,050	3,311	333
CZ	622,717	668,242	4,552	261
EE	249,230	307,120	7,236	159
CY	3,123	3,055	-7	71
LV	354,240	409,260	5,502	170
LT	271,260	314,355	4,309	187
HU	274,189	295,301	3,519	174
MT	:	0	:	:
PL	1,690,298	1,771,042	16,149	213
SI	202,200	292,491	9,029	283
SK	368,204	445,547	9,668	261
BG	349,747	401,141	5,139	128
RO	:	:	:	:
TR	1,032,352	1,187,309	6,457	138
CA	16,722,000	17,354,560	45,200	138
RU	61,768,856	60,922,156	-169,340	116
US	26,225,000	27,035,000	162,000	137

Source: TBFRA

Increment, fellings and removals

	Forest available for wood supply				
	Net annual increment				
	Reference period	Conifer.	Non-conifer.	Total	Per hectare
	(1000 m ³ overbark)			(1000 m ³ o.b./ha)	
EU-15		308,420	150,419	459,506	-
B	1982-97	3,359	1,778	5,137	8.0
DK	1990	2,200	1,000	3,200	7.3
D	1995-2002	63,521	25,477	88,998	8.8
EL	1992	1,760	1,760	3,520	1.1
E	1990	16,686	11,903	28,589	2.7
F	1997	39,538	52,761	92,299	6.4
IRL	1996	3,400	50	3,450	6.0
I	1995	6,112	12,601	18,713	3.1
L	1985-97	:	:	667	7.8
NL	1991-95	1,128	1,077	2,205	7.0
A	1992-96	21,926	5,411	27,337	8.2
P	1995	7,890	5,010	12,900	6.8
FIN	1991-96	56,646	15,824	72,470	3.5
S	1992-96	71,514	13,917	85,431	4.0
UK	1995	12,740	1,850	14,590	6.9
IS	1998	32	5	37	2.6
LI	1995	12	6	18	4.5
NO	1994-96	17,512	4,529	22,041	3.3
CH	1985-95	5,341	2,814	8,155	7.7
CZ	1995	17,083	3,272	20,355	8.0
EE	1996	4,065	3,072	7,137	3.7
CY	1980-90	44	0	44	1.0
LV	1996	6,420	4,630	11,050	4.6
LT	1996	5,266	3,238	8,504	5.0
HU	1996	1,568	8,357	9,925	5.8
MT	1996	0	0	0	:
PL	1992-96	33,066	6,370	39,436	4.8
SI	1996	2,901	3,231	6,132	5.9
SK	1996	5,842	6,495	12,337	7.2
BG	1995	5,028	5,209	10,236	3.3
RO	1984	:	:	:	:
TR	1996	19,658	12,861	32,519	3.8
CA	1994	158,280	69,200	227,480	1.8
RU	1993	464,000	278,000	742,000	1.4
US	1987-92	386,000	308,000	694,000	3.5

Source: TBFRA

Increment, fellings and removals (cont.)

	Forest available for wood supply						
	Reference period	Annual fellings			Annual removals		
		Conifer.	Non-conifer.	Total	Conifer.	Non-conifer.	Total
		(1000 m ³ overbark)					
EU-15		216,032	83,498	299,530	184,923	69,734	254,657
B	1986-95	3,150	1,250	4,400	3,150	1,250	4,400
DK	1996	1,468	726	2,194	1,468	726	2,194
D	1996	37,179	11,405	48,584	29,743	9,124	38,867
EL	1992	:	:	:	625	1,783	2,408
E	1994	6,577	4,451	11,028	:	:	:
F	1996	31,180	28,994	60,174	22,910	24,701	47,611
IRL	1996	2,295	35	2,330	2,295	35	2,330
I	1995	1,824	6,922	8,746	1,682	6,699	8,381
L	1992-94	:	:	:	180	180	360
NL	1991-95	950	488	1,438	836	383	1,219
A	1992-96	16,132	3,389	19,521	14,308	2,613	16,921
P	1995	6,200	5,000	11,200	6,100	4,900	11,000
FIN	1991-96	43,500	10,800	54,300	40,800	8,700	49,500
S	1992-96	57,277	8,838	66,115	53,526	7,740	61,266
UK	1995	8,300	1,200	9,500	7,300	900	8,200
IS	1996	0	0	0	0	0	0
LI	1995	12	4	16	10	4	14
NO	1994-96	10,291	1,341	11,632	9,673	1,207	10,880
CH	1985-95	5,121	1,955	7,076	4,405	1,681	6,086
CZ	1995	14,810	1,390	16,200	11,926	1,096	13,022
EE	1996	:	:	:	:	:	:
CY	1986-95	50	0	50	48	0	48
LV	1996	3,610	2,960	6,570	3,250	2,230	5,480
LT	1992-96	3,410	1,830	5,240	2,900	1,550	4,450
HU	1996	777	5,103	5,880	597	4,577	5,174
MT	1996	0	:	:	0	:	:
PL	1992-96	23,235	7,297	30,532	18,895	6,418	25,313
SI	1996	1,500	800	2,300	1,500	800	2,300
SK	1996	4,200	2,900	7,100	3,300	2,100	5,400
BG	1995	1,772	3,080	4,852	1,263	2,024	3,887
RO	1993-97	:	:	:	:	:	:
TR	1996	9,843	7,537	17,380	9,457	6,753	16,210
CA	1995	:	:	:	179,900	34,228	214,128
RU	1995	89,300	36,200	125,500	:	:	:
US	1992	353,000	170,000	523,000	318,000	134,000	452,000

Source: TBFRA

Ownership of forest available for wood supply

	Reference period	In public ownership		
		Total	State	Other
		(1000 ha)		
EU-15		25,351	14,930	10,422
B	1997	276	69	207
DK	1990	140	118	22
D	1987	5,406	3,390	2,016
EL	1992	2,404	2,032	372
E	1985-95	1,931	39	1,892
F	1995-97	3,787	1,467	2,320
IRL	1996	380	380	0
I	1995	2,044	372	1,672
L	1994-97	40	10	31
NL	1992-96	160	115	45
A	1992-96	550	460	90
P	1995	200	25	175
FIN	1991-96	5,164	5,164	0
S	1992-96	1,904	404	1,500
UK	1995	965	885	80
IS	1985	4	4	0
LI	1995	4	0	4
NO	1989	853	664	189
CH	1993-95	700	10	690
CZ	1996	2,141	1,826	315
EE	1996	1,757	1,752	5
CY	1996	43	43	0
LV	1997	1,333	1,237	96
LT	1997	1,391	1,386	5
HU	1996	1,079	1,070	9
MT	1996	0	0	0
PL	1992-96	6,806	6,730	76
SI	1996	310	285	25
SK	1996	969	725	244
BG	1995	3,124	3,124	0
RO	1990	5,283	5,283	0
TR	1996	8,620	8,620	0
CA	1994	104,370	104,215	155
RU	1993	525,191	525,191	0
US	1992	53,215	39,115	14,100

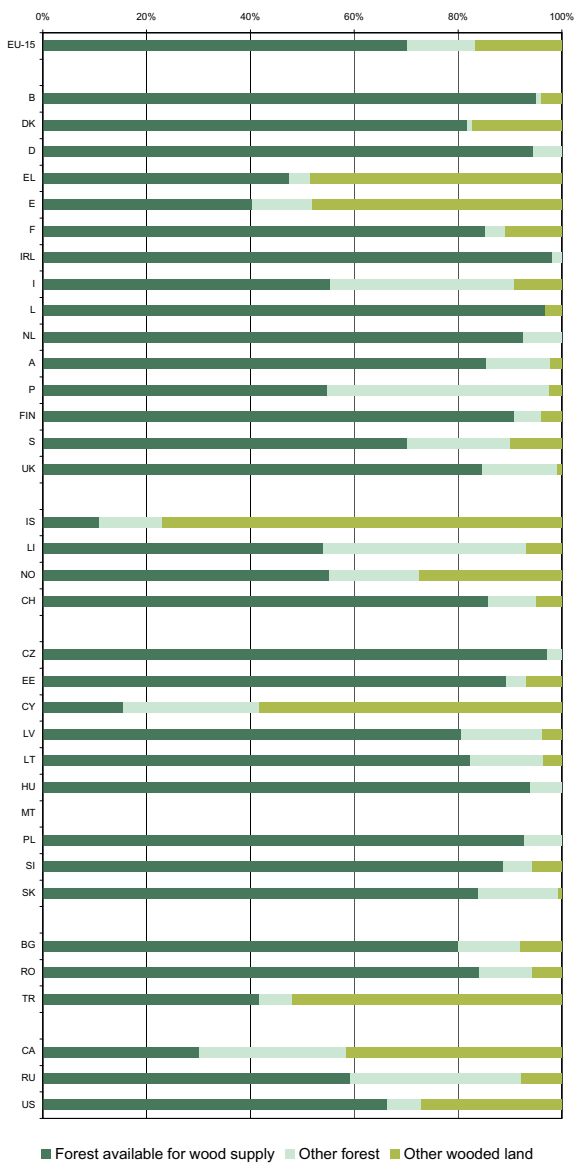
Source: TBFRA

Ownership of forest available for wood supply (cont.)

	In private ownership			
	Total	Individuals	Industries	Other
	(1000 ha)			
EU-15	70,175	55,447	10,355	4,373
B	364	352	1	10
DK	301	200	0	100
D	4,736	4,736	0	0
EL	690	529	0	161
E	8,548	8,000	48	500
F	10,683	8,983	0	1,700
IRL	200	200	0	0
I	3,969	3,917	52	0
L	46	:	0	46
NL	154	65	0	89
A	2,802	2,315	0	487
P	1,697	1,497	200	0
FIN	15,511	12,936	1,613	962
S	19,332	10,916	8,416	:
UK	1,143	800	25	318
IS	10	10	0	0
LI	1	1	0	0
NO	5,756	5,123	261	372
CH	360	321	0	39
CZ	418	418	0	0
EE	175	170	0	5
CY	0	0	0	0
LV	1,080	1,080	0	0
LT	295	295	0	0
HU	623	69	0	554
MT	0	0	0	0
PL	1,493	1,460	0	33
SI	725	725	0	0
SK	737	308	0	429
BG	0	0	0	0
RO	334	334	0	0
TR	15	14	0	1
CA	20,853	17,126	3,727	0
RU	0	0	0	0
US	141,761	105,745	28,513	7,503

Source: TBFRA

Forest and other wooded land



2. Economy

NACE Rev.1 ("Nomenclature statistique des Activités économiques dans la Communauté Européenne" - Statistical classification of economic activities in the European Community) was adopted in order to establish a common statistical classification of economic activities within the European Community in order to ensure comparability between national and Community classifications and hence national and Community statistics.

NACE Rev. 1 contains

17 Sections - letters A to Q

31 Subsections - 2-character alphabetical codes

60 Divisions - 2-digit codes

222 Groups - 3-digit codes

503 Classes - 4-digit codes

Agriculture, hunting and forestry

(*Section A*) covers the exploitation of vegetable and animal natural resources. The section comprises the activities of growing crops, raising animals, harvesting timber, and harvesting other plants and animals from farms or their natural habitats.

Agriculture, hunting and related service activities

(*Division 01*) first of all distinguishes two basic activities

- Production of crop products and
- Production of animal products.

Certain operations such as soil preparation, planting, harvesting, and management, which are normally part of farm operation, may be carried out by agricultural support units on a fee or contract basis, as agricultural or animal husbandry service activities.

Agricultural activity excludes any subsequent processing of the agricultural products, beyond that needed to prepare them for the primary markets. However, as an exception to the general rule for

classification of integrated activities, a unit processing its own agricultural production on the farm is classified as 01, even though the output is normally the product of divisions 15 and 16. Examples are

- Growing of grapes and production of wine from these
- Growing of olives and production of olive oil from these.

The division excludes field construction.

Forestry, logging and related service activities

(Division 02) covers the production of standing timber as well as the extraction and gathering of wild growing forest materials. Besides the production of timber, forestry results in products which undergo little processing, such as wood for fuel or industrial use (e.g. pit-props, pulpwood, etc).

Further processing of wood beginning with sawmilling and planing of wood and generally done away from the logging area is classified as Manufacture of wood and wood products (division 20), while production of charcoal is classified under division 24.

Forestry and logging

(Class 02.01) includes:

- Growing of standing timber: planting, replanting, transplanting, thinning and conserving of forests and timber tracts
- Growing of coppice and pulpwood
- Operation of forest tree nurseries
- Growing of Christmas trees
- Logging: felling of timber and production of wood in the rough such as pit-props, split poles, pickets or fuel wood
- Growing of vegetable materials used for plaiting

This class excludes:

- Growing and gathering of mushrooms or truffles, see 01.12
- Gathering of berries or nuts, see 01.13
- Production of wood chips, see 20.10

Forestry and logging related service activities

Class 02.02 includes:

- Forestry service activities: forestry inventories, timber evaluation, fire protection
- Logging service activities: transport of logs within the forest

Manufacturing

(Section D) The manufacturing activity is the mechanical, physical or chemical transformation of materials, substances or components into new products. The materials, substances or components transformed are raw materials that are products of agriculture, forestry, fishing, mining or quarrying, as well as products of other manufacturing activities.

Assembly of the component parts of manufactured products is considered manufacturing, except in cases where the activity is appropriately classified in any class of division 45 (Construction).

Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials

(Division 20) includes manufacture of wood products, such as lumber, plywood, veneers, wooden containers, wooden flooring, wooden trusses and prefabricated wooden buildings. The production processes include sawing, planing, shaping, laminating and assembling of wood products starting from logs that are cut into bolts or lumber that then may be further cut or shaped by lathes or other shaping tools. The lumber or other transformed wooden shapes may also be subsequently planed or smoothed, and assembled into finished products, such as wooden containers.

With the exception of sawmills and wood preservation units, the units are grouped into industries mainly based on the specific products manufactured.

It does not include either the manufacture of furniture or the installation of not self-manufactured wooden fittings and the like.

Manufacture of pulp, paper and paper products

(Division 21) covers the manufacture of pulp, paper or converted paper products. The manufacturing of these products is grouped together because they constitute a series of vertically connected processes. More than one is often carried out in a single unit. There are essentially three activities. The manufacturing of pulp involves separating the cellulose fibres from other impurities in wood or used paper. The manufacturing of paper involves matting these fibres into a sheet. Converted paper products are made from paper and other materials by various cutting and shaping techniques and include coating and laminating activities. The paper articles may be printed (e.g. wallpaper, gift wrap, etc), as long as the printed information is not the main purpose.

Percentage of gross value added at basic prices of the Forest Sector, 1995

	Forestry, logging and related services	Manufacture of wood and products	Manufacture of pulp, paper and products	Total
B	0.07	0.30	1.60	1.97
EL	0.14	0.40	0.80	1.34
F	0.29	0.31	1.63	2.23
I	0.05	0.60	1.40	2.05
L	0.10	0.10	0.90	1.10
P	0.79	0.93	2.24	3.96
FIN	2.56	1.30	6.70	10.56
S	1.30	0.90	4.10	6.30

Source: Eurostat / New Cronos

Percentage of gross value added at basic prices for agriculture as a whole and for NACE divisions regarding the Forest Sector

	Agriculture, hunting and forestry				Forestry, logging and related services			
	1990	1995	2000	2001	1990	1995	2000	2001
B		1.60	1.30	1.40		0.07	0.05	
DK	4.10	3.40	2.50	2.70				
D		1.27	1.15					
EL	9.90	9.50	7.00		0.22	0.14	0.08	
E			3.30	3.20				
F	3.55				0.27	0.29		
IRL								
I	3.30	3.10	2.70	2.60	0.05	0.05	0.04	
L		1.10	0.70			0.10		
NL	4.20	3.40	2.60	2.60	0.02	0.01	0.01	
A	3.60	2.50	2.20	2.30				
P	7.90	4.94			1.24	0.79	0.74	0.70
FIN	6.30	4.30	3.60	3.30	2.81	2.56	2.29	2.07
S		2.60	1.90			1.30	0.82	
UK	1.80	1.80	1.00	0.90				
IS	2.47	2.14						
NO	2.70	1.80						
CZ	8.08	4.64	4.27	4.31				
EE		8.14	5.85	5.42				
CY		5.09	p 3,57	p 3,83				
LV	21.08	9.48	4.47	4.51				
LT	26.36	11.70	7.89	7.11				
HU		6.73	4.26	4.28				
MT								
PL		6.87	3.55	3.72				
SI	5.50	4.52	3.40	3.25				
SK		5.95	4.71	4.49				
BG			13.79					
RO	23.16	21.42	12.36	14.22				
TR	16.52	14.62	13.20	10.94				

Source: Eurostat / New Cronos

Percentage of gross value added at basic prices for agriculture as a whole and for NACE divisions regarding the Forest Sector (cont.)

	Manufacture of wood and products				Manufacture of pulp, paper and products			
	1990	1995	2000	2001	1990	1995	2000	2001
B		0.30	0.30	0.30		1.60	1.50	1.50
DK	0.40	0.50	0.50	0.40	2.00	1.80	1.70	1.80
D		0.52	0.43			1.69	1.75	
EL	0.60	0.40	0.30		0.90	0.80	0.80	
E			0.50	0.40			1.60	1.60
F	0.36	0.31			1.74	1.63		
IRL								
I	0.60	0.60		0.60	1.50	1.40	1.40	1.40
L		0.10	0.20			0.90	0.90	
NL	0.20	0.20	0.20	0.20	2.30	2.20	2.00	2.00
A	1.00	1.00	1.00	1.00	1.80	1.80	2.00	2.00
P	1.19	0.93			2.71	2.24		
FIN	1.40	1.30	1.20	0.90	4.70	6.70	6.00	5.40
S		0.90	0.90			4.10	3.50	
UK	0.40	0.30	0.30	0.30	2.60	2.70	2.50	2.40
IS	0.40	0.32			1.73	1.71		
NO	0.60	0.50			2.10	2.30		
CZ	0.63	0.79	0.95		2.54	1.46	1.67	
EE								
CY		0.69				0.87		
LV								
LT		0.87	1.43	1.82		1.03	1.43	1.61
HU		0.58	0.48	0.41		1.30	1.27	1.37
MT								
PL								
SI								
SK		0.88				2.24		
BG								
RO	1.76	1.90	2.13		0.87	0.68	0.91	
TR								

Source: Eurostat / New Cronos

3. Employment

In general a labour force survey is an enquiry directed towards households, designed to obtain information on the labour market and related topics. As it would clearly involve considerable expense to include all households or individuals (as in population censuses), labour force surveys are usually confined to a sample of households, the actual size of which depends primarily on the level of detail required in the survey estimates.

Labour Force Survey conducted accordance with Council Regulation (EC) No 577/1998.

Sampling error

As with any sample survey, the results of the labour force survey are subject to sampling error. It is almost certain that somewhat different figures would have been obtained if a complete census had been carried out using the same questionnaires, interviewers, supervisors, data-processing techniques, etc, as were used in this survey. This difference is known as the 'sampling error' of the estimate.

In this publication, results likely to have very wide margins of relative sampling error have been replaced by a dot.

Employment in the Forest Sector, 2002

(Thousands of people)

	All Sectors	Forestry	Wood	Paper	Forest Sector	
					Total	% All Sect.
EU 15	162,974	256	1,004	677	1,937	1.19
B	4,052	.	25	20	46	1.13
DK	2,741	.	10	9	21	0.77
D	36,275	42	217	150	409	1.13
EL	3,949	9	27	8	44	1.11
E	16,241	34	125	43	202	1.24
F	23,885	40	116	92	249	1.04
IRL	1,750	.	8	4	14	0.81
I	21,757	44	182	105	331	1.52
L	188	.	.	.	.	.
NL	8,176	.	20	27	48	0.59
A	3,734	6	28	17	51	1.37
P	5,133	15	77	13	106	2.06
FIN	2,406	21	32	44	97	4.04
S	4,348	19	40	41	99	2.28
UK	28,338	18	96	105	219	0.77
IS	156	.	.	.	.	.
NO	2,293	5	18	10	33	1.45
CH	3,959	7	39	11	56	1.42
CZ	4,763	43	75	26	145	3.05
EE	581	8	20	.	30	5.08
CY	315	1	2	.	3	1.08
LV	987	34	39	.	75	7.55
LT	1,421	7	28	.	37	2.61
HU	3,846	18	38	14	70	1.81
PL	13,820	:	:	:	:	:
SI	922	4	14	7	25	2.71
SK	2,111	24	35	12	71	3.35
BG	2,800	21	22	12	54	1.94
RO	;	43	129	23	195	2.00

Source: Eurostat / New Cronos

Employment in manufacturing of wood and pulp compared with all sectors and manufacturing as a whole, 2002

	Manufacture of wood and pulp		
	1000 people	% All Sectors	% Manufacturing
EU 15	1,681	1.03	5.39
B	45	1.11	6.06
DK	19	0.69	4.29
D	367	1.01	4.29
EL	35	0.89	6.48
E	168	1.04	5.61
F	209	0.87	4.90
IRL	12	0.67	4.14
I	287	1.32	5.82
L	.	.	.
NL	47	0.57	4.52
A	45	1.21	6.18
P	91	1.77	8.59
FIN	76	3.15	16.01
S	80	1.85	11.11
UK	201	0.71	4.54
IS	.	.	.
NO	28	1.21	9.52
CH	50	1.25	7.85
CZ	102	2.13	7.63
EE	22	3.75	17.05
CY	3	0.84	6.88
LV	41	4.13	24.69
LT	30	2.12	11.91
HU	52	1.35	5.44
PL	:	:	:
SI	21	2.30	7.40
SK	47	2.23	8.27
BG	33	1.20	5.02
RO	:	1.55	7.22

Source: Eurostat / New Cronos

Employment in forestry compared with all sectors and Agriculture, 2002

	Forestry		
	1000 people	% All Sect.	% Agriculture
EU 15	255.9	0.16	3.91
B	.	.	.
DK	.	.	.
D	42.1	0.12	4.66
EL	8.9	0.23	1.43
E	33.7	0.21	3.50
F	40.1	0.17	4.06
IRL	.	.	.
I	43.9	0.20	4.10
L	.	.	.
NL	.	.	.
A	6.2	0.17	2.91
P	14.9	0.29	2.33
FIN	21.4	0.89	16.12
S	18.9	0.43	17.25
UK	18.3	0.06	4.69
IS	.	.	.
NO	5.5	0.24	6.07
CH	6.6	0.17	3.94
CZ	43.4	0.91	18.72
EE	7.8	1.33	20.57
CY	0.8	0.24	4.62
LV	33.8	3.43	22.42
LT	6.9	0.49	2.61
HU	17.6	0.46	7.57
PL	:	:	:
SI	3.7	0.40	4.22
SK	23.7	1.12	17.04
BG	20.9	0.75	7.00
RO	:	0.44	1.17

Source: Eurostat / New Cronos

Employment in all sectors, industry, agriculture, and in the related branches of the Forest Sector

(Thousands of people)

	All sectors			Industry		
	1995	2000	2002	1995	2000	2002
EU 15	148,694	159,232	162,974	44,829	45,931	45,700
B	3,793	4,120	4,052	1,072	1,064	1,045
DK	2,601	2,716	2,741	703	686	642
D	35,782	36,324	36,275	12,883	12,180	11,741
EL	3,821	3,946	3,949	886	888	887
E	12,495	15,306	16,241	3,774	4,748	5,088
F	21,907	23,123	23,885	5,898	6,073	6,065
IRL	1,262	1,671	1,750	349	476	484
I	19,943	20,930	21,757	6,405	6,653	6,874
L	162	181	188	41	38	38
NL	6,782	7,860	8,176	1,535	1,589	1,554
A	3,675	3,684	3,734	1,180	1,106	1,078
P	4,417	5,016	5,133	1,421	1,721	1,727
FIN	2,016	2,367	2,406	556	660	652
S	4,051	4,125	4,348	1,031	1,005	997
UK	25,989	27,862	28,338	7,094	7,045	6,827
IS	140	157	156	35	35	35
NO	2,043	2,271	2,293	470	494	497
CH	:	3,879	3,959	:	933	920
CZ	:	4,675	4,763	:	1,866	1,909
EE	:	568	581	:	196	179
CY	:	294	315	:	70	73
LV	:	942	987	:	252	252
LT	:	1,525	1,421	:	418	389
HU	:	3,807	3,846	:	1,286	1,315
PL	:	14,518	13,820	:	4,509	3,944
SI	:	894	922	:	334	355
SK	:	2,083	2,111	:	776	805
BG	:	2,872	2,800	:	938	914
RO	:	10,898	9,768	:	2,811	2,890

Source: Eurostat / New Cronos

Employment in all sectors, industry, agriculture, and in the related branches of the Forest Sector (cont.)

(Thousands of people)

	Agriculture			Forestry and related services		
	1995	2000	2002	1995	2000	2002
EU 15	7,829	6,796	6,319	278	240	248
B	102	79	73	3	.	.
DK	114	99	88	.	.	.
D	1,134	958	902	65	48	42
EL	780	671	624	8	7	9
E	1,123	1,013	964	27	36	34
F	1,071	958	987	37	37	40
IRL	151	131	121	3	.	.
I	1,489	1,095	1,072	51	36	44
L	6	4	4	.	.	.
NL	252	242	.	.	.	.
A	270	223	212	11	6	6
P	507	633	640	9	11	15
FIN	156	147	133	18	27	21
S	142	120	110	31	20	19
UK	531	425	391	17	12	18
IS	13	14	12	.	.	.
NO	111	97	90	6	6	5
CH	:	181	167	:	5	7
CZ	:	244	232	:	48	43
EE	:	39	38	:	7	8
CY	:	16	17	:	1	1
LV	:	141	151	:	19	34
LT	:	281	265	:	15	7
HU	:	246	233	:	16	18
PL	:	2,711	2,713	:	:	:
SI	:	85	89	:	4	4
SK	:	144	139	:	25	24
BG	:	377	299	:	33	21
RO	:	4,926	3,683	:	58	43

Source: Eurostat / New Cronos

Employment in all sectors, industry, agriculture, and in the related branches of the Forest Sector (cont.)

(Thousands of people)

	Wood and wood products			Pulp and paper		
	1995	2000	2002	1995	2000	2002
EU 15	1070.6	1032.23	1004.14	720	704	676.59
B	20	21	25	14	17	20
DK	19	19	10	11	8	9
D	371	244	217	188	157	150
EL	30	28	27	11	9	8
E	83	110	125	40	50	43
F	114	116	116	91	99	92
IRL	8	9	8	4	4	4
I	144	186	182	79	103	105
L	.	.	.	.	.	.
NL	20	25	20	27	28	27
A	41	35	28	20	19	17
P	59	75	77	17	16	13
FIN	34	35	32	37	40	44
S	43	40	40	52	38	41
UK	87	89	96	129	117	105
IS	.	.	.	.	.	.
NO	19	16	18	9	10	10
CH	:	44	39	:	13	11
CZ	:	63	75	:	26	26
EE	:	22	20	:	.	.
CY	:	3	2	:	.	.
LV	:	18	39	:	.	.
LT	:	32	28	:	.	.
HU	:	39	38	:	12	.
PL	:	:	:	:	:	:
SI	:	18	14	:	6	7
SK	:	39	35	:	14	12
BG	:	26	22	:	15	12
RO	:	109	129	:	27	23

Source: Eurostat / New Cronos

4. Energy

All products

The code “All products” covers all energy products. These consist of hard coal and derivatives, lignite and derivatives, peat and derivatives, crude oil and petroleum products, natural gas, manufactured gases, derived heat, renewable energies, electrical energy and nuclear energy.

Renewable energies

“Renewable energies” covers hydro power, wind energy, solar energy, biomass and wastes and geothermal energy.

Wood and wood waste

“Wood and wood waste” covers purpose-grown energy crops (poplar, willow, etc), a multitude of woody materials generated by industrial processes or provided directly by forestry and agriculture (firewood, wood chips, bark, sawdust, shavings, chips, black liquor, etc), as well as wastes (such as straw, rice husks, nut shells, poultry litter, crushed grape dregs, etc).

Primary production

Any kind of extraction of energy products from natural sources to a usable form is called primary production. “Primary production” takes place when the natural sources are exploited, for example in coal mines, crude oil fields, hydro power plants or fabrication of biofuels. Transformation of energy from one form to another, such as electricity or heat generation in thermal power plants, or coke production in coke ovens, is not primary production.

Final energy consumption

“Final energy consumption” covers energy supplied to the final consumer's door for all energy uses. It is the sum of final energy consumption (industry, transport, households, services etc).

Final energy consumption - households

“Final energy consumption – households” covers quantities consumed by households, excluding the consumption of motor fuels for personal transport.

Share of primary energy produced from wood and wood waste

	1990		1995		2001	
	wood	wood	wood	wood	wood	wood
	% of total	% of renew.	% of total	% of renew.	% of total	% of renew.
EU15	5.17	55.21	5.24	52.66	5.99	49.45
B	2.81	51.78	2.12	38.77	2.17	40.16
DK	12.70	75.26	6.55	59.58	3.49	43.63
D	1.58	51.60	2.11	47.08	3.38	45.06
EL	9.76	80.84	9.25	69.59	9.43	71.12
E	11.76	63.24	10.58	58.92	11.17	44.18
F	8.92	61.54	7.75	53.12	7.28	51.48
IRL	3.02	62.89	3.72	70.68	8.79	58.34
I	11.45	38.18	10.50	35.83	18.34	41.03
L	33.00	33.00	33.03	33.03	31.84	31.84
NL	0.44	34.31	0.37	27.22	0.53	19.94
A	27.85	44.16	29.69	42.98	29.50	41.53
P	67.27	70.15	70.25	70.25	55.86	55.86
FIN	36.72	81.74	37.99	81.47	42.75	83.68
S	17.34	43.89	21.53	51.60	22.38	50.63
UK	0.15	28.74	0.35	45.43	0.34	32.69
IS	:	:	:	:	:	:
NO	0.77	8.06	0.56	8.72	0.58	11.13
CZ	:	:	1.23	65.19	1.22	53.28
EE	8.23	100.00	14.46	99.55	16.03	99.54
CY	:	:	:	:	:	:
LV	:	:	:	:	84.84	85.66
LT	:	:	:	:	15.29	95.74
HU	:	:	:	:	3.09	79.41
MT	:	:	:	:	:	:
PL	1.47	90.70	3.83	94.11	4.83	94.18
SI	:	:	8.71	48.54	:	54.80
SK	:	:	:	:	4.24	37.02
BG	:	:	2.15	59.29	5.32	78.55
RO	2.77	43.98	4.44	48.68	7.67	62.41
TR	:	:	:	:	23.32	61.72

2001 data for EU, Germany and Italy are provisional.

Source: Eurostat / New Cronos

Share of final consumption of energy produced from wood and wood waste

	1990		1995		2001	
	wood	wood	wood	wood	wood	wood
	% of total	% of renew.	% of total	% of renew.	% of total	% of renew.
EU15	3.92	97.29	3.79	96.39	3.99	93.52
B	0.97	98.44	0.88	97.09	0.95	91.38
DK	3.88	94.80	3.71	92.76	3.90	91.79
D	1.28	94.93	1.16	94.29	1.89	81.91
EL	6.14	93.76	5.67	91.28	4.91	89.99
E	6.88	99.15	5.05	98.49	4.02	96.18
F	6.99	97.68	6.61	95.72	6.02	91.58
IRL	1.48	97.85	2.04	98.15	1.42	97.08
I	2.84	92.59	2.76	91.86	4.18	94.66
L	0.46	100.00	0.49	100.00	0.43	99.69
NL	0.61	88.39	0.52	82.21	0.35	79.31
A	11.10	98.59	10.49	97.79	9.92	96.28
P	15.52	99.25	12.89	98.98	9.82	98.90
FIN	16.28	100.00	17.74	100.00	19.41	99.48
S	15.18	99.93	15.05	99.91	15.05	99.88
UK	0.22	74.75	0.54	87.89	0.31	82.01
IS	:	:	:	:	:	:
NO	5.58	99.89	5.77	98.43	6.90	99.19
CZ	:	:	1.10	100.00	0.73	79.24
EE	6.59	100.00	16.33	100.00	:	100.00
CY	:	:	:	:	:	:
LV	:	:	:	:	28.29	100.00
LT	:	:	:	:	15.47	100.00
HU	:	:	:	:	1.96	98.22
MT	:	:	:	:	:	:
PL	1.40	56.63	5.86	99.73	6.59	99.41
SI	:	:	6.58	100.00	8.59	99.69
SK	:	:	:	:	2.10	93.83
BG	:	:	1.56	100.00	6.33	100.00
RO	:	:	5.06	100.00	9.44	100.00
TR	:	:	0.00	:	14.87	77.93

2001 data for EU, Germany, Spain and Italy are provisional.

Source: Eurostat / New Cronos

Share of final consumption of energy from wood and wood waste at household level

	1990		1995		2001	
	wood	wood	wood	wood	wood	wood
	% of total	% of renew.	% of total	% of renew.	% of total	% of renew.
EU15	9.21	98.62	8.68	98.22	9.24	97.86
B	2.22	99.55	1.82	99.45	1.73	99.18
DK	8.30	99.34	8.39	98.71	9.32	98.03
D	3.79	99.62	3.47	98.79	5.88	98.48
EL	22.99	92.56	21.10	89.52	14.98	87.40
E	22.38	98.99	19.95	99.50	16.02	98.23
F	22.35	98.49	21.55	98.15	18.93	97.88
IRL	2.02	99.89	1.82	99.75	1.69	99.72
I	6.71	97.77	6.76	97.80	10.97	98.74
L	2.97	100.00	2.76	100.00	2.42	99.69
NL	2.26	99.25	1.90	98.23	1.13	92.56
A	22.20	99.41	23.82	98.46	22.20	96.92
P	50.22	99.37	44.76	99.11	40.29	99.02
FIN	17.16	100.00	16.98	99.98	20.02	99.98
S	13.74	99.66	11.59	99.50	7.30	99.03
UK	0.45	96.69	0.51	96.92	0.46	93.50
IS	:	:	:	:	:	:
NO	13.64	100.00	14.95	100.00	13.55	100.00
CZ	:	:	:	:	:	:
EE	27.02	100.00	32.07	100.00	34.72	100.00
CY	:	:	:	:	:	:
LV	:	:	:	:	50.54	100.00
LT	:	:	:	:	35.68	100.00
HU	:	:	:	:	4.52	100.00
MT	:	:	:	:	:	:
PL	4.52	100.00	10.77	100.00	12.98	100.00
SI	:	:	12.60	100.00	32.18	100.00
SK	:	:	:	:	:	:
BG	:	:	6.36	100.00	24.14	100.00
RO	17.66	100.00	16.32	100.00	24.44	100.00
TR	:	:	:	:	44.69	77.93

2001 data for EU, Eurozones, EEA, Germany, France, Italy, Luxembourg are provisional

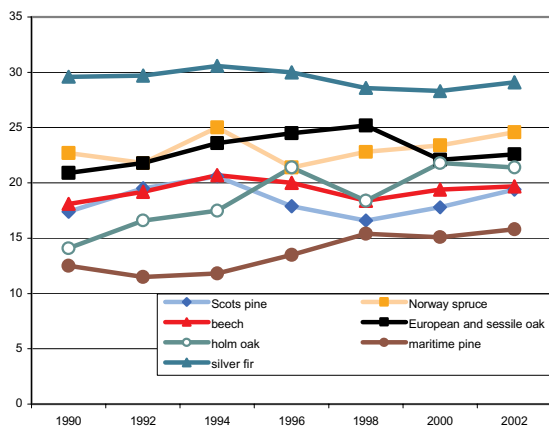
Source: Eurostat / New Cronos

5. Forest Condition¹

Crown condition in the forests of Europe

Forest condition in Europe has been monitored over 17 years jointly by the International Cooperative Programme on Assessment and Monitoring of Air Pollution Effects on Forests (ICP Forests) of the United Nations Economic Commission for Europe (UNECE) and by the European Union (EU). Large-scale variations of forest condition over space and time in relation to natural and anthropogenic factors are assessed on about 6 000 plots systematically spread across Europe. Within the so-called crown condition survey, the lack of foliage is described as defoliation for each sample tree. Trees with no leaf and needle loss have 0% defoliation, whereas dead trees are 100% defoliated. More than 130 000 trees on approximately 6 000 permanent sample plots in 30 European countries were assessed using harmonized methods in 2002. Some 21.3% of these trees were classified as moderately or severely defoliated or dead. The temporal development of defoliation was analysed for the smaller sample of continuously monitored trees. Silver fir trees had the highest mean defoliation in all years. In general, mean defoliation values fluctuated considerably (see Figure 1).

Figure 1:
Trends for mean defoliation for European main tree species,
calculated for continuously monitored trees.
Sample sizes vary between 1 237 trees for European and sessile oak
and 2 988 for spruce (silver fir: 289 trees).



Effects of air pollution

Within the ICP Forests and EU forest monitoring programme, air pollution has been shown to be one factor explaining the spatial and temporal variability of crown condition. Causal relationships are studied in detail on about 860 intensive monitoring plots covering the most important forest ecosystems in Europe. Deposition is measured below the forest canopy (throughfall) as well as in nearby open fields (bulk deposition). Due to interactions in the canopy, total deposition is modelled on throughfall measurements and bulk deposition.

On average, nitrogen deposition was highest in Central Europe between 1988 and 2000 (see Figure 2).

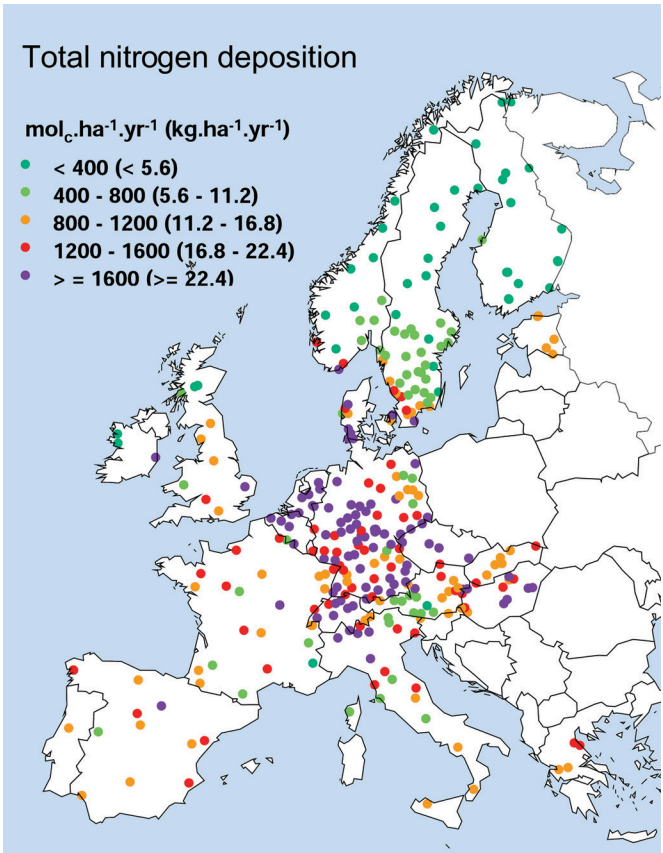


Figure 2: Total nitrogen deposition on Level II plots, 1998 - 2000. (Nitrogen = NO₃ + NH₄)

Critical loads for nitrogen and acidity

Total deposition describes the current situation but does not give precise information on the potential damage to be expected from atmospheric inputs. Similar deposition loads can have differing effects depending on the stand and site conditions in the forests. Critical loads have therefore been calculated. They define thresholds for the effects of air pollution. If pollution is below the critical values, it is assumed that no environmental damage will occur and a long-term stability of the ecosystem is achieved. The critical load of sulphur and nitrogen acidity was defined in 1994 in the UNECE Protocol on Further Reduction of Sulphur Emissions.

Within the monitoring programme of EU and ICP Forests, critical loads were calculated for approximately 230 Intensive Monitoring plots where all relevant data on deposition, meteorology, forest growth and soil and soil solution chemistry were available. Results for nitrogen are reported as the sum of nitrate (NO_3) and ammonium (NH_4). Acidity is defined as the sum of sulphate (SO_4) and nitrogen.

The average critical load aiming at no further nitrogen accumulation in the soil was near $8 \text{ kg} \cdot \text{ha}^{-1} \cdot \text{yr}^{-1}$. These critical loads were exceeded on 92% of the evaluated Level II plots (see Figure 3). Critical loads for acidity, which take into account the impact on tree roots through free aluminium in the soil solution, were exceeded on 33% of the plots (see Figure 4).

Critical load excess nitrogen

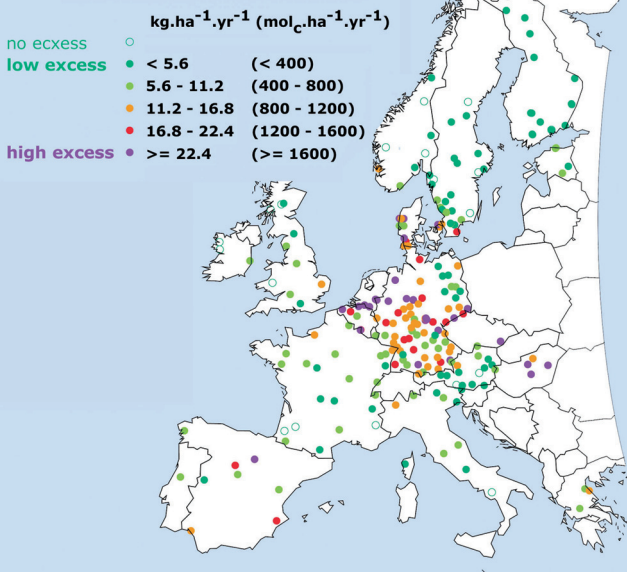


Figure 3: Excess deposition above critical loads of nitrogen deposition (234 Intensive Monitoring Plots, average 1995-1999)

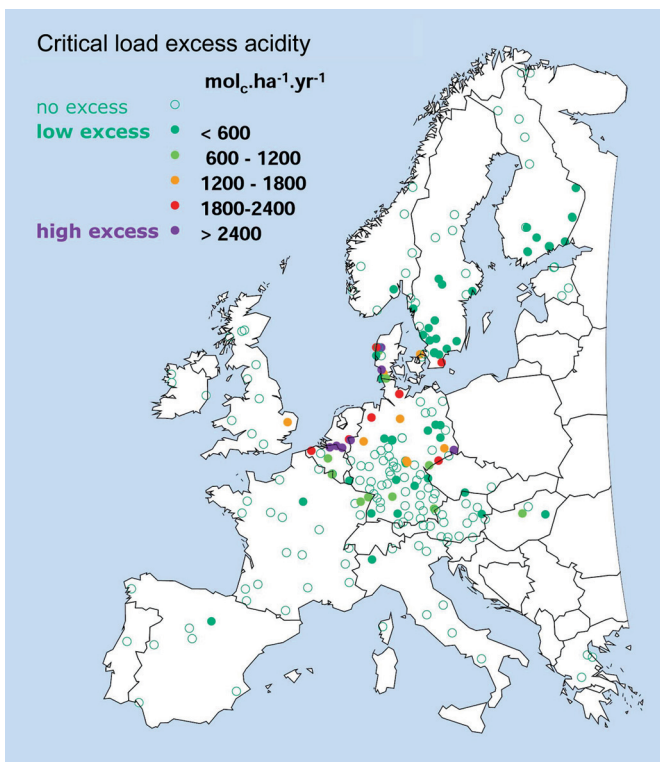


Figure 4: Excess deposition above critical loads of acidity inputs (226 Intensive Monitoring Plots, average 1995-1999)

Ground vegetation

The Intensive Monitoring Plots offer a unique opportunity to relate the species composition of the ground vegetation to environmental factors, including atmospheric deposition. This was done to identify where possible those environmental factors that most strongly determine the plant diversity of the ground vegetation, specifically in view of the hypothesis that the deposition of nitrogenous compounds is an important threat. The impact of nitrogen deposition was low but statistically significant. Due to the fact that until now only one vegetation assessment has been evaluated, the results only refer to the spatial variation of the ground vegetation. The results of repeated surveys will become available soon and a stronger influence of deposition on ground vegetation changes is expected.

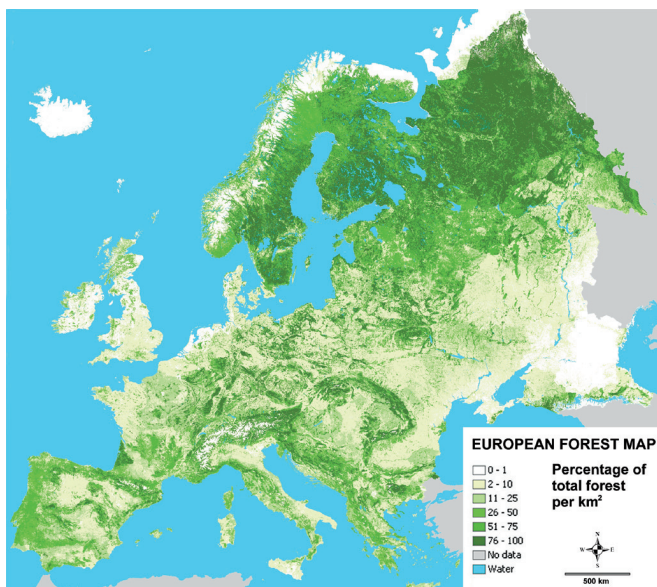
Variable group	Explained variance
Actual soil situation	7.6%
Temperature, precipitation	5.6%
Tree species	4.1%
Deposition	3.3%
Total	20.6%

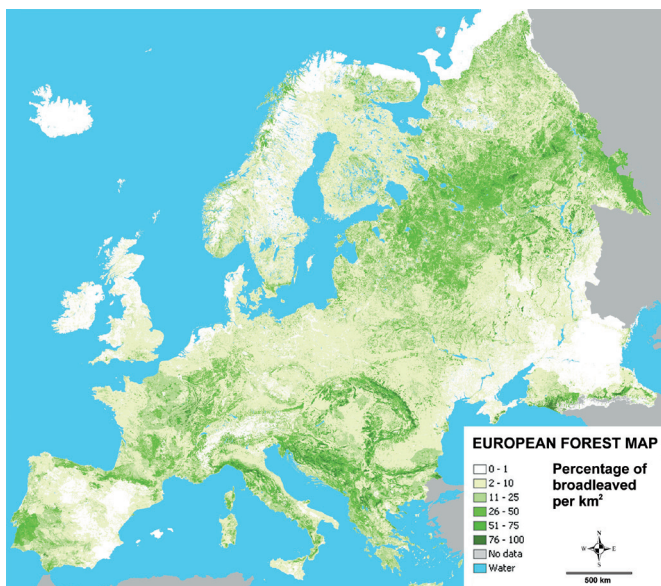
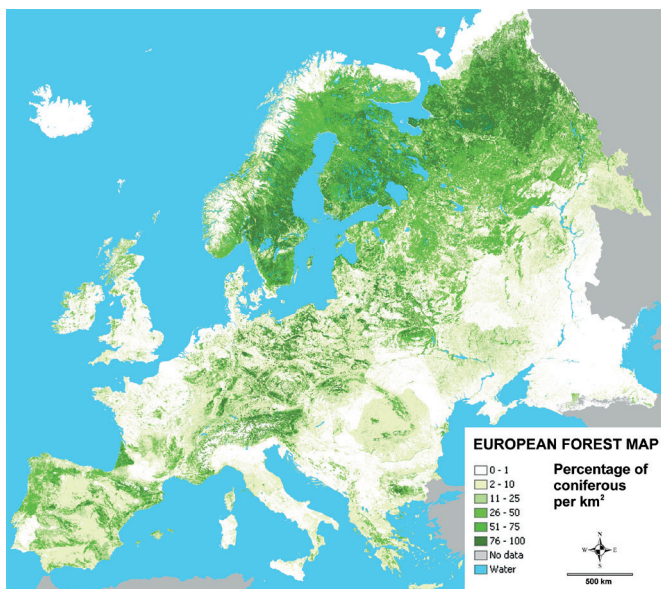
Table 1: Percentage of explained variance of the species abundances that could be ascribed to the four main groups of variables based on 194 Intensive Monitoring Plots

6. Mapping European forests¹ using Earth Observation data and statistics

Earth Observation data has become a valuable source of spatial information complementing traditional statistical data in giving an overall picture of the actual geographical location of land surface features like forest area. During the Fifth Framework Programme, the Joint Research Centre, the European Forest Institute and VTT Automation developed a method for combining satellite data with statistics from EUROSTAT and national statistical data for producing forest distribution maps covering the pan-European area: for each square kilometre, corresponding to the geometric resolution of the NOAA satellite, an estimate is made of the proportion covered by forest or main forest type. This estimate is adjusted to comply with national or regional statistical estimates.

The result is a “best fit” representation of the spatial distribution of forest or major forest types corresponding to the total statistical forest cover.





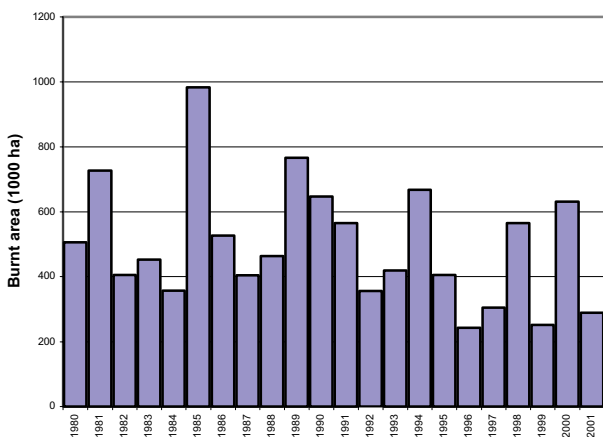
7. Forest Fires

The public awareness on the issue of natural hazards is increasing every day. The EU and international organizations are realizing that there are means to reduce or minimize the damage caused by natural disasters. The first step in this direction is the characterization of areas subject to suffer damages. This involves the use of analytical tools to infer the risk of natural or human induced hazards.

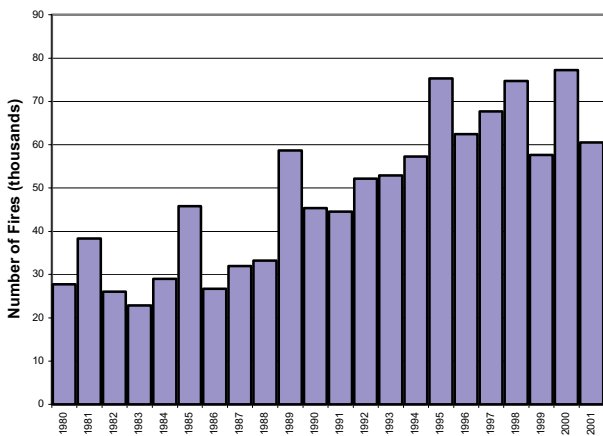
In particular, in the case of forest fire, the EU has suffered in the last years enormous losses in terms of human life and environmental damage. Forest fires are the result of strong tensions in landscape use and management. The high densities of population in suburban or tourist areas increase the risk of fires due to negligence or accident. Rural exodus and extensification of agriculture and livestock breeding increases agricultural and pastoral burning in order to contain natural re-afforestation. Economically not very profitable, the forests are often used for waste dumping and quarries. Forests are also crossed by electricity cables, railways and roads networks increasing the risk of fires. All these reasons explain the increasing trend of the number of forest fires in the last years. The growth of cities in their neighbour natural areas has also increased the number of fires in the urban-forest interface.¹

¹ Source: Forest Fires in Southern Europe, Bulletin of the 2000 fire campaign, JRC

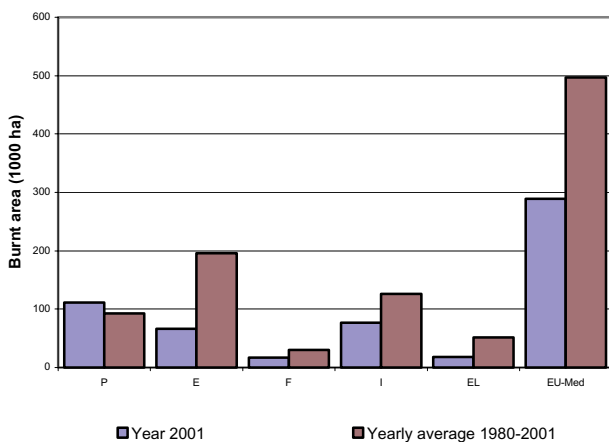
Burnt area in the EU-Med region



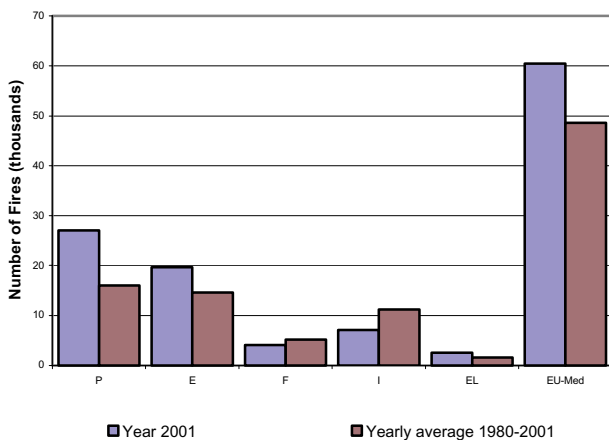
Number of fires in the EU-Med region



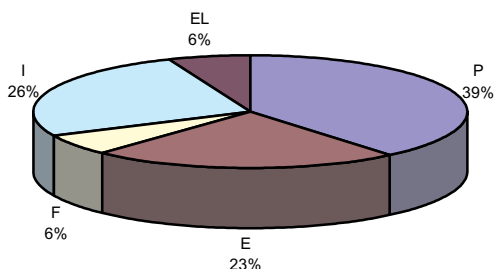
Burnt area in thr EU-Med countries



Number of Fires in the EU-Med countries



Percentage of the total burnt area in each of the EU-Med countries

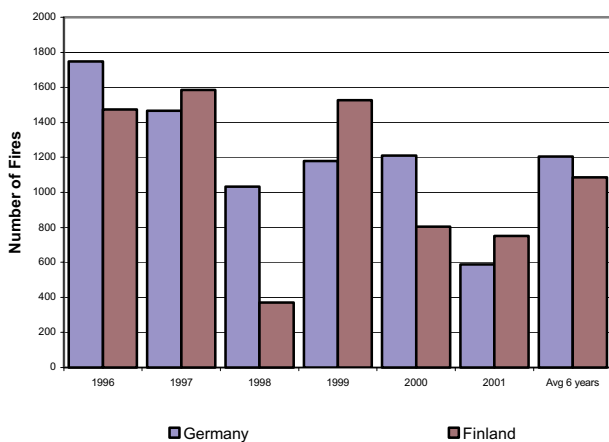


Number of fires and burnt area of the EU-Med countries in the last decades

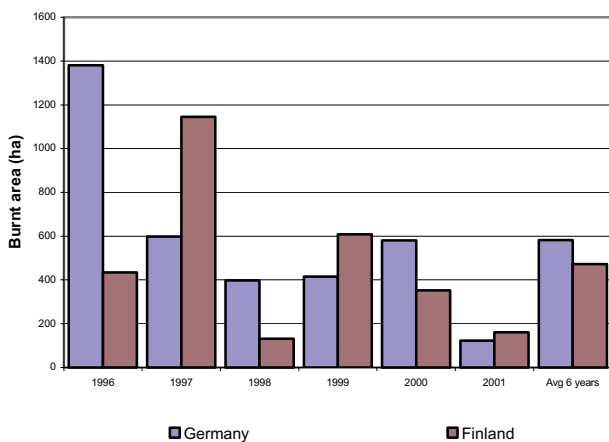
Number of fires (thousands)	P	E	F	I	EL	EU-Med
2001	27.1	19.6	4.1	7.1	2.5	60.5
Average 1980-1989	6.8	9.5	4.9	11.6	1.3	34.0
Average 1990-1999	22.3	18.2	5.5	11.4	1.8	59.0
Average 1980-2001	16.0	14.6	5.2	11.2	1.6	48.5
TOTAL	351.5	320.6	113.7	247.0	35.2	1068.0

Burnt area (1000 ha)	P	E	F	I	EL	EU-Med
2001	111.2	66.1	17.0	76.4	18.2	288.9
Average (1980-1989)	74.5	244.8	39.2	148.5	52.4	559.3
Average (1990-1999)	102.2	161.3	23.0	108.9	44.1	442.5
Average 1980-2001	92.6	196.2	30.1	125.7	51.3	497.2
Percentage of total (2001)	39.0	23.0	6.0	26.0	6.0	100.0
TOTAL	2.0	4.3	0.7	2.8	1.1	10.9

Numbers of Fire in EU Northern countries



Burnt area in EU Northern countries



Number of fires and burnt area of the EU Northern countries

	Number of Fires		Burnt area (ha)	
	D	FIN	D	FIN
1991	1,846	:	920	:
1992	3,012	:	4,908	:
1993	1,694	:	1,493	:
1994	1,696	:	1,114	:
1995	1,237	:	592	:
1996	1,748	1,475	1,381	433
1997	1,467	1,585	599	1,146
1998	1,032	370	397	131
1999	1,178	1,528	415	609
2000	1,210	805	581	352
2001	587	751	122	161
Avg 6 years	1,204	1,086	583	472
Total	16,707	6,514	12,522	2,832

1. Removals

The primary source for removals of roundwood is the Joint Eurostat/UNECE/FAO/ITTO Forest Sector Questionnaire. The definitions and breakdown of roundwood used in the questionnaire are:

Removals (the term is used as a synonymous term for “roundwood production”) comprise all quantities of wood removed from the forest and other wooded land or other felling site during a certain period of time. It is reported in cubic metres underbark (i.e. excluding bark).

Roundwood is divided into two principal categories: industrial roundwood and wood fuel. The commodities included in *industrial roundwood* are logs, pulpwood and other industrial wood. The final use determines the category to which roundwood is attributed. *Logs* are used for the production of sawnwood (including sleepers) and veneer sheets. *Pulpwood* is wood in the rough other than logs, for the manufacture of pulp, particleboard and fibreboard. *Other Industrial roundwood* includes roundwood that will be used for poles, piling, posts, fencing, pitprops tanning, distillation and match blocks, etc. *Wood fuel* is wood in the rough (from trunks and branches of trees), to be used as fuel for purposes such as cooking, heating and power production.

All roundwood commodities can further be divided into coniferous (generally referred to as softwood) or non-coniferous (generally referred to as broadleaves or hardwood) species. Here, separate figures are reported for coniferous and non-coniferous total roundwood.

The ownership categories applied in statistics on removals are private ownership, state ownership and other publicly owned forest/other wooded land (TBFR 2000):

–Private ownership: forests owned by individuals, families, cooperatives and corporations which may be

engaged in agriculture or other occupations as well as forestry; private forest enterprises and industries; private corporations and other institutions (religious and educational institutions, pension and investment funds, nature conservation societies, etc).

–State ownership: forests owned by national, state and regional governments, or government-owned corporations; Crown forests.

–Other publicly owned forests: forests belonging to cities, municipalities, villages and communes; includes any publicly owned forest and other wooded land not classified as being "in State ownership".

Removals of roundwood by coniferous and non-coniferous species

	Coniferous			Non-Coniferous			Roundwood total		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000m ³								
EU-15	192,322	217,194	201,569	65,683	68,823	62,817	258,005	286,017	264,386
B	:	2,830	3,000	:	1,680	1,500	:	4,510	4,500
DK	1,518	2,428	1,064	764	524	382	2,282	2,952	1,446
D	30,442	43,284	33,177	8,901	10,426	9,203	39,343	53,710	42,380
EL	521	600	484	1,440	1,645	1,107	1,961	2,245	1,591
E	8,654	8,114	8,901	7,421	6,207	6,938	16,075	14,321	15,839
F	19,958	28,739	22,190	16,103	17,089	13,710	36,061	45,828	35,900
IRL	2,163	2,631	2,443	41	42	46	2,204	2,673	2,489
I	1,736	1,719	1,439	8,000	7,610	6,350	9,736	9,329	7,789
L	:	121	41	:	138	99	:	260	140
NL	693	645	522	411	394	317	1,104	1,039	839
A	12,196	11,229	12,670	2,209	2,047	2,175	14,405	13,276	14,845
P	5,117	5,182	3,285	4,233	5,649	5,457	9,350	10,831	8,742
FIN	41,734	45,769	44,471	8,485	8,493	8,540	50,219	54,262	53,011
S	58,100	57,010	61,050	5,500	6,290	6,450	63,600	63,300	67,500
UK	6,780	6,892	6,832	775	589	543	7,555	7,481	7,375
IS	0	-	-	0	-	-	0	-	-
NO	8,476	7,602	7,847	569	554	802	9,045	8,156	8,649
CH	3,516	7,611	3,200	1,233	1,627	1,250	4,749	9,238	4,450
CZ	11,308	12,851	13,010	1,057	1,590	1,531	12,365	14,441	14,541
EE	1,853	5,870	6,920	1,856	3,040	3,580	3,709	8,910	10,500
CY	46	19	14	2	1	2	48	21	15
LV	2,800	9,618	8,552	4,090	4,686	4,915	6,890	14,304	13,467
LT	4,600	2,880	3,460	1,360	2,620	2,840	5,960	5,500	6,300
HU	420	696	620	3,911	5,206	5,216	4,331	5,902	5,836
MT	0	0	0	0	0	0	0	0	0
PL	15,365	19,541	19,855	5,286	6,484	7,315	20,651	26,025	27,170
SI	1,043	1,209	1,272	823	1,044	1,011	1,866	2,253	2,283
SK	3,237	3,211	2,882	2,086	2,952	2,883	5,323	6,163	5,765
BG	996	1,608	1,408	1,842	3,176	2,584	2,838	4,784	3,992
RO	4,355	4,919	6,592	7,823	8,230	8,562	12,178	13,148	15,154
TR	9,002	7,394	8,238	10,277	9,393	10,227	19,279	16,787	18,465
CA	158,365	163,042	163,042	29,981	37,284	37,284	188,346	200,326	200,326
RU	85,100	97,000	119,000	31,410	61,100	57,900	116,510	158,100	176,900
US	286,621	292,669	289,686	212,689	207,505	188,135	499,310	500,174	477,821

Source: Eurostat / New Cronos

Removals by roundwood category

	Fuelwood			Industrial roundwood			Roundwood total		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000 m ³								
EU-15	27,498	28,862	30,306	230,507	257,154	234,080	258,005	286,017	264,386
B	:	550	550	:	3,960	3,950	:	4,510	4,500
DK	485	461	657	1,797	2,491	789	2,282	2,952	1,446
D	2,429	2,622	4,625	36,914	51,088	37,755	39,343	53,710	42,380
EL	1,330	1,601	1,093	631	644	498	1,961	2,245	1,591
E	3,078	1,600	1,989	12,997	12,721	13,850	16,075	14,321	15,839
F	2,500	2,388	2,400	33,561	43,440	33,500	36,061	45,828	35,900
IRL	64	73	34	2,140	2,600	2,455	2,204	2,673	2,489
I	5,263	5,680	4,567	4,473	3,649	3,222	9,736	9,329	7,789
L	:	18	4	:	242	135	:	260	140
NL	163	160	136	941	879	703	1,104	1,039	839
A	3,059	2,860	3,036	11,346	10,416	11,809	14,405	13,276	14,845
P	500	600	600	8,850	10,231	8,142	9,350	10,831	8,742
FIN	4,095	4,115	4,482	46,124	50,147	48,529	50,219	54,262	53,011
S	3,800	5,900	5,900	59,800	57,400	61,600	63,600	63,300	67,500
UK	232	234	233	7,323	7,247	7,142	7,555	7,481	7,375
IS	0	-	-	0	-	-	0	-	-
NO	470	678	1,189	8,575	7,478	7,460	9,045	8,156	8,649
CH	833	1,626	950	3,916	7,612	3,500	4,749	9,238	4,450
CZ	649	940	1,007	11,716	13,501	13,534	12,365	14,441	14,541
EE	573	1,640	1,930	3,136	7,270	8,570	3,709	8,910	10,500
CY	11	5	5	37	15	10	48	21	15
LV	1,200	1,680	1,198	5,690	12,624	12,269	6,890	14,304	13,467
LT	1,090	1,450	1,440	4,870	4,050	4,860	5,960	5,500	6,300
HU	1,948	2,597	2,398	2,383	3,305	3,438	4,331	5,902	5,836
MT	0	0	0	0	0	0	0	0	0
PL	1,411	1,536	2,130	19,240	24,489	25,040	20,651	26,025	27,170
SI	227	532	280	1,639	1,721	2,003	1,866	2,253	2,283
SK	436	277	259	4,887	5,886	5,507	5,323	6,163	5,765
BG	868	2,107	1,635	1,970	2,677	2,357	2,838	4,784	3,992
RO	2,163	3,032	3,062	10,015	10,116	12,092	12,178	13,148	15,154
TR	8,534	6,358	7,160	10,745	10,429	11,305	19,279	16,787	18,465
CA	5,319	2,953	2,953	183,027	197,373	197,373	188,346	200,326	200,326
RU	33,460	52,300	48,800	83,050	105,800	128,100	116,510	158,100	176,900
US	90,362	72,520	73,086	408,948	427,654	404,735	499,310	500,174	477,821

Source: Eurostat / New Cronos

Removals by forest ownership category

	State forests		Other publicly owned forests		Private forests		All owner groups	
	2001	2002	2001	2002	2001	2002	2001	2002
	1000 m ³							
EU-15	:	:	:	:	:	:	:	:
B	:	:	:	:	:	:	:	:
DK	418	345	63	58	1,132	1,043	1,613	1,446
D	17,737	17,262	9,671	8,612	12,075	16,506	39,483	42,380
EL	1,579	1,302	-	-	337	289	1,916	1,591
E	:	:	:	:	:	:	:	:
F	7,182	5,092	8,031	7,056	24,618	23,752	39,831	35,900
IRL	-	-	2,301	2,318	154	171	2,455	2,489
I	143	157	1,567	1,590	6,390	6,042	8,099	7,789
L	:	:	:	:	:	:	:	:
NL	347	337	87	87	431	415	865	839
A	1,848	1,931	-	-	11,619	12,914	13,467	14,845
P	:	:	:	:	:	:	:	:
FIN	4,068	4,171	-	:	48,142	48,840	52,210	53,011
S	300	:	3,100	:	59,800	:	63,200	67,500
UK	4,735	4,771	:	:	2,824	2,604	7,559	7,375
IS	:	:	:	:	:	:	:	:
NO	249	210	-	-	8,748	8,438	8,996	8,649
CH	382	:	3,452	:	1,828	:	5,662	:

Source: Eurostat / New Cronos

Removals of Industrial roundwood

by roundwood assortment

	Sawlogs and veneer logs			Pulpwood		
	1995	2000	2002	1995	2000	2002
1000 m ³						
EU-15	133,819	157,561	135,742	90,674	91,145	91,682
B	:	2,660	2,575	:	1,200	1,175
DK	875	1,332	455	571	587	153
D	24,292	36,537	24,446	11,738	10,118	10,398
EL	389	441	409	142	113	-
E	6,030	6,678	7,603	6,341	5,393	5,373
F	21,687	30,619	21,730	11,414	12,341	11,300
IRL	1,370	1,588	1,733	770	1,013	722
I	2,543	2,062	1,840	710	708	590
L	:	113	68	:	72	67
NL	514	572	398	352	197	189
A	8,081	8,033	9,183	2,665	2,383	2,626
P	4,189	3,588	2,294	4,480	6,463	5,668
FIN	22,831	25,994	23,835	22,968	24,153	24,694
S	34,700	33,140	34,900	24,600	23,760	26,200
UK	3,768	4,204	4,273	3,073	2,645	2,527
IS	0	-	-	0	:	:
NO	4,603	4,088	4,141	3,762	3,366	3,293
CH	3,304	6,801	3,000	542	811	500
CZ	5,812	8,020	8,073	5,204	5,081	5,081
EE	1,413	2,850	3,360	1,527	3,800	4,030
CY	25	12	10	12	3	0
LV	2,900	8,642	9,861	2,400	3,517	1,861
LT	2,320	2,900	3,220	2,390	1,100	1,620
HU	1,303	1,380	1,860	660	612	623
MT	0	0	0	0	0	0
PL	9,337	11,609	10,716	7,630	10,988	12,600
SI	918	1,120	1,164	397	396	414
SK	2,109	2,566	2,365	2,691	3,118	2,955
BG	877	1,626	1,292	934	957	971
RO	4,274	6,146	7,062	1,934	1,652	2,463
TR	5,467	5,178	5,606	1,558	3,369	3,776
CA	150,026	165,301	165,301	30,926	28,102	28,102
RU	52,550	49,700	67,800	23,300	46,400	47,500
US	242,874	248,241	229,356	150,000	164,513	161,645

Source: Eurostat / New Cronos

Removals of Industrial roundwood (cont.)

by roundwood assortment

	Other industrial roundwood			Industrial roundwood total		
	1995	2000	2002	1995	2000	2002
	1000 m ³					
EU-15	6,014	8,448	6,655	230,507	257,154	234,080
B	:	100	200	:	3,960	3,950
DK	351	573	181	1,797	2,491	789
D	884	4,433	2,911	36,914	51,088	37,755
EL	100	90	89	631	644	498
E	626	650	874	12,997	12,721	13,850
F	460	480	470	33,561	43,440	33,500
IRL	0	-	-	2,140	2,600	2,455
I	1,220	879	792	4,473	3,649	3,222
L	:	56	0	:	242	135
NL	75	109	116	941	879	703
A	600	-	-	11,346	10,416	11,809
P	181	180	180	8,850	10,231	8,142
FIN	325	-	-	46,124	50,147	48,529
S	500	500	500	59,800	57,400	61,600
UK	482	398	342	7,323	7,247	7,142
IS	0	:	:	0	-	-
NO	210	24	26	8,575	7,478	7,460
CH	70	-	-	3,916	7,612	3,500
CZ	700	400	380	11,716	13,501	13,534
EE	196	620	1,180	3,136	7,270	8,570
CY	0	0	0	37	15	10
LV	390	465	547	5,690	12,624	12,269
LT	160	50	20	4,870	4,050	4,860
HU	420	1,314	956	2,383	3,305	3,438
MT	0	0	0	0	0	0
PL	2,273	1,892	1,724	19,240	24,489	25,040
SI	324	205	425	1,639	1,721	2,003
SK	87	202	187	4,887	5,886	5,507
BG	159	94	94	1,970	2,677	2,357
RO	3,807	2,318	2,567	10,015	10,116	12,092
TR	3,720	1,882	1,923	10,745	10,429	11,305
CA	2,075	3,970	3,970	183,027	197,373	197,373
RU	7,200	9,700	12,800	83,050	105,800	128,100
US	16,074	14,900	13,734	408,948	427,654	404,735

Source: Eurostat / New Cronos

2. Supply balance sheets

The primary source of the data is the Joint Eurostat/UNECE/FAO/ITTO Forest Sector Questionnaire. The tables comprise the production and trade of roundwood and the following forest industry products:

Sawnwood: wood that has been produced either by sawing lengthways or by a profile-chipping process. It includes planks, beams, joists, boards, rafters, scantlings, laths, boxboards, sleepers and "lumber", etc

Wood-based panels comprising the following panel products: veneer sheets, plywood, particle board (including oriented standard board OSB) and fibreboard;

Wood pulp: fibrous material prepared from pulpwood, wood chips, particles or residues by mechanical and/or chemical process for further manufacture into paper, paperboard, fibreboard or other cellulose products;

Paper and paper board comprising the sum of graphic papers; sanitary and household papers; packaging materials and other paper and paperboard but excluding manufactured paper products such as boxes, cartons, books and magazines, etc.

In the framework of the Forestry Strategy of the European Commission, the demand of and the supply to the wood processing industries are of special interest. For this reason, a valuation for the *degree of self-sufficiency* was calculated. It shows the domestic production as a percentage of domestic use or apparent consumption (= production + imports - exports). Since the apparent consumption does not include stocks, these figures are only indicators for actual self-sufficiency.

Supply balance sheet for roundwood

	Production			Imports			Imports extra-EU		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000 m ³								
EU-15	258,005	286,017	264,386	-	-	-	25,550	35,634	34,503
B	:	4,510	4,500	:	4,024	2,674	:	271	79
DK	2,282	2,952	1,446	681	637	643	74	116	187
D	39,343	53,710	42,380	1,776	3,596	2,538	938	1,655	1,444
EL	1,961	2,245	1,591	25	445	460	9	370	404
E	16,075	14,321	15,839	2,265	3,789	3,302	1,089	1,592	1,023
F	36,061	45,828	35,900	2,351	2,043	1,960	1,431	1,272	949
IRL	2,204	2,673	2,489	50	107	138	11	32	40
I	9,736	9,329	7,789	5,058	6,295	5,877	2,616	3,028	3,354
L	:	260	140	:	764	944	:	1	0
NL	1,104	1,039	839	465	389	514	117	99	266
A	14,405	13,276	14,845	4,618	8,591	7,452	2,680	5,430	4,453
P	9,350	10,831	8,742	1,638	1,342	1,080	1,221	992	688
FIN	50,219	54,262	53,011	9,389	10,005	12,688	8,881	9,814	12,464
S	63,600	63,300	67,500	7,667	11,898	10,007	6,075	10,785	8,962
UK	7,555	7,481	7,375	673	309	490	115	178	191
IS	0	-	-	3	4	-	-	-	-
NO	9,045	8,156	8,649	3,728	3,348	2,829	-	-	-
CH	4,749	9,238	4,450	268	305	381	-	-	-
CZ	12,365	14,441	14,541	335	954	994	-	-	-
EE	3,709	8,910	10,500	14	346	639	-	-	-
CY	48	21	15	4	2	3	-	-	-
LV	6,890	14,304	13,467	51	136	393	-	-	-
LT	5,960	5,500	6,300	16	61	104	-	-	-
HU	4,331	5,902	5,836	239	354	332	-	-	-
MT	0	0	0	2	4	4	-	-	-
PL	20,651	26,025	27,170	380	732	727	-	-	-
SI	1,866	2,253	2,283	324	496	424	-	-	-
SK	5,323	6,163	5,765	9	129	134	-	-	-
BG	2,838	4,784	3,992	2	105	83	-	-	-
RO	12,178	13,148	15,154	80	20	88	-	-	-
TR	19,279	16,787	18,465	782	1,883	1,050	-	-	-
CA	188,346	200,326	200,326	6,563	6,540	7,512	-	-	-
RU	116,510	158,100	176,900	975	527	806	-	-	-
US	499,310	500,174	477,821	977	7,531	6,901	-	-	-

Source: Eurostat / New Cronos

Supply balance sheet for roundwood (cont.)

	Exports			Exports extra-EU			Self-sufficiency degree (excluding stock)		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000 m ³						%		
EU-15	-	-	-	3,009	3,812	3,200	92.0	90.0	89.4
B	:	1,181	901	:	139	68	:	61.3	71.7
DK	325	877	568	98	233	428	86.5	108.8	95.1
D	4,983	5,604	4,450	692	1,171	934	108.9	103.9	104.7
EL	60	10	16	2	0	0	101.8	83.8	78.2
E	537	369	273	4	91	50	90.3	80.7	83.9
F	2,936	5,859	4,284	205	528	356	101.7	109.1	106.9
IRL	304	42	127	28	0	6	113.0	97.6	99.6
I	5	24	17	1	16	13	65.8	59.8	57.1
L	:	228	210	:	1	0	:	32.7	16.0
NL	391	241	385	5	10	3	93.7	87.5	86.6
A	498	942	893	59	65	82	77.8	63.4	69.4
P	798	570	807	11	2	1	91.8	93.3	97.0
FIN	866	533	408	407	174	136	85.5	85.1	81.2
S	1,738	1,462	1,783	1,419	1,372	1,117	91.5	85.8	89.1
UK	62	362	202	11	9	5	92.5	100.7	96.2
IS	0	-	-	-	-	-	0.0	-	:
NO	437	515	552	-	-	-	73.3	74.2	79.2
CH	1,030	3,755	2,005	-	-	-	119.1	159.6	157.5
CZ	2,335	2,030	2,514	-	-	-	119.3	108.1	111.7
EE	2,657	4,432	3,359	-	-	-	348.1	184.7	135.0
CY	0	0	0	-	-	-	93.2	90.7	83.5
LV	2,820	4,353	4,469	-	-	-	167.2	141.8	143.4
LT	1,770	1,203	1,437	-	-	-	141.7	126.2	126.8
HU	695	1,593	1,575	-	-	-	111.8	126.6	127.1
MT	0	0	0	-	-	-	0.0	0.0	0.0
PL	239	347	723	-	-	-	99.3	98.5	100.0
SI	174	304	362	-	-	-	92.5	92.1	97.3
SK	919	1,612	1,283	-	-	-	120.6	131.7	124.9
BG	92	360	306	-	-	-	103.3	105.6	105.9
RO	0	535	95	-	-	-	99.3	104.1	100.0
TR	56	4	9	-	-	-	96.4	89.9	94.7
CA	1,387	3,048	5,071	-	-	-	97.3	98.3	98.8
RU	18,460	32,049	37,486	-	-	-	117.7	124.9	126.2
US	12,945	19,106	14,806	-	-	-	102.5	102.4	101.7

Source: Eurostat / New Cronos

Supply balance sheet for sawnwood

	Production			Imports			Imports extra-EU		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000 m³								
EU-15	69,581	79,208	79,662	-	-	-	13,181	19,719	18,519
B	:	1,150	1,175	:	2,223	2,007	:	1,107	941
DK	585	364	244	1,927	2,925	2,689	315	394	603
D	14,207	16,340	16,879	5,296	6,344	4,862	2,920	3,567	3,027
EL	337	123	123	395	700	838	175	507	666
E	3,312	3,760	3,524	1,839	3,165	3,129	760	1,730	1,548
F	10,071	10,536	10,540	2,349	3,341	3,287	752	1,384	1,243
IRL	678	888	969	405	646	842	108	202	387
I	1,862	1,630	1,605	6,406	8,380	7,857	2,458	3,116	2,972
L	:	133	133	:	64	51	:	1	2
NL	428	389	258	3,277	3,705	3,022	1,097	1,724	1,340
A	7,814	10,390	10,415	1,037	1,663	1,352	629	1,233	900
P	1,831	1,427	1,298	153	297	274	109	187	219
FIN	10,007	13,420	13,390	236	341	257	159	321	244
S	14,970	16,176	16,560	294	348	439	167	289	367
UK	2,295	2,482	2,549	5,533	7,963	8,263	2,732	3,957	4,060
IS	0	-	-	72	94	71	-	-	-
NO	2,212	2,280	2,225	684	945	940	-	-	-
CH	1,504	1,625	1,420	583	453	409	-	-	-
CZ	3,498	4,106	3,800	250	336	381	-	-	-
EE	353	1,436	1,900	49	199	236	-	-	-
CY	15	9	7	95	67	77	-	-	-
LV	1,300	3,900	3,947	8	135	158	-	-	-
LT	940	1,300	1,250	28	279	307	-	-	-
HU	231	291	221	810	1,109	1,227	-	-	-
MT	0	0	0	22	22	19	-	-	-
PL	3,870	4,262	2,910	135	379	496	-	-	-
SI	513	439	446	105	198	187	-	-	-
SK	661	1,265	1,265	16	55	50	-	-	-
BG	257	312	312	2	18	11	-	-	-
RO	1,777	3,396	3,696	2	8	11	-	-	-
TR	4,331	5,528	5,732	155	312	196	-	-	-
CA	43,838	50,465	52,896	1,458	1,736	1,646	-	-	-
RU	27,815	20,000	22,000	51	21	16	-	-	-
US	85,313	91,076	89,151	29,948	34,391	37,416	-	-	-

Source: Eurostat / New Cronos

Supply balance sheet for sawnwood (cont.)

	Exports			Exports extra-EU			Self-sufficiency degree (excluding stock)		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000 m ³						%		
EU-15	-	-	-	6,112	8,832	10,727	90.8	87.9	91.1
B	:	1,025	982	:	23	20	:	49.0	53.4
DK	95	117	368	16	20	75	24.2	11.5	9.5
D	1,907	3,911	4,439	237	702	1,551	80.7	87.0	97.6
EL	8	11	12	7	11	11	46.6	15.1	12.9
E	53	128	134	29	27	19	65.0	55.3	54.1
F	1,045	1,386	1,406	148	225	286	88.5	84.3	84.9
IRL	255	174	316	4	0	1	81.9	65.3	64.8
I	130	208	187	77	144	111	22.9	16.6	17.3
L	:	33	35	:	0	0	:	81.3	89.2
NL	458	381	356	19	67	63	13.2	10.5	8.8
A	4,659	6,356	6,422	1,038	1,502	1,767	186.4	182.4	194.9
P	525	283	250	70	32	25	125.5	99.0	98.2
FIN	7,376	8,431	8,187	2,072	2,934	3,089	349.0	251.8	245.2
S	10,339	11,048	11,476	2,367	3,140	3,704	304.0	295.4	299.8
UK	63	195	294	10	5	4	29.6	24.2	24.2
IS	1	-	-	-	-	-	0.0	-	-
NO	713	656	626	-	-	-	101.3	88.8	87.6
CH	131	193	197	-	-	-	76.9	86.2	87.0
CZ	1,548	1,778	1,448	-	-	-	159.0	154.1	139.0
EE	299	1,070	1,248	-	-	-	340.7	253.8	214.0
CY	0	1	0	-	-	-	13.6	11.8	8.8
LV	895	3,077	2,857	-	-	-	314.8	407.1	316.3
LT	773	823	918	-	-	-	481.3	171.9	195.9
HU	149	335	286	-	-	-	25.9	27.4	19.0
MT	0	0	0	-	-	-	0.0	0.0	0.0
PL	1,167	1,100	789	-	-	-	136.4	120.4	111.2
SI	358	344	368	-	-	-	197.3	150.0	168.8
SK	471	920	864	-	-	-	320.7	316.3	280.5
BG	36	265	264	-	-	-	115.1	480.0	528.8
RO	746	2,322	2,187	-	-	-	172.0	314.2	243.2
TR	154	43	158	-	-	-	100.0	95.4	99.3
CA	35,139	36,456	37,341	-	-	-	431.6	320.5	307.5
RU	6,076	7,764	9,020	-	-	-	127.7	163.2	169.3
US	6,041	5,129	4,520	-	-	-	78.1	75.7	73.0

Source: Eurostat / New Cronos

Supply balance sheet for wood based panels

	Production			Imports			Imports extra-EU		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000 m ³								
EU-15	34,395	44,097	44,861	-	-	-	5,282	6,553	6,344
B	:	2,821	2,758	:	1,417	1,451	:	519	480
DK	570	448	354	905	1,032	1,246	229	376	427
D	10,646	14,064	13,758	3,685	4,250	3,587	1,687	2,032	1,574
EL	313	713	663	112	387	274	39	96	113
E	2,792	4,673	5,030	550	1,214	1,303	80	153	171
F	3,857	5,538	5,593	1,319	1,692	1,609	244	322	352
IRL	336	745	700	166	284	285	70	110	107
I	4,183	5,425	5,520	1,128	1,729	1,896	649	670	789
L	:	150	165	:	59	45	:	1	0
NL	95	61	23	1,170	1,726	1,631	436	307	306
A	1,997	2,079	3,420	283	688	563	71	174	127
P	1,170	1,293	1,250	118	246	269	4	34	31
FIN	1,406	1,801	1,860	107	197	261	50	127	185
S	1,049	1,012	850	591	667	676	199	370	384
UK	2,531	3,275	2,917	2,679	3,146	3,661	1,376	1,262	1,297
IS	0	0	:	20	32	5	-	-	-
NO	560	535	476	152	217	199	-	-	-
CH	704	740	716	508	518	491	-	-	-
CZ	813	921	1,109	189	462	611	-	-	-
EE	288	412	480	154	182	134	-	-	-
CY	19	12	3	62	81	109	-	-	-
LV	299	291	318	2	42	62	-	-	-
LT	187	270	304	47	115	157	-	-	-
HU	493	563	612	210	251	432	-	-	-
MT	0	0	0	32	26	38	-	-	-
PL	2,434	4,615	5,197	313	688	946	-	-	-
SI	390	537	481	92	132	183	-	-	-
SK	386	346	409	108	334	242	-	-	-
BG	233	470	530	9	42	61	-	-	-
RO	463	306	583	45	226	436	-	-	-
TR	1,445	2,370	2,656	92	535	333	-	-	-
CA	7,783	14,533	16,203	747	1,539	1,930	-	-	-
RU	3,421	4,750	5,636	175	376	646	-	-	-
US	36,644	45,523	40,517	5,529	13,055	15,580	-	-	-

Source: Eurostat / New Cronos

Supply balance sheet for wood based panels (cont.)

	Exports			Exports extra-EU			Self-sufficiency degree (excluding stock)		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000 m ³						%		
EU-15	-	-	-	2,276	4,404	6,282	92.0	95.4	99.9
B	:	2,759	2,879	:	356	778	:	190.7	207.4
DK	100	144	129	35	32	59	41.5	33.5	24.1
D	1,805	4,620	5,410	602	1,511	2,111	85.0	102.7	115.3
EL	34	91	79	19	90	69	79.9	70.6	77.3
E	543	1,097	1,223	280	380	604	99.8	97.5	98.4
F	1,723	2,269	2,705	186	258	280	111.7	111.6	124.4
IRL	183	581	603	10	43	119	105.3	166.3	183.2
I	611	1,121	1,142	304	650	780	89.0	89.9	88.0
L	:	167	102	:	47	16	:	358.7	152.4
NL	331	274	254	15	18	24	10.2	4.0	1.6
A	1,249	2,030	2,603	205	566	904	193.8	282.1	247.8
P	647	748	713	82	101	157	182.7	163.4	155.1
FIN	900	1,381	1,500	178	211	267	229.4	291.9	299.3
S	473	265	231	113	87	86	89.9	71.6	65.7
UK	349	352	436	51	54	29	52.1	54.0	47.5
IS	3	-	-	-	-	-	0.0	0.0	:
NO	227	341	254	-	-	-	115.4	130.1	113.2
CH	437	675	665	-	-	-	90.8	126.9	132.0
CZ	343	639	727	-	-	-	123.4	123.8	111.7
EE	233	436	384	-	-	-	138.2	261.5	208.9
CY	0	0	0	-	-	-	23.6	13.1	2.3
LV	628	233	237	-	-	-	:	290.7	222.6
LT	102	211	192	-	-	-	141.9	154.8	113.1
HU	159	319	331	-	-	-	90.6	113.8	85.9
MT	0	0	0	-	-	-	0.0	0.0	0.0
PL	451	1,337	1,610	-	-	-	106.0	116.4	114.6
SI	138	186	209	-	-	-	113.6	111.3	105.7
SK	109	240	281	-	-	-	100.3	78.6	110.6
BG	19	182	190	-	-	-	104.3	142.4	132.3
RO	144	153	450	-	-	-	127.1	80.9	102.3
TR	60	64	230	-	-	-	97.8	83.4	96.3
CA	5,267	10,834	12,058	-	-	-	238.5	277.5	266.7
RU	559	1,404	1,583	-	-	-	112.6	127.6	119.9
US	2,912	2,127	2,061	-	-	-	93.3	80.6	75.0

Source: Eurostat / New Cronos

Supply balance sheet for pulp

	Production			Imports			Imports extra-EU		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000mt								
EU-15	32,114	35,088	34,731	-	-	-	8,136	9,032	8,774
B	:	431	490	:	1,099	1,043	:	710	558
DK	146	-	-	49	52	60	21	11	15
D	1,984	2,215	2,148	3,750	4,063	4,342	1,857	2,003	2,015
EL	25	5	-	102	110	102	69	90	80
E	1,602	1,750	1,719	521	669	771	280	293	332
F	2,822	2,581	2,560	1,956	2,387	2,218	1,320	1,577	1,378
IRL	0	-	-	19	33	26	14	28	21
I	448	434	423	2,778	3,193	3,469	1,928	2,195	2,357
L	:	0	0	:	0	0	:	0	0
NL	148	137	132	873	904	1,055	494	406	401
A	1,619	1,761	1,755	552	595	582	264	272	315
P	1,617	1,774	1,929	74	94	140	29	21	36
FIN	10,180	12,009	11,729	145	144	93	59	58	36
S	10,506	11,517	11,354	224	307	387	155	113	150
UK	639	474	492	1,967	1,908	1,576	1,369	1,255	1,079
IS	0	:	:	0	-	-	-	-	-
NO	2,557	2,435	2,303	114	156	93	-	-	-
CH	254	244	290	405	465	462	-	-	-
CZ	524	637	702	113	122	160	-	-	-
EE	13	54	60	0	1	0	-	-	-
CY	0	0	0	4	2	3	-	-	-
LV	3	0	0	2	0	0	-	-	-
LT	14	0	0	4	8	5	-	-	-
HU	5	0	0	29	173	175	-	-	-
MT	0	0	0	1	0	0	-	-	-
PL	879	994	1,013	143	266	367	-	-	-
SI	113	153	153	139	164	168	-	-	-
SK	261	608	454	40	76	86	-	-	-
BG	97	85	85	1	14	10	-	-	-
RO	298	293	274	18	4	12	-	-	-
TR	291	306	225	236	320	368	-	-	-
CA	25,643	26,696	25,744	317	274	266	-	-	-
RU	5,073	5,842	6,414	13	52	47	-	-	-
US	61,932	57,831	53,569	5,417	6,596	6,575	-	-	-

Source: Eurostat / New Cronos

Supply balance sheet for pulp (cont.)

	Exports			Exports extra-EU			Self-sufficiency degree (excluding stock)		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000 mt						%		
EU-15	-	-	-	1,042	1,385	1,884	82	82	83
B	:	718	668	:	30	51	:	53	57
DK	70	1	2	6	-	-	117	-	-
D	271	392	490	137	158	179	36	38	36
EL	1	1	1	-	1	2	20	4	-
E	643	809	792	53	84	41	108	109	101
F	421	359	444	59	31	33	65	56	59
IRL	0	1	2	-	1	1	0	0	-
I	20	22	18	12	16	11	14	12	11
L	:	0	0	:	0	0	:	0	:
NL	226	363	160	40	7	27	19	20	13
A	222	332	324	31	96	111	83	87	87
P	971	969	914	126	108	89	224	197	167
FIN	1,301	1,681	2,114	134	211	484	113	115	121
S	2,560	3,073	3,377	438	636	856	129	132	136
UK	316	9	8	1	6	0	28	20	24
IS	0	-	:	-	-	-	0	:	:
NO	599	552	614	-	-	-	123	119	129
CH	78	135	134	-	-	-	44	43	47
CZ	190	289	330	-	-	-	117	136	132
EE	6	0	0	-	-	-	183	99	100
CY	0	0	0	-	-	-	0	0	0
LV	0	0	0	-	-	-	60	0	0
LT	9	6	2	-	-	-	157	0	0
HU	3	3	0	-	-	-	16	0	0
MT	0	0	0	-	-	-	0	0	0
PL	69	33	29	-	-	-	92	81	75
SI	49	35	27	-	-	-	56	54	52
SK	76	75	101	-	-	-	116	100	103
BG	6	60	60	-	-	-	105	217	242
RO	4	31	30	-	-	-	96	110	107
TR	0	0	1	-	-	-	55	49	38
CA	10,746	11,879	11,805	-	-	-	169	177	181
RU	1,331	1,649	1,870	-	-	-	135	138	140
US	7,494	5,816	5,673	-	-	-	103	99	98

Source: Eurostat / New Cronos

Supply balance sheet for paper and paperboard

	Production			Imports			Imports extra-EU		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000mt								
EU-15	71,844	84,519	84,624	-	-	-	:	7,984	7,885
B	:	1,727	1,710	:	3,218	3,080	:	464	622
DK	362	263	393	1,383	1,151	1,144	:	91	97
D	15,284	18,182	18,526	7,340	9,810	9,293	:	2,046	2,111
EL	833	496	495	323	682	497	:	168	194
E	3,684	4,765	5,365	2,184	3,476	3,390	:	545	381
F	8,302	10,006	9,798	4,525	6,131	5,885	:	677	779
IRL	42	43	44	386	431	390	:	43	52
I	6,949	9,129	9,273	3,218	4,385	3,501	:	1,054	940
L	:	0	0	:	108	87	:	8	7
NL	2,962	3,333	3,346	2,510	3,211	3,344	:	748	446
A	3,614	4,385	4,419	733	1,397	1,156	:	301	343
P	1,050	1,290	1,537	658	644	605	:	31	23
FIN	11,922	13,509	12,776	268	356	383	:	85	102
S	9,120	10,786	10,724	313	754	652	:	281	227
UK	6,305	6,605	6,218	5,720	6,420	7,062	:	1,442	1,562
IS	0	:	:	32	44	32	-	-	-
NO	2,283	2,300	2,114	464	465	454	-	-	-
CH	1,145	1,616	1,805	1,066	979	1,005	-	-	-
CZ	756	804	870	237	581	670	-	-	-
EE	36	54	81	89	65	87	-	-	-
CY	0	0	0	50	55	56	-	-	-
LV	18	16	24	138	85	100	-	-	-
LT	70	53	78	99	78	84	-	-	-
HU	321	506	517	393	495	414	-	-	-
MT	0	0	0	33	27	46	-	-	-
PL	1,477	1,934	2,230	410	1,229	1,475	-	-	-
SI	449	411	494	143	182	228	-	-	-
SK	739	925	994	168	247	242	-	-	-
BG	153	136	136	42	130	144	-	-	-
RO	375	340	370	168	147	193	-	-	-
TR	1,305	1,567	1,643	638	1,006	1,020	-	-	-
CA	17,077	20,921	20,226	1,253	3,810	2,851	-	-	-
RU	2,489	5,310	5,915	321	358	602	-	-	-
US	118,979	86,545	81,792	11,699	16,279	15,941	-	-	-

Source: Eurostat / New Cronos

Supply balance sheet for paper and paperboard (cont.)

	Exports			Exports extra-EU			Self-sufficiency degree (excluding stock)		
	1995	2000	2002	1995	2000	2002	1995	2000	2002
	1000mt						%		
EU-15	-	-	-	:	13,198	14,385	:	107	108
B	:	2,301	2,244	:	236	325	:	65	67
DK	240	239	238	:	24	27	24	22	30
D	7,021	8,905	9,732	:	2,879	3,456	98	95	102
EL	27	62	57	:	50	46	74	44	53
E	684	1,479	1,805	:	375	344	71	70	77
F	2,856	4,743	4,754	:	902	1,016	83	88	90
IRL	51	60	47	:	6	3	11	10	11
I	1,707	2,241	1,047	:	752	370	82	81	79
L	:	67	25	:	6	6	:	0	0
NL	2,724	3,000	2,844	:	748	856	108	94	87
A	2,659	3,449	3,661	:	1,109	1,115	214	188	231
P	583	744	979	:	43	203	93	108	132
FIN	9,746	11,642	11,487	:	3,493	3,851	488	608	764
S	6,963	9,031	8,934	:	2,084	2,393	369	430	439
UK	1,426	1,794	1,325	:	491	373	59	59	52
IS	0	2	0	-	-	-	0	:	:
NO	1,798	1,982	1,866	-	-	-	241	294	301
CH	949	1,183	1,284	-	-	-	91	114	118
CZ	303	536	572	-	-	-	110	95	90
EE	94	53	68	-	-	-	117	82	81
CY	1	1	0	-	-	-	0	0	0
LV	14	9	24	-	-	-	13	17	24
LT	25	37	30	-	-	-	49	56	59
HU	86	230	316	-	-	-	51	66	84
MT	0	0	0	-	-	-	0	0	0
PL	336	754	1,125	-	-	-	95	80	86
SI	202	422	441	-	-	-	115	241	176
SK	404	349	480	-	-	-	147	112	131
BG	14	55	41	-	-	-	85	64	57
RO	49	115	182	-	-	-	76	91	97
TR	59	65	175	-	-	-	69	62	66
CA	15,454	15,613	14,276	-	-	-	594	229	230
RU	1,535	2,253	2,441	-	-	-	195	156	145
US	9,810	9,139	8,225	-	-	-	98	92	91

Source: Eurostat / New Cronos