

### Gozdarski inštitut Slovenije Slovenian Forestry Institute

### **Forest Resource Assessment for Slovenia**

to THE MINISTERIAL CONFERENCE ON THE PROTECTION OF FORESTS IN EUROPE, April 2003, Vienna

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Ljubljana, 19<sup>th</sup> of June 2002

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### 1. SPLOŠNO

Naslov projekta: REPORTING FOREST RESOURCE ASSESSMENT DATA (FRA) TO THE MINISTRIAL CONFERENCE ON THE PROTECTION OF FORESTS IN EUROPE, April 2003, Vienna

Zahtevek za študijo: UNECE/FAO secretariat in Geneva, Trade Division.

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### 2. Namen in CILJI:

- Priprava informacijske infrastrukture za potrebe ministrske konference o varovanju gozdov v Evropi, Dunaj 28 30. Aprila 2003
- Priprava ažurirane baze podatkov o stanju gozdov v Evropi
- Priprava podatkov za oceno panevropskih kriterijev in indikatorjev za trajnostno gospodarjenje z gozdovi

### 3. PRILOGE:

- Pregledne tabele o gozdnih virih za 40 izbranih držav Evrope
- Pojmi in definicije
- Dopisi

Priloga 1

### Tables and Statistics

### List of Tables in Appendix 1

- 1.1 Area and change of forest and OWL
- 1.2 Forest and other wooded land by species groups
- 1.3 Volume and biomass per ha and changes over time in growing stock
- 1.4 Ownership and number of holdings of forest and other wooded land
- 1.5 Carbon store of woody biomass and annual change
- 2.1 Area of damage to forest and other wooded land by different damaging agents
- 2.2 Number and area of forest fires, total
- 2.3 Forest and OWL area burned
- 3.1 Gross annual increment and annual fellings overbark
- 3.2 Management of forest and OWL, total
- 3.3 Quantity and value of NWFP from forest and other wooded land
- 3.3 Quantity and value of NWFP from forest and other wooded land (cont.)
- 4.1 Forest and other wooded land area by categories of "naturalness"
- 4.2 Reported number of forest occurring endangered tree and vascular plant species
- 4.3 Mixed forest (%)
- 4.4 Share of different types of regeneration (%)
- 5.1 Area and changes over time in areas where forest and other wooded land is primarily managed for soil protection
- 6.1 Quantity and value of wood from forest and other wooded land
- 6.2 Area of forest and other wooded land where access to public is legally allowed and not allowed

### 1.1 Area and change of forest and other wooded land

	Ref. Period	Forest area	OWL area	Forest area change 1990-2000 per year	CWL cover change per yr (1000 ha)**
·		(1000 ha)	(1000 ha)	(1000 ha)	(1000 ha)
Albania	2001	1,030	22		
Austria	1994	3,840	84	8	0
Belarus :	1994	7,865	1,071	256	36
Belgium	2000	667	27.1	0.135	0.144
Bosnia and Herzegovina	1995	2,273	433	**	0
Bulgaria	1995	3,588	314	20	2
Croatia	1996	1,775	330	2	0
Cyprus	1999	172	214	5	16
Czech Republic	1995	2,630		1 1	0
Denmark	1990	445	93	1 1	2
Estonia	1996	2,010	146	13	- 6
Finland	1996	22,032	850	71	-17
France	1997	15,156	1,833	62	-18
Georgia	1995	2,988	·		0
Germany	1987	10,740			Ô
Greece '	1992	3,359	3,154	30	-29
Hungary	2001	1,873	0	10	. 0
Iceland	1998	30	100	1 1	Õ
Ireland	2001	624	41	18	Ô
Italy	1995	9,855	985	30	-30
Latvia	1997	2,884	111	13	-3
Liechtenstein	1995	6.90			0
Lithuania	2001	2,034	85	12	3
Luxembourg	1997	86	3	i	0
Malta	1996	0.347			. 0
Moldova, Republic of	1997	322	31	1 1	0
Netherlands	1994	361	ļ	1 1	0
Norway	1995	8,713	3,291	31	15
Poland	2001	9,088	.,	18	••
Portugal	1995	3,308	41	15	
Romania	1990	6,301		15	
Russian Federation	1998	810,367	71,607	-1,234	321
Slovakia	2001	2,038		4 ]	;
Slovenia	2001	1,143	51	8	. 0
Spain	1990	13,656	12,611	86	-68
Sweden	1998-2001	27,293	3,266	0	0
Switzerland	1994	1,173	61	4	1
Turkey	1999	10,027	10,735	16	24
Ukraine	1996	9,460	36	31	0
United Kingdom	1995-1999	2,751	20	0	0
Relevant to indicator(s)		1.1	1.1	1.1	1.1

Source: Global FRA. Global forest resources assessment 2000, Main report. FAO Forestry Paper 140. FAO, Rome (Table 5). (Forest area was adjusted according FAOSTAT land areas)

<sup>\*\*</sup> Change of OWL derived from Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000.(Table 7)

# 1.2 Forest and other wooded land by species groups

		F	orest (1000 ha	a)	Other w	ooded land (1	000 ha)
	Ref. Period	Predomina ntly coniferous	Predomina ntly broadleave d	Mixed	Predomina ntly coniferous	Predomina ntly broadleave d	Mixed
			· · •	(100	0 ha)		
Albania	2001	141	560	329	0	0	0
Austria	1992-1996	2,613	470	757	84	0	0
Belarus	1994 -		1 751	3,067	108	854	110
	1997	3,046	1,751	3,007			
Belgium	2000	283	339	46	0	27	0
Bosnia and	1995						.,
Herzegovina	1995						
Bulgaria	1995	793	2,421	376	150	163	0
Croatia	1996	168	1,448	159	0	330	0
Cyprus	1999	171	1 1	. 0	0	0	214
Czech Republic	1995	820	346	1,464	0	0	0
Denmark	1990	168	111	166		<u></u> 1	<u>:-</u>
Estonia	1996	788	416	812	29	80	37
Finland	1991-2000	17,525	1,773	2,734	727	122	1
France	1997	4,124	9,667	1,365	92	1,649	92
Georgia	1995						••
Germany	1997	6,052	2,715	1,973	0	0	0
Greece	1992	1,429	1,930	0	0	3,154	0
Hungary	2001	189	1,455	229	0	0	0
Iceland	1998	10	18	2	0	100	0
Ireland	2001	516	80	28		41	
Italy	1995	2,094	7,071	692	209	707	69
Latvia	1997	1,127	534	1,223	0	111	0
Liechtenstein	1995	3.0	2.10	1.80	0.20	0.20	0.10
Lithuania	2001	936	732	366	7	46	32
Luxembourg	1994	31	53	2	0	3	0
Malta	1996	0	0	0.347	0	0	0
Moldova, Republic of	1997	4	320	0	0	31	0
Netherlands	1992-1996	143	146	50	0	0	0
Norway	1994-1996	4,930	1,962	1,818	702	2,407	181
Poland	1997-2001	6,022	1,392	1,628	0	0	0
Portugal	1995	876	2,002	430	0	41	0
Romania	1990-1997	1,909	4,392	0	0	379	0
Russian Federation	1998	324,147	113,451	372,769	38,014	33,593	0
Slovakia	2001	616	939	372			<u>:</u>
Slovenia	2001	344	427	372	20	22	9
Spain	1990	5,879	5,123	2,507	3,743	7,484	1,248
Sweden	1998-2001	20,900	1,808	4,585	1,973	686	607
Switzerland	1997	671	269	233	15	38	8
Turkey	1999	6,563	3,464	0	4,631	6,104	0
Ukraine	1996	3,711	4,745	1,002	7	29	0
United Kingdom	1995-1999	1,554	1,005	192	0	20	0
Relevant to indicator(s)	<u> </u>	1.1	1.1	1.1	1.1	1.1	1.1

Source: Regional FRA, Forest Resources of Europe, CIS North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 3)

# 1.3 Volume and biomass per ha and changes over time in growing stock

	Fores	t, total*	<u> </u>	Growing stock	on forest (100	0 m³ overbark)	**
	Stem	Woody	Ref.	Ref. period	Ref. period	Ref. period	Average
	volume	biomass	period 1	2	1	2	annual
	m³/ha	t/ha		<u> </u>		, –	change
Albania	82	66	1995	2001	83,435	84,394	160
Austria	286	250	1986-1990	1992-1996	1,080,121	1,097,307	2,864
Belarus	153	80	1988	1994	891,230	1,092,550	33,553
Belgium	213	124	1982	1997	122,047	141,793	1,316
Bosnia and	110		1990	1995			l
Herzegovina				•			
Bulgaria	130	76	1985	1995	404,800	467,345	6,255
Croatia	201	107	1986	1996	328,207	356,302	2,809
Cyprus	45	22	1990	2000	4,812	7,714	290
Czech Republic	260	125	1986	1995	639,873	683,806	4,393
Denmark	124	58	1980	1990	43,200	55,200	1,200
Estonia	156	85 50	1988	1996	259,680	314,537	6,857
Finland	100	50	1991-1996	1991-2000	1,940,000	1,995,000	20,370
France	202	98 07	1987	1997	2,538,961	2,891,777	35,282
Georgia	145 268	97	1990 1961	1995	421,190	434,000	2,562
Germany	45	134 25		1987 1992	••	2,880,000	35,000
Greece	174	∠5 112	 1990	2001	 288,004	151,788	 3,491
Hungary Iceland	27	17	1990-1990	1998-1998	760	326,410 800	
I Ireland	74	25	1990-1990	1996-1996	25,000	42,000	5 1,700
Italy	145	74	1985	1995	712,447	1,428,742	71,630
Latvia	174	93	1988	1997	432,000	502,000	7,000
Liechtenstein	254	119	1975	1995	1,570	1,750	9
Lithuania	186	100	1996	2001	362,637	378,294	3,131
Luxembourg			1985	1997	20,377	20,217	160
Malta	232			1996	20,077	80	
Moldova, Republic of	128	64	1988	1997	35,290	41,600	631
Netherlands	160	107	1988-1992	1991-1995	52,191	54,209	672
Norway	89	49	1980-1986	1994-1996	621,332	771,448	11,547
Poland	230	101	1992-1996	1997-2001	1,908,019	2,079,444	34,285
Portugal	56	48	1982-1984	1995-1998	182,000	186,839	358
Romania	213	124			·		••
Russian Federation	101	90	1993	1998	80,676,360	81,863,690	237,466
Slovakia	276	157	1996	2001	510,948	554,223	8,655
Slovenia	283	178	1996	2000	310,577	320,040	2,365
Spain .	44	24	1970	1990	456,721	594,111	6,870
Sweden	110	64	9296	98-01	2,928,117	3,000,950	13,242
Switzerland	337	165	1983-1985	1993-1995	361,286	395,450	3,383
Turkey	136		1996	1999	1,349,323	1,366,361	5,679
Ukraine	179		1988	1996	1,319,700	1,695,912	47,026
United Kingdom	137	80		1995-1999		377,000	8,000
Relevant to	1.2	1.2			1.2	1,2	1.2
indicator(s)							

<sup>\*</sup>Source: Global FRA, Global forest resources assessment 2000, Main report. FAO Forestry Paper 140. FAO, Rome. (Table 7)

<sup>\*\*</sup>Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 37)

# 1.4 Ownership and number of holdings of forest and other wooded land

	Ref.		t and OWL by (1000 ha)	Number o	f holdings
	Period	Public	Private	Public	Private
Albania	2001	1,019	11	36	
Austria	1995	0	0	7,286	227,307
Belarus	1994	8,936	0	1,971	0
Belgium	2000	301	<b>3</b> 93	877	155,110
Bosnia and	1995	2,125	584		
Herzegovina	1005	0.000		177	0
Bulgaria	1995	3,903		672	_
Croatia	1996	1,651	454	403	••
Cyprus	1999	157	229		137,260
Czech Republic	1996	2,212	418	4,566	
Denmark	1990	153	359	616	20,005
Estonia	1996	1,978	184	180	17,000
Finland	1991-2000	6,491	16,391		447,104
France	1995-1999	4,228	12,761	15,926	3,495,000
Georgia	1995	2,988	0	••	
Germany	1996	6,107	3,334	13,040	349,361
Greece	1992	5,331	1,182	2,190	1,265
Hungary	2001	1,116	757	912	53,636
Iceland	1998				
Ireland	2001	397	268	152	21,386
Italy	1995	3,686	7,156	2,241	815,586
Latvia	1997	1,678	1,317	575	117,645
Liechtenstein	1995	6.90	0.50	15	584
Lithuania	2001	1,513	606	53	164,000
Luxembourg	1997	41	47	295	13,785
Malta	1996	0.347	0	21	0
Moldova, Republic of	1995	775	213		
Netherlands	1995	173	166	2,558	28,870
Norway	1989	2,936	9,064	1,302	171,079
Poland	1997-2001	7,518	1,524		ĺ
Portugal	1995	258	3,091	1,140	409,524
Romania	1997	6,320	360	,	·
Russian Federation	1998	881,974	0	>2000	Ö
Slovakia	2001	1,047	959.1	578	40,035
Slovenia	2001	350	844	251	300,000
Spain	1990	5,608	20,376	8,718	661,992
Sweden	1998-2001	6,175	24,385		
Switzerland	1996	878	326	3,503	257,700
Turkey	1999	20,745	18	1,623	152
Ukraine	1996	9,494	0	10,515	0
United Kingdom	1995-1999	1,030	1,721	10,010	
	1 1333-1333	1,000	i i i i i i i i i i i i i i i i i i i	· · · · · · · · · · · · · · · · · · ·	<u> </u>
Relevant to	1	1.1	1.1	1.1	1.1
indicator(s)		ł		l	

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000 (Table 18).

### 1.5 Carbon store of woody biomass and annual change

	T		Change of C
		Woody	store in woody
	Ref. Period	biomass, Tg C	biomass
		Tg C	Tg C/yr
Albania	2001	. 34.69	0.07
Austria	1992-1996	580.36	5.15
Belarus	1994	380.01	5.65
Belgium	1997	41.27	0.38
Bosnia and			
Herzegovina	1995	89.26	1.37
Bulgaria	1995	162.75	2.65
Croatia	1996	115.28	1.12
Cyprus	1999	1.8	0.07
Czech Republic	1995	209.11	2.13
Denmark	1990	19.58	0.30
Estonia	1996	101.25	1.23
Finland	1991-2000	662.59	5.77
France	1997	838.55	9.92
Georgia	1995	167.2	1.37
Germany	1987	920	14.02
Greece	1992	52.04	0.59
Hungary	2001	132.13	1.65
Iceland	1998	0.42	0.02
Ireland*	2000	11.74	0.11
Italy	1995	409.28	6.95
Latvia	1997	177.6	2.52
Liechtenstein	1995	0.51	0.00
Lithuania	1997-2001	123.02	0.94
Luxembourg	1985-1997	6.53	0.09
Malta	1996	0.06	0.00
Moldova, Republic of	1997	12.42	0.23
Netherlands	1991-1995	29.29	0.40
Norway	1994-1996	265.61	4.56
Poland	1997-2001	550.03	10.70
Portugal	1995-1998	79.21	1.36
Romania	1984	470.78	7.35
Russian Federation	1998	37003.57	440.00
Slovakia	2001	181.165	2.83
Slovenia	2000	117.46	1.89
Spain	1990	186.69	4.49
Sweden	1998-2001	1077	5.60
Switzerland	1993-1995	140.14	0.71
Turkey	1999	474.38	
Ukraine	1996	545.87	7.36
United Kingdom	1995- 1999	148	3.43
Relevant to		1.3	1.3
indicator(s)	L	1.0	1.0

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Chapter III, annex 3B.2)

Estimation is based on same methods as applied in TBFRA-2000, but with updated data

<sup>\*</sup>Estimation is based on other methods to be explained in the report

2.1 Area of damage to forest and other wooded land by different damaging agents

Primarily damaged by (1000 ha) Storm, wind, Total area Total with damage Known snow or area with Ref. Insects Wildlife local other by damage Period and and Fire pollution identifiable unidentified by known disease grazing sources abiotic causes causes factors 0.0 518.0 677.6 135.0 12.7 11.9 0.0 Albania 2001 14.0 0.0 13.0 0.0 1991-00 140.0 55.0 72.0 Austria 2.6 0.0 5.8 0.6 0.4 0.1 Belarus 8.9 45.1 40.5 1.9 1994-99 87.5 Belgium Bosnia and Herzegovina 7.0 13.8 18.7 23.5 63.0 Bulgaria .. .. 15.0 11.0 1986-96 16.0 1.0 Croatia 0.0 0.0 1990-99 0.0 0.0 1.2 0.0 1.2 Cyprus 44.0 13.0 4.0 18.0 30.0 1988-97 451.0 355.0 Czech Republic 0.2 0.0 1.0 0.0 2.5 3.7 Denmark 1990-95 .. 0.7 0.5 0.4 1996 5.1 3.5 Estonia 1.0 2 600.0 2 852.0 1991-00 6 090.0 3 028.0 206.0 3.0 Finland 0.0 200.0 45.0 17.6 0.0 1.8 France 1995-98 264.4 Georgia ٠. .. 1987-96 Germany •• .. .. .. .. 37.2 Greece 2001 205.8 146.2 27.9 1.6 0.0 30.1 2.6 Hungary 2.0 10.0 3.0 5.0 0.0 0.0 Iceland 2 661.0 939.0 2001 Ireland 0.1 17.5 6.5 66.0 6.0 40.0 1995 129.6 Italy 0.9 0.3 0.0 0.2 0.0 1996 1.6 0.2 Latvia 0.7 0.1 0.4 0.3 .. Liechtenstein 0.6 15.3 0.0 2001 54.4 38.5 Lithuania 0.0 0.0 0.0 0.0 0.0 0.0 Luxembourg ٠. Malta .. 0.0 61.2 61.2 Moldova, Rep. 0.0 0.0 1990-95 0.0 0.0 0.3 0.0 0.3 Netherlands 218.0 0.0 2.0 832.0 0.0 1994-96 1 164.0 112.0 Norway 196.0 309.0 389.0 13.0 Poland 1992-96 0.0 32.6 34.9 437.3 41.1 363.6 0.0 Portugal 2001 0.7 0.0 66.9 67.6 0.0 1993-97 Romania 23.5 20.0 299.5 9.6 0.2 268.4 0.2 1998 Russian Federation 8.3 3.2 0.595 1997-01 21.2 11.5 0.785 9.1 Slovakia 0.018 0.345 338.0 0.082 0,340 0.719 Slovenia 2001 1 842 1 000.0 1 000.0 500.0 100.0 1990 Spain .. 146.1 562.7 1998-01 1 518.0 323.6 629.5 2.3 Sweden 230.0 0.2 0.1 Switzerland 1.0 0.7 .. 5.0 13.0 1992-96 22.0 4.0 Turkey 0.4 18.3 0.4 33.1 1992-96 100.9 49.0 Ukraine 0.0 135.0 10.0 67.0 8.0 1995 240.0 30.0 United Kingdom Relevant to 2.1 2.1 2.1 2.1 2.1 2.1 2.1 indicator(s)

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 70)

# 2.2 Number and area of forest fires, total

	1	Num	ber of fo	rest fires		Ī"	Area	of forest fire	es (ha)	
	1997	1998	1999	2000	Averag e 97-00	1997	1998	1999	2000	Average 97-00
Albania	735	601	628	915	720	1847	680	4761	12339	4907
Austria	56	84	33	39	53	22	93	8	42	41
Belarus	1466	876	3959	2569	2218	965	547	6261	1931	2426
Belgium	35	20	20	4	20	280	30	4	2	79
Bosnia and	139	139	139	139	139	881	881	881	881	881
Herzegovina	139	139	139	139	139	001	001	001	001	001
Bulgaria	200	578	320	1710	702	595	6967	8291	57406	18315
Croatia	305	441	223	706	419	6784	32055	6053	68166	28265
Cyprus	19	19	20	285	86	167	566	3	8035	2193
Czech Republic	1398	2563	1403	1499	1716	3475	1132	336	375	1330
Denmark	7		0	0	2	10		0	0	2
Estonia	359	61	130	158	177	1114	54	1103	684	739
Finland	1192	231	1543	825	948	1171	95	623	374	566
France	8005	6289	4952	2908	5539	21581	19283	15864	20459	19297
Georgia	11	6	6	6	7	98	105	105	105	103
Germany	1467	1032	1178	1210	1222	599	397	415	581	498
Greece	2273	1842	1486	2581	2046	34781	92901	8289	140267	69060
Hungary	393	393	258	696	435	1349	1349	754	1595	1262
Iceland								1		
Ireland	143	143	143	143	143	461	461	461	461	461
Italy	1161	9540	6932	1003	9531	111230	155553	90130	140384	124324
	2			8					· .	
Latvia	768	357	1196	915	809	604	211	1544	1341	925
Liechtenstein									]	
Lithuania	565	231	1022	606	606	139	93	215	215	165
Luxembourg	1	0	0	0	0	1	0	0	0	0
Malta	·	ł								
Moldova, Rep.	0	2	2	2	2 ·	. 0	10	10	10	7
Netherlands	68	74	74	74	73	222	207	207	207	211
Norway	108	14	148	97	92	870	300	861	1713	936
Poland	3624	2134 6	3264 9	3163 2	22313	2172	58388	41102	49024	37672
Portugal	2349 7	3467 6	2547 7	3410 9	29440	30534	158369	70613	159605	104780
Romania	34	181	139	688	261	46	729	381	3607	1191
Russian Federation	3130	2800	3660	2240			426880		132860	176895
Russian rederation	0	0	0	0	29575	726700	0	751700	0	0
Slovakia	535	1056	751	824	792	35	32	96	105	67
Slovenia	59	151	53	98	90	493	1254	433	265	611
Spain	2231	2244	1823	2411						
Оран	9	5	7	7	21780	98503	133643	82217	187026	125347
Sweden	8434	5258	5258	5258	6052	6386	2989	2989	2989	3838
Switzerland	77	88	41	53	65	1932	249	22	66	567
Turkey	1339	1932	2075	2353	1925	6011	6764	5804	26353	11233
Ukraine	2309	3915	6070	3696	3998	1835	4706	6494	1905	3735
United Kingdom	375	158	81	47	165	332	54	171	266	206
Relevant to										
indicator(s)	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3

Source: Global FRA. Global forest resources assessment 2000, Main report. FAO Forestry Paper 140. FAO, Rome. (Table 8)

Source: UNECE, forest fire statistics

# 2.3 Forest and OWL area burned

		Fores	st (ha)			OWL	(ha)	
	1998	1999	2000	Average 98-00	1998	1999	2000	Average 98-00
Albania	680	689	3675	1681	0	2910	828	1246
Austria		••				••		
Belarus								
Belgium	20	4	2	9	0	0	0	0
Bosnia and				0				
Herzegovina		••	,,,					
Bulgaria	6060	3543	31340	13648	907	4093	19975	8325
Croatia	7661	1872	38398	15977	16910	1389	21896	13398
Cyprus	514	2	2551	1022	52	1	0	18
Czech Republic	433	235	301	323	699	101	74	291
Denmark								
Estonia	33	346	475	285	12	12	12	12
Finland	95	623	374	364	0	. 0	0	0
France	4463	4380	4499	4447	14820	11484	15960	14088
Georgia								
Germany	397	415	581	464				
Greece	46077	4773	67617	39489	31227	2461	38963	24217
Hungary	1349	754	1595	1233		••		
Iceland								
Ireland								
Italy	57791	39362	44808	47320	15226			5075
Latvia	10644	59694	58216	42851	6591	15683	43852	22042
Liechtenstein						••		
Lithuania	74	0	0	25	2			1
Luxembourg						••		
Malta								
Moldova, Rep.								
Netherlands								
Norway								
Poland								
Portugal	57393	31052	68646	52364				
Romania	3315	3810	36067	14397	,			
Russian Federation	2323280		2434050		٥ ا	0	o	lo
}	0	•••	) 0		}			
Slovakia	32	0	105	46				] _::.
Slovenia	725,1	321	124	390	529	112	141	261
Spain	4295934	2403425	1691709	2797023	8374282	5346139	124917	4615113
Sweden							••	
Switzerland					_ ::_	4-00		
Turkey	4567	4016	22107	10230	2197	1788	4246	2744
Ukraine								
United Kingdom						<u></u>		<u> </u>
Relevant to	2.2	2.3	2.3	2.3	2.3	2.3	2.3	2.3
indicator(s)	2.3	2.3	2.3	2.5	2.5	2.5		

Source: UNECE, forest fire statistics

### 3.1 Gross annual increment and annual fellings overbark

	Gross	annual incr	ement (1000	m³ overt	ark)	Ar	nual fellin	gs (1 <b>0</b> 00 r	n³ overba	ırk)
	Ref. period	Total	Forest	OWL	Trees outsid e forest	Ref. period	Total	Forest	OWL	Trees outside forest
Albania	2001	969	969	0	0.	2001	245	245	0	0
Austria	1992-96	29 733	29 433	200	100	1992-96	20 041	19 821	150	70
Belarus	1994	36 866	36 866	0	0	1996	9 550	9 550	0	0
Belgium	1994-99	5 289	5 289	0		1994-99	3 701	3 701	0	
Bosnia and	1995					1995		1 200		. ·
Herzegovina				"				i		1
Bulgaria	1995	12 311	12 310		1	1995	4 852	4 852	0	0
Croatia	1986-96	9 651	9 651		0	1986-96	4 600	4 600	0	0
Cyprus	1990-99		109			1999	35	35	0	0
Czech Republic	1995	23 056	22 915	0	141	1995	16 355	16 345	0	10
Denmark .	1990	3 770	3 520	250	0	1996	2 444	2 194	250	
Estonia	1996	10 110	9 830	160	120	1996	l	4 028		
Finland	1991-00	80 172	79 129	271	772	2000	67 500	67 500	0	0
France	1997	102 215	102 096	0	119	1996	65 006	65 006		l
Georgia	1995					1995	500	500	0	
Germany	1995	102 736	100 722	Ö	2 014	1996	48 584	48 584	0	
Greece	1992	4 193	4.118	75		1992				
Hungary	2001	12 573	11 973	0	600	2001	7 687	7 287	Ö	400
Iceland	1998	67	58	9	0	1996	0	0	Ŏ	
Ireland	1996	3 500	3 500			2001	3 089	3 089	Ō	
Italy	1995	32 526	30 822	0	1 704	1995	10 101	8 746	Ō	1 355
Latvia	1996	17 800	16 500	500	800	1996	8 150	8 010	60	80
Liechtenstein	1995	28	28	000		1995	16	16	0	0
Lithuania	2001	12 509	11 904	345	260	1997-01	6 152	5 972	130	50
Luxembourg	1985-97	12 303				1992-94	0 102	00,2	100	"
Malta	1996	••		"	· · ·	1996	ő	0	!	ľ
Moldova, Rep.	1997	1 206	1 140	66	Ö	1997	483	483	 0	0
Netherlands	1991-95	3 158	2 538	0	620	1991-95	2 150	1 561	ŏ	589
Norway	1994-96	27 370	26 209	1 161	0	1994-96	11 632	11 632	Ö	0
Poland	1997-01	82 544	80 439	0	2 105	1997 - 01	37 386	36 810		576
Portugal Romania	1995-98 1984	19 369	19 054 34 650	32	284 	1995-98 1997-01	12 733 8 525	12 733 8 525	0	0
Russian Federation	1998	1 388 466	1 339 166	35 800	13 500	1998	130 179	130 179	0	0
Slovakia	2001	13 601	13 601			1997-01	8 525	8 525		
Slovenia	2001	6 990	6 925	55	10	2001	2 614	2 614	Ö	Ö
Spain	1990	30 135	30 120	15		1994	15 863	12 639		3 224
Sweden	1998-01	103 706	101 598	996	1 112	1998-01	72 621	72 345	0	277
Switzerland	1985-95	10 107	9 831	276		1985-95	7 451	7 451	Ō	
Turkey	1999	47 242	38 832	3 863	4 547	1999	19 573	15 029	Ō	4 544
Ukraine	1996	34 960	33 757	10	1 193	1996	11 600	11 300	Ö	300
United Kingdom	1995-99	21 880	21 300			1995	9 500	9 500	ő	0
Relevant to indicator(s)	100000	3.1	3.1	3.1	3.1		3.1	3.1	3.1	3.1

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 42 and Table 47)

# 3.2 Management of forest and OWL, total

		Managed
	Ref. Period	from total
		FOWL* (%)
Albania	2001	<b>10</b> 0.0
Austria	1992-1996	100.0
Belarus	1997	93.6
Belgium	1997	100.0
Bosnia and	1995	74.1
Herzegovina	1993	74.1
Bulgaria	1995	92.0
Croatia	1996	74.1
Cyprus	1999	41.0
Czech Republic	1996	100.0
Denmark	1990	100.0
Estonia	1996	52.2
Finland	1991-1996	85.6
France	1999	69.2
Georgia	1995	81.6
Germany	1987	100.0
Greece	1992	39.0
Hungary	2001	100.0
Iceland	1985	10.0
Ireland	2001	93.8
Italy	1995	10.3
Latvia	1997	100.0
Liechtenstein	1995	100.0
Lithuania	2001	98.8
Luxembourg	1994-1997	11.6
Malta	1996	100.0
Moldova, Rep.	1997	100.0
Netherlands	1992-1996	100.0
Norway	1989	77.4
Poland	1997-2001	100.0
Portugal	1995	34.8
Romania	1990	100.0
Russian Federation	1998	100.0
Slovakia	2001	95.4
Slovenia	2001	100.0
Spain	1985-1995	68.0
Sweden	1998-2001	100.0
Switzerland	1993-1995	93.4
Turkey	1999	100.0
Ukraine	1996	100.0
United Kingdom	1995	93.2
Relevant to		3.2
indicator(s)		

\*FOWL is forest and other wooded land

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 10)
Global FRA. Global forest resources assessment 2000, Main report. FAO Forestry Paper 140. FAO, Rome. (Table 9)

3.3 Quantity a	and value	ue of N	and value of NWFP from fores	om fore	est and	other w	other wooded	land	ĵ				•
	Ref. Period	Christma s trees	Value of Christma s trees	Cork	Value of cork	Mushroo ms and truffles	Value of mushroo ms and truffles	Fruits and berries	Value of fruits and berries	Medicinal plants	Value of Medicinal Plants	Decorativ e Foliage	Value of Decorativ e Foliage
		(thousan ds)	(thousan d USD)	(tons)	(thousan d USD)	(tons)	(million USD)	(tons)	(million USD)	(tons)	(thousan d USD)	(tons)	(million USD)
Albania	2001	0	0	0	0	0.043	0.0306	0.033	0.0603	8.8	10000	0	0
Austria Belarus	: :	: :	: :	: :	: :	10100	15.15	8100	: 6	297	: 08	: :	: :
Belgium	:	:	:	:	:	:	:	:	:	:	:	:	: :
Bosnia and	:	:	:	:	:	:	:	:	:	:	:	;	:
Bulgaria	:	;	:	:	:	:	;	:	:	:	:	:	:
Cyprus	1996	: ~	57	: :	: :	: 80	0.26	: :	: :	: :	: :	: :	: :
Czech Republic	. O	: 00	24.50	:	:	23900	39.13	22700	39.2	·	:	: 200	: 0
Denmark   Estonia	1996	320	1455	: :	: :	4130	6.9	8043	8.7	: :	: :	00067	o.
Finland	2000	200	6400	:	:	0006	0.021	40000	0.042	: :	4357	314	1.3
France	1997-99	:	:	6950	1086	0886	26	2200	:	:	:	:	:
Georgia	:	20000	235294	:	:	:	:	:	:	:	:	:	;
Greece	: :	:	:	: :	: :	: :	: :	: :,	: :	: :	: :	: :	: :
Hungary	:	:	: !	:	:	:	;	. :	:	;	:	:	;
Iceland	1998	ω ξ	45	:	:	:	:	:	:	:	:	:	:
Ireland	1995	07 :	3 :	10374	7200	2413	44.7	496	2.8	: :	: :	: :	: :
Latvia	:	:	:	:	:	:	:	:	:	:	:	:	:
Lithuania	2001	300	750	: :	: :	1316	4.5	4930	6.7	:. 57	: 83	: :	: :
Luxempourg	:	:	:	:	:	:	:	:	:	:	:	:	:
Malta	:	:	:	:	:	:	:	351.4	: 0	: 4	: 7	:	:
Netherlands	1996	1800	21302	: :	: :	: :	: :	t : : :	20.0	t -	) <u>†</u>	:	:
Norway	1994-96	1000	21150	: :	:	1200	5.4	25000	45.3	: :	: :	375	1.2
Poland	1996	339	:	400722	100:000	940	:	2683	:	:	:	:	:
Romania	00-7661	:	;	120733	190299	:	:	:	:	:	:	:	;
*Russian Federation	: :	: :	: :	: :	: :	213	: :	780	: :	510	: :	: :	: :
Slovakia	2001	600 5	4000 875	: <b>c</b>	: 0	8750	9.7	15200	1.5	178	230	8303	2.2
Spain	3 :	3 :	3 :	<b>&gt;</b> :	• :	:	; :	3 :	<u>?</u> :	: :	: :	: :	: :
Sweden	: }	2000	14000	:	:	2000	16.5	26000	39.8	: ;	: ;	:	:
Switzerland Turkev	1996 1999	 5 0	42/4	: 12	: 2	2,39	6.5 7745	318	2871	4444 4444	2.5 90636	11750**	2597
Ukraine	1995	3000	66667	:	:	:	:	:	:	:	:	300	:
Relevant to indicator(s)	ator(s)	33	333	33	33	3.3	33	3.3	33	3.3	33	33	3.3
	121.21		,,,,		1						***	,,,	, , , , , , , , , , , , , , , , , , ,

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\*For Russian Federation data was derived from Forest and Forest Products Country Profile: Russian Federation, ECE/TIM/SP/18. \*\*Quantity in cubic meters

# 3.3 Quantity and value of NWFP from forest and other wooded land (cont.)

0.0 % 000 100 0	2 2	2000			200	100		(0011::/		
	Ref.	Game Meat	Game Harvest	Value of Game	Pelts	Value of Pelts	Quantity of honey		Quantity of nuts	Value of nuts
	Period	(tons)	(thousand s)	(million USD)	(thousand s)	(thousand USD)	(tons)	(thousand USD)	(tons)	(thousand USD)
Albania	2001	:	210.1	0.1527	:	:	:	:	:	:
Austria	:	3:	:	}:	:	:	3:	<u>.</u>	3:	3 :
Belarus	1995	2830	:	4.79	:	15	30	110	20	S 20
Belgium	1991	:	:	15.8	:	:	:	:	0	c
Bosnia and	:	:	:	:	:	:	:	:	:	:
Bulgaria	:	:	:	:	:	:	:	:	:	•
Croatia	:	:	}:	) : i	:	:	:	:	:	:
Cyprus	:	:	25	0.47	:	:	:	:	:	:
Czech Republic	1992	6790	695	:	:	:	:	:	:	:
Denmark	:	) :	:	<b>)</b> :	;:	3 :	:	:	:	:
Estonia	1996	1000		7 N	5.8 27£	2,00	:	:	;	:
Fillario	1990	10200	U 444	100	2/3	2772	§ :	:	:	:
Georgia	:		:	103.	:	:	000	4000	: :	:
Germany	1996	:	:	176	:	:	:	:	:	:
Greece	:	:	:	:	:	:	:	:	:	:
Hungary	1996	6604	157.6	8.9	:	:	7600	21218	:	:
Iceland	:	:	:	:	:	:	:	:	:	:
Ireland	:	:	:	:	:	:	:	;	<b>2</b>	) :
latvia	:	:	:	;	:	:	:	:	94944	9000
Liechtenstein	: :	: :	: :	: :	: :	: :	: :	: :	: :	: :
Lithuania	1996	853	:	1	22	117	:	:	:	:
Luxembourg	:	:	:	:	:	:	:	:	:	:
Malta	:	:	:	:	:	:	:	\:	:	\:
Moldova, Rep.	1006	:	1 :	ว์ ว	:	;	<u>۔</u> د	20	4/.5	20
Neglellands	1006	66 :	- 1	ה ה יות	<u>7</u> :	က် ၁	<b>1</b> :	:	:	:
Poland	1996	8153	: :	: :	: 6	: 6	: 50	: :	: :	: :
Portugal	2000	2634	3304	20071	_		3500	2800	20700	22500
Romania	:	:	3300	:	3	:	3:	:	<b>1</b> :	;
Russian rederation	7001	1673 1	48.7	) 82 1	20000	:	2500	2700	200	<u>.</u> ;
Slovenia	2001	1119	: :	6.9	: :	: :	1600	6700	: }	: ;
Spain	:	:	: i ::	} :	<u>.</u> :	:	<del></del>		:	:
Switzerland	1996	1597		11.2	30 i	240	513	6310	12:	50
Turkey	:	:	:	:	:	:	;	:	907	258
Ukraine Uhited Kingdom	:	85 : O	:	л Э	:	:	:	:	:	:
Relevant to indicator(s)	ator(s)	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.3
	40.10			٠٠٠						1

<sup>\*</sup> For Russian Federation data was derived from Forest and Forest Products Country Profile: Russian Federation, ECE/TIM/SP/18.

# 4.1 Forest and other wooded land area by categories of "naturalness"

Ref. Period			F	orest (1000 ha	1)	Other woods	ed land (1000
Ref. Period   By man   Natural   Plantations   D. O.				•	,		a)
Albania 2001 84.8 843.2 102.0 0.0 22.0 Austria 1992-1996 34.0 3806.0 0.0 84.0 0.0 Belarus 1994-1997 43.5 7626.5 194.8 0.0 1071.3 Belgium 2000 0.0 395.8 271.5 0.0 27.1 Bosnia and 1995 0.0 2219.3 56.9 0.0 433.6 Herzegovina 1995 256.5 2364.6 968.5 0.0 313.8 Bulgaria 1995 256.5 2364.6 968.5 0.0 313.8 Croatia 1996 2.4 1725.7 47.0 33.0 297.0 Cyprus 1999 171.3 0.0 0.3 214.0 0.0 Czech Republic 1995 0.0 2630.0 0.0 0.0 0.0 0.0 Czech Republic 1995 0.0 2630.0 0.0 0.0 0.0 0.0 Estonia 1996 2.0 1709.0 305.0 0.0 146.0 Finland 1991-2000 1202.0 20830.0 0.0 75.0 775.0 France 1997 30.0 13465.0 1661.0 Georgia 1995 550.0 2238.4 200.0 0.0 0.0 0.0 Germany 1997 0.0 10740.0 0.0 0.0 0.0 Greece 1992 120.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0		5 / 5	Undisturbe	Semi-	Dississions	Undisturbe	Semi-
Albania		Ref. Period	d by man	natural	Plantations		natural
Austria         1992-1996         34.0         3806.0         0.0         84.0         0.0           Belarus         1994-1997         43.5         7626.5         194.8         0.0         1071.3           Bespium         2000         0.0         395.8         271.5         0.0         27.1           Bosnia and         1995         0.0         2 219.3         56.9         0.0         433.6           Herzegovina         1995         256.5         2 364.6         968.5         0.0         313.8           Sulgaria         1996         2.4         1 725.7         47.0         33.0         297.0           Cyprus         1996         2.4         1 725.7         47.0         33.0         297.0           Cyprus         1995         0.0         2 630.0         0.0         0.0         0.0           Cyprus         1995         0.0         2 630.0         0.0         0.0         0.0           Cyprus         1995         0.0         2 630.0         0.0         0.0         0.0           Cyprus         1995         0.0         0.4         104.2         340.7         10.0         0.0           Estonia         1997	Albania	2001		843.2	102.0		
Belarus         1994-1997         43.5         7 626.5         194.8         0.0         1 071.3           Belgium         2000         0.0         395.8         271.5         0.0         27.1           Bosnia and         1995         0.0         2 219.3         56.9         0.0         433.6           Herzegovina         1995         256.5         2 364.6         968.5         0.0         313.8           Croatia         1996         2.4         1 725.7         47.0         33.0         297.0           Cyprus         1999         171.3         0.0         0.3         214.0         0.0           Cyprus         1999         171.3         0.0         0.3         214.0         0.0           Cyprus         1999         0.4         104.2         340.7         10.0         10.0           Denmark         1990         0.4         104.2         340.7         10.0         10.0           Estonia         1996         2.0         1 709.0         305.0         0.0         146.0           France         1997         30.0         13 465.0         1 661.0         1833.0         1833.0           Georgia         1995         55	1	l	34.0	3 806.0	0.0	84.0	
Belgium		1994-1997	43.5	7 626.5	194.8	0.0	1 071.3
Bosnia and Herzegovina			0.0	395.8	271.5	0.0	27.1
Helrzegovina   1995   256.5   2 364.6   968.5   0.0   313.8     Croatia   1996   2.4   1 725.7   47.0   33.0   297.0     Cyprus   1999   171.3   0.0   0.3   214.0   0.0     Czech Republic   1995   0.0   2 630.0   0.0   0.0   0.0     Denmark   1990   0.4   104.2   340.7   10.0   10.0     Estonia   1996   2.0   1 709.0   305.0   0.0   146.0     Finland   1991-2000   1 202.0   20 830.0   0.0   75.0   775.0     France   1997   30.0   13 465.0   1 661.0   1 833.0     Georgia   1995   550.0   2 238.4   200.0   0.0   0.0     Germany   1997   0.0   10 740.0   0.0   0.0   0.0     Greece   1992       120.0   0.0   3 154.0     Hungary   2001   0.1   1 743.2   129.7   0.0   0.0     Iceland   1998   0.0   18.0   12.0   0.0   100.0     Italy   1995   6.0   9 718.0   133.0   197.0   788.0     Latvia   1997   4.0   2 737.0   143.0   0.0   111.0     Liechtenstein   1995   0.0   0.0   0.3   0.2     Lithuania   2001   12.0   1 738.0   284.0   0.0   85.0     Luxembourg   1994   0.0   0.0   0.3   0.0   0.0     Moldova, Rep.   1997   0.0   232.8   1.3   0.0   30.8     Netherlands   1992-1996   0.0   239.0   100.0   0.0   0.0     Polugal   1998-1996   0.0   239.0   100.0   0.0   0.0     Polugal   1998-1996   0.0   252.0   785.9   0.0   41.4     Romania   1990   5.0   1 160.0   3 180.5   85.5     Switzerland   1997   7.0   1 160.0   40.0   0.0   61.0     Furkey   1999   188.0   7 845.0   1 994.0   148.0   10.584.0     Lake   1990   188.0   7 845.0   1 994.0   148.0   10.584.0     Lake   1990   188.0   7 845.0   1 994.0   148.0   10.584.0     Lake   1990   188.0   7 845.0   1 994.0   148.0   10.584.0     Lake   1990   188.0   7 845.0   1 994.0   148.0   10.584.0     Lake   1990   188.0   7 845.0   1 994.0   148.0   10.584.0     Luxembourg   1994   188.0   7 845.0   1 994.0   148.0   10.584.0     Luxemboura   1990   188.0   7 845.0   1 994.0   148.0   10.584.0     Luxemboura   1990   188.0   7 845.0   1 994.0   148.0   10.584.0     Luxemboura   1990   188.0   7 845.0   1 994.0   148.0   10.584.0     Luxemboura   1990   188.0				0.040.0	50.0	0.0	422 E
Bulgaria         1995         256.5         2 364.6         968.5         0.0         313.8           Croatia         1996         2.4         1725.7         47.0         33.0         297.0           Cyprus         1999         171.3         0.0         0.3         214.0         0.0           Czech Republic         1995         0.0         2 630.0         0.0         0.0         0.0           Denmark         1990         0.4         104.2         340.7         10.0         10.0           Estonia         1996         2.0         1 709.0         305.0         0.0         146.0           Finland         1991-2000         1 202.0         20 830.0         0.0         75.0         775.0           France         1997         30.0         13 465.0         1 661.0         1833.0           Georgia         1995         550.0         2 238.4         200.0         0.0         0.0           Germany         1997         0.0         10 740.0         0.0         0.0         0.0           Gerece         1992           120.0         0.0         0.0           Hungary         2001         0.1         1 743.		1995	0.0	2 219.3	56.9		
Croatia         1996         2.4         1 725.7         47.0         33.0         297.0           Cyprus         1999         171.3         0.0         0.3         214.0         0.0           Czech Republic         1995         0.0         2 630.0         0.0         0.0         0.0           Denmark         1990         0.4         104.2         340.7         10.0         10.0           Estonia         1996         2.0         1 709.0         305.0         0.0         146.0           Finland         1991-2000         1 202.0         20 830.0         0.0         75.0         775.0           France         1997         30.0         13 465.0         1 661.0         1833.0           Georgia         1995         550.0         2 238.4         200.0         0.0         0.0           Germany         1997         0.0         10740.0         0.0         0.0         0.0           Greece         1992           120.0         0.0         0.0           Hungary         2001         0.1         1 743.2         129.7         0.0         0.0           Italya         1998         0.0         18.0		1995	256.5	2 364.6	968.5		
Cyprus         1999         171.3         0.0         0.3         214.0         0.0           Czech Republic         1995         0.0         2 630.0         0.0         0.0         0.0           Denmark         1990         0.4         104.2         340.7         10.0         10.0           Estonia         1996         2.0         1 709.0         305.0         0.0         146.0           Finland         1991-2000         1 202.0         20 830.0         0.0         75.0         775.0           France         1997         30.0         13 465.0         1661.0         1833.0         Georgia         1995         550.0         2 238.4         200.0         0.0         0.0         0.0           Germany         1997         0.0         10 740.0         0.0			2.4	1 725.7	47.0	33.0	297.0
Czech Republic Denmark         1995         0.0         2 630.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         146.0         775.0         18.33.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         0.0         10.0         10.0         10.0         10.0			171.3	0.0	0.3	214.0	
Denmark         1990         0.4         104.2         340.7         10.0         10.0           Estonia         1996         2.0         1 709.0         305.0         0.0         146.0           Finland         1991-2000         1 202.0         20 830.0         0.0         75.0         775.0           France         1997         30.0         13 465.0         1 661.0         1833.0           Georgia         1995         550.0         2 238.4         200.0         0.0         0.0           Germany         1997         0.0         10 740.0         0.0         0.0         0.0           Gerece         1992           120.0         0.0         3 154.0           Hungary         2001         0.1         1 743.2         129.7         0.0         0.0           Iceland         1998         0.0         18.0         12.0         0.0         100.0           Iceland         1998         0.0         18.0         12.0         0.0         100.0           Italy         1995         6.0         9 718.0         133.0         197.0         788.0           Latvia         1997         4.0         2 737.0				2 630.0	0.0	0.0	0.0
Estonia         1996         2.0         1 709.0         305.0         0.0         146.0           Finland         1991-2000         1 202.0         20 830.0         0.0         75.0         775.0           France         1997         30.0         13 465.0         1 661.0         1 833.0           Georgia         1995         550.0         2 238.4         200.0         0.0         0.0           Germany         1997         0.0         10 740.0         0.0         0.0         0.0           Greece         1992           120.0         0.0         0.0           Hungary         2001         0.1         1 743.2         129.7         0.0         0.0           Iceland         1998         0.0         18.0         12.0         0.0         100.0           Iceland         1998         0.0         18.0         12.0         0.0         100.0           Italy         1995         6.0         9 718.0         133.0         197.0         788.0           Italy         1995         1.5         5.1         0.3         0.3         0.2           Italy         1997         4.0         2 737.0			0.4	104.2	340.7	10.0	10.0
Finland         1991-2000         1 202.0         20 830.0         0.0         75.0         775.0           France         1997         30.0         13 465.0         1 661.0         1 833.0           Georgia         1995         550.0         2 238.4         200.0         0.0         0.0           Germany         1997         0.0         10 740.0         0.0         0.0         0.0           Greece         1992           120.0         0.0         0.0           Hungary         2001         0.1         1 743.2         129.7         0.0         0.0           Iceland         1998         0.0         18.0         12.0         0.0         100.0           Ireland         2001         0.0         624.0         1.0         40.0         110.0           Italy         1995         6.0         9 718.0         133.0         197.0         788.0           Latvia         1997         4.0         2 737.0         143.0         0.0         111.0           Liecthenstein         1995         1.5         5.1         0.3         0.3         0.2           Liithuania         1996         0.0			2.0	1 709.0	305.0	0.0	
France         1997         30.0         13 465.0         1 661.0         1 833.0           Georgia         1995         550.0         2 238.4         200.0         0.0         0.0           Germany         1997         0.0         10 740.0         0.0         0.0         0.0           Greece         1992           120.0         0.0         3 154.0           Hungary         2001         0.1         1 743.2         129.7         0.0         0.0           Iceland         1998         0.0         18.0         12.0         0.0         100.0           Ireland         2001         0.0         0.0         624.0         1.0         40.0           Italy         1995         6.0         9 718.0         133.0         197.0         788.0           Latvia         1997         4.0         2 737.0         143.0         0.0         111.0           Liechtenstein         1995         1.5         5.1         0.3         0.3         0.2           Lithuania         2001         12.0         1 738.0         284.0         0.0         85.0           Luxembourg         1994         0.0				20 830.0	0.0	75.0	775.0
Georgia         1995         550.0         2 238.4         200.0         0.0         0.0           Germany         1997         0.0         10 740.0         0.0         0.0         0.0           Greece         1992           120.0         0.0         3 154.0           Hungary         2001         0.1         1 743.2         129.7         0.0         0.0           Iceland         1998         0.0         18.0         12.0         0.0         100.0           Ireland         2001         0.0         0.0         624.0         1.0         40.0           Italy         1995         6.0         9 718.0         133.0         197.0         788.0           Latvia         1997         4.0         2 737.0         143.0         0.0         111.0           Latvia         1997         4.0         2 737.0         143.0         0.0         111.0           Latvia         1997         4.0         2 737.0         143.0         0.0         111.0           Lichuentenstein         1995         1.5         5.1         0.3         0.3         0.2           Lithuania         2001         12.0         1 7	l				1 661.0		1 833.0
Germany         1997         0.0         10 740.0         0.0         0.0         0.0           Greece         1992           120.0         0.0         3 154.0           Hungary         2001         0.1         1 743.2         129.7         0.0         0.0           Iceland         1998         0.0         18.0         12.0         0.0         100.0           Ireland         2001         0.0         0.0         624.0         1.0         40.0           Italy         1995         6.0         9 718.0         133.0         197.0         788.0           Latvia         1997         4.0         2 737.0         143.0         0.0         111.0           Liechtenstein         1995         1.5         5.1         0.3         0.3         0.2           Lithuania         2001         12.0         1 738.0         284.0         0.0         85.0           Luxembourg         1994         0.0           0.0         2.8           Malta         1996         0.0         0.0         0.3         0.0         0.0           Moldova, Rep.         1997         0.0         322.8						0.0	0.0
Greece         1992           120.0         0.0         3 154.0           Hungary         2001         0.1         1 743.2         129.7         0.0         0.0           Iceland         1998         0.0         18.0         12.0         0.0         100.0           Ireland         2001         0.0         0.0         624.0         1.0         40.0           Italy         1995         6.0         9 718.0         133.0         197.0         788.0           Latvia         1997         4.0         2 737.0         143.0         0.0         111.0           Liechtenstein         1995         1.5         5.1         0.3         0.3         0.2           Lithuania         2001         12.0         1 738.0         284.0         0.0         85.0           Luxembourg         1994         0.0           0.0         28           Malta         1996         0.0         0.0         0.3         0.0         0.0           Moldova, Rep.         1997         0.0         322.8         1.3         0.0         30.8           Netherlands         1992-1996         0.0         239.0 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>							
Hungary 2001 0.1 1 743.2 129.7 0.0 0.0 lceland 1998 0.0 18.0 12.0 0.0 100.0 lreland 2001 0.0 0.0 624.0 1.0 40.0 ltaly 1995 6.0 9718.0 133.0 197.0 788.0 Latvia 1997 4.0 2737.0 143.0 0.0 111.0 Liechtenstein 1995 1.5 5.1 0.3 0.3 0.2 Lithuania 2001 12.0 1 738.0 284.0 0.0 85.0 Luxembourg 1994 0.0 0.0 0.0 2.8 Malta 1996 0.0 0.0 0.0 0.3 0.0 0.0 Moldova, Rep. 1997 0.0 322.8 1.3 0.0 30.8 Netherlands 1992-1996 0.0 239.0 100.0 0.0 0.0 Norway 1994-1996 250.0 8160.0 300.0 329.0 2961.0 Poland 1992-1996 144.0 8758.0 39.0 0.0 0.0 0.0 Portugal 1995-1998 0.0 2522.0 785.9 0.0 41.4 Romania 1990-1997 233.2 5977.4 90.6							
Iceland   1998   0.0   18.0   12.0   0.0   100.0   111.0   100.0   100.0   111.0   110.0   110.0   100.0   1				1 743.2			0.0
Ireland   2001   0.0   0.0   624.0   1.0   40.0   18aly   1995   6.0   9718.0   133.0   197.0   788.0   12dvia   1997   4.0   2737.0   143.0   0.0   111.0   111.0   12dvia   1995   1.5   5.1   0.3   0.3   0.2   12dvia   1994   0.0     0.0   2.8   0.0   12dvia   1994   0.0     0.0   0.0   2.8   0.0   0							
Italy         1995         6.0         9 718.0         133.0         197.0         788.0           Latvia         1997         4.0         2 737.0         143.0         0.0         111.0           Liechtenstein         1995         1.5         5.1         0.3         0.3         0.2           Lithuania         2001         12.0         1 738.0         284.0         0.0         85.0           Luxembourg         1994         0.0           0.0         2.8           Malta         1996         0.0         0.0         0.3         0.0         0.0           Moldova, Rep.         1997         0.0         322.8         1.3         0.0         30.8           Netherlands         1992-1996         0.0         239.0         100.0         0.0         0.0           Norway         1994-1996         250.0         8 160.0         300.0         329.0         2 961.0           Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Russian Federation         1998	1						
Latvia         1997         4.0         2 737.0         143.0         0.0         111.0           Liechtenstein         1995         1.5         5.1         0.3         0.3         0.2           Lithuania         2001         12.0         1 738.0         284.0         0.0         85.0           Luxembourg         1994         0.0           0.0         2.8           Malta         1996         0.0         0.0         0.3         0.0         0.0           Moldova, Rep.         1997         0.0         322.8         1.3         0.0         30.8           Netherlands         1992-1996         0.0         239.0         100.0         0.0         0.0           Norway         1994-1996         250.0         8 160.0         300.0         329.0         2961.0           Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6             Russian Federation         1998 <td>I</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	I						
Liechtenstein         1995         1.5         5.1         0.3         0.3         0.2           Lithuania         2001         12.0         1738.0         284.0         0.0         85.0           Luxembourg         1994         0.0          0.0         2.8           Malta         1996         0.0         0.0         0.3         0.0         0.0           Moldova, Rep.         1997         0.0         322.8         1.3         0.0         30.8           Netherlands         1992-1996         0.0         239.0         100.0         0.0         30.8           Norway         1994-1996         250.0         8 160.0         300.0         329.0         2 961.0           Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6             Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001 </td <td></td> <td></td> <td>l .</td> <td></td> <td></td> <td></td> <td></td>			l .				
Lithuania         2001         12.0         1738.0         284.0         0.0         85.0           Luxembourg         1994         0.0          0.0         2.8           Malta         1996         0.0         0.0         0.3         0.0         0.0           Moldova, Rep.         1997         0.0         322.8         1.3         0.0         30.8           Netherlands         1992-1996         0.0         239.0         100.0         0.0         30.8           Norway         1994-1996         250.0         8 160.0         300.0         329.0         2 961.0           Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6             Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         50.0         1 998.0         15.0         0.0            Spain         1990 <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td>				1			
Luxembourg         1994         0.0           0.0         2.8           Malta         1996         0.0         0.0         0.3         0.0         0.0           Moldova, Rep.         1997         0.0         322.8         1.3         0.0         30.8           Netherlands         1992-1996         0.0         239.0         100.0         0.0         0.0           Norway         1994-1996         250.0         8 160.0         300.0         329.0         2 961.0           Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6             Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         25.0         1 998.0         15.0         0.0            Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden </td <td>l .</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	l .						
Malta         1996         0.0         0.0         0.3         0.0         0.0           Moldova, Rep.         1997         0.0         322.8         1.3         0.0         30.8           Netherlands         1992-1996         0.0         239.0         100.0         0.0         0.0           Norway         1994-1996         250.0         8 160.0         300.0         329.0         2 961.0           Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6              Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         25.0         1 998.0         15.0         0.0            Spain         1990         5.0         1 092.6         0.3         0.0         51.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5				1 7 00.0			
Moldova, Rep.         1997         0.0         322.8         1.3         0.0         30.8           Netherlands         1992-1996         0.0         239.0         100.0         0.0         0.0           Norway         1994-1996         250.0         8 160.0         300.0         329.0         2 961.0           Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6              Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         25.0         1 998.0         15.0         0.0            Slovenia         2001         50.0         1 092.6         0.3         0.0         51.0           Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85				0.0	0.3		
Netherlands         1992-1996         0.0         239.0         100.0         0.0         0.0           Norway         1994-1996         250.0         8 160.0         300.0         329.0         2 961.0           Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6              Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         25.0         1 998.0         15.0         0.0            Slovenia         2001         50.0         1 092.6         0.3         0.0         51.0           Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1999         188.0         7 845.0         1 994.0         148.0							30.8
Norway         1994-1996         250.0         8 160.0         300.0         329.0         2 961.0           Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6              Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         25.0         1 998.0         15.0         0.0            Slovenia         2001         50.0         1 092.6         0.3         0.0         51.0           Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10	, · · · · · · · · · · · · · · · · · · ·						
Poland         1992-1996         144.0         8 758.0         39.0         0.0         0.0           Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6             Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         25.0         1 998.0         15.0         0.0            Slovenia         2001         50.0         1 092.6         0.3         0.0         51.0           Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10 584.0							
Portugal         1995-1998         0.0         2 522.0         785.9         0.0         41.4           Romania         1990-1997         233.2         5 977.4         90.6             Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         25.0         1 998.0         15.0         0.0            Slovenia         2001         50.0         1 092.6         0.3         0.0         51.0           Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10 584.0	Poland						
Romania         1990-1997         233.2         5 977.4         90.6              Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         25.0         1 998.0         15.0         0.0            Slovenia         2001         50.0         1 092.6         0.3         0.0         51.0           Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10 584.0							
Russian Federation         1998         260 768.7         534 238.3         15 360.0         38 014.0         33 593.0           Slovakia         2001         25.0         1 998.0         15.0         0.0            Slovenia         2001         50.0         1 092.6         0.3         0.0         51.0           Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10 584.0							
Slovakia         2001         25.0         1 998.0         15.0         0.0         51.0           Slovenia         2001         50.0         1 092.6         0.3         0.0         51.0           Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10 584.0		1					33 593.0
Slovenia         2001         50.0         1 092.6         0.3         0.0         51.0           Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10 584.0							
Spain         1990         5.0         11 600.0         1 904.0         3.0         12 472.0           Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10 584.0							51.0
Sweden         1998-2001         4 531.3         22 151.4         610.3         3 180.5         85.5           Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10 584.0							
Switzerland         1997         7.0         1 162.0         4.0         0.0         61.0           Turkey         1999         188.0         7 845.0         1 994.0         148.0         10 584.0	•						
Turkey 1999 188.0 7 845.0 1 994.0 148.0 10 584.0	I =						
Turkey							
Ilkraine	Ukraine	1996	59.0	4 974.0	4 425.0	6.0	30.0
United Kingdom 1995-1999 1 979.0 0.0 20.0			55.5	, , , , , ,			
Selection of the select			i———				
Relevant to 4.1 4.1 4.1 4.1 4.1 4.1			4.1	4.1	4.1	4.1	4.1

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 53)

# 4.2 Reported number of forest occurring endangered tree and vascular plant species

		ccurring tree		rring vascular
		of which:	1	of which:
	Total	Endangere	Total	Endangere
		ď		d
Albania	120	21	1,460	38
Austria	58	9	1,049	271
Belarus	33	2	850	107
Belgium	38	3	131	37
Bosnia and				
Herzegovina		••		
Bulgaria	210		l	i
Croatia		<u></u>	l	
Cyprus	47	1	1,500	22
Czech Republic	277	14	655	83
Denmark	63	7	256	50
Estonia	62	13	240	69
Finland	33	8	213	35
France	104	Ŏ	611	11
Georgia			"	
Germany	63	Ö	601	6
Greece				
Hungary	79	"4		5
Iceland	27	İ		1
ireland	85	Ö	130	8
Italy	86	1 1.	,,,,,	
Latvia	47	2	480	94
Liechtenstein				
Lithuania	32	2	713	102
Luxembourg				
Malta	2	Ö	6	Ö
Moldova, Rep.	47	7	130	18
Netherlands	74	27	317	72
Norway	43	2	700	60
Poland	81	1 1	524	
Portugal	63	5	490	16
Romania		]		
Russian Federation	68	4	90	15
Slovakia	57	7	1,500	360
Slovenia	73	5		
Spain				·
Sweden	 30	7	360	92
Switzerland	44	4	442	110
Turkey				
Ukraine	 148	14	730	200
United Kingdom				
Relevant to	<u> </u>	<u> </u>		<del></del>
indicator(s)	4.2	4.2	4.2	4.2
maioator(3)				

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 56, 57)

# 4.3 Mixed forest (%)

	Ref. period	Mixed forest	Forest area	Share of mixed forest
		(1000 ha)	(1000 ha)	(%)
Albania Austria Belarus Belgium	2001 1992-1996 1994-1997 2000	329 757 3 067 46	1030 3840 7865 667	32 % 20 % 39 % 7 %
Bosnia and Herzegovina	1995		2273	
Bulgaria Croatia Cyprus Czech Republic Denmark Estonia Finland France Georgia Germany Greece	1995 1996 1995 1990 1996 1991-2000 1997 1995 1997 1992	376 159 0 1 464 166 812 2 734 1 365 1 973	3588 1775 172 2630 445 2010 22032 15156 2988 10740 3359	10 % 9 %  56 % 37 % 40 % 12 % 9 %  18 %
Hungary	2001 1998	229 2	1873 30	12 % 7 %
Iceland Ireland	2001	28	624	4 %
Italy	1995	692	9855	7 %
Latvia	1997	1 223	2884	42 %
Liechtenstein	1995	1.80	7 2034	26 % 18 %
Lithuania	2001 1994	366 2	2034 86	2%
Luxembourg Malta	1994	0.347	0.347	100 %
Moldova, Rep.	1997	0.547	322	
Netherlands	1992-1996	50	361	14 %
Norway	1994-1996	1 818	8713	21 %
Poland	1997-2001	1 628	9047	18 %
Portugal	1995	430	3 308	13 %
Romania	1990-1997	0	6301	
Russian Federation	1998	372 769	810367	46 % 18 %
Slovakia	2001	372 <b>372</b>	2 038 <b>1143</b>	33 %
Slovenia Spain	<b>2001</b> 1990	2 507	13656	18 %
Sweden	1998-2001	4 585	27293	17 %
Switzerland	1997	233	1173	20 %
Turkey	1996		10027	
Ukraine	1996	1 002	9460	11 %
United Kingdom	1995-1999	192	2751	7 %
Relevant to indicator(s)		4.4	4.4	4.4

	Natural	Natural	Coppice	Planting or
	regeneratio	regeneratio	sprouting	seeding
	n	n enhanced		
!		by planting		
Albania	58	1	40	1
Austria	76	10	0	14
Belarus	10.7	0	4.6	84.7
Belgium	25.3		••	74.7
Bosnia and	-			
Herzegovina			••	••
Bulgaria	37.5	16.8	10	35.7
Croatia	71.8	7.7	12.8	7.7
Cyprus	100	0	0	0
Czech Republic	0	4.2	0	95.8
Denmark	3.5	3.5	2	90.9
Estonia	21.3	11.5	0	67.2
Finland	30.2		0	69.8
France	35		12.1	52.9
Georgia	84.8	13.3		1.9
Germany	40	0	0	60
Greece		••	-:· .	
Hungary	9.6		36.1	54.3
Iceland	<u>:</u>			
Ireland	0	0	0	100
Italy	45.5	2.1	44.1	8.4
Latvia	24.6	0	0	75.4 16.7
Liechtenstein	50	33.3		52.3
Lithuania	20.4	27.3	••	
Luxembourg		••	••	
Malta Moldova, Rep.	31	 0	 19	 50
Netherlands	28.6	0	28.6	42.9
Norway	42.6	0	0	57.4
Poland	1.8	7.2	0.0	91.0
Portugal	30.7	0	53.3	16
Romania				
Russian Federation	74	0	 0	26
Slovakia	6	37	5	52
Slovenia	81.6	1.6	11	5.8
Spain			•••	
Sweden	28.6	1.1	1	69.3
Switzerland	87.9	7.9	0	4.2
Turkey	29	0	24	47
Ukraine	2.8	2.5	2.5	92.1
United Kingdom	2	0	0.7	97.3
Relevant to	4.5	4.5	4.5	4.5
indicator(s)	4.5	4.5	4.5	4.5

<sup>\*</sup>area of regeneration under continuous forest cover management is not included

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 68)

5.1 Area and changes over time in areas where forest and other wooded land is primarily managed for soil protection

	Ref.	Ref.	manag soil pro	orimarily ged for otection 0 ha)	land pr manage	vooded rimarily d for soil on (1000 a)	Forest (	1000 ha)	Other w land (10	)00 ha)
	Period 1	Period 2	Ref. Perio d 1	Ref. Period 2	Ref. Period 1	Ref. Period 2	Change betwee n periods	Annual average change	Chang e betwee n periods	Annual averag e chang e
Albania	1995	2001	107	134	0	0	27.00	4.5	0.00	0
Austria	1986- 90	1992-96	741	755	84	84	14.00	2.33	0.00	0.00
Belarus Belgium Bosnia and Herzegovina	1994 1982	1997 2000 	0 2 	0 149 	0 5 	0 5 	0.00 147.16 	0.00 8.18 	0.00 0.00	0.00 0 
Bulgaria Croatia Cyprus Czech Republic	1985 1986 1990 1986	1995 1996 1999 1995	220 35 119 2	524 39 172 2	0 2 51 0	0 9 214 0	304.20 0.40 52.20 0.00	30.42 0.04 5.8 0.00	0.00 0.70 163.90 0.00	0.00 0.07 18.2 0.00
Denmark Estonia Finland France	1980 1983 1991 1990	1990 1994 1996 1997	30 89 0 144	34 97 0 144	20  0 48	24  0 48	4.00 8.00 0.00 0.00	0.40 0.73 0.00 0.00	4.00  0.00 0.00	0.40  0.00 0.00
Georgia Germany Greece Hungary Iceland	1993 1964 1996 1990	1997 1992 2001 1998	480 2 512 164 15	3 359 170 16	 0 3 960  100	 3 154  100	 47.10 6 1.00	 1.68 1.2 0.13	 -44.78  0.00	 -1.60  0.00
Ireland Italy Latvia Liechtenstein	1987 1985 1988	1996 1995 1997 1995	0 232 39	0 299 40	0 197 5	0 254 4	0.00 67.00 1.00	0.00 6.70 0.11	0.00 57.00 -1.00	0.00 5.70 -0.11
Lithuania Luxembourg Malta	1996  1986- 96	2001  1997	44  	47 	2  	3	3.60 	0.7  	0.40 	0.1 
Moldova, Rep. Netherlands Norway	1988 1990	1997 1996 1994-96	0 <b>4</b> 	22 4 1	31 0 	31 0 0	21.90 0.00 	2.43 0.00 	0.00 0.00 	0.00 0.00 
Poland	1992- 96	1997-01	256	308	0	0	52.00	11.4	0.00	0
Portugal Romania	1982 1980	1995 1990	217 729	217 813	4 0	4 0	0.00 7.60 5	0 0.76	0.00 0.00	0.00
Russian Federation	1988	1998	3 565	8 985			420.00	542 5.1		
Slovakia Slovenia	1988 <b>1996</b>	2001 <b>2001</b>	261 <b>59</b>	327 <b>74</b>	9	10	66.00 <b>15.00</b>	5.1 <b>3</b>	1.00	0.2
Spain		1994		10 055		12 079				••
Sweden	1985- 89	1992-96	33	33			0.00	0.00	0.00	0.00
Switzerland Turkey Ukraine	1996 1988	1996 1999 1996	 1 133 2 191	493 1 194 2 904 0	 2 113 9 0	2 202 11 0	 61.00 713.00 0.00	 20.3 89.13 0.00	 89.00 2.00 0.00	29.6 0.25 0.00
United Kingdom  Relevant to indic	1980 cator(s)	1995	5.1, 5.2	5.1, 5.1	5.1, 5.2	5.1, 5.2	5.1, 5.2	5.1, 5.2	5.1, 5.2	5.1, 5.2

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 79, 80)

### 6.1 Quantity and value of wood from forest and other wooded land

Ref. Period			Total wood	Value of wood
Albania 2001 244.7 0.7214 Austria 2001 13467 821* Belarus 1995 9830 39.2 Belgium 1994-99 3701.2 126.5** Bosnia and Herzegovina Bulgaria		Ref Period		
Albania         2001         244.7         0.7214           Austria         2001         13467         821*           Belarus         1995         9830         39.2           Belgium         1994-99         3701.2         126.5**           Bosnia and         Herzegovina             Bulgaria              Croatia         1996         3000         144           Cyprus         1999         35         1           Czech Republic         1993-95         11568         363.1           Denmark         1996         1900         60.3           Estonia              Finland         2000         61500         1768           France         40600         1974.9            Georgia              Germany         39272         1990            Greece              Hungary         2001         5811         166.7           Iceland         1998         0.15         0.15           Italy         1995	·	itel. I ellou		
Austria         2001         13467         821*           Belarus         1995         9830         39.2           Belgium         1994-99         3701.2         126.5**           Bosnia and         Herzegovina             Bulgaria              Croatia         1996         3000         144           Cyprus         1999         35         1           Czech Republic         1993-95         11568         363.1           Denmark         1996         1900         60.3           Estonia              Finland         2000         61500         1768           France         40600         1974.9            Gergia              Germany         39272         1990            Greace              Hungary         2001         5811         166.7           Iceland         1998         0.15         0.15           Ireland         1995         10101         550.3           Latvia </td <td>Albania</td> <td>2001</td> <td></td> <td></td>	Albania	2001		
Belarus         1995         9830         39.2           Belgium         1994-99         3701.2         126.5**           Bosnia and Herzegovina Bulgaria              Croatia         1996         3000         144           Cyprus         1999         35         1           Czech Republic         1993-95         11568         363.1           Denmark         1996         1900         60.3           Estonia              Finland         2000         61500         1768           France         40600         1974.9            Georgia              Germany         39272         1990            Greece              Hungary         2001         5811         166.7           Iceland         1998         0.15         0.15           Ireland         2001         3089            Italy         1995         10101         550.3           Latvia              Liechtenstein				
Belgium				:
Bosnia and   Herzegovina   Bulgaria   Croatia   1996   3000   144   Cyprus   1999   35   1   Czech Republic   1993-95   11568   363.1   Denmark   1996   1900   60.3   Estonia   Finland   2000   61500   1768   France   40600   1974.9   Georgia   Germany   Greece   Hungary   2001   5811   166.7   Iceland   1998   0.15   0.15   Ireland   2001   3089   Italy   1995   10101   550.3   Latvia   Liechtenstein   Lithuania   2001   5472   105   Luxembourg   Malta   Moldova, Rep.   1991-96   362               Moldova, Rep.   1994-96   9340   482.5   Poland   2001   26671   1279.5   Portugal   2000   10831   314.2   Romania   Russian Federation   1999   90054   3000   Slovakia   Stovenia   2001   2700   83   Spain   Sweden   61200   2208   Sovenia   Sweden   61200   2208   Sovenia   Sweden   61200   2208   Sovenia   Sweden   61200   2208   Sovenia   Sweden   Contact   C				
Herzegovina   Bulgaria   Croatia   1996   3000   144   Cyprus   1999   35   1   1568   363.1   Denmark   1996   1900   60.3   Estonia   Finland   2000   61500   1768   France   40600   1974.9   Georgia	•	1994-99	3/01.2	126.5**
Bulgaria				
Croatia         1996         3000         144           Cyprus         1999         35         1           Czech Republic         1993-95         11568         363.1           Denmark         1996         1900         60.3           Estonia              Finland         2000         61500         1768           France         40600         1974.9           Georgia              Germany         39272         1990           Greece              Hungary         2001         5811         166.7           Iceland         1998         0.15         0.15           Ireland         1995         10101         550.3           Latvia              Liechtenstein              Lithuania         2001         5472         105           Luxembourg              Malta              Moldova, Rep.         1991-96         362				
Cyprus         1999         35         1           Czech Republic         1993-95         11568         363.1           Denmark         1996         1900         60.3           Estonia              Finland         2000         61500         1768           France         40600         1974.9           Georgia              Germany         39272         1990           Greece              Hungary         2001         5811         166.7           Iceland         1998         0.15         0.15           Ireland         2001         3089            Italy         1995         10101         550.3           Latvia              Liechtenstein              Lithuania         2001         5472         105           Luxembourg              Malta              Norway         1991-96         362				
Czech Republic         1993-95         11568         363.1           Denmark         1996         1900         60.3           Estonia              Finland         2000         61500         1768           France         40600         1974.9           Georgia              Germany         39272         1990           Greece              Hungary         2001         5811         166.7           Iceland         1998         0.15         0.15           Ireland         2001         3089            Italy         1995         10101         550.3           Latvia              Liechtenstein              Lithuania         2001         5472         105           Luxembourg              Netherlands         1080         53.7           Norway         1994-96         9340         482.5           Poland         2001         26671         1279.5      <				1 '''
Denmark         1996         1900         60.3           Estonia              Finland         2000         61500         1768           France         40600         1974.9           Georgia             Germany         39272         1990           Greece             Hungary         2001         5811         166.7           Iceland         1998         0.15         0.15           Ireland         2001         3089         181           Italy         1995         10101         550.3           Latvia              Liechtenstein              Lithuania         2001         5472         105           Luxembourg              Malta              Moldova, Rep.         1991-96         362            Netherlands         1080         53.7           Poland         2001         26671         1279.5           Portugal         2001				
Estonia Finland Finland France Georgia Germany Greece Hungary Iceland Italy Liechtenstein Lithuania Liechterlands Moldova, Rep. Netherlands Norway Poland Portugal Portugal Russian Federation Spain Sweden France 2000 61500 1768 1974.9 640600 1974.9 1990 1974.9 1990 1990 1990 1990 1991 1991 1991 19	•			
Finland       2000       61500       1768         France       40600       1974.9         Georgia            Germany       39272       1990         Greece            Hungary       2001       5811       166.7         Iceland       1998       0.15       0.15         Ireland       2001       3089          Italy       1995       10101       550.3         Latvia            Liechtenstein            Lithuania       2001       5472       105         Luxembourg            Malta            Moldova, Rep.       1991-96       362          Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2001       26671       1279.5         Romania            Russian Federation		1996	1900	60.3
France       40600       1974.9         Georgia           Germany       39272       1990         Greece           Hungary       2001       5811       166.7         Iceland       1998       0.15       0.15         Ireland       2001       3089          Italy       1995       10101       550.3         Latvia            Liechtenstein            Lithuania       2001       5472       105         Luxembourg            Malta            Moldova, Rep.       1991-96       362          Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2000       10831       314.2         Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187				
Georgia	Finland	2000		
Germany       39272       1990         Greece            Hungary       2001       5811       166.7         Iceland       1998       0.15       0.15         Ireland       2001       3089          Italy       1995       10101       550.3         Latvia            Lichtenstein            Lithuania       2001       5472       105         Luxembourg            Malta            Moldova, Rep.       1991-96       362          Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2000       10831       314.2         Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain	France		40600	1974.9
Greece <t< td=""><td></td><td></td><td>••</td><td></td></t<>			••	
Hungary       2001       5811       166.7         Iceland       1998       0.15       0.15         Ireland       2001       3089       10101       550.3         Italy       1995       10101       550.3         Latvia            Liechtenstein            Lithuania       2001       5472       105         Luxembourg            Malta            Moldova, Rep.       1991-96       362          Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2000       10831       314.2         Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain            Sweden        61200       2208     <	Germany		39272	1990
Iceland         1998         0.15         0.15           Ireland         2001         3089         0.15           Italy         1995         10101         550.3           Latvia              Liechtenstein              Lithuania         2001         5472         105           Luxembourg              Malta              Moldova, Rep.         1991-96         362            Netherlands         1080         53.7           Norway         1994-96         9340         482.5           Poland         2001         26671         1279.5           Portugal         2000         10831         314.2           Romania              Russian Federation         1999         90054         3000           Slovakia         5459         187           Slovenia         2001         2700         83           Spain              Sweden          <			••	
Ireland   2001   3089	Hungary	2001	5811	166.7
Italy     1995     10101     550.3       Latvia          Liechtenstein          Lithuania     2001     5472     105       Luxembourg          Malta          Moldova, Rep.     1991-96     362        Netherlands     1080     53.7       Norway     1994-96     9340     482.5       Poland     2001     26671     1279.5       Portugal     2000     10831     314.2       Romania          Russian Federation     1999     90054     3000       Slovakia     5459     187       Slovenia     2001     2700     83       Spain          Sweden      61200     2208	Iceland	1998	0.15	0.15
Latvia Liechtenstein Lithuania Luxembourg Malta Moldova, Rep. Netherlands Norway Poland Portugal Romania Russian Federation Spain Sweden Lithuania 2001 5472 105 1080 1080 53.7 1080 53.7 1080 53.7 1080 53.7 1080 5452 1080 53.7 1080 5452 1080 53.7 1080 53.7 1080 5482.5 1080 10831 10831 1080 1080	Ireland	2001	3089	
Liechtenstein             Lithuania       2001       5472       105         Luxembourg            Malta            Moldova, Rep.       1991-96       362          Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2000       10831       314.2         Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain            Sweden        61200       2208	Italy .	1995	10101	550.3
Lithuania       2001       5472       105         Luxembourg            Malta            Moldova, Rep.       1991-96       362          Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2000       10831       314.2         Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain            Sweden        61200       2208	Latvia		••	
Luxembourg           Malta           Moldova, Rep.       1991-96       362          Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2000       10831       314.2         Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain            Sweden        61200       2208	Liechtenstein			
Malta            Moldova, Rep.       1991-96       362          Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2000       10831       314.2         Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain            Sweden        61200       2208	Lithuania	2001	5472	105
Moldova, Rep.       1991-96       362          Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2000       10831       314.2         Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain            Sweden        61200       2208	Luxembourg			**
Netherlands       1080       53.7         Norway       1994-96       9340       482.5         Poland       2001       26671       1279.5         Portugal       2000       10831       314.2         Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain            Sweden        61200       2208	Malta			••
Norway         1994-96         9340         482.5           Poland         2001         26671         1279.5           Portugal         2000         10831         314.2           Romania              Russian Federation         1999         90054         3000           Slovakia         5459         187           Slovenia         2001         2700         83           Spain              Sweden          61200         2208	Moldova, Rep.	1991-96	362	
Poland         2001         26671         1279.5           Portugal         2000         10831         314.2           Romania              Russian Federation         1999         90054         3000           Slovakia         5459         187           Slovenia         2001         2700         83           Spain              Sweden          61200         2208	Netherlands		1080	53.7
Portugal         2000         10831         314.2           Romania              Russian Federation         1999         90054         3000           Slovakia         5459         187           Slovenia         2001         2700         83           Spain              Sweden          61200         2208	Norway	1994-96	9340	482.5
Romania            Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain           Sweden        61200       2208	Poland	2001	26671	1279.5 ,
Russian Federation       1999       90054       3000         Slovakia       5459       187         Slovenia       2001       2700       83         Spain            Sweden        61200       2208	Portugal	2000	10831	314.2
Slovakia         5459         187           Slovenia         2001         2700         83           Spain           61200         2208	Romania			
Slovenia         2001         2700         83           Spain              Sweden          61200         2208	Russian Federation	1999	90054	3000
Spain                 2208	Slovakia		5459	187
Sweden 61200 2208	Slovenia	2001	2700	83
Sweden 61200 2208	Spain	Ì		
	Sweden		61200	2208
Switzerland   1996   5400   435.5	Switzerland .	1996	5400	435.5
Turkey 1999 13191 421	Turkey	1999	13191	421
Ukraine	Ukraine	İ		
United Kingdom 1995 7951 309.5	United Kingdom	1995	7951	309.5
Relevant to	Relevant to			- 4
indicator(s) 6.1 6.1		1	6.1	6.1

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Chapter VI, Table 6.3)

<sup>\*</sup>mill. Euro

<sup>\*\*</sup>average for 94-99, but with actual change (1 euro = 0.98 USD)

# 6.2 Area of forest and other wooded land where access to public is legally allowed and not allowed

			d other wood			other wooded ate ownership	land in
		Area with	ublic ownersh	ι <u>γ</u>	Area with		Perce
	Ref.	public	Area with	Percent of	public	Area with	nt of
	Period ·	access	public	total	access	public	of
		tebuloxe	access		excluded	access	total
			0 ha)	(%)	(100	0 ha)	(%)
Albania	2000	13	1029	98,8	0	11	0
Austria	1992-96	30	682	95.8	162	3,050	95.0
Belarus	1997	148	8,788	98.3	0	0	
Belgium	2000	16	285	94,8	0	393	100
Bosnia and		0	2,125	100.0	0	584	100.0
Herzegovina	1995	0	2,125				100.0
Bulgaria	1995	73	3,830	98.1	0	0	
Croatia	1996	0	1,651	100.0	0	454	100.0
Cyprus	1999	0	157	100	0	229	100
Czech Republic	1995	122	2,091	94.5	0	418	100.0
Denmark	1990-97	5	148	96.7	2	384	99.5
Estonia	1994	7	1,971	99.6	••		••
Finland	1991-00	306	6185	95,3	47	16344	99,7
France	1997	45	4,183	98.9	12761	0	0.0
Georgia	1995					,.	.,
Germany		0	5,762	100.0	0	4,978	100.0
Greece	1992	108	5,223	98.0	23	1,159	98.1
Hungary	2001	4	1869	99.8			
Iceland	1998	0	39	100.0	5	86	94.5
Ireland	2001		441	66			
Italy	1995	6	3,681	99.8	0	7,155	100.0
Latvia	1997	4	1,674	99.8			
Liechtenstein	1995	0	7	100.0	0	1	100.0
Lithuania	2001	32	1481	97,9	8	598	98,7
Luxembourg	1994-97	0	41	100.0	0	47	100.0
Malta	1996	0	0	0.0	0	0	
Moldova, Rep.	1988-97	44	311	87.6	0	0	
Netherlands	1990	21	153	88.2	35	131	79.0
Norway	1994-96	0	2,936	100.0	0	9,064	100.0
Poland	2001	805.17	6687.03	89.3			
Portugal	1995	3	255	98.9	0	3091	100
Romania		0	6,320	100.0	0	360	100.0
Russian Federation	1998	15565	866409	98,2	0	0	0
Slovakia	1996	54	1,079	95.2	34	864	96.2
Slovenia	2001	10	340	97,1	0	844	100
Spain				.:			400.0
Sweden	1992-96	77	6,070	98.7	0	24,112	100.0
Switzerland	1993-95	0	850	100.0	0	384	100.0
Turkey	1999	22	20722	99,1	.:	<u>'</u>	
Ukraine	1996	500	8,994	94.7	0	0	
United Kingdom	1995	20	1,052	98.1	<u> </u>	<u> </u>	<u> </u>
Relevant to		6.2	6.2	6.2	6.2	6.2	6.2
indicator(s)	<u> </u>	<u> </u>	<u> </u>	<u> </u>	JL	JL	<u> </u>

Source: Regional FRA, Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. (Table 81)

### Background information on MCPFE countries

Country	Referenc e period	Total area	Land area	Forest and other wooded land	Forest	GDP */ per capita	Populatio n **/
		(1000 ha)				(USD)	(1000)
Albania	2001	2,875	2,759	1,052	1,030	3 438	3,401
Austria	1994	8,387	8,252	3,924	3,840	27 102	8,121
Belarus	1994	20,760	20,285	8,936	7,865	7 824	9,990
Belgium	2000	3,053	3,030	694	667	26 181	10,262
Bosnia and	4005		F 072	0.740	0.070	i .	
Herzegovina	1995	5,120	5,073	2,710	2,276		3,675
Bulgaria	1995	11,098	10,895	3,902	3,588	5 689	8,150
Croatia	1996	5,654	5,592	2,105	1,775	7 845	4,582
Cyprus	1999	925	916	386	172	11 289	759
Czech Republic	1995	7,887	7,728	2,630	2,630	14 019	10,267
Denmark .	1990	4,309	4,239	538	445	29 160	5,349
Estonia	1996	4,523	4,187	2,156	2,010	8 940	1,367
Finland	1996	33,814	30,454	22,882	22,032	25 195	5,181
France	1997	54,919	54,148	16,989	15,156	24 703	59,040
Georgia	1995	6,970	6,831	2,988	2,988	3 243 <sup>-</sup>	4,946
Germany	1987	35,702	34,613	10,740	10,740	25 941	82,193
Greece 2	1992	13,196	13,076	6,513	3,359	16 734	10.565
Hungary	2001	9,303	9,093	1,873	1,873	12 065	10,005
Iceland	1998	10,295	9,024	130	30	30 078	283
Ireland	2001	7,029	6,890	665	624	29 034	3,820
Italy	1995	30,132	29,412	10,842	9,857	25 228	57,844
Latvia	1997	6,459	6,222	2,995	2,884	6 912	2,366
Liechtenstein	1995	16	16	7	7		33
Lithuania	2001	6,530	6,267	2,119	2,034	6 946	3,693
Luxembourg	1997	259	258	89	86	47 234	441
Malta	1996	31.6	31.6	0.347	0.347	9 096	391
Moldova, Republic of	1997	3,385	3,309	353	322	2 119	3,635
Netherlands	1994	3,735	3,388	361	361	27 928	15,983
Norway	1995	32,376	30,625	12,004	8,713	30 315	4,503
Poland	2001	31,268	30,435	9088	9088	9 524	38,644
Portugal	1995	9,204	9,105	3,349	3,308	18 002	10,023
Romania	1990	23,839	22,949	6,301	6,301	6 347	22,431
Russian Federation	1998	1,709,800	1,498,700	881,974	810,367	8 144	144,800
Slovakia	2001	4,903	4,810	2,038	2,038	11 328	5,403
Slovenia	2001	2,027	2,016	1,194	1,143	16 889	1,990
Spain	1990	50,596	50,055	26,267	13,656	20 133	39,490
Sweden	1998-01	45,218	40,843	30,599	27,293	24 924	8,883
Switzerland	1994	4,129	3,916	1,234	1,173	30 191	7,206
Turkey	1999	77,945	76,729	20,762	10,027	6 455	65,787
Ukraine	1996	60,355	57,936	9,496	9,460	3 691	49,037
United Kingdom	1995-99	24,410	24,088	2,771	2,751	24 576	59,832

<sup>\*/</sup> Real GDP (Gross Domestic Product) per capita (year 2000), at current prices and current PPPs; Source: UNECE Statistical Database; UNECE Economic Survey of Europe, 2001, No.2 \*\*/ Population data (01.01.2001): Eurostat and Council of Europe, ISSN 1024 - 4352, European Communities, 2001 Notes: - Population data for Albania, Croatia, Bosnia and Herzegovina are on 01.01.2000

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Appendix I: TBFRA-2000 terms and definitions 10

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### **APPENDIX I**

# TERMS AND DEFINITIONS APPLIED IN THE UN-ECE/FAO

# TEMPERATE AND BOREAL FOREST RESOURCES ASSESSMENT 2000

No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table(s) No.
1.	Above-stump woody biomass	The mass of the woody part (stem, bark, branches, twigs) of trees, alive or dead, shrubs and bushes, excluding stumps and roots.	14	40-41
2.	Annual fellings	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.  Includes: s:lvicultural and pre-commercial thinnings and cleanings left in the forest; and natural losses that are recovered (harvested).	16	47-48, 52
3.	Annual removals	Average annual of those fellings that are removed from the forest, other wooded land or other felling site during the given reference period.  Includes: Removals during the given reference period of trees felled during an earlier period and removal of trees killed or damaged by natural causes (natural losses), e.g. fire, windblow, insects and diseases.	16	49-52
4.	Broadleaved	All trees classified potanically as Angiospermae They are sometimes referred to as "non-coniferous" or "hardwoods".	3, 13-17, 20	3-6, 27, 31, 35-36, 38, 41, 43-49, 51-52, 78
5.	Coniferous	All trees classified potanically as Gymnospermae They are sometimes referred to as "softwoods".	3, 13-17, 20	3-6, 26, 30, 35-36, 38, 41,43-49, 51-52, 77
6.	Coppice and coppice with standards	Forest composed of stool-shoots or root suckers with or without scattered trees (standards), which may be of seedling or coppice origin.	4	5, 6
7.	Coppice sprouting	The regrowth from coppice stools after the previous stand has been cut.	11	66, 68
8.	Damage to forest	Disturbance to the forest which may be caused by biotic or	18	70-75

No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table(s) No.
-		abiotic agents, resulting in death, or a significant loss of vitality, productivity or value of trees and other components of the forest ecosystem.		
9.	Defoliation classes	The extent of visually assessed defoliation of trees, as developed by the International Co-operative Programme (ICP Forests) of the Executive Committee for the Convention on Long-range Transboundary Air Pollution in Europe.  Damage classes are from 0 to 4, as follows:	20	76-78
		Class Needle/Leaf loss Degree of defoliation  0 up to and including 10% none	· ·	
		1 > 10 to 25 % slight (warning stage)		
		2 > 25 to 60 % moderate 3 > 60 to < 100 % severe 4 100% dead  */ For methods of assessment and other concepts, see ICP documentation.		
10.	Domesticated introduced tree species	Introduced tree species planted outside their natural biotope, area or region, which have become established sufficiently well after at least one generation that they have grown satisfactorily, have not shown themselves prone to serious insect or fungal (or other diseases) attack and have been able to regenerate themselves naturally.	9	
11.	Endangered species	Species classified by an objective process (e.g. national "Red Book") as being in IUCN categories "critically endangered" and "endangered". A species is considered to be a critically endangered when it is facing an extremely high risk of extinction in the wild in the immediate future. It is considered "endangered" when it is not critically endangered but is still facing a very high risk of extinction in the wild in the near future.	10	56-64
12.	Endemic species	Species is endemic when found only in a certain strictly limited geographical region, i.e. restricted to a specified region or locality.	10	56-64
13.	Even-aged (high forest)	High forest in which the predominant proportion of the trees falls into the same age class, generally resulting in a single storey forest.	13	25-32
14.	Forest available for wood supply	Forest where any legal, economic, or specific environmental restrictions do not have a significant impact on the supply of wood.  Includes: areas where, although there are no such restrictions, harvesting is not taking place, for example areas included in long-term utilization plans or intentions.	3-5, 7, 13-17	3, 5, 8, 12- 13, 15-16, 25-38, 41, 43-52
15.	Forest	Land with tree crown cover (or equivalent stocking level) of more than 10 percent 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. May consist either of closed forest formations where	1-3, 5-8, 11, 14-17, 19, 21	1-4, 7-8, 11, 13-16, 18, 21-22, 33- 35, 37-39,

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No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table(s) No.
		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 percent. Young natural stands and all plantations established for forestry purposes which have yet to reach a crown density of 10 percent or tree height of 5m are included under forest, as 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.  Includes: Forest nurseries and seed orchards that constitute an integral part of the forest; forest roads, cleared tracts, firebreaks and other small open areas within the forest; forest in national parks, nature reserves and other protected areas such as those of special environmental, scientific, historical, cultural or spiritual interest; windbreaks and shelterbelts of trees with an area of more than 0.5 ha and a width of more than 20 m. Rubberwood plantations and cork oak stands are included.  Excludes: Land predominantly used for agricultural practices.		41-45, 47- 51, 53-55, 65-69
16.	Forest Fire	Fire which breaks out and spreads on forest and other wooded land or which breaks out on other land and spreads to forest and other wooded land. Excludes: Prescribed or controlled burning, usually with the purpose of reducing or eliminating the quantity of accumulated fuel on the ground.	18, 19	70-75
17.	Forest industries (owned by)	Forest and other wooded land owned by private wood- processing enterprises or industries.	5, 23	12, 15, 81
18.	Forest not available for wood supply	Forest where legal, economic or specific environmental restrictions prevent any significant supply of wood.  Includes: (a) Forest with legal restrictions or restrictions resulting from other political decisions, which totally exclude or severely limit wood supply, inter alia for reasons of environmental or biodiversity conservation, e.g. protection forest, national parks, nature reserves and other protected areas, such as those of special environmental, scientific, historical, cultural or spiritual interest;  (b) Forest where physical productivity or wood quality is toc low or harvesting and transport costs are too high to warrant wood harvesting, apart from occasional cuttings for auto-consumption.	3, 4, 7, 14-16	6, 8, 17, 33- 35, 39, 41, 43-45, 47- 48, 50
19.	Forest/other wooded land with damage from unidentifiable causes	Forest/other wooded land with damage, the cause of which is unknown or could be a combination of a number of agents.	18	71
20.	Forest/other wooded land undisturbed by man	Forest/other wooded land which shows natural forest dynamics, such as natural tree composition, occurrence of dead wood, natural age structure and natural regeneration processes, the area of which is large enough to maintain its natural characteristics and where there has been no known significant human intervention or where the last significant human intervention was long enough ago to have allowed the natural species composition and processes to have become reestablished.	2	53, 54

No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table(s) No.
21.	Gross annual increment	Average annual volume of increment over the reference period of all trees, measured to a minimum diameter breast height (d.b.h.) of 0 centimetres (cm).  Includes: The increment on trees which have been felled or die during the reference period.	15	42-43
22.	Growing stock	The living tree component of the standing volume.	14, 17	34-38
23.	High forest	Forest normally composed of trees of seedling origin, but may also include trees from vegetative reproduction, e.g. poplars.  Includes: stands in process of transformation into high forest.	4, 13	5, 29-32
24.	Holding	One or more parcels of forest and other wooded land which constitute a single unit from the point of view of management or utilization. For State-owned forest and other wooded land a holding may be defined as the area forming a major management unit administered by a senior official, .e.g. a Regional Forestry Officer. For forest and other wooded land that is owned publicly, other than by the State, or owned by large-scale forest owners, e.g. forest industries, a holding may constitute a number of separated properties which are, however, managed according to one corporate strategy. Under any category of ownership, other than State-owned, one holding may be the property of one or several owners.	6	18-24
25.	Indigenous tree species	Tree species which have evolved in the same area, region or biotope where the forest stand is growing and are adapted to the specific ecological conditions predominant at the time of the establishment of the stand. May also be termed native species or autochthonous species.	9, 12	65-67, 69
26.	Indigenous and tribal peoples	Indigenous and tribal peoples in independent countries are defined as those who:  (1) are regarded as indigenous on account of their descent from the populations which inhabited the country, or a geographical region to which the country belongs, at a time of conquest or colonization or the establishment of present state boundaries and who, irrespective of their legal status, retain some or all of their own social, economic, cultural and political institutions;  (2) are tribal peoples whose social, cultural and economic conditions distinguish them from other sections of the national community, and whose status is regulated wholly or partly by their own customs or traditions or by special laws and regulations.  For both categories (1) and (2) self-identification as indigenous or tribal shall be regarded as the fundamental criterion for determining the groups. (Source: ILO Convention No. 169 on "indigenous and tribal peoples").	5, 22, 23	9-17, 81
27.	Inland water	Area occupied by major rivers, lakes and reservoirs.	1	1

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No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table( <b>s</b> ) No.
28.	IUCN Protection categories	Guidance on interpretation of these definitions may be obtained from IUCN. (see footnote in "Definitions to Table 10", page 26 of the enquiry)	8	55
	I. Strict nature reserve/ wilderness area	Protected area managed mainly for science or wilderness protection.  These areas possess some outstanding ecosystems, features and/or species of flora and fauna of national scientific importance, or they are representative of particular natural areas. They often contain fragile ecosystems or life forms, areas of important biological or geological diversity, or areas of particular importance to the conservation of genetic resources. Public access is generally not permitted. Natural processes are allowed to take place in the absence of any direct human interference, tourism and recreation. Ecological processes may include natural acts that alter the ecological system or physiographic features, such as naturally occurring fires, natural succession, insect or disease outbreaks, storms, earthquakes and the like, but necessarily excluding man-induced disturbances.	8	55
	II. National Park	Protected area managed mainly for ecosystem protection and recreation.  National parks are relatively large areas, which contain representative samples of major natural regions, features or scenery, where plant and animal species, geomorphological sites, and habitats are of special scientific, educational and recreational interest. The area is managed and developed so as to sustain recreation and educational activities on a controlled basis. The area and visitors' use are managed at a level which maintains the area in a natural or semi-natural state.	8	55
	III. Natural monument	Protected area managed mainly for conservation of specific natural features.  This category normally contains one or more natural features of outstanding national interest being protected because of their uniqueness or rarity. Size is not of great importance. The areas should be managed to remain relatively free of human disturbance, although they may have recreational and touristic	8	55
	IV. Habitat/ Species management area	Protected area managed mainly for conservation through management intervention.  The areas covered may consist of nesting areas of colonial bird species, marshes or lakes, estuaries, forest or grassland habitats, or fish spawning or seagrass feeding beds for marine animals. The production of harvestable renewable resources may play a secondary role in the management of the area. The area may require habitat manipulation (mowing, sheep or cattle grazing,	8	55
	V. Protected landscape/ seascape	etc).  Protected areas managed mainly for landscape/seascape conservation and recreation.  The diversity of areas falling into this category is very large.  They include those whose landscapes possess special aesthetic qualities which are a result of the interaction of man and land or water, traditional practices associated with agriculture, grazing and fishing being dominant; and those that are primarily natural areas, such as coastline, lake or river shores, hilly or mountainous terrains, managed intensively by man for recreation and tourism.	8	55

No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table(s) No.
	VI. Managed resource protection area	Protected area managed for the sustainable use of natural ecosystems.  Normally covers extensive and relatively isolated and uninhabited areas having difficult access, or regions that are relatively sparsely populated but are under considerable pressure for colonization or greater utilization.	8	55
29.	Individuals (owned by)	Forest and other wooded land owned by individuals or families, including those who have formed themselves into companies.  Includes: individuals and families who combine forestry with agriculture (farm forests), those who live in or near their forest holdings, and those who live elsewhere (absentee owners).	5, 23	12, 15, 81
30.	Introduced tree species	Tree species occurring outside their natural vegetation zone, area or region. May also be termed non-indigenous species.  Includes: Hybrids	9, 11	
31.	Invasive species	Species of fauna and flora of non-local origin which has established itself or has been introduced into a given area and has spread in the natural conditions on an undesirable scale, e.g. to the extent that it has replaced or seriously suppressed the species previously occupying this specific area.	10	
32.	Land area	Total area, excluding inland water.	1	1, 2
33.	Legal right of access	Where the public are legally entitled to visit forest and other wooded land, whether publicly owned or owned by third parties. Some activities by the visiting public may however be forbidden or restricted.	23	81
34.	Local provenance	Genetic material which has originated from a place and a source considered as local for the area where it has been planted.  Excludes: provenance from seed-orchards.	12	69
35.	Managed forest/other wooded land	Forest and other wooded land which is managed in accordance with a formal or an informal plan applied regularly over a sufficiently long period (five years or more). The management operations include the tasks to be accomplished in individual forest stands (e.g. compartments) during the given period.	5	9-10, 14-17
36.	Mixed forest/other wooded land	Forest/other wooded land on which neither coniferous, nor broadleaved, nor palms, bamboos, etc account for more than 75 percent of the tree crown area.	3	3-6, 28, 32
37.	Natural colonization of non-forest land	The colonization of non-forest land with forest trees through stages of natural succession without human intervention.  Natural colonization may frequently occur after other (non-forest) land has been abandoned or withdrawn from its former utilization, e.g. farming or pasturing.	11	65, 67-68
38.	Natural conversion of other wooded land to forest	The conversion of other wooded land to forest as a result of natural processes. The process may occur without intentional intervention by man, but may be aided by human interventions such as the withdrawal of animal grazing from the land allowing	11	65, 67-68

No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table(s) No.
		tree regeneration to succeed, soil scarification, or actions to protect the area from fire, over-cutting, etc.		
39.	Natural losses	Average annual losses to the growing stock during the given reference period, measured to a minimum diameter of 0 cm (d.b.h.), due to mortality from causes other than cutting by man, e.g. natural mortality, diseases, insect attacks, fire, windthrow or other physical damage.	15-16	44, 48
40.	Natural regeneration	Re-establishment of a forest stand by natural means, i.e. by natural seeding or vegetative regeneration. It may be assisted by human intervention, e.g. by scarification or fencing to protect against wildlife damage or domestic animal grazing.	11	66, 68
41.	Natural regeneration enhanced by planting	Natural regeneration which has been combined with artificial planting or seeding, either to ensure satisfactory restocking with the naturally regenerated species or to increase species diversity.	11	66, 68
42.	Net annual increment	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.).	15	42, 45-46
43.	Non-local provenance	Genetic material which has originated from a place and a source not considered as local for the area where it has been planted.  Includes: provenance from seed-orchards.	12	69
44.	Other land	Land not classified as forest or other wooded land as they are defined in this enquiry.	1	1
45.	Other private institutions (owned by)	Forest/other wooded land owned by private corporations, co- operatives or institutions (religious, educational, pension or investment funds, nature conservation societies, etc).	5, 23	12, 15, 81
46.	Other public institutions (owned by)	Forest/other wooded land belonging to cities, municipalities, villages and communes.  Includes: Ary publicly owned forest and other wooded land not classified as being "in State ownership".	5, 23	12, 15, 81
47.	Other wooded land	Land either with a tree crown cover (or equivalent stocking level) of 5-10 percent 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 percent 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.  Excludes: Areas having the tree, shrub or bush cover specified above but of less than 0.5 ha and width of 20 m, which are classed under "cther land"; Land predominantly used for agricultural practices.	1-3, 5, 7-8, 11, 14-16, 21	1-4, 7-8, 11, 14, 37-39, 42, 47, 50
48.	Plantation (s)	Forest stands established by planting or/and seeding in the process of afforestation or reforestation. They are either: - of introduced species (all planted stands), or - intensively managed stands of indigenous species which meet all the following criteria: one or two species at	2	53-54

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No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table(s) No.
		plantation, even age class, regular spacing.  Excludes: Stands which were established as plantations but which have been without intensive management for a significant period of time. These should be considered semi-natural.		
49.	Planting and seeding	The act of establishing a forest stand (e.g. plantation) or re- establishing a forest stand by artificial means, either by planting of seedlings or by scattering seed. The material used may be of indigenous or introduced origin. Planting and seeding may take place on forest, other wooded land or other land.	tr.	66-68
50.	Predominantly bamboos, palms, etc.	Forest/other wooded land on which more than 75 percent of the crown cover consists of tree species other than coniferous or broadleaved species (e.g. tree-form members of the bamboo, palm, fern families).	3, 13	3-6
51.	Predominantly broadleaved	Forest/other wooded land on which more than 75 percent of the tree crown cover consists of broadleaved species.	3, 13	3-6
52.	Predominantly coniferous	Forest/other wooded land on which more than 75 percent of the tree crown cover consists of coniferous species.	3, 13	3-6
53.	Primarily damaged by fire	Forest and other wooded land, the vegetation on which, including the trees, has been wholly or largely destroyed by fire.	18	70, 71
54.	Primarily damaged by insects and disease	Forest and other wooded land where insect attack or disease has been identified as the primary cause of damage.	18	70, 71
55.	Primarily damaged from known local pollution sources	Forest and other wooded land where damage can be attributed with reasonable certainty to pollutant deposition from an identified local source or sources.	18	70, 71
56.	Primarily damaged by storm, wind, snow or other identifiable abiotic factors	Forest and other wooded land on which the trees have been felled or damaged by storm, wind, snow or other abiotic factors such as avalanches, landslides or flooding.	18	70, 71
57.	Primarily damaged by wildlife and grazing	Forest and other wooded land where damage has been caused by wildlife or grazing by domestic animals.  Includes: Grazing or browsing of young plants, preventing or delaying the establishment or regeneration of the stand.	18	70, 71
58.	Private ownership (in)	Forest/other wooded land owned by individuals, families, co- operatives 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).	5, 6, 23	9-18, 20, 22, 24, 81
59.	Protection	The function of forest/other wooded land in providing protection of soil against erosion by water or wind, prevention of desertification, the reduction of risk of avalanches and rock or mud slides; and in conserving,	21	79-80

No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table(s) No.
		protecting and regulating the quantity and quality of water supply, including the prevention of flooding.  Includes: Protection against air and noise pollution.		
60.	Public ownership (in)	Forest/other wooded land belonging to the State or other public bodies.	5, 6, 23	9-19, 21, 23
61.	Reference period	The year or years during which the national forest inventory or other method of collection of the data reported in the forest resources assessment was carried out.	General application	General application
62.	Regeneration	Re-establishment of a forest stand by natural or artificial means following the removal of the previous stand by felling or as a result of natural causes, e.g. fire or storm.	11	65-66, 68
63.	Removals for commercial use	Annual removals that generate revenue for the owner of the forest or other wooded land or trees outside the forest.  Includes: Removals of wood destined for domestic consumption after further processing, e.g. into sawnwood, fencing or construction material.  Excludes: Removals of wood for direct autoconsumption, e.g. of fuelwood.	16	47-48, 50
64.	"Rotation age"	"The planned number of years between the establishment or regeneration of a tree crop or stand and its final cutting at a specified stage of maturity".		
65.	Semi-natural forest/other wooded land	Forest/other wooded land which is neither "forest/other wooded land undisturbed by man" nor "plantation" as defined separately.	2	53-54
66.	Shrubs and bushes	Woody perennial plants, generally of more than 0.5 m and less than 5 m height, and often without a definite stem and crown.	14	40-41
67.	Species at risk	Species in IUCN categories "vulnerable", "conservation dependent" and "near threatened".  A species is "vulnerable" when it is not critically endangered or endangered (see "Endangered species"), but is facing a high risk of extinction in the wild in the medium-term future. A "conservation dependent" species is one which is the focus of a continuing species-specific or habitat-specific conservation programme, the cessation of which would result in the species qualifying for one of the threatened species categories within a period of five years. "Near threatened" species are ones that do not meet the criterion of conservation dependent but which are close to qualifying as vulnerable.	10	56-64
68.	Species occurring on forest/other wooded land	Species of fauna and flora which occurs on forest or other wooded land for at least part of its everyday existence, e.g. for shelter, feeding, nesting or breeding.	9, 10	56-64
69.	Standing volume	Volume of standing trees, living or dead, above-stump measured overbark to top (0 cm). Includes all trees with diameter over 0 cm (d.b.h.)  Includes: Tops of stems, large branches; dead trees lying on the ground which can still be used for fibre or fuel.  Excludes: Small branches, twigs and foliage.	14	33
70.	State ownership	Forest/other wooded land owned by national, state and	5, 23	12, 15, 81

No.	Terms	Definitions	Relevance to Enquiry Table(s) No.	Relevance to Main Table(s) No.
	(in)	regional governments, or by government-owned corporations; Crown forest and other wooded land.		
71.	Stumps and roots	Parts of the whole tree volume, which exclude the volume of the above-stump woody biomass. The height of the stump is taken to be that at which the tree would be cut under normal felling practices in that country or region. <u>Excludes:</u> Small roots.	14	40
72.	Total area	Total area of country, including area of inland water bodies.  Excludes: offshore territorial waters.	1	1
73.	Tree	A woody perennial with a single main stem or, in the case of coppice, with several stems, having a more or less definite crown.  Includes: Bamboos, palms and other woody plants meeting the above criterion.	9-10, 14-15, 20	33-34, 39-42, 47, 56, 76-78
74.	Trees outside the forest	Trees on land other than forest or other wooded land.  Includes: Trees on land that meets the definitions of forest and of other wooded land except that the area is less than 0.5 ha and the width is less than 20 m; scattered trees in permanent meadows and pastures; permanent tree crops such as fruit tree orchards and coconut palm plantations; trees in parks and gardens, around buildings, in hedgerows and in lines along streets, roads, railways, rivers, streams and canals; trees in shelterbelts and windbreaks of less than 20 m in width and 0.5 ha in area.	14, 15, 16	33, 39, 42, 47, 50
75.	Under regeneration	Forest being prepared for regeneration or in the process of reforestation by planting, seeding or natural regeneration after the previous stand was totally or partly removed, e.g. by felling, fire or windblow.  Includes: Stands of seed trees.	13	29-32
76.	Uneven-aged (high forest)	High forest in which there is a mixture of different age classes. Usually, the trees can not be separated into different storeys.	13	25-28
77.	Woody biomass	The mass of the woody parts (wood, bark, branches, twigs, stumps and roots) of trees, alive and dead, shrubs and bushes, measured to a minimum diameter of 0 mm (d.b.h.).  Includes: Above-stump woody biomass, and stumps and roots.  Excludes: Foliage.	14	40-41

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## Explanatory Notes and Guidelines to Forest Resources Data Tables

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This document provides general explanations and gives instructions for national correspondents.

The attached package contains the available Global and Regional FRA-2000 information related to the Pan-European Criteria and Indicators for Sustainable Forest Management. Under the headings of the six Pan-European Criteria you will find a number of tables that have specific variables, which can be assigned to the respective Pan-European Indicators for SFM.

<u>Note</u>: In the list of tables (below) the titles of Global and Regional FRA variables/parameters are given under the corresponding criteria. Please, note also that not all Pan-European Indicators for SFM are covered by the Global and Regional FRA-2000 variables / parameters.

### Contents:

- Explanatory notes and guidelines (4 pages)
- Pre-filled Global and Regional FRA-2000 data tables
- Tables requesting up-dated information (26 tables)
- Tables requesting new information (7 tables)
- Background information on MCPFE countries (1 table)
- Terms and definitions applied in TBFRA 2000

## General comments:

The tables include information concerning all MCPFE countries. This information is provided in order to help the country correspondents to update and check the national data. The idea is that the country correspondent should fill <u>only one row per table referring to the respective country</u>.

"Ref. Period" means reference period, which indicates the year of data source (e.g. year of forest inventory).

The section entitled "Updated by country correspondent" in italics indicates an area, which is reserved for information updates and corrections to be provided by the correspondents.

"OWL" means other wooded land, according to the TBFRA 2000 definition.

References (sources) of updates and corrections should be indicated in the box below the updated information.

The <u>explanation box</u> is reserved for comments concerning updated information (i.e. concerning national definitions and adjustment to FRA- 2000 definitions)

## Notes:

- a) The table: "Background information on MCPFE countries" is included for your reference and for possible comments.
- b) Data for the Russian Federation were derived from the following sources:
  - (1) Forest and Forest Products Country Profile: Russian Federation, ECE/TIM/SP/18 (by V.Strakhov, A. Filiptchuk.
  - V. Moritzki), published as the follow-up to TBFRA- 2000;
- (2) Global FRA. Global Forest Resources Assessment 2000. Main report. FAO Forestry Paper 140. FAO, Rome.

These data sources were considered at the international level as the most recent and updated data.

#### List of tables:

Criteria 1. Maintenance and Appropriate Enhancement of Forest Resources and their Contribution to Global Carbon Cycles

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1.1 Latest area and change of forest and other wooded land

This table includes data concerning area and change of forest and OWL. Unit: 1000 ha. Concerning the "reference period for change estimates" there should be two points in time, i.e. 2 respective years covering the period from which the change is assessed.

All data on "change" except for OWL are coming from Global FRA. Change estimate for OWL is derived from Regional FRA (TBFRA- 2000).

1.2 Forest and other wooded land by species groups

This table reports forest and OWL that are grouped by dominant tree species, into following classes: coniferous, broadleaved and mixed forest by FRA-2000 definitions. Unit: 1000 ha.

1.3 Ownership and number of holdings of forest and other wooded land

Area of forest and OWL by private- and public ownership is reported in 1000 ha. The number of holdings is reported by ownership categories.

1.4 Volume and biomass per ha and changes over time in growing stock

Stem volume (Unit: m³/ha, over bark) and woody biomass (Unit: t/ha) per hectare are derived from Global FRA. Data on growing stock (Unit: 1000 m³, over bark) and changes are originally from TBFRA-2000

1.5 Carbon store and annual change

Dr. Kauppi and Dr. Liski estimated this information from the data countries provided during the implementation of the TBFRA- 2000. These estimates were obtained by converting the total woody biomass to carbon by multiplying with 0.5. The annual change estimate is based on the net annual increment, annual fellings and annual fellings of natural losses. Unit of carbon store: Tg (tera grams =  $10^{12}$ g). Unit for annual change: Tg per year.

In general, the carbon store of forest is estimated by using forest inventory data (stem volume), biomass factor (expansion from stem to total volume), wood density (from volume to weight) and carbon content (from biomass to carbon). Forest carbon store = (stem volume \* biomass factor \* wood density \* carbon content)

## Criteria 2. Maintenance of Forest Ecosystem Health and Vitality

2.1 Area of damage to forest and other wooded land

Damaged forest area is reported by different causes in 1000 ha. Data source: TBFRA- 2000.

2.2 Forest condition: percentage of coniferous species showing defoliation

2.3 Forest condition: percentage of broadleaved species showing defoliation

(Data for indicators 2.2 and 2.3 are to be reported from ICP-Forest Process)

2.4 Number and area of forest fires, in total (Unit: absolute numbers; ha)

2.5 Forest and OWL area burned (Unit: ha)

(Data for indicators 2.4 and 2.5 are to be reported from UN-ECE/FAO Geneva database)

## Criteria 3. Maintenance and Encouragement of Productive Functions of Forests (wood and non-wood)

3.1a Gross annual increment

Gross annual increment is reported in 1000 m<sup>3</sup> over bark in forests, OWL and trees outside the forest. Data source is TBFRA- 2000.

3.1b Annual fellings overbark

Annual fellings are reported in 1000 m<sup>3</sup> in forests, OWL and trees outside the forest. Data source is TBFRA- 2000

3.2 Management of forest and OWL in total

Unit: Percentage of forest and OWL in total, which is under management, according to the TBFRA-2000 definition. Data source is TBFRA-2000.

3.3 – 3.7 Quantity and value of non-wood forest products

Units of quantity and value are indicated in the table. Tons refer to metrical tonnes and "USD" refers to Dollar of United States.

Criteria 4. Maintenance, Conservation and Appropriate Enhancement of Biological Diversity in Forest Ecosystems

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4.1 Forest and other wooded land by categories of "naturalness"

Definitions for "undisturbed"- and "semi-natural forest" and "plantations" can be found in the attached list of definitions. Unit: 1000 ha.

4.2 Reported number of forest occurring endangered tree and vascular plant species

Unit: number of species. The definition for "endangered species" as well as for "species occurring in forest" can be found in the list of definitions.

4.3 Mixed forests

The information is available in table 1.2, where mixed forest areas are reported according to the TBFRA- 2000 definitions. Unit: 1000 ha. (Not necessary to repeat these data in your replies)

4.4 Share of different types of regeneration.

It is important to notice that the area of regeneration under continuous forest cover is not included. Unit: % of area regenerated in the reference year.

4.5 Volume of dead trees in standing volume of forests

This information is reported with a breakdown to total forest area, forest available for wood supply and forest not available for wood supply. Unit: 1000 ha.

Criteria 5. Maintenance and Appropriate Enhancement of Protective Functions in Forest Management (notably soil and water)

5.1 Area and changes over time in areas where forest and other wooded land is primarily managed for soil protection

Primarily managed for soil protection to be defined as reported to the TBFRA- 2000 Unit: 1000 ha.

Criteria 6. Maintenance of Other Socio-Economic Functions and Conditions

6.1 Quantity and value of wood from forest and other wooded land

Wood produced is reported in 1000 m<sup>3</sup> and value in million USD. Wood produced means all wood derived from forest and OWL that has an economical value.

6.2 Area of forest and other wooded land where access to public is legally allowed and not allowed Legal right of access is defined as reported to the TBFRA- 2000. Unit: 1000 ha. The area with public access is to be reported as percentage of the total.

## Additional requests:

The tables "Requests for" are included in order to increase quality, resolution and transparency of forest resource data

R.1 Request for: Age-class distribution of area of predominantly coniferous forest

Predominantly coniferous forest is defined in the TBFRA- 2000 list of definitions. Unit: 1000 ha.

R.2 Request for: Average stem volume of corresponding age-classes of predominantly coniferous forest.

Predominantly coniferous forest is defined in the TBFRA- 2000 list of definitions. Unit: m³/ha, overbark.

R.3 Request for: Age-class distribution of area of predominantly broadleaved forest

Predominantly broadleaved forest is defined in the TBFRA- 2000 list of definitions. Unit: 1000 ha.

R.4 Request for: Average stem volume of corresponding age-classes of predominantly broadleaved forest Predominantly broadleaved forest is defined in the TBFRA- 2000 list of definitions. Unit: m³/ha, overbark.

R.5 Request for: Age-class distribution of area of mixed forest

Mixed forest is defined in the TBFRA- 2000 list of definitions. Unit: 1000 ha.

R.6 Request for: Average stem volume of corresponding age-classes of mixed forest Mixed forest is defined in the TBFRA- 2000 list of definitions. Unit: m³/ha, overbark.

R.7 Request for: Original forest inventory data at national level (Unit: 1000 ha) and reclassification of these data to TBFRA- 2000 forest classes. The aim of this request is to increase the transparency of TBFRA- 2000

data provided by the countries. Country correspondents are asked to provide original forest resource data according to national forest types/categories aggregated at country level. The reclassification of original data for TBFRA- 2000 land-use classes is to be reported in absolute figures (ha) and percentage (%) of the corresponding national data. This means that the forest resource information is not requested at regional or provincial level.

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MANY THANKS FOR YOUR CO-OPERATION

If you have any questions or require clarifications, please contact:

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E-mail: alexander.korotkov@unece.org

## References:

TBFRA- 2000 (Regional FRA). Forest Resources of Europe, CIS, North America, Australia, Japan and New Zealand (industrialized temperate/boreal countries). 2000. UN-ECE/FAO Contribution to the Global Forest Resources Assessment 2000. UN, Geneva.

and/or

Global FRA. Global Forest Resources Assessment 2000. Main report. FAO Forestry Paper 140. FAO, Rome.

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4. Ljubljana, 19<sup>th</sup> of June 2002

REPORTING FOREST RESOURCE ASSESSMENT DATA (FRA) TO THE MINISTRIAL CONFERENCE ON THE PROTECTION OF FORESTS IN EUROPE

Dear Mr. Aleksi Lehtonen

Please find attached the set of tables with Slovenian forest resources data for the next Ministerial Conference on the Protection of Forests in Europe (MCPFE) -. April 2003, Vienna. The tables/information have been checked, validated and up-dated (in case if we had newer data).

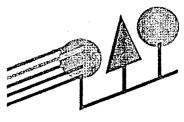
We bolded Slovenian rows and in *Reference* lines wrote down sources. Any explanations are written in *Explanations* lines

If you have any further questions, please contact Prof. dr. Milan Hočevar (<u>milan.hocevar@gozdis.si</u>) or Mr. Gal Kušar (gal.kusar@gozdis.si) as contact person.

Regards,

Gal KUŠAR

Prof. dr. Milan HOČEVAR



MINISTERIAL CONFERENCE ON THE PROTECTION OF FORESTS IN EUROPE

LIAISON UNIT VIENNA



NATIONS UNIES

объединенные нации

UNITED NATIONS

COMMISSION ÉCONOMIQUE POUR L'EUROPE ЭКОНОМИЧЕСКАЯ КОМИССИЯ ДЛЯ ЕВРОПЫ ECONOMIC COMMISSION FOR EUROPE

Télégrammes : UNATIONS, GENEVE

TÉLEX: 41 29 62

Téléphone: + 41 22 917 2879 (DIRECT) Téléfax: + 41 22 917 0041

REF, NE: AT/2002 (à rappeler dans la réponse) Palais des Nations CH - 1211 GENEVE 10

15 May 2002

# Reporting Forest Resource Assessment Data (FRA) to the Ministerial Conference on the Protection of Forests in Europe

Dear Colleagues,

The 4<sup>th</sup> Ministerial Conference on the Protection of Forests in Europe will be held on 28-30 April 2003 in Vienna. On this occasion a report on the State of Europe's Forests will be prepared for the Ministers. The MCPFE Liaison Unit Vienna, UNECE/FAO in Geneva, and their partners are working together to collect the data for this report in the most efficient possible way. The data for the report have to be provided on the basis of the Pan-European Criteria and Indicators for Sustainable Forest Management, and the available UNECE/FAO Forest Resources Assessment information.

Every effort is being made to ensure that the data presented to the Ministers are in conformity with international terms and definitions, notably those used in the Global Forest Resource Assessment (FRA 2000) and Regional Forest Resource Assessment (TBFRA 2000). For this reason our primary channel of communication is with national TBFRA correspondents such as yourself.

In the attached annex you will find the set of tables, which have been compiled using the available information on your country from Global FRA 2000 and TBFRA 2000. However, some of the data, which we have included in the pre-filled tables, might be out of date and other parts might not have existed when we asked you for information the last time.

Therefore, we kindly ask you to review the information presented in the tables and to consider whether any updates, corrections or other improvements should be made to your corresponding country data. We would also be very grateful if you could provide some of the additional data requested in the attached forms. The guidelines on how to provide additional (or new) data, and how to correct the original information are provided in the explanatory notes.

The current approach has been chosen with the intention that reporting efforts should not be duplicated, and that the overall reporting burden on countries should be minimised. The requested

variables follow to the extent possible the format used in the recently completed Global FRA 2000, and especially in the TBFRA 2000.

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We would also kindly inform you that later these data should be supplemented by an enquiry on protected and protective forests and other wooded land. We will contact you to verify and to collect the relevant data in this context during the summer 2002.

To support your work regarding the necessary adjustments of national data to the TBFRA categories and classes we are providing you with the set of terms and definitions applied in the TBFRA 2000 process. In this respect we ask you to submit also the original information and provide us with information on the reclassification of national data to the TBFRA 2000 categories.

We would be grateful if you could provide the updated information for your country in the requested format by <u>20 June 2002</u> to the UNECE/FAO secretariat. If you do not reply by this date we will assume that you confirm the existing and published data as reported by your country to the TBFRA 2000. If you have any questions please do not hesitate to contact the UNECE/FAO secretariat in Geneva.

We thank you for your kind co-operation.

Yours sincerely,

Mr. C.F.L. Prins Chief, Timber Section UNECE Trade Division Mr. Peter Mayer
Head, MCPFE Liaison Unit Vienna

Peter May

From: Aleksi.Lehtonen@unece.org
Date: Wed, 15 May 2002 16:57:31 +0200
Message-ID: <004BD10C.C21305@unece.org>

To: milan.hocevar@gozdis.si

Subject: MCPFE and Forest Resources Assessment (C&I for SFM)

Dear Mr. Milan Hocevar,

My name is Aleksi Lehtonen, and I am working here in the UN-ECE / FAO as a visiting scientist on the preparation of the report to the MCPFE – 2003 on the basis of FRA- 2000 data.

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Please find attached the set of tables with the forest resources data, which were reported by your country to the UN-ECE/FAO Forest Resources Assessment.2000, and which have to be checked, validated and up-dated (if necessary). As I.noted above, this work has to be done in the light of the preparation for the next Ministerial Conference on the Protection of Forests in Europe (MCPFE) -.April 2003, Vienna. The countries - signatories of the MCPFE Resolutions have taken (in particular) the commitment to report to the Ministerial Conference data on the implementation of the pan-European Criteria and Indicators for Sustainable Forest Management (C&I for SFM). These data will be reported on the basis of the updated Forest Resources Assessment 2000 information.

The process of updating and requirements for this work are explained in the attached covering letter, signed by ECE/FAO (Geneva), and MCPFE Liaison Unit. (Vienna), and in the guidelines, which are self-explanatory. The updated information should be comparable to the FRA-2000 data (the set of FRA-2000 terms and definitions is also attached for your references), and the requested data have to be supplied by the established deadline. Sorry for the limited time allocated for this challenging work, which will constitute only a part of the whole preparation for MCPFE-2003, and many thanks for your understanding.

Please note that if you do not reply by the 20th June 2002, it will be assumed as the confirmation of the existing and published data as they were reported by your country to the Forest Resources Assessment 2000.

Please do not hesitate to contact me (or/and Mr. A. Korotkov or Mr. K. Prins) on any possible questions you may have in connection with this FRA updating process for reporting to MCPFE. All the above-mentioned documentation is also sent to your address by the surface mail (by post).

Thanking you in advance for your co-operation. With best regards and wishes, Yours, Aleksi Lehtonen

Aleksi Lehtonen 2.4.2002-15.7.2002

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UNITED NATIONS

COMMISSION ÉCONOMIQUE POUR L'EUROPE ЭКОНОМИЧЕСКАЯ КОМИССИЯ ДЛЯ ЕВРОПЫ

ECONOMIC COMMISSION FOR EUROPE

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15 May 2002

Reporting Forest Resource Assessment Data (FRA) to the Ministerial Conference on the Protection of Forests in Europe

Dear Colleagues,

The 4<sup>th</sup> Ministerial Conference on the Protection of Forests in Europe will be held on 28-30 April 2003 in Vienna. On this occasion a report on the State of Europe's Forests will be prepared for the Ministers. The MCPFE Liaison Unit Vienna, UNECE/FAO in Geneva, and their partners are working together to collect the data for this report in the most efficient possible way. The data for the report have to be provided on the basis of the Pan-European Criteria and Indicators for Sustainable Forest Management, and the available UNECE/FAO Forest Resources Assessment information.

Every effort is being made to ensure that the data presented to the Ministers are in conformity with international terms and definitions, notably those used in the Global Forest Resource Assessment (FRA 2000) and Regional Forest Resource Assessment (TBFRA 2000). For this reason our primary channel of communication is with national TBFRA correspondents such as yourself.

In the attached annex you will find the set of tables, which have been compiled using the available information on your country from Global FRA 2000 and TBFRA 2000. However, some of the data, which we have included in the pre-filled tables, might be out of date and other parts might not have existed when we asked you for information the last time.

Therefore, we kindly ask you to review the information presented in the tables and to consider whether any updates, corrections or other improvements should be made to your corresponding country data. We would also be very grateful if you could provide some of the additional data requested in the attached forms. The guidelines on how to provide additional (or new) data, and how to correct the original information are provided in the explanatory notes.

The current approach has been chosen with the intention that reporting efforts should not be duplicated, and that the overall reporting burden on countries should be minimised. The requested

variables follow to the extent possible the format used in the recently completed Global FRA 2000, and especially in the TBFRA 2000.

We would also kindly inform you that later these data should be supplemented by an enquiry on protected and protective forests and other wooded land. We will contact you to verify and to collect the relevant data in this context during the summer 2002.

To support your work regarding the necessary adjustments of national data to the TBFRA categories and classes we are providing you with the set of terms and definitions applied in the TBFRA 2000 process. In this respect we ask you to submit also the original information and provide us with information on the reclassification of national data to the TBFRA 2000 categories.

We would be grateful if you could provide the updated information for your country in the requested format by 20 June 2002 to the UNECE/FAO secretariat. If you do not reply by this date we will assume that you confirm the existing and published data as reported by your country to the TBFRA 2000. If you have any questions please do not hesitate to contact the UNECE/FAO secretariat in Geneva.

We thank you for your kind co-operation.

Yours sincerely,

Mr. C.F.L. Prins Chief, Timber Section UNECE Trade Division

Mr. Peter Mayer Head, MCPFE Liaison Unit Vienna

Peter Many