Forestry Department
Food and Agriculture Organization of the United Nations

GLOBAL FOREST RESOURCES ASSESSMENT

COUNTRY REPORTS

CZECH REPUBLIC

FRA2005/087
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The Forest Resources Assessment Programme

Sustainably managed forests have multiple environmental and socio-economic functions important at the global, national and local scales, and play a vital part in sustainable development. Reliable and up-to-date information on the state of forest resources - not only on area and area change, but also on such variables as growing stock, wood and non-wood products, carbon, protected areas, use of forests for recreation and other services, biological diversity and forests' contribution to national economies - is crucial to support decision-making for policies and programmes in forestry and sustainable development at all levels.

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Forest Resources Assessment Programme. This country report forms part of the Global Forest Resources Assessment 2005 (FRA 2005), which is the most comprehensive assessment to date. More than 800 people have been involved, including 172 national correspondents and their colleagues, an Advisory Group, international experts, FAO staff, consultants and volunteers. Information has been collated from 229 countries and territories for three points in time: 1990, 2000 and 2005.

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

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Contents

1 Table T1 – Extent of Forest and Other wooded land

1.1 FRA 2005 Categories and definitions

Category	Definition
Forest	Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds *in situ*. It does not include land that is predominantly under agricultural or urban land use.
Other wooded land	Land not classified as "Forest", spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds *in situ*; or with a combined cover of shrubs, bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use.
Other land	All land that is not classified as "Forest" or "Other wooded land".
Other land with tree cover (Subordinated to "Other land")	Land classified as "Other land", spanning more than 0.5 hectares with a canopy cover of more than 10 percent of trees able to reach a height of 5 meters at maturity.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.

1.2 National data

1.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Czech Statistical Office (ČSÚ)	H	Total area of country, forest area	1996-2003	http://www.czso.cz/csu/edicniplan.nsf/publ/3AED4A0BED410547C1256E4A0033F6FC/$File/1405.xls
Statisticka rocenka zivotniho prostredi České republiky. (Statistical environmental yearbook of the Czech Republic), Ministry of environment, Praha 2003	H	inland water, orchards gardens	1996-2002	Tab.B.3.2.1 - 2
Statisticka rocenka Ceske a Slovenske federativni republiky 1991 (Statistical Yearbook), Czech Statistical Office Praha.	H	forest, water	1990	Tab 11 - 10
Zaverecna zprava prvni etapy specialnich hospodárskych planu (Final report on special management plans. Inventory of water flows and tree groups growing outside forest), 1976, Lesprojekt Brandýs n. L.	H	other land with tree cover	1976	Tab. 1a

1.2.2 Classification and definitions

National class	Definition
Lesni půda (PUPFL) - Forest:	Land **registered in cadastre** as forest *. * That land must be reforested in 2 years after deforestation, tree density must be higher than 70 % (if less, it is obligatory to cut it down and reforest it). Size in area is not limited. **Incl. roads**, cleared tracks etc.
Vnitrozemske vodni plochy - Inland water	Major rivers, ponds, lakes and water reservoirs.
Stromy mimo les - na brezich rek, potoku a jezer, vetrolamy, male izolovane lesiky. Trees on river and lake banks, protection belts and small isolated forested lots.	Trees on river and lake banks, protection belts and small isolated forested lots. "Special management plans" for them were elaborated in the 1970´s.
Other wooded land	Not a national category. See comment below.

1.2.3 Original data

Total area of country
Czech Statistical Yearbook 2003 on Web - 7 887 000 ha,
FAOSTAT Total 7 887, land 7 728, inland water 159 000 ha

Water – (ME Yearbook)
1996-2000: – 159 thous. ha, 2001: 160 thous. ha, 2002 – 159 897 ha
Orchards – (ME Yearbook)
2002 – 48.373 thous. ha

Forest – (Statistical Yearbook 91)
1990: 2 630 000. ha.

Land with tree cover – trees outside forest (Source: Special management plans 1976)

	banks length		
	rivers	**ponds**	**reservoirs**
	km		
special plans	93 116.695	3 687.880	722.485

Stock assessment: 45 m3/ha

forest

	1990	1995	1998	1999	2000	2001	2002	2003
	1 000 ha							
Total area CR	7 887	7 887	7 887	7 887	7 887	7 887	7 887	7 887
Inland water	159	159	159	159	159	160	160	160
Forest (ha)	2 630	2 630	2 634 (2 633 819)	2 634 (2 634 470)	2 637 (2 637 289)	2 639 (2 638 917)	2 643 (2 643 058)	2 644 (2 644 168)

orchards

orchards							48	48

1.3 Analysis and processing of national data

1.3.1 Calibration

		1990	1995	2000	2001	2002	2003
Total area	Czech statistics	7 887	7 887	7 887	7 887	7 887	7 887
	FAOSTAT			7 887			

Calibration
Water – (ME Yearbook)
1996-2000: – 159 thous. Hectares (calibration not needed), 2001: 160 thous. ha, 2002 – 159 897 ha, rounded = 160 thous. ha. (the difference in inland water is added to Other land to match FAOSTAT figures)

1.3.2 Estimation and forecasting

	1990	1995	2000	2001	2002	2005
inland water	159	159	159	159	159	159
Land with tree cover	96		96			96

Calculation of differences - forest

Units		
Years	Δx (2003-1998)	5
Hectares	Δy (2 644 163 - 2 633 819)	10 344
Hectares/years	Δy / Δx	2 069

Forecasting

	2005	
forest (ha)	2 648 301	value2003 + (2 * 2 069)

Other land estimation
Total area – forest – inland water = other land.

1.4 Reclassification into FRA 2005 classes

Area calculation of the land with tree cover (Source: Special management plans 1976)

	banks length			**Stock total**	**Stock**	**Area** (total stock/average stock per ha)
	rivers	**ponds**	**reservoirs**			
	km			**1000 m^3**	**(m^3/km)**	**1 000 ha**
special plans	93 116.695	3 687.880	722.485			
total	97 527				21.5 *	46
small lots				101,157 *		2
orchards						48
total land with tree cover						**96**

* avge stock 45 m^3/ha

1.5 Data for National reporting table T1

FRA 2005 Categories	Area (1000 hectares)		
	1990	**2000**	**2005**
Forest	2630	2637	2648
Other wooded land	0	0	0
Other land	5098	5091	5080
...of which with tree cover [1)]	*96*	*96*	*96*
Inland water bodies	159	159	159
TOTAL	**7887**	**7887**	**7887**

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

1.6 Comments to National reporting table T1

Subsidised part of the afforestation of marginal agriculture land amounts about 1 000 ha annually (last 4 years)
The Czech and the FRA **definitions of the forest** (lesni puda, PUPFL) are very similar. Differences:
- FRA size limits (0,5 ha) – in the CR, a "forest" could be smaller depending on how the individual land lot is registered in the cadaster; **no information** on this is available; total area of such isolated lots smaller than 0,5 ha could be approx. from hundreds to 2 thousands (max.) of hectares.
- It is obligatory to reforest any forest stand in 2 years after felling; it is also obligatory to maintain a density of a forest stand higher than 70 %. In some cases the regeneration time could be prolonged by state forest authority.
- An **unknown** part of the approx. 6 000 ha of dwarf pine is not a regular forest according to the FRA definition (it mostly does not reach a height of 5 m in situ): these dwarf pine groups ("spots"), mostly mixed with spruce, form parts – larger or smaller than 0.5 ha - of regular forest stands mainly in high mountains. Here, these (roughly 0,2 % of total forest area) are included into "forest" because they are used and protected like regular forest stands having more non-wood producing functions than a regular forest has. It is also better to keep them within "forest" than to introduce absolutely groundless subjective assessments into reporting tables. The height and area size limits are not fully useful for a forest definition in Central Europe.
- Any land lot must have a description of its use. FRA "land with tree cover" is registered mostly as the "other land" (different from the FRA other land). These are mainly river and creek banks, balks, lanes etc.
- None "other wooded land" is registered in the CR. Case the agriculture land is abandoned and occupied by (forest) trees, the owner willing manage it as forest, he must change the attribute in the cadaster.
- Registered orchards are included here into the land with tree cover. Parks (towns, castles, botanical gardens; approx. hundreds of hectares in total) cannot be clearly identified from the cadastre registers. A portion of registered gardens which matches the FRA land with tree cover definition is unknown. These categories probably not exceed about 1000 ha.
Inland water increases in area (by tens of ha annually) probably because of new ponds (artificial lakes) establishment or the old ones restoration. Number is rounded up, see the source data once again: (ME Yearbook) 1996-2000: – 159 thous. ha; 2001: 160 thous. ha; 2002 – 159 897 ha

2 Table T2 – Ownership of Forest and Other wooded land

2.1 FRA 2005 Categories and definitions

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

2.2 National data

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Zprava o stavu lesa a lesniho hospodarstvi Ceske republiky 1995, 2000, 2003 (Report on forest and forestry in the Czech Republic. A Yearbook), Ministry of Agriculture, Prague, 1996, 2001, in print	H	forest ownership	1990 2000 2003	annually

2.2.2 Classification and definitions

National class	Definition
statni- state	Forest owned by the State (national, state and regional governments) or government-owned institutions or corporations
obecni - municipalities	forest owned by cities, towns, municipalities, communities and villages.
lesni druzstva a spolecenstva - forest cooperatives	forest owned by individuals joined in co-operatives or similar organisations
ostatní soukrome - other private	Land owned by individuals, families, corporations.
JZD - agriculture cooperatives	Land owned by former agriculture co-operatives

2.2.3 Original data

Owner	1990	2000	2001	2002	2003
	%				
State	95.8	63.1	61.5	60.7	60.5
Municipalities		13.6	14.6	15.0	15.3
forest co-operatives		0.9	0.9	1.0	1.0
other private	0.1	22.4	23.0	23.3	23.2
Agriculture co-operatives	4.1	0	0	0	0

2.3 Analysis and processing of national data

2.3.1 Calibration

Not needed

2.3.2 Estimation and forecasting

Not needed.

2.4 Reclassification into FRA 2005 classes

Owner- national	**FRA**	**1990**	**2000**
		%	
State		95.8	63.1
Municipalities			13.6
Total	**Public**	**95.8**	**76.7**
Forest co-operatives			0.9
Other private	**Private**	0.1	22.4
Agriculture co-operatives		4.1	0
Total		**4.2**	**23.3**
	Other	**0**	**0**

% * total area

		1990	**2000**
Total area of forest (1000 ha)		2 630	2 637
of which (1000 ha)	**Public**	2 520	2 023
	Private	110	614
	Other	**-**	**-**

2.5 Data for National reporting table T2

FRA 2005 Categories	**Forest**		**Other wooded land**	
	1990	**2000**	**1990**	**2000**
	Area (1000 hectares)			
Private ownership	110	614	0	0
Public ownership	2520	2023	0	0
Other ownership	0	0	0	0
TOTAL	**2630**	**2637**	**0**	**0**

2.6 Comments to National reporting table T2

Ownership development since 2000 seems to be stabilised (ownership restitution after 1989 change of regime has been quasi finished except of some most complicated cases and catholic church). The years before 2000 cannot be used for forecasting.

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

3.1 FRA 2005 Categories and definitions

Types of designation

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

Designation categories

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

3.2 National data

3.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Souhrnny lesni hospodarsky plan, SLHP (Summary of the Forest Management Plans), Forest Management Institute, Brandys n. l.,	H	primary functions	1978-2002	annually, 2002 page 27
Zprava o stavu lesu a lesniho hospodarstvi v CR (Report on state of forestry and forest in the CR), Ministry of agriculture, Prague.	H	Total areas with function	1994-2003	annually , 2003 Table 3.8.1
Consultation, Forest and Game Management Research Institute Jiloviste-Strnady	M-L	Overlap of the production and the other functions	1990 - 2005	
Prehled subkategoii vcetne prekryvu (Summary of categories including overlaps), special surwey, 1991, Forest Management Institute.	H	Multiple functions	1991	Overlaps of the other functions (excluding the production one)

3.2.2 Classification and definitions

Primary functions ("forest categories", declared functions)

1978-1995 (decree No. 13/1976 Coll.)

National class	Definition (declared prevailing function)
1. Les hospodarsky Production forest	Plnici produkcni funkci Production of timber and other goods
2.Ochranne lesy – Protection forest	a) na mimoradne nepriznivych stanovistich on extraordinary unfavourable sites
	b) vysokohorske pod horni hranici stromove vegetace alpine forest below tree line
	c) v pasmu kosodreviny in the zone of dwarf pine
	d) k zajisteni ochrany pudy needed for soil protection
3. Lesy zvlastniho urceni - Special purpose forest	a) ochranna pasma vodnich zdroju 1. stupne protective zones of water sources, strictly controlled
	b) ochranna pasma prirodnich lecivych zdroju a lesy lazenske protective zones of natural curative resources and forest in spas
	c) v uznanych oborach a bazantnicich game preserves and pheasantries
	d) narodni parky a CHKO national parks and protected landscape regions
	e) postihovane exhalacemi affected by air pollution
	f) urcene pro lesnicky vyzkum forestry research
	g) jiné potreby spolecnosti (vojenske, rekreacni atd.) other social demands (military, recreation, gene preserves etc.)
Porostni půda - Timberland	Forest land **actually covered** by trees or temporary unstocked and to be reforested in next two years. Forest roads, cleared tracks, forest enterprise facilities etc. **not included. Data on forest are collected on the timberland. Area – see table 3.**

1996-2005 (law No. 289/1995 Coll.)

National class	Definition
1. Les hospodarsky Production forest	11) les nezarazeny do jine kategorie Production of timber and other goods
2. Les ochranny Protection forest	21) na mimoradne nepriznivych stanovistich extremely unfavourable sites
	22) vysokohorske pod hranici stromove vegetace chranici nize polozene in high mountains below tree line, protecting forest stands down slopes
	23) v klecovem vegatcnim stupni in dwarf pine vegetation zone
3. Les zvlastniho urceni Special purpose forest	31) pasma hygienicke ochrany 1. stupne protective zones of water sources, strictly protected
	32) ochranna pasma lecivych zdroju protective zones of curative and mineral water sources
	33) narodni parky a narodni prirodni rezervace national parks and national nature reserves
	41) první zony CHKO a prirodni rezervace 1st zones of protected landscape regions and natural reserves
	42) lazenske in spas
	43) primestske a rekreacni forest in outskirts of cities and recreation forest
	44) lesnicky vyzkum a vyuka forestry research and education
	45) pudoochranne, vodoochranne a krajinotvorne soil and water protective and landscape creative
	46) zachovani biologicke ruznorodosti biodiversity protective
	47) v oborach a bazantnicich game preserves and pheasantries

	48) jiny verejny zajem other society needs (public interest)

Total area with function – potential, 2000

function
water and soil protection and management
nature and biodiversity protection
social functions
production

Original data

1990

National class	**Definition (prevailing function)**	**1990** ha of timberland
1.Production forest		1 507 418
2. Protection forest 63 608	a)	44 931
	b)	13 377
	c)	4 026
	d)	1 275
3. Special purpose forest 1 011 754	a)	10 640
	b)	7 595
	c)	41 321
	d)	8 046
	e)	734 094
	f)	3 449
	g)	206 610
Total timberland* (t)		2 582 780

*timberland = land covered by trees or temporary unstocked only, not including forest roads etc.

2000

National class	**Definition**	**1999**	**2000**	**2002***
		ha of timberland		
1.Production forest	11	2 005 855	1 981 884	1 965 785
2. Protection forest 93 447; 89 422; 91 552	21	60 182	67 224	65 491
	22	19 803	17 736	21 604
	23	4 461	4 462	4 456
3. Les zvlastniho urceni Special purpose forest 482 541; 511 529; 530 525	31	14 075	12 565	12 015
	32	39 413	39 821	51 719
	33	91 173	99 118	98 681
	41	5 074	7 252	13 136
	42	207	207	207
	43	8 772	9 217	16 796
	44	25 314	25 212	20 207
	45	9 106	25 022	49 204
	46	26 603	38 785	48 606
	47	35 733	33 772	30 496
	48	227 066	220 557	189 457
total timberland (t)		**2 581 843**	**2 582 835**	**2 587 861**

* year 2003 not yet ready

Total area with function – potential, 2000

Function	**1990, 2000, 2005**
	area (1 000 ha)
water and soil protection and management	726
nature and biodiversity protection	656
social functions	605
production forest (no other function identified)	58 %

Multiple 1991
All the function combinations 26 992 ha

3.3 Analysis and processing of national data

3.3.1 Calibration

National class	**Definition (prevailing function)**	**1990**
Total timberland (t)		2 582 780
Total forest (f)		2 630 000
coefficient f/t		1.0183

		ha of forest (t * coefficient)
1.Production forest		1 534 978
2. Protection forest	a)	45 752
	b)	13 621
	c)	4 100
	d)	1 298
3. Special purpose forest	a)	10 834
	b)	7 734
	c)	42 076
	d)	8 193
	e)	747 515
	f)	3 512
	g)	210 387

National class	**Definition (prevailing function)**	**1999**	**2000**	**2002***
total forest (f)		2 634 470	2 637 289	2 638 917
total timberland (t)		2 581 843	2 582 835	2 587 861
coeficient f/t		1.0204	1.0211	1.0197

		ha of forest (t * coef.)		
1.Production forest	11	2 046 743	2 023 669	**2 004 569**
2. Protection forest	21	70 593	68 641	**66 783**
	22	20 207	18 110	**22 030**
	23	4 552	4 556	**4 544**
3. Les zvlastniho urceni Special purpose forest	31	14 362	12 830	**12 252**
	32	40 218	40 661	**52 739**
	33	93 033	101 208	**100 628**
	41	5 177	7 405	**13 395**
	42	211	211	**211**
	43	8 951	9 411	**17 127**
	44	25 831	25 744	**20 606**
	45	9 293	25 549	**50 175**
	46	27 145	39 603	**49 565**
	47	36 461	34 484	**31 098**
	48	231 695	225 207	**193 195**

3.4 Reclassification into FRA 2005 classes

Primary function
1990

FRA 2005 Categories / Designated function -	**National definition**	**National**	**FRA**
Forest		**Area (hectares)**	
Production	1. Production	1 534 978	**1 534 978**
Protection of soil and water	2 a) unfavourable sites	45 752	**65 618**
	2.d) soil protection	1 298	
	3 a) water sources	10 834	
	3 b) curative resources	7 734	
Conservation of biodiversity	2 b) alpine	13 621	**192 854**
	2 c) dwarf pine	4 100	
	3 c) game preserves	42 076	
	3 d) natl. parks, nature reserves and protected landscape	8 193	
	3 g) other (gene bases 124 864 ha)	124 864	
Social services	3 f) forestry research-	3 512	**89 035**
	3 g) other (-124 864)	85 523	
Multiple purpose	3 e) air pollution	747 515	**747 515**
No or unknown function	0	0	**0**
Total – Forest		**2 630 000**	**2 630 000**

2000

FRA 2005 Categories / Designated function	**National definition**	**2000**	
		National	**FRA**
Forest		**Area (hectares)**	
Production	Production	2 023 669	**2 023 669**
Protection of soil and water	21 unfavourable sites	68 641	**147 681**
	31 water sources	12 830	
	32 mineral water	40 661	
	45 soil and water protection	25 549	
Conservation of biodiversity	22 high mountains	18 110	**205 366**
	23 dwarf pine zone	4 556	
	33 natl. parks and reserves	101 208	
	41 1st zones protected landscape regs. and reserves	7 405	
	46 biodiversity protection	39 603	
	47 game reserves	34 484	
Social services	42 spas	211	**260 573**
	43 recreation	9 411	
	44 research and education	25 744	
	48 public interests	225 207	
Multiple purpose		0	**0**
No or unknown function		0	**0**
Total – Forest		2 637 289	**2 637 289**

Total area with function – potential, 2000

Function	**%**	**potential evaluated (1990, 2000, 2005)**	**Total**	**Percentage of area and the area serving other function**			
			production	protection	conservation	soc. services	total potential
water and soil protection and management	1 000 ha	726		726			726
	%	-		100			-
nature and biodiversity protection	1 000 ha	656			656		656
	%	-			100		-
social functions	1 000 ha	605				605	605
	%	-				100	-
production (= total – non production)	1 000 ha		(1990) 2630 (2000) 2637 (2005) 2648	-217		-121	2292 2299 2310
	%	-	100	30	0	20	-

3.4.1 Estimation and forecasting

Total area of function 1990, 2000, 2005

Total area with function – potential, 2000

Category		**1990,**	**2000,**	**2005**
FRA	National	area (1 000 ha)		
Production	Only production = 58% of total area	**1 525**	**1 529**	**1 536**
Protection of soil and water	Water and soil protection and management	**726**	**726**	**726**
Conservation of biodiversity	Nature and biodiversity protection	**656**	**656**	**656**
Social services	Social functions	**605**	**605**	**605**
Total		**2 630**	**2 637**	**2 648**

Calculation of differences – production forest

	ha
Δx (2000-1990)	**10**
Δy (2023669-1534978)	**488691**
Δy / Δx	**48869**

Forecasting

	2005	
production forest	**2 268 014**	**value2000 + 5 * (48869) =**

Calculation of differences – protection forest

	ha
Δx (2000-1990)	**10**
Δy (147681-65618)	**82063**
Δy / Δx	**8206**

Forecasting

	2005	
protection forest	**188711**	**value2000 + 5 * (8206) =**

Calculation of differences – biodiversity

	ha
Δx (2000-1990)	**10**
Δy (205166-192854)	**12312**
Δy / Δx	**1231**

Forecasting

	2005	
biodiversity forest	**211521**	**value2002 + 5 * (1231) =**

Calculation of differences – social

	ha
Δx (2000-1990)	**10**
Δy (260573-89035)	**171538**
Δy / Δx	**17154**

Forecasting

	2005	
production forest	**346348**	**value2002 + 5 * (17154) =**

Adjustment for 2005

	forecast	real 2005
production	**2 268 014**	**1 992 209**
protection	**188711**	**165 762**
biodiversity	**211521**	**185799**
social	**346348**	**304 230**
total	**3014589**	**2 648 000**

real : forecast = 0,878 %

3.5 Data for National reporting table T3

FRA 2005 Categories / Designated function	Area (1000 hectares)					
	Primary function			Total area with function		
	1990	2000	2005	1990	2000	2005
Forest						
Production	**1535**	**2024**	**1992**	**2292**	**2299**	**2310**
Protection of soil and water	**66**	**148**	**166**	**726**	**726**	**726**
Conservation of biodiversity	**193**	**205**	**186**	**656**	**656**	**656**
Social services	**89**	**260**	**304**	**605**	**605**	**605**
Multiple purpose	**747**	NDA	NDA	not appl.	not appl.	not appl.
No or unknown function	**0**	0	0	not appl.	not appl.	not appl.
Total - Forest	**2 630**	**2 637**	**2 648**	**not appl.**	**not appl.**	**not appl.**
Other wooded land	**0**	**0**	**0**	**0**	0	0
Production	0	0	0	0	0	0
Protection of soil and water	0	0	0	0	0	0
Conservation of biodiversity	0	0	0	0	0	0
Social services	0	0	0	0	0	0
Multiple purpose	0	0	0	not appl.	not appl.	not appl.
No or unknown function	0	0	0	not appl.	not appl.	not appl.
Total – Other wooded land	**0**	**0**	**0**	**not appl.**	**not appl.**	**not appl.**

3.6 Comments to National reporting table T3

In the majority of cases, a primary function is legally declared and mapped in the field. Total area with function means potential function of which only a part is considered primary; areas of individual functions partly overlap each other.
FAO requested method has been used for forecasting.
Multiple purposes 1990 – included were forests under heavy influence of air pollution. After 1996, that category is out of use (not needed).
In the original data, the area, where no other potential function has been identified is considered to be the production function area. Mayor part of the other potential function areas is used also for timber production – with a proper management the non-wood producing functions are not endangered in the majority of the cases. In fact, all the forest has some social function in a cultural landscape.

4 Table T4 – Characteristics of Forest and Other wooded land

4.1 FRA 2005 Categories and definitions

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

4.2 National data

4.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Prusa, Eduard: Prirozene lesy Ceske republiky, (Natural forest in the Czech Republic), Ministry of Agriculture, Prague, 1990	M	Modified natural forest	1990	These forest are protected, no significant change in area

4.2.2 Classification and definitions

National class	Definition
Prales – virgin forest	Undisturbed by man
Prirozeny les – modified natural	Naturally regenerated, undisturbed by human activities for a long time,.
Kulturni les - semi-natural forest	Managed forest composed of domestic species, regenerated artificially or naturally.
Plantaz -plantation	Intensive managed forest stand composed of introduced species, short rotation.

4.2.3 Original data

No “primary (virgin) forest” can be found in the country.

Modified natural forest (1990)

Natural Forest Region	Locality	ha of forest
Krušné hory	Vlček	62
Zč pahorkatiny	Běleč	13
	Těrešovské tisy	50
	Lopata a Hádky	10
Brdy	Fajmanovy skály	30
	Kokšín	19
	Chýnské buky a Getsemanka	37
Kivoklátská pahorkatina	Týřov	419
	Kohoutov	30
	Dubensko	5
Rakovnicko-Kladenská pahorkatina	Pochválovská skála	25
Středočeská pahorkatina	U vymyšlené pěšiny	40
	Drbákovské tisy	24

	Hradec	35
	Kuchyňka	12
	Voděradské bučiny	658
	Hrby	27
	Rukávečská obora	3
Český les	Podkovák	5
	Diana	21
Šumava	Boubín	47
	Milešický prales	9
	Stožec, Černý les, Borová Lada	40
	Mrtvý luh	281
	Trojmezná	387
	Jezerní slať	104
	Prameny Vltavy	3
	Modravské slatě	3613
	Povydří	900
	Černé a Čertovo jezerro	152
Novohradské hory	Žofín	98
	Hojná Voda	9
Jihočeské pánve	Stará řeka	800
	Žofinka	129
	Červené blato	129
ČM vrchovina	Polom	18
Polabí	Oškobrh	5
	Jiřina	2
	Žehuňská obora	100
	Buky u Vysokého Chvojna	28
Severočeská pískovcová plošina	Kokořínsko	2097
	Růžák	93
	Studený vrch	113
Jizerské hory	Poledník	132
	Jizera	92
	Na čihadle	5
	Jizerka	171
	Bukovec	29
Krkonoše	Obří důl	400
	Labský důl	207
	Kotelné jámy	101
	V bažinkách	31
	Dvorský les	75
Orlické hory	Bukačka	51
	Komáří vrch	13
Předhoří Orlických hor	Herbortice	90
Hrubý Jeseník	Bílá Opava	238
	Keprník	227
	Praděd	56
	Františkova myslivna	14
	Rejvíz	260
Předhoří Hrubého Jeseníku	Karlovice	42
Moravské úvaly	Lanžhot	39
Bílé Karpaty	Javořina	78
Beskydy	Radhošť	75
	Kněhyně	216
	Nořičí	52
	Mazák	62
	Gruník	47
	Skalka	13
	Mionší	170
	Salajka	22
	Pod kasárny	5
	Kutaný	15
Total		**13 710**

Semi-natural forest – forest not classified as modified forest. The rest of forest area.

No plantations are recorded – none clear ligniculture exists in the CR, x-mas tree plantations size varies localities (mostly on agriculture land) moving in response to the market and these cover less than approx. 500 ha in maximum.
Artificial regeneration is prevailing but use of domestic and the site proper species is requested. The management aim are all the forest functions, not only the production one. Use

of introduced species is strongly limited and must be approved by regional bodies of the ministry of environment and of the agriculture.

4.3 Analysis and processing of national data

4.3.1 Calibration

Not needed.

4.3.2 Estimation and forecasting

No estimation needed. All the modified forests are in strictly protected areas, no significant changes in size.

4.4 Reclassification into FRA 2005 classes

		1990	2000	2005
FRA forest categ.	National classes	Area (1000 ha)		
Primary	Prales - Primary	0	0	0
Modified natural	Prirozeny les - Modified natural	14	14	14
Semi-natural	Kulturni les - Semi-natural	2 616	2 623	2 634
Productive plantation	Plantaze - Plantation	0	0	0
Protective plantation		0	0	0
Total	**Celkem - Total**	**2 630**	**2 637**	**2 648**

4.5 Data for National reporting table T4

FRA 2005 Categories	**Area (1000 hectares)**					
	Forest			**Other wooded land**		
	1990	**2000**	**2005**	**1990**	**2000**	**2005**
Primary	0	0	0	0	0	0
Modified natural	14	14	14	0	0	0
Semi-natural	2616	2623	2634	0	0	0
Productive plantation	0	0	0	0	0	0
Protective plantation	0	0	0	0	0	0
TOTAL	**2 630**	**2 637**	**2 648**	**0**	**0**	**0**

4.6 Comments to National reporting table T4

Modified natural forest is strictly protected.
No plantation can be found in the country. Native and site adequate species are used in forest regeneration. Introduced* species planting in forest must be approved by the environmental authority.
*Word “introduced” here means even species introduced two or more hundred years ago (*Pinus nigra, Larix decidua, Robinia pseudoacacia*) and naturally regenerated.

5 Table T5 – Growing stock

5.1 FRA 2005 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees more than X cm in diameter at breast height (or above buttress if these are higher). Includes the stem from ground level or stump height up to a top diameter of Y cm, and may also include branches to a minimum diameter of W cm.
Commercial growing stock	The part of the growing stock of species that are considered as commercial or potentially commercial under current market conditions, and with a diameter at breast height of Z cm or more.

5.2 National data

5.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Consultation, Administrations of National Parks	M	1st zones of NP´s	1990-2005	
Rocenka zivotniho prostredi (Statistical Environmental Yearbook of the CR)	H	Areas of reserves	2000	Tab. B5.1.1
Zprava o lesich a lesnim hospodarstvi v České republice (Report on Forest and Forestry in the CR)	H	Areas of reserves,	1990	In combination with the Yearbook above
SLHP (Summary of the Forest Management Plans)	H	avge stock/ha	1990, 2000	Tab. C3, les ochranny; Str. 27, 1 zony
Report on Forest and Forestry in the CR (above)	H	Growing stock	1990, 2000	published annually
Zjistovani biomasy v lesnich ekosystemech (Biomass volume assessment in the forest ecosystems), VULHM Opocno, 2003	H	under to owerbark coefficient	2003	special study

5.2.2 Classification and definitions

National class	Definition
Tezitelne drevo – Commercial wood	All the species, minimum top diameter of 7 cm, m^3 u.b.
Netezitelne – non commercial	Wood in 1st zones of national parks and in natural reserves and monuments. Dimensions as above.
Porostni zasoba - Growing stock of all forests	Volume of living trees with the minimum DBH of 7 cm. in m^3 under bark
Koeficient hroubi s kurou - under bark to over bark coefficient	1.1082967

5.2.3 Original data

Areas where removal of wood is not permitted

national parks (year of establishment)	1990	2000
	Forest area ha	
SUNAP (1991)	-	9 000
KRNAP (1963)	4 400	4 400
CSS (2000)	-	1 702
PODYJI (1991)	-	2 205
Total 1st zones of NP	**4 400**	**17 307**
Natural reserves and monuments	25 282	33 988
National natural reserves and monuments	24 875	24 440
Total reserves	**50 157**	**58 428**
Total ha	**54 557**	**75 735**

Growing stock of all the forests (mill. m^3 u.b.)

	1990	**2000**
Stock volume	564	630.5
Average stock per ha	184	244

5.3 Analysis and processing of national data

5.3.1 Calibration

Not needed

5.3.2 Estimation and forecasting

Non-commercial wood

Calculation of differences – Natural reserves and monuments

	ha
Δx (2000-1990)	**10**
Δy (33988-25282)	**8706**
Δy / Δx	**870.6**

Forecasting

	2005	
other private	**38 341**	**value2000 + 5 * 870.6 =**

Calculation of differences – average stock per ha

	m^3
Δx (2000-1990)	**10**
Δy (244-184)	**60**
Δy / Δx	**6**

Forecasting

	2005	
other private	**274**	**value2000 + 5 * 6 =**

national parks (year of establishment)	1990	2000	2005
	Forest area ha		
SUNAP (1991)	-	9 000	9 000
KRNAP (1963)	4 400	4 400	4 400
CSS (2000)	-	1 702	1 702
PODYJI (1991)	-	2 205	2 205
Total 1st zones of NP	4 400	17 307	17 307
Natural reserves and monuments	25 282	33 988	38 341
National natural reserves and monuments	24 875	24 440	24 223
Total reserves	50 157	58 428	62 564

Total ha	54 557	75 735	79 871
Average stock per ha	184	244	274
Total non commercial wood 1000 m^3	**10 038**	**18 479**	**21 885**

Calculation of differences – growing stock (all forests)

	mill. m^3 under bark
Δx (2000-1990)	**10**
Δy (630.5-564)	**66.5**
Δy / Δx	**6.6**

Forecasting

	2005	
growing stock	**663.7**	**value2000 + 5 * 6.6 =**

5.4 Reclassification into FRA 2005 classes

FRA 2005 Categories	**Volume (million cubic meters under bark)**					
	Forest			**Other wooded land**		
	1990	**2000**	**2005**	**1990**	**2000**	**2005**
Growing stock	564.0	630,5	663.7			
Non-commercial stock	10.0	18.5	21.9			
Commercial growing stock	554.0	612.0	641.8			
	Volume (million cubic meters over bark) (u.b. * 1.1082967)					
Growing stock	625.1	698.8	735.6	0	0	0
Commercial growing stock	614.0	678.3	711.3	0	0	0

5.5 Data for National reporting table T5

FRA 2005 Categories	**Volume (million cubic meters over bark)**					
	Forest			**Other wooded land**		
	1990	**2000**	**2005**	**1990**	**2000**	**2005**
Growing stock	625.1	698.8	735.6	0	0	0
Commercial growing stock	614.0	678.3	711.3	0	0	0

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

5.6 Comments to National reporting table T5

For the expansion coefficient growing stock over bark (min. diameter 7 cm) to growing stock over bark (min. diameter 0 cm) see next table.
Growing stock is increasing because: the measurement methods and tools are improving reaching more accuracy, current increment is going up in Europe, rotation period length is increasing in the CR, thinning is insufficient here, average age is increasing, etc.

6 Table T6 – Biomass stock

6.1 FRA 2005 Categories and definitions

Category	Definition
Above-ground biomass	All living biomass above the soil including stem, stump, branches, bark, seeds, and foliage.
Below-ground biomass	All living biomass of live roots. Fine roots of less than 2mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead wood biomass	All non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots, and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.

6.2 National data

6.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
SLH/P- (Summary of the Forest management Plans), UHUL, Brandys n. L.	H	Growing stock volume	1979-2002	Annually
Zjistovani biomasy v lesnich ekosystemech. Vyrocni zprava. (Report on biomass assessment in forest ecosystems). VULHM Opocno, 2003	H	conversion coeficients of total stock volume (top diameter <7cm)	2003	Special study using detail tabled coefficients by species and diameters by Parez, Zlabek, Kopriva in Lesnictvi 6, 36/1990
Vyskot, Janouš, research in Olomucany, Lesnictvi 39/1993	M	above ground to roots and volume to owen-dry weight volume coefficient	1993	average measured coef. 0.18427 and 0.64
Odumrele drevo v lesich (Final report. Dead wood in forest), UHUL Brandys n. L., 1991	H	dead wood biomass	1991, 1987	measured on 2 032 sample plots. (= 53 057 600 m^3 o.b.) (1987 – 54 843 800 m^3)

6.2.2 Classification and definitions

National class	Definition
Above-ground biomass*	All living biomass above the soil including stem, stump, branches, bark, seeds, excluding foliage.
Below-ground biomass	All living biomass of live roots. Fine roots of less than 2mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead wood biomass	All non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots, and stumps larger than 0 cm in diameter.

*Average conversion coefficient from wood larger than or equal to 7 cm in diameter into the above ground woody biomass is 1.22490076, of which stumps 0.0209420; above ground woody biomass with foliage exp. coef. is 1.062078.

Volume to weight (WD) coefficient: = 0.64 t/m^3, assessment based on Vyskot´s measurements.

6.2.3 Original data

	Volume (million cubic meters over bark)		
	Forest		
	1990	2000	2005
Growing stock o.b. (table 5)	625.1	698.8	735.6
Dead wood biomass volume*	53,1	53,1	53,1

* Without military forests (6.3 % of total forest area)

6.3 Analysis and processing of national data

6.3.1 Calibration Not needed

6.3.2 Estimation and forecasting

6.4 Reclassification into FRA 2005 classes

Dead wood biomass volume*	53,1	53,1	53,1
Dead wood biomass volume total (civil forest + 6.3 %)	56.4	56.4	56.4

*without military forests.

FRA 2005 Categories	National categories		Volume (million cubic meters over bark)		
			Forest		
			1990	2000	2005
Above-ground biomass	Growing stock o.b. (table 5, over 7 cm)	mill. m^3 o.b.	625.1	698.8	735.6
	coeff. above-ground		1.22490076	1.22490076	1.22490076
	Above-ground woody biomass		765.7	856.0	901.0
	coeff. with foliage		1.062078	1.062078	1.062078
	volume with foliage (above ground volume * coeff.)		813.2	909.1	957.0
	coeff. volume to weight owen dry	mill. t	0.64	0.64	0.64
	weight		**520.4**	**581.8**	**612.5**
Below-ground (roots) biomass	coeff. roots to above ground woody biomass	mill. m^3 o.b.	0.18427	0.18427	0.18427
	below-ground woody biomass		141.1	166.3	176.3
	coeff. volume to weight owen dry	mill. t	0.64	0.64	0.64
	weight		**90.3**	**106.4**	**112.8**
Dead wood biomass	assessed volume	mill. m^3 o.b.	56.4	56.4	56.4
	coeff. volume to weight owen dry	mill. t	0.64	0.64	0.64
	weight		**36.1**	**36,1**	**36.1**

6.5 Data for National reporting table T6

FRA 2005 Categories	Biomass (million metric tonnes oven-dry weight)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Above-ground biomass	**520.4**	**581.8**	**612.5**	0	0	0
Below-ground biomass	**90.3**	**106.4**	**112.8**	0	0	0
Dead wood biomass	**36.1**	**36,1**	**36.1**	0	0	0
TOTAL	**646.8**	**724.3**	**761.4**	**0**	**0**	**0**

Thresholds used by the country are the following:
Growing stock is reported in m^3 u.b., minimum top diameter 7 cm.
Stem under bark to over bark volume: 1.1082967
Stem to above ground woody biomass (including stumps, without foliage) volume: 1.22490076
Above ground to under ground woody biomass: 0.18427
Above ground woody biomass without to including foliage: 1.062078
Volume to weight coefficient: = 0.64 t/m^3

6.6 Comments to National reporting table T6

The first **field measurement** of dead wood was executed in 1987 – total volume was 54 843 800 m^3; 22.7 m^3/ha. Compared with 1990/91 (53 057 600) survey, the 1990 minus difference results of temporary low volume of felling in about 1990.

7 Table T7 – Carbon stock

7.1 FRA 2005 Categories and definitions

Category	Definition
Carbon in above-ground biomass	Carbon in all living biomass above the soil, including stem, stump, branches, bark, seeds, and foliage.
Carbon in below-ground biomass	Carbon in all living biomass of live roots. Fine roots of less than 2 mm diameter are excluded, because these often cannot be distinguished empirically from soil organic matter or litter.
Carbon in dead wood biomass	Carbon in all non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots, and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in litter	Carbon in all non-living biomass with a diameter less than a minimum diameter chose by the country for lying dead (for example 10 cm), in various states of decomposition above the mineral or organic soil. This includes the litter, fumic, and humic layers.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a specified depth chosen by the country and applied consistently through the time series.

7.2 National data

7.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Zjistovani biomasy v lesnich ekosystemech. Vyrocni zprava. (Report on biomass assessment in forest ecosystems). VULHM Opocno, 2003	L	info on carbon content in litter and humus	2003	C t/ha (published research results, assessment of mean content) conifers stands 18 t/ha broadleaved stands 6 t/ha
SLHP (Summary of the Forest Management Plans), UHUL, Brandys n. L.	H	area and stock of conifers and broadleaves	1979-2002	Annually
Personal consultation, Pedological Laboratory of the UHUL, Brandys n. L.	L	carbon in soil	2004	Assessment: 1200 t/ha of soil (20 cm layer), 6 % of C =72 t/ha

7.2.2 Classification and definitions

National class	Definition
Carbon in above-ground biomass	Carbon in all living biomass above the soil, including stem, stump, branches, bark, seeds, and foliage.
Carbon in below-ground biomass	Carbon in all living biomass of live roots. Fine roots of less than 2 mm diameter are excluded, because these often cannot be distinguished empirically from soil organic matter or litter.
Carbon in dead wood biomass	Carbon in all non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots, and stumps larger than or equal to 0 cm in diameter
Carbon in litter and soil	Carbon in all non-living biomass in various states of decomposition above the mineral or organic soil. This includes the litter, fumic, and humic (L, F, H) layers.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to the depth of 20 cm.

Assessment: 1 g of organic biomass = 0,45 g C = 1,5 g CO_2

7.2.3 Original data

SLHP	1990	2000
	1 000 ha timberland	
conifers	2 005.3	1 975.1
broadleaves	536.9	576.8
total timberland	2 542.2	2 551.8
unstocked	40.5	30.9
total timberland	2582.7	2582.8

7.3 Analysis and processing of national data

7.3.1 Calibration

Not needed

7.3.2 Estimation and forecasting

Calculation of differences –conifers

	1 000 ha
Δx (2000-1990)	**10**
Δy (1975.1-2005.3)	**-30.2**
Δy / Δx	**-3.0**

Forecasting

	2005	
conifers	**1960**	**value2000 + 5 * (3.02) =**

Calculation of differences – broadleaves

	1 000 ha
Δx (2000-1990)	**10**
Δy (576.8-536.9)	**39.9**
Δy / Δx	**4.0**

Forecasting

	2005	
broadleaves	**597**	**value2000 + 5 * (4.0) =**

Unstocked area will not decrease after 2000.

C in timber

FRA 2005 Categories	**Biomass (million metric tonnes oven-dry weight)**		
	Forest		
	1990	**2000**	**2005**
Above-ground biomass	520.4	581.8	612.5
C content coeff.	0.45	0.45	0.45
C content in above-ground biomass	**234.2**	**261.8**	**275.6**
Below-ground biomass	90.3	106.4	112.8
C content coeff.	0.45	0.45	0.45
C content in below-ground biomass	**40.6**	**47.9**	**50.7**
Dead wood biomass	36.1	36.1	36.1
C content coeff.	0.45	0.45	0.45
C content in dead wood	**16.2**	**16.2**	**16.2**

C in litter

conifers		1990	2000	2005
area	1000 ha	2005	1975	1960
koef C	t/ha	18	18	18
C conif.	**mill. t**	**36,1**	**35.5**	**35.3**
broadleaves				
area	1000 ha	537	577	597
koef. C	t/ha	6	6	6
C broadlvs	**mill. t**	**3.3**	**3.5**	**3.6**
Total C in litter	**mill. t**	**39.4**	**39.0**	**38.9**

C in soil

		1990	**2000**	**2005**
Total forest area	1000 ha	2 630	2 637	2 648
C content per 1 ha /20 cm layer	t/ha	72	72	72
C total content in soil	**mill. t**	**189.4**	**189.9**	**190.4**

7.4 Reclassification into FRA 2005 classes

FRA 2005 Categories	**National**	**Carbon (Million metric tonnes)**		
	Forest			
		1990	**2000**	**2005**
Carbon in above-ground biomass	C content in above-ground biomass	234.2	261.8	275.6
Carbon in below-ground biomass	C content in below-ground biomass	40.6	47.9	50.7
Sub-total: Carbon in living biomass		**274.8**	**309.7**	**326.3**
Carbon in dead wood	C content in dead wood	16.2	16.2	16.2
Carbon in litter	C content in litter	39.4	39.0	38.9
Sub-total: Carbon in dead wood and litter		**55.6**	**55.2**	**55.1**
Soil carbon to a depth of __20___ cm	C content in soil	**189.4**	**189.9**	**190.4**
TOTAL CARBON		**519.8**	**554.8**	**571.8**

7.5 Data for National reporting table T7

FRA 2005 Categories	**Carbon (Million metric tonnes)**					
	Forest			**Other wooded land**		
	1990	**2000**	**2005**	**1990**	**2000**	**2005**
Carbon in above-ground biomass	234.2	261.8	275.6	0	0	0
Carbon in below-ground biomass	40.6	47.9	50.7	0	0	0
Sub-total: Carbon in living biomass	**274.8**	**309.7**	**326.3**	**0**	**0**	**0**
Carbon in dead wood	16.2	16.2	16.2	0	0	0
Carbon in litter	39.4	39.0	38.9	0	0	0
Sub-total: Carbon in dead wood and litter	**55.6**	**55.2**	**55.1**	**0**	**0**	**0**
Soil carbon to a depth of __20___ cm	**189.4**	**189.9**	**190.4**	0	0	0
TOTAL CARBON	**519.8**	**554.8**	**571.8**	**0**	**0**	**0**

7.6 Comments to National reporting table T7

Based on large soil samplings and analyses, a special study on the carbon content in soils is carried out and will be finished by the end of 2005.

8 Table T8 – Disturbances affecting health and vitality

8.1 FRA 2005 Categories and definitions

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

8.2 National data

8.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Zprava o stavu lesa a lesniho hospodarstvi České republiky (Report on forest and forestry in the CR), Ministry of Agriculture, Prague	H M	Salvage felling, fires disturbance by fungi	1994-2003	Annually, year 2003 in print. ad hoc assessments
Lesni hospodarska evidence (Summary of forestry records), Forest Management Institute, UHUL, Brandys n. L:	H	Salvage felling	before 1994	Annually

8.2.2 Classification and definitions

National class	Definition
Disturbance by fire	Reported disturbance caused by wildfire, independently whether it broke out inside or outside the forest in ha.
Criteria	Disturbed is the area: (i) where the damage could be faced by the regeneration (salvage) felling only; (ii) in the case of the leaf-eating insects, the disturbed area means stands defoliated by more than 70 % (not depending on regeneration possibility).
Salvage felling caused by insects	Reported salvage felling caused by insects.
Disturbance caused by diseases	Reported disturbance caused by diseases attributable to pathogens, such as a bacteria, fungi, phytoplasma or virus. Usually such a disturbance causes increased salvage felling.
Other salvage felling	Reported salvage felling caused by air pollution, draught, wind and snow.

8.2.3 Original data

salvage felling mill. m^3

year	abiotic		air pollution		other		insects	
	mill. m^3	avge	mill. m^3	avge	mill. m^3	avge	mill. m^3	avge
1988	3,41		0,64		0,43		0,85	
1989	3,20		0,50		0,33		0,33	
1990	8,57	4.312	0,36	0.416	0,29	0.404	0,40	0.508
1991	4,07		0,34		0,45		0,22	
1992	2,31		0,24		0,52		0,74	
1998	1,84		0,19		0,30		0,33	

1999	2,00		0,07		0,28		0,27	
2000	1,66	1.826	0,06	0.074	0,27	0.238	0,30	0.256
2001	1,04		0,03		0,20		0,18	
2002	2,59		0,02		0.14		0,20	

Forest fires		avge
	ha	
1991**	76	744
1992	1278	
1993	1151	
1994	808	
1995	403	
1998	1132	557
1999	336	
2000	375	
2001	87	
2002	179	
2003	1235	

** No information before 1991

assessments of fungi and diseases disturbance ha

	spruce yellowing		larch drying	Lophodermium pinastri		beech drying	birch dying	Armilaria melea	
		average 1000 ha			average 1000 ha				average 1000 ha
1994*	34 000	12.4			7.0				
1995	5 724		231						
1996	6 151		139	7 000		605			
1997	3 710					1 000	3 000		
1998	3 260	11.8		377	1.2	280			5.3
1999				500					
2000				400					
2001				2 000					
2002	20 300			2 000					
2003				2 400				5 300	

*No information before 1994

8.3 Analysis and processing of national data

8.3.1 Estimation and forecasting

salvage felling area estimation

year	abiotic	air pollution	other	FRA other (sum)	assessment average	**affected area other**	insects	assessment average	**affected area insects**
	mill. m^3				m^3/ha	**1000 ha**	mill. m^3	m^3/ha	**1000 ha**
avge 1990	4.312	0.416	0.404	5.132	222	**23.1**	0.508	222	**2.3**
avge 2000	1.826	0.074	0.238	2.138	247	**8.6**	0.256	247	**1.0**

	Forest fires	**Diseases**			
		yellowing	pine-leaf-cast	honey fungus	**total**
	1000 ha				
1990	**0.744**	12.4	7.0	5.3	**24.7**
2000	**0.557**	11.8	1.2	5.3	**17.8**

8.4 Reclassification into FRA 2005 classes

FRA-2005 Categories	National categories	Average annual area affected (1000 hectares)	
		Forests	
		1990	2000
Disturbance by fire	Disturbance by fire	0.7	0.6
Disturbance by insects	Disturbance by insects	2.3	1,0
Disturbance by diseases	Disturbance by diseases	24.7	17.8
Other disturbance	Other disturbance	23.1	8.6

8.5 Data for National reporting table T8

FRA-2005 Categories	Average annual area affected (1000 hectares)			
	Forests		Other wooded land	
	1990	2000	1990	2000
Disturbance by fire	0.7	0.6	0	0
Disturbance by insects	2.3	1.0	0	0
Disturbance by diseases	24.7	17.8	0	0
Other disturbance	23.1	8.6	0	0

8.6 Comments to National reporting table T8

In the majority of cases, disturbance by diseases is not followed immediately by salvage felling. The area is a result of field surveys. Slight damage by leaf-eating insects could be neglected, not the damage by bark beetle (the forest owner, it is obligatory to cut the invaded trees immediately and take measures for killing the insect; they report the area actually reforested). Area of snow and wind damage is also mapped in the field. Sparse windbreaks (or insect affected trees) area is counted using average volume per hectare. Damage by fungi could be underestimated because it is hard to asses it in standing trees.

The main damaging agent included in the "other disturbances" are: wind and snow damage registered by the means of the salvage felling reports.

9 Table T9 – Diversity of tree species

9.1 FRA 2005 Categories and definitions

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

9.2 National data

9.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
IUCN Red List	H	endangered, vulnerable		http://www.fao.org/forestry/foris/webview/forestry2/index.jsp?siteId=5461&sitetreeId=20747&langId=1&geoId=0
Czech Botanical Institute	H	total native tree species	1998	report for TBFRA 2000

9.2.2 Classification and definitions

National class	Definition
Number of native tree species	The total number of native tree species that have been identified within the country. (277)
Number of critically endangered tree species	The number of native tree species that are classified as "Critically endangered" in the IUCN red list.
Number of endangered tree species	The number of native tree species that are classified as "Endangered" in the IUCN red list.
Number of vulnerable tree species	The number of native tree species that are classified as "Vulnerable" in the IUCN red list.

9.2.3 Original data

Vulnerable tree species by IUCN Red List: Betula pendula ssp. oycoviensis (Besser) A. & D. Loeve ; syn. Betula pendula x szaferi ;

Main forest occurring native tree species	common name (czech)
Abies alba	jedle belokora
Acer campestre	javor babyka
Acer platanoides	javor mlec
Acer pseudoplatanus	javor klen
Alnus glutinosa	olse lepkava
Alnus incana	olse seda
Betula nana	briza zakrsla
Betula obscura	briza tmava
Betula pendula	briza belokora
Betula pubescens	briza pyrita
Carpinus betulus	habr obecny

Cerasus avicenum	tresen ptaci
Fagus silvatica	buk lesni
Fraxinus angustifolia	jasan uzkolisty
Fraxinus excelsior	jasan ztepily
Larix decidua	modrin opadavy
Malus silvestris	jablon lesni
Picea abies	smrk ztepily
Pinus mugo	klec
Pinus sylvestris	borovice lesni
Populus alba	topol bily
Populus nigra	topol cerny
Populus tremula	osika
Pyrus nivalis	hrusen snezna
Quercus ceris	dub cer
Quercus petraea	dub zimni
Quercus pubescens	dub pyrity
Quercus robur	dub letni
Salix alba	vrba bila
Salix appendiculata	vrba velkolista
Salix caprea	jiva
Salix fragilis	vrba krehka
Salix myrtiloides	vrba boruvkolista
Salix pentandra	vrba petimuzna
Sorbus aria	muk obecny
Sorbus aucuparia	jerab ptaci
Sorbus torminalis	brek obecny
Taxus baccata	tis cerveny
Tilia parvifolia	lípa srdcita
Tilia platyphylla	lípa sirolista
Ulmus glabra	jilm horsky
Ulmus laevis	jilm vaz
Ulmus minor	jilm habrolisty

9.3 Data for National reporting table T9

FRA 2005 Categories	**Number of species (year 2000)**
Native tree species	70[1]
Critically endangered tree species	0
Endangered tree species	0
Vulnerable tree species	1

[1] Expert estimate of number of Native forest occurring species.

9.4 Comments to National reporting table T9

Native tree species here include all the tree species occurring in the country regardless in forest or not. Naturalised species are not included. In some regions, Larix decidua is considered a naturalised species by the ministry of environment; here it is included into native ones.
Number of native tree species considered rare = 14.
The vulnerable sp. listed in the IUCN Red List is Betula pendula ssp. oycoviensis.

10 Table T10 – Growing stock composition

10.1 FRA 2005 Categories and definitions

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

Forest occurring native tree species	common name (Czech)	
Picea abies	smrk ztepily	Norway spruce
Pinus sylvestris	borovice lesni	Scots pine
Larix decidua	modrin opadavy	European larch
Quercus sp.	dub	Oaks
Fagus silvatica	buk lesni	European beech
Carpinus betulus	habr obecny	European hornbeam
Fraxinus excelsior	jasan ztepily	European ash
Betula pendula	briza belokora	European birch
Alnus sp.	olse	Alder
Tilia sp.	lípa	Linden

*Most common by the area covered

10.2 National data

10.2.1 Data sources

References to sources of information	**Quality (H/M/L)**	**Variable(s)**	**Year(s)**	**Additional comments**
SLHP (Summary of the forest management plans), UHUL Brandys n.L.	H	all	1990, 2000	annually since 1979

10.2.2 Original data

Scientific name*	Common name		**Area 2000 (timberland)**		**Growing Stock in Forests (million cubic meters u.b.)**	
	(czech)	(english)	1000 ha	%	1990	2000
Picea abies	smrk ztepily	Norway spruce	1 382.9	53.54	366.6	399.5
Pinus sylvestris	borovice lesni	Scots pine	446.3	17.28	92.0	96.3
Quercus sp.	dub	Oaks	159.4	6.17	24.3	29.2
Fagus silvatica	buk lesni	European beech	154.8	5.99	29.8	37.3
Larix decidua	modrin opadavy	European larch	97.2	3.76	17.0	23.0
Betula pendula	briza belokora	European birch	74.6	2.89	5.1	8.3
Alnus sp.	olse	Alder	37.8	1.46	3.0	4.5
Carpinus betulus	habr obecny	European hornbeam	30.8	1.19	3.3	4.5
Fraxinus excelsior	jasan ztepily	European ash	28.5	1.10	4.0	5.4
Tilia sp.	lípa	Linden	25.1	0.97	2.9	4.8
Remainder of species	Total		114.5	4.48	16.0	17.7
total			2 551.9	98.80	564.0	630.5

*Most common by the area occupied by the species in 2000

10.3 Analysis and processing of national data

10.3.1 Calibration

Not needed

10.3.2 Estimation and forecasting

Scientific name*	Common name	**Growing Stock in Forests**			
	(english)	1990	2000	1990	2000
		million cubic meters u.b.		**million cubic meters o.b. (u.b. *** 1.1082967)	
Picea abies	Norway spruce	366.6	399.5	406.3	442.8
Pinus sylvestris	Scots pine	92.0	96.3	102.0	106.7
Fagus silvatica	European beech	29.9	37.3	33.1	41.3
Quercus sp.	Oaks	24.3	29.2	26.9	32.4
Larix decidua	European larch	17.0	23.0	18.8	25.5
Betula pendula	European birch	5.1	8.3	5.7	9.2
Fraxinus excelsior	European ash	4.0	5.4	4.4	6.0
Carpinus betulus	European hornbeam	3.3	4.5	3.7	5.0
Alnus sp.	Alder	3.0	4.5	3.3	5.0
Tilia sp.	Linden	2.9	4.8	3.2	5.3
Remainder of species		16.0	17.7	17.7	19.6
		564.0	630.5	625.1	698.8

10.4 Data for National reporting table T10

FRA 2005 Categories / Species name (Scientific name and common name)	**Growing Stock in Forests (million cubic meters o.b.)**	
	1990	**2000**
Picea abies	406.3	442.8
Pinus sylvestris	102.0	106.7
Fagus silvatica	33.1	41.3
Quercus sp.	26.9	32.4
Larix decidua	18.8	25.5
Betula pendula	5.7	9.2
Fraxinus excelsior	4.4	6.0
Carpinus betulus	3.7	5.0
Alnus sp.	3.3	5.0
Tilia sp.	3.2	5.3
Remainder of species	17.7	19.6
TOTAL	**625.1**	**698.8**

10.5 Comments to National reporting table T10

11 Table T11 – Wood removal

11.1 FRA 2005 Categories and definitions

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

11.2 National data

11.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Working Paper XX, Appendix 3,	H	removals: industrial roundwood and fuelwood	1993-2002	Table 3-1, 3-2
Zprava o stavu lesu a lesniho hospodarstvi CR (Report on forest and forestry in the Czech Republic), Ministry of Agriculture, Prague 1994	H	removals: industrial roundwood and fuelwood	1989-1992	Tab.1/4.1.15
Lesni hospodarska evidence (Summary of forestry records), UHUL, Brandys n. L.	H	removals	1988	

11.2.2 Classification and definitions

National class	Definition
Tezba celkova - Felling	Total wood removed from forest (volume of roundwood in m^3 under bark).
Dodavky uzitkoveho drivi - Industrial wood removal	The wood removed (volume of roundwood in m^3 under bark) for production of goods and services other than energy production (woodfuel).
Dodavky palivoveho drivi - Woodfuel removal	Fuelwood: The wood removed (volume of roundwood in m^3 under bark) for energy production purposes, regardless whether for industrial, commercial or domestic use.

11.2.3 Original data

Year	removals		
	Total	industrial roundwood	Fuelwood
	m^3 u.b.		
1988	12 657 000	?	?
1989	12 451 000	11 487 000	964 000
1990	12 828 000	11 627 000	1 301 000
1991	10 878 000	9 864 000	1 014 000
1992	9 870 000	9 037 000	833 000
1998	13 991 000	13 171 000	820 000
1999	14 203 000	13 363 000	840 000
2000	14 441 000	13 501 000	940 000
2001	14 374 000	13 364 000	1 010 000
2002	14 541 000	13 534 000	1 007 000

11.3 Analysis and processing of national data

Assessment of fuelwood in 1988

Year		removals	
	Total	industrial roundwood	Fuelwood
		m^3 u.b.	
1989	12 451 000	11 487 000	964 000
1990	12 828 000	11 627 000	1 201 000
1991	10 878 000	9 864 000	1 014 000
1992	9 870 000	9 037 000	833 000
total	46 027 000	42 015 000	4 012 000
avge. %	100	91.28	8.72
1988		total1988 * average %	
	12 657 000	11 554 000	1 103 000

Calculation of averages for 1990, 2000

Year	industrial roundwood		Fuelwood	
	removals	average	removals	average
	m^3 u.b.	1000 m^3 u.b.	m^3 u.b.	1000 m^3 u.b.
1988	11 554 000		1 103 000	
1989	11 487 000		964 000	
1990	11 627 000	10 713.8	1 301 000	1 043.0
1991	9 864 000		1 014 000	
1992	9 037 000		833 000	
1998	13 171 000		820 000	
1999	13 363 000		840 000	
2000	13 501 000	13 386.6	940 000	923.4
2001	13 364 000		1 010 000	
2002	13 534 000		1 007 000	

11.3.1 Estimation and forecasting

Calculation of differences – industrial roundwood

	1000 m^3 u.b.
Δx (2000-1990)	10
Δy (13386.6-10713.8)	2 673.0
Δy / Δx	267.3

Forecasting

	2005	
industrial roundwood	14 723.1	value2000 + 5 * 267,3 =

Calculation of differences – fuelwood

	1000 m^3 u.b.
Δx (2000-1990)	10
Δy (923.4-1043.0)	-120.0
Δy / Δx	-12.0

Forecasting

	2005	
fuelwood	863.4	value2000 + 5 * (-12.0) =

11.4 Reclassification into FRA 2005 classes

FRA 2005 Categories	**Natzional**	**Volume in 1000 cubic meters of roundwood over bark**					
		Forest					
		1990		**2000**		**2005**	
		1000 m^3 u.b.	1000 m^3 o.b.	1000 m^3 u.b.	1000 m^3 o.b.	1000 m^3 u.b.	1000 m^3 o.b.
Industrial roundwood o.b.			11 874		14 837		16 317
	Industrial roundwood u-b-	10 714		13 387		14 723	
Woodfuel o.b.			1 156		1 023		957
	Woodfuel u-b-	1 043		923		863	
TOTAL o.b- for Country		**11 757**	**13 030**	**14 310**	**15 860**	**15 586**	**17 274**

Conversion coefficient under bark to over bark = 1.1082967

11.5 Data for National reporting table T11

FRA 2005 Categories	**Volume in 1000 cubic meters of round-wood over bark**					
	Forest			**Other wooded land**		
	1990	**2000**	**2005**	**1990**	**2000**	**2005**
Industrial roundwood	11874	14837	16317	0	0	0
Woodfuel	1156	1023	957	0	0	0
TOTAL for Country	**13 030**	**15 860**	**17 274**	**0**	**0**	**0**

11.6 Comments to National reporting table T11

In 2003, the total current increment was 20.2 mill.m^3 **under** bark.

12 Table T12 – Value of wood removal

12.1 FRA 2005 Categories and definitions

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

12.2 National data

12.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Zprava o stavu lesu a lesniho hospodarstvi CR (Report on forest and forestry in the Czech Republic), Ministry of Agriculture, Prague 1994	H	timber prices change	1990, 1993	Graf I/6.3 (1993 – 129 %; 1990 – 98 %; year 1989 = 100 %)
	H	timber removal volume and prices by quality classes	1993	Tab. I/1.6.2 Tab I/4.1.15
Forest Sector Questionaire TRADE JQ2 - 2002	H	timber prices	1991, 2000	

12.2.2 Classification and definitions

National class	Definition
surove drivi - roundwood	raw material for sawn wood and for veneer
vlaknina - pulpwood	wood for chemical processing (paper, fibre boards etc)
lesni stepka - forest chips	woody particles for chemical or energetic use
palivove drivi - fuelwood	round wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.
uzitkove drivi - industrial wood	wood for use in mines, small poles, pillars etc.

12.2.3 Original data

Wood price changes:
1989 = 100 %
1990 = 98 %; price regulation up to Sept. 1st, 1991
1993 = 198 %

Prices 1993, 2000

Sortimenty	Assortments	1993	2000
		price CZK/m^3	price CZK/m^3
industrial wood			
Jehličnaté	Conifers		
Výřezy I. třídy	Logs, 1st class	3535	3635
Výřezy II. třídy	Logs, 2nd class	2751	2950
Výřezy III. A třídy	Logs, 3rd A class	1385	1887
Výřezy III. B třídy	Logs, 3rd B class	1127	1538
Výřezy IV. třídy dulni	Logs, 4th class	1081	1234
Výřezy V. třídy vlakninove	Logs, 5th class	698	907
Listnaté	Broadleaves		
Výřezy I. třídy	Logs, 1st class	9900	6101
Výřezy II. třídy	Logs, 2nd class	3534	3579
Výřezy III. A třídy	Logs, 3rd A class	1550	1746
Výřezy III. B třídy	Logs, 3rd B class	1333	1379
Drivi IV. tridy dulni		995	-
Dříví V. třídy	Logs, 5th class	725	592
Celkem	Total		
fuelwood			
conif.			
Dříví VI. třídy jehlic	Logs, 6th class	160	264
brdlvs.			
Dříví VI. třídy palivo list.	Logs, 6th class brdlvs.	209	385
Celkem	Total		

12.3 Analysis and processing of national data

Average price 1993

Sortimenty	Assortments	1993							
		price CZK/m^3	1000 m^3					price * volume	average CZK/m^3
industrial wood			round wood	pulpwood	forest chips	fuel wood	industrial wood		
Jehličnaté	Conifers		100 4485	100 3686	100 13		100 8843		
Výřezy I. třídy	Logs, 1st class	3535	10 448.5					1585447	
Výřezy II. třídy	Logs, 2nd class	2751	20 897.0					2467647	
Výřezy III. A třídy	Logs, 3rd A class	1385	30 1345.5					1860827	
Výřezy III. B třídy	Logs, 3rd B class	1127	40 1794.0					2021828	
Výřezy IV. třídy dulni	Logs, 4th class	1081					100 8843	9559283	
Výřezy V. třídy vlakninove	Logs, 5th class	698		100 3686	100 13			2581902	

Listnaté	Broadleaves		100 260	100 340	100 0		100 604		
Výřezy I. třídy	Logs, 1st class	9900	10 26.0					257400	
Výřezy II. třídy	Logs, 2nd class	3534	20 52.0					183768	
Výřezy III. A třídy	Logs, 3rd A class	1550	30 78.0					120900	
Výřezy III. B třídy	Logs, 3rd B class	1333	40 104.0				20 120.8	298592	
Drivi IV. tridy dulni		995					60 362.4	360190	
Dříví V. třídy	Logs, 5th class	725					20 120.8	87000	
Celkem	Total		18231					21384794	**1173**
fuelwood									
conif.						100 558			
Dříví VI. třídy jehlic	Logs, 6th class	160				100 558		89280	
brdlvs.						100 136			
Dříví VI. třídy palivo list.	Logs, 6th class brdlvs.	209				100 136		28424	
Celkem	Total		694					117704	**170**

Price 1990 assessment

1990 = 98 %; 1993 = 198 %; coef. 1990/1993 = 0.4949

I	Price 1993	Price 1990
ndustrial roundwood	1173	580.6
fuelwood	170	84.1

Average price 2000

Sortimenty	Assortments	2000							
		price CZK/m^3	% 1000 m3 (weihgt)					price * volume	average CZK/m^3
industrial wood			round wood	pulpwood	forest chips	fuel wood	industrial wood		
Jehličnaté	Conifers		100 7370	100 4787	100 34		100 660		
Výřezy I. třídy	Logs, 1st class	3635	10 737.0					2678995	
Výřezy II. třídy	Logs, 2nd class	2950	20 1474.0					4348300	
Výřezy III. A třídy	Logs, 3rd A class	1887	30 2211.0					4172157	
Výřezy III. B třídy	Logs, 3rd B class	1538	40 2948.0					4534024	
Výřezy IV. třídy dulni	Logs, 4th class	1234					100 660.0	814440	
Výřezy V. třídy vlakninove	Logs, 5th class	907		100 4787.0	100 34.0			4372647	
Listnaté	Broadleaves		100 650	100 660	100 0		100 280		
Výřezy I. třídy	Logs, 1st class	6101	10 65.0					396565	
Výřezy II. třídy	Logs, 2nd class	3579	20 130.0					465270	

Výřezy III. A třídy	Logs, 3rd A class	1746	30 195.0					340470	
Výřezy III. B třídy	Logs, 3rd B class	1379	40 260.0				70 196.0	628824	
Dříví V. třídy	Logs, 5th class	592					30 84.0	49728	
Celkem	Total		14441					22801420	**1579**
fuelwood									
conif.						100 660			
Dříví VI. třídy jehlic	Logs, 6th class	264				100 660.0		174240	
brdlvs.						100 280			
Dříví VI. třídy palivo list.	Logs, 6th class brdlvs.	385				100 280.0		107800	
Celkem	Total		940					282040	**300**

12.3.1 Estimation and forecasting

Calculation of differences – industrial roundwood

	CZK/m^3
Δx (2000-1993)	**7**
Δy (1579-1173)	**406**
Δy / Δx	**58**

Forecasting

	2005	
industrial roundwood	**1869**	**value2000 + 5 * 58 =**

Calculation of differences – woodfuel

	CZK/m^3
Δx (2000-1993)	**7**
Δy (300-170)	**130**
Δy / Δx	**18.6**

Forecasting

	2005	
industrial woodfuel	**392.9**	**value2000 + 5 *18.6 =**

Exchange rates

	1998	1999	2000	2001	2002	2003	2004 (by Aug,20)	2005 assessment
CZK /USD	29.85	35.98	37.81	36.23	30,14	25.65	25.61	
avge	34.00							25.6

1990 exchange rate assessment:
1992 exchange 1 KCS (Czechoslovak crown – currency) to CZK (Czech crown) was 1:1.
Official 1990 rate approx. 7,60 KCS per 1 USD
Black market rate was much more real exchange rate (see the actual rates of 1998-2004 shown here). If the then official rate is used, the trend of the market development is not rational.

Value CZK

	Forest								
	1990			2000			2005		
	volume 1000 m^3	unit price CZK/m^3	total value mill. CZK	volume 1000 m^3	unit price CZK/m^3	total value mill. CZK	volume 1000 m^3	unit price CZK/m^3	total value mill. CZK
Industrial roundwood	11 874	580,6	6894.044	14 837	1573.0	23417.251	16 317	1869	30496.473
Woodfuel	1 156	84.1	97.220	1 023	300.0	306.900	956	392.9	375.612
TOTAL CZK for Country	13 030	**x**	**6 991**	15 860	**x**	**23 724**	17 273	**x**	**30 872**

12.4 Reclassification into FRA 2005 classes

Value USD

	Forest								
	1990			2000			2005		
	total value mill. CZK	exchange rate CZK/USD	value mill. USD (CZK/rate)	total value mill. CZK	exchange rate CZK/USD	value mill. USD (CZK/rate)	total value mill. CZK	exchange rate CZK/USD	value mill. USD (CZK/rate)
Industrial roundwood	6894.044	7.60	907.111	23417.251	34.0	688.743	30496.473	25.6	1 191.268
Woodfuel	97.220		12.792	306.900		9.026	375.612		14.672
TOTAL CZK for Country	**6 991**		**919.903**	**23 724**		**697.769**	**30 872**		**1 205.940**

12.5 Data for National reporting table T12

FRA 2005 Categories	Value of roundwood removal (1000 USD)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Industrial roundwood	907 111	688.743	1191.268	0	0	0
Woodfuel	12792	9.026	14.672	0	0	0
TOTAL for Country	**919 903**	**697.769**	**1 205.940**	**0**	**0**	**0**

12.6 Comments to National reporting table T12

13 Table T13 – Non-wood forest product removal

13.1 FRA 2005 Categories and definitions

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

Category
Plant products / raw material
1. Food
2. Fodder
3. Raw material for medicine and aromatic products
4. Raw material for colorants and dyes
5. Raw material for utensils, handicrafts & construction
6. Ornamental plants
7. Exudates
8. Other plant products
Animal products / raw material
9. Living animals
10. Hides, skins and trophies
11. Wild honey and bee-wax
12. Bush meat
13. Raw material for medicine
14. Raw material for colorants
15. Other edible animal products
16. Other non-edible animal products

13.2 National data

13.2.1 Data sources

References to sources of information	**Quality (H/M/L)**	**Variable(s)**	**Year(s)**	**Additional comments**
Zprava o stavu lesu a lesniho hospodarstvi CR (Report on forest and forestry in the Czech Republic), Ministry of Agriculture, Prague 1998, 2000, 2003	M	hunting	1990-1992;	refers to "hunting year" (Apr.1st, year N to March 31, year N+1)
Czech Statistical Office, web	H	hunting: pieces and weight, average weight	2000	http://www.czso.cz/csu/edicniplan.nsf/publ/2201-04-za_rok_2003
Zprava o stavu lesu a lesniho hospodarstvi CR (Report on forest aand forestry in the Czech Republic), Ministry of Agriculture, Prague **2003**	H	fruits collection	1994-2003	insufficient information before 1994

13.2.2 Classification and definitions

Fodder collection not allowed in forest

National class	**Definition**
Plant products / raw material	
Food	Mushrooms and berries
Raw material for medicine and aromatic products	Medicinal plant collection

Animal products / raw material	
Living animals	Catching of game
Hides, skins and trophies	Skins and trophies
Bush meat	Venison

13.2.3 Original data

Living game catching in 2003 (pcs), insufficient data before 2003, none is from farms.

Zvěř jelení	red deer	14
Zvěř daňčí	fallow deer	227
Zvěř mufloní	mouflon	159
Zvěř srnčí	roe deer	14
Zvěř černá	wild boar	84
Total		**498**

Hunting of main game species (shot) in pcs

Game	**1998**	**1999**	**2000**	**2001**	**2002**	**average 2000**
red deer	13981	15371	19 069	19 366	18 572	16 872
fallow deer	7120	8269	9 651	9 642	8 390	8 614
mouflon	6591	6848	7 974	7 724	6 642	7 156
roe deer	88057	99921	113 320	115 832	112 808	105 988
wild boar	60629	73027	68 571	74 883	82 632	71 948
total					**229 044**	**210 578**

Game	**1988***	**1989***	**1990**	**1991**	**1992**	**average 1990**
red deer	ID	ID	21639	23929	22294	22 621
fallow deer	ID	ID	5364	4674	5799	5 279
mouflon	ID	ID	7976	7883	7344	7 734
roe deer	ID	ID	105257	119508	121630	115 465
wild boar	ID	ID	57235	54085	31168	47 496
total						**198 595**

* insufficient data

Insufficient data also on hunting of birds (mainly pheasant) and brown hare before 2000.

	shot game in pcs		
	zajíci brown hare	koroptve partridge	bažanti pheasant
2000	94 118	NDA	561 637
2001	82 017	NDA	548 337
2002	80 473	24	548 048

	Total weight of shot game in metric tons								
	jelení red deer	dančí fallow deer	mufloní mouflon	srnčí roe deer	černá wild boar	zajíci brown hare	koroptve partridge	bažanti pheasant	total
2000	1 420,3	282,4	194,7	1 698,1	3 423,6	282,4	-	561,6	7 863.1
2001	1 448,9	282,2	188,4	1 737,4	3 741,6	246,1	-	548,3	8 192.9
2002	1 391,7	243,3	162,5	1 692,1	4 126,8	241,5	0,0036	548,0	8 406.9

Total forest fruits collection, mill. kg

Lesní plodiny	**Rok Year**										**Průměr**
Forest fruits	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	**Average**
Houby Mashrooms	23,6	29,7	18,4	17,8	17,7	20,2	23,8	23,4	21,2	13,5	20,9
Borůvky Blueberries	11,3	15,0	9,4	8,7	10,3	13,0	8,7	8,9	10,9	6,5	10,3
Maliny Raspberries	4,2	5,8	3,1	4,0	4,9	3,5	4,1	3,7	3,6	2,6	4,0
Ostružiny Blackberries	2,7	2,8	1,8	1,7	2,3	2,3	2,7	2,3	2,1	2,0	2,3
Brusinky Cranberries	0,7	1,3	0,7	0,9	0,6	1,2	0,7	0,7	0,9	0,4	0,7
Bezinky Elderberries	3,9	3,9	1,5	2,2	2,6	3,2	1,8	1,4	2,1	1,4	2,4
Celkem Total	**46,4**	**58,5**	**34,9**	**35,3**	**38,4**	**43,4**	**41,8**	**40,4**	**40,8**	**26,3**	**40,6**

	Rok Year									
	1994	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
	1000 kg									
medicinal plants dried	NDA	**2 831**	NDA	NDA	NDA	NDA	NDA	NDA	NDA	NDA

13.3 Analysis and processing of national data

Average weight of hunted game

		jelení red deer	dančí fallow deer	mufloní mouflon	srnčí roe deer	černá wild boar	zajíci bnrown hare	koroptve partridge	bažanti pheasant
2000	weight total 1000kg	1 420,3	282,4	194,7	1 698,1	3 423,6	282,4	-	561,6
	pieces shot	19 069	9 651	7 974	113 320	68 571	94 118	-	561 637
	average kg/pc	**74.5**	**29.3**	**24.4**	**15.0**	**49.9**	**3.0**	**-**	**1.0**

Game	**avge. assessed weight of shot pc**	**1990 (avge)**		**2000 (avge)**	
	kg/pc	**pcs**	**1000 kg**	**pcs**	**1000 kg**
red deer	74.5	22 621	1 685	16 872	2 257
fallow deer	29.3	5 279	154	8 614	252
mouflon	24.4	7 734	189	7 156	177
roe deer	15.0	115 465	1 732	105 988	1 590
wild boar	49.9	47 496	2 370	71 948	3 590
brown hare	3.0		**NDA**	94 118	**282**
pheasant	1.0		**NDA**	561 637	**562**
total	-	198 595	**6 130**	866 333	**8 710**

Lesní plodiny Forest fruits	**Rok Year**										**Průměr Average**
	1994	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	
	1000 kg										
Celkem Total forest fruits collection, mill. kg	46 400	58 500	34 900	35 300	38 400	43 400	41 800	40 400	40 800	26 300	
Average					**40 960**						**40 600**
medicinal plants dried	ID	**2 831**	ID	ID	ID	ID	ID	ID	ID	ID	

13.3.1 Estimation and forecasting

Medicinal plants (no changes)

1990	**2000**	**2005**
2 800	**2 800**	**2 800**

Game catching - units

1990	**2000**	**2005**
ID	**ID**	**500**

Calculation of differences – Game trophies and skins (shot) units

	units
Δx (2000-1990)	**10**
Δy (210578-198595)	**11 983**
Δy / Δx	**1198.3**

Forecasting

	2005	
game trophies and skins	**216 570**	**value2002 + 3 * 1198.3 =**

Calculation of differences – venison (Without brown hare and pheasant.

	1000 kg
Δx (2000-1990)	**10**
Δy (7866-6130)	**1736**
Δy / Δx	**173.6**

Forecasting

	2005	
venison	**8 734**	**value2002 + 3 * 173.6 =**

7866 (meat 2000) + 844 (brown hare and pheasant) = 8 710
8734 (meat 2005) +844 (brown hare and pheasant of 2000) = 9 578

13.4 Reclassification into FRA 2005 classes

FRA 2005	**National class**	**1990**	**2000**	**2005**
	1000 kg			
Plant products / raw material				
Food	Mushrooms and berries	**40 960**	**40 960**	**40 960**
Raw material for medicine and aromatic products	medicinal plants	**2 800**	**2 800**	**2 800**
Animal products / raw material				
Living animals	Game catching	ID	ID	**500**
Hides, skins and trophies	Game shootingh	198 595	210 578	216 570
Bush meat	Venison	6 130	8 710	9 578

13.5 Data for National reporting table T13

FRA 2005 Categories	**Scale factor**	**Unit**	**NWFP removal**		
			1990	**2000**	**2005**
Plant products / raw material					
1. Food	1	tonnes	**40960**	**40960**	**40960**
2. Fodder			**0**	**0**	**0**
3. Raw material for medicine and aromatic products	1	tonnes	**2800**	**2800**	**2800**
4. Raw material for colorants and dyes			0	0	0
5. Raw material for utensils, handicrafts & construction			0	0	0
6. Ornamental plants			ID	ID	ID
7. Exudates			0	0	0
8. Other plant products			0	0	0
Animal products / raw material					
9. Living animals	1000	unit	NDA	NDA	0.5
10. Hides, skins and trophies	1000	unit	198.595	210.578	216.570
11. Wild honey and bee-wax			0	0	0
12. Bush meat	1	tonnes	6130	8710	9578
13. Raw material for medicine			0	0	0
14. Raw material for colorants			0	0	0
15. Other edible animal products			0	0	0
16. Other non-edible animal products			0	0	0

13.6 Comments to National reporting table T13

Collecting of fodder in forest is illegal.
Insufficient data on X-mas trees produced in forest.

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

14.1 FRA 2005 Categories and definitions

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

Category
Plant products / raw material
1. Food
2. Fodder
3. Raw material for medicine and aromatic products
4. Raw material for colorants and dyes
5. Raw material for utensils, handicrafts & construction
6. Ornamental plants
7. Exudates
8. Other plant products
Animal products / raw material
9. Living animals
10. Hides, skins and trophies
11. Wild honey and bee-wax
12. Bush meat
13. Raw material for medicine
14. Raw material for colorants
15. Other edible animal products
16. Other non-edible animal products

14.2 National data

14.2.1 Data sources

References to sources of information	**Quality (H/M/L)**	**Variable(s)**	**Year(s)**	**Additional comments**
Non-wood goods and services, FAO web	H	non-wood goods	1995	http://www.unece.org/trade/timber/docs/sp/Sp-15.pdf -
Interlov Praha, (a game selling company)	M	bush meat prices 2004		http://www.interlov.cz/czech/ceny.xls
Expert assessment	L	market prices of venison, mushrooms and berries	2000, 1990,	
Working Paper XX, Appendix 4 Exchange rates	M	exchange rates	2000	

14.2.2 Classification and definitions

National class	**Definition**
Plant products / raw material	
Food	Mushrooms and berries
Raw material for medicine and aromatic products	Medicinal plant collection
Animal products / raw material	
Living animals	Catching of game
Hides, skins and trophies	Skins and trophies
Bush meat	Venison

14.2.3 Original data

Forest fruits collection in current prices, mill. CZK

	Year										Average
Forest fruits	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	
Houby Mashrooms	1,314	1,658	1,082	1,510	1,578	1,880	2,087	2,298	1,922	1,399	1,673
Borůvky Blueberries	881	1,164	456	585	727	973	628	710	821	562	751
Maliny Raspberries	180	248	173	202	260	197	290	294	261	218	232
Ostružiny Blackberries	161	169	129	96	138	144	218	176	162	170	156
Brusinky Cranberries	22	43	42	72	51	105	66	65	89	36	59
Bezinky Elderberries	140	137	113	95	118	149	72	93	111	80	111
Celkem Total	**2,698**	**3,419**	**1,995**	**2,560**	**2,872**	**3,448**	**3,361**	**3,636**	**3,366**	**2,465**	**2,982**

Venison price 2000 CZK/pc

druh ***class of meat***	*jelen,daněk red and fallow deer*	*srnčí roar deer*	*divočák wild boar*	*muflon mouflon*
	CZK/kg	**CZK/kg**	**CZK/kg**	**CZK/kg**
kýta s k.	195	240	180	165
hřbet s k.	335	410	270	190
plec s k.	105	150	115	105
ragout s k.	35	35		35
gulášové maso	155	170	120	120
krkovice s k. kostí	-	-	120	-

pheasant male – piece **bažant** v peří, kohout 1ks	83
pheasant female –piece **bažant** v peří, slepice 1ks	69
brown hare part **zajíc** - stehna celá s k.	260

14.3 Analysis and processing of national data

	Year										Average
Year	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**	
Value	**Million CZK**										
Forest fruits Total	2 698	3 419	1 995	2 560	2 872	3 448	3 361	3 636	3 366	2 465	2 982
avge					**3 337**						**2 982**

Value 1990

Assessment of prices: 1990=20% of 2003 (above table)**.**

Forecast

No prices increment is expected

Venison price 2000 assessment CZK/pc

druh ***class of meat***	*jelen,daněk red and fallow deer*			*srnčí roar deer*			*divočák wild boar*			*muflon mouflon*		
	CZK/kg	***% in one animal***	***CZK/kg***	***CZK/kg***	***% in one animal***	***CZK/kg***	***CZK/kg***	***% in one animal***	***CZK/kg***	***CZK/kg***	***% in one animal***	***CZK/kg***
kýta s k.	195	20		240	20		180	25		165	20	
hřbet s k.	335	25		410	25		270	20		190	25	

plec s k.	105	20		150	20		115	20		105	20	
ragout s k.	35	10		35	10			0		35	10	
gulášové maso	155	25		170	25		120	20		120	25	
krkovice s k. kostí	-			-			120	15		-		
average 2000		100	**186**		100	**226.5**		100	**164**		100	**135**
assessment 1990 (20 %)			**37.2**			**45.3**			**32.8**			**27**

Venison prices

	price CZK/unit	% in the shooting	average price 2000	averaqge price 1990 (20%)
pheasant male – bazant v peri, kohout 1ks	83	65	**78.1**	**15.6**
pheasant female – bazant v perí, slepice 1ks	69	35		

	stehna celá s k legs.	cely kus unit price 2000	averaqge price 1990 (10%)
brown hare zajic -	260	**900**	**90.0**

Game	**1990 (avge)**	**2000 (avge)**
	1000 kg	
total	**6 130**	**7 866**

Venison value 1990, 2000

Game	**1990 (avge)**				**2000 (avge)**			
	pcs	**1000 kg**	**avge price KCS*/kg**	**total price 1000 KCS***	**pcs**	**1000 kg**	**avge price CZK/kg**	**total price 1000 CZK**
red deer	22 621	1 685	37.2	62 682	16 872	2 257	166.0	374 662
fallow deer	5 279	154	37.2	5 729	8 614	252	166.0	41 832
mouflon	7 734	189	27.0	5 103	7 156	177	135.0	23 895
roar deer	115 465	1 732	45.3	78 460	105 988	1 590	226.5	360 135
wild boar	47 496	2 370	32.8	77 736	71 948	3 590	164.0	588 760
total	198 595	**6 130**		**229 710**	210 578	**7 866**	**163.9**	**1 289 284**

* Czechoslovak crown – currency (exchange rate KCS/CZK = 1:1

bird and brown hare total value 2000

	shot game in pcs					
	zajíci brown hare	price per unit	price total	bažanti pheasant	price per unit	price total
	units	CZK	1000 CZK	units	CZK	1000 CZK
2000	94 118	900	**84 706**	561 637	78.1	**43 863**
2002	80 473		72 426	548 048		42 803

14.3.1 Estimation and forecasting

For forest fruits no change in the total value is expected and the average for 1998-2002 is used for 2005.

The value for 1990 is estimated at 20% of the 2003 value.

	1990	**2000**	**2005**
Value in CZK Fruit	667 000 000	3 337 000 000	3 337 000 000
Average exchange CZK/USD	**7.60**	**34.0**	**25.6**
Total in USD	87 763 158	98 147 059	130 351 563

Game	1990 (avge)	2000 (avge)
	1000 kg	
total	6 130	7 866

Calculation of differences – game venison in 1000 kg

	1000 kg
Δx (2002-2000)	2
Δy (7866-6130)	1736
Δy / Δx	868

Forecasting

	2005	
brown hare	10 470	value2002 + 3 * 868 =

Prices in CZK

	1990	2000	2005
1000 kg	6 130	7 866	10 470
CZK/kg*		163.9	163.9
total 1000 CZK	229 710	1 289 284	1 716 095

*** average prices 2000 and 2005 will be approx. the same (market saturated,)**

Exchange rates

	1998	1999	2000	2001	2002	2003	2004 (20.08)	2005 assessment
USD/CZK	29.85	35.98	37.81	36.23	30,14	25.65	25.61	
avge	34.00							25.6

1992 exchange 1 KCS (Czechoslovak crown – currency) to CZK was 1:1.
Official 1990 rate 7,60 KCS per 1 USD

Venison value

	1990	2000	2005
	1000 CZK		
venison	229 710	1 289 284	1 716 095
brown hare*	ID	84 706	84 706
pheasants*	ID	43 863	43 863
Total 1000 CZK	29 710	1 417 853	1 843 664
Average exchange CZK/USD	7.60	34.0	25.6
Total 1000 USD (total/CZK=USD)	3 909	41 702	72 018

*The same amount of shot units is expected in 2005 as in 2000

14.4 Reclassification into FRA 2005 classes

FRA 2005	National class	1990	2000	2005
		value 1000 USD	value 1000 USD	value 1000 USD
Plant products / raw material				
Food	Mushrooms and berries	87 763	98 147	130 352
Raw material for medicine and aromatic products	Medicinal plants	**ID**	**ID**	**ID**
Animal products / raw material				
Living animals	Game catching	**ID**	**ID**	**ID**
Hides, skins and trophies	Game shootingh	ID	ID	ID
Bush meat	Venison	3 909	41 702	72 018

14.5 Data for National reporting table T14

FRA 2005 Categories	**Value of the of NWFP removed (1000 USD)**		
	1990	**2000**	**2005**
Plant products / raw material			
1. Food	87 763	98 147	130 352
2. Fodder	NA	NA	NA
3. Raw material for medicine and aromatic products	**ID**	ID	ID
4. Raw material for colorants and dyes	0	0	0
5. Raw material for utensils, handicrafts & construction	0	0	0
6. Ornamental plants	ID	ID	ID
7. Exudates	0	0	0
8. Other plant products	0	0	0
Animal products / raw material			
9. Living animals	ID	ID	**ID**
10. Hides, skins and trophies	ID	ID	ID
11. Wild honey and bee-wax	NA	NA	NA
12. Bush meat	3909	41702	72018
13. Raw material for medicine	0	0	0
14. Raw material for colorants	0	0	0
15. Other edible animal products	0	0	0
16. Other non-edible animal products	0	0	0
TOTAL	**91 672**	**139 849**	**202 370**

14.6 Comments to National reporting table T14

15 Table T15 – Employment in forestry

15.1 FRA 2005 Categories and definitions

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

15.2 National data

15.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Zprava o stavu lesa a lesniho hospodarstvi České republiky (Report on the forest and forestry in the Czech Republicú, Ministry of Agriculture Prague 1996, , 2003	H	Employment	1990, 2000, 2003	
Expert assessment	L	person in primary production	all	

15.2.2 Classification and definitions

National class	Definition
Employment in forestry sector	Persons in primary production and services.
Persons in services	Managers of all levels, forestry service institutions, forest management planning

15.2.3 Original data

Number of employees in forestry sector

Rok Year	1988	1989	1990	1991	1992	1998	1999	2000	2001	2002	2003
Lesní hospodáøství celkem - Total forestry	57 700	50 400	57 700	50 400	46 500	33 985	33 314	32 264	29 804	25 702	24 893

15.3 Analysis and processing of national data

Averages

Year	1988	1989	1990	1991	1992	1998	1999	2000	2001	2002
Total forestry	57 700	50 400	57 700	50 400	46 500	33 985	33 314	32 264	29 804	25 702
Average	**52 540**					**31 014**				

15.3.1 Estimation and forecasting

15.4 Reclassification into FRA 2005 classes

National Categories	FRA 2005 Categories			
	Primary production of goods	Provision of services	Unspecified forestry activities	Total
	%			
Forestry sector employees	60	40	0	100
	1000 person			
1990	**31.5**	**21.0**	**0**	**52.5**
2000	**18.6**	**12.4**	**0**	**31.0**

15.5 Data for National reporting table T15

FRA 2005 Categories	**Employment (1000 person-years)**	
	1990	**2000**
Primary production of goods	31.5	18.6
Provision of services	21.0	12.4
Unspecified forestry activities	0	0
TOTAL	**52.5**	**31.0**

15.6 Comments to National reporting table T15

The lowering trend probably will not continue such rapidly.

16 Thematic reporting tables

Forest under Management Plans

16.1 Categories and definitions

Category	Definition
Forest under Management plan	Forest where management follows any management plan.

16.2 National data

16.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Zprava o stavu lesa a lesniho hospodarstvi Ceske republiky (Report on the forest and forestry in the Czech Republic, Ministry of Agriculture Prague 2000, 2003	H	Forest under management plans	1990, 2000, 2003	

16.2.2 Classification and definitions

National class	Definition
Forest under Management plan	Forest where management follows a written and legally approved management plan. Each forest owner must have a management plan. Since 1996, forest estates smaller than 50 ha can have a reduced plan

16.2.3 Original data

	Year														
	1850	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000	2003
	% of forest land														
Povinnost hospodarit podle LHP – FMP obligatory	3,0	33,2	35,5	46,7	48,9	72,0	80,6	?	90,2	100,0	100,0	100,0	100,0	100,0	100,0
Skutecne zarizeno - reality	55,0	64,9	77,6	72,5	72,8	74,5	76,9	78,2	90,2	97,4	100,0	100,0	100,0	100,0	100,0

16.3 Analysis and processing of national data

	Year	
	1990	2000
% of forest land	100,0	100,0
1000 ha	2 630	2 637

16.3.1 Estimation and forecasting

not needed

16.4 Reclassification into FRA 2005 classes

not needed

16.5 Data for National reporting table T16

	1990	2000	2005
Forest under management plans (1000 ha)	2 630	2 637	2 648

16.6 Comments to National reporting table T16

Having a forest management plan will be fully obligatory also in the near future

17 Thematic reporting tables

Forest Management Certification

17.1 Categories and definitions

Category	Definition
Certified forest management	PEFC

17.2 National data

17.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Zprava o stavu lesa a lesniho hospodarstvi České republiky (Report on the forest and forestry in the Czech Republic, Ministry of Agriculture Prague 2002, 2003	H	Certified forest area	2002, 2003	
http://www.uhul.cz/ncc/pefc.php	H	"	2004	
Personal consultation	M-L		2005	

17.2.2 Classification and definitions

National class	Definition
Certified forest management	PEFC

17.2.3 Original data

Certified forest	2002	2003	2004
1000 ha	1 789	1 898	1 932

17.3 Analysis and processing of national data

Not needed

17.3.1 Estimation and forecasting

Another increment by about 34 000 ha (2004 – 2003) is expected in the 2005.

17.4 Reclassification into FRA 2005 classes

Not needed

17.5 Data for National reporting table T17

Certified forest	1990	2000	2005
1000 ha	N.A.	N.A.	1 966

17.6 Comments to National reporting table T17

Certification will increase more in private forest.