

● Wood products and timber trade

Wood products output in 2007<sup>1</sup>

	Removals	
	total (m³)	ratio in assortment composition (%)
Logs for panel products	107066	1.9
Sawlogs	1190137	21.1
Other raw material for sawmilling	438262	7.8
Pitwood	15202	0.3
Pulpwood	411244	7.3
Bolt for panels	350843	6.2
Other industrial wood	236675	4.2
Technological chips	11775	0.2
Total industrial wood	2761204	45.1
Fuelwood	2878705	54.9
Total removals	5639909	100.0

<sup>1</sup> National distribution calculated on the basis of a 66 % sample. Source: State Forest Service

Output of selected products in 2007<sup>1</sup>

	Unit	Quantity
Coniferous sawnwood	1000 m³	89,3
Broadleaved sawnwood	"	145,7
Parquet frieze	"	34,3
Furniture strips and parts	"	5,4
Pallets	"	159,3
Wood particle board	"	656,1
Laminated particle board	"	561,4
Cement-bonded particle board	"	32,2
Fibreboard	"	53,7
Surface-treated fibreboard	"	19,5
Flat-pressed, moulded, laminated b.	"	51,2
Veneer sheets	million m²	50,9
Parquet	1000 m²	2553,3
Match	million boxes	195,0

<sup>1</sup> Based on data from large-scale and medium industries appointed for contributing data by the Ministry of Agriculture. Source: State Forest Service

Timber trade in 2007

	Export	Import	Balance
	(million HUF)		
Solid wood products	15932	6265	9667
Sawn wood products	20049	42262	-22213
Panel products	42163	47430	-5267
Miscellaneous wood products	47631	28061	19570
<b>Total wood products</b>	125775	124018	1757
Pulp and paper products	175545	248424	-72879
<b>Total</b>	301320	372442	-71122

Source: State Forest Service

● Natural conservation

Protected forest lands

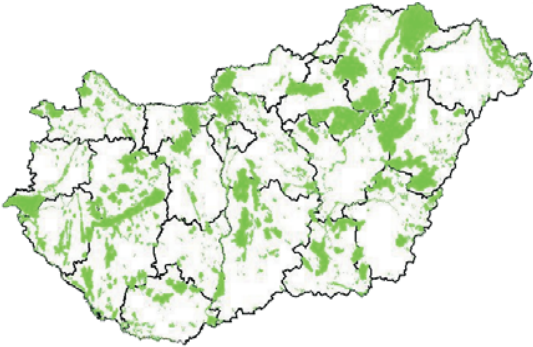
	Subcompartment	Other type of subcompartment	Total
	(ha)		
Strictly protected natural area	62309	4718	67027
Protected natural area	342337	23097	365434
Total protected forest land	404646	27815	432461

Source: State Forest Service Database, Data as of Dec. 31, 2007.

47 % of the 836504 ha of protected lands of national importance (national parks, landscape protection areas and protected natural areas) are covered by forests.

The number of the forest reserves: 53 (Declaring forest reserve in progress: 10)

Natura 2000 Network



Source: State Secretariat for Nature and Environment Protection, Data as of Apr. 1, 2008.

● Organisational structure

Forest administration:

Ministry of Agriculture and Rural Development (MARD)
MARD - Department of Natural Resources
MARD Forestry Department
Central Agricultural Office Forest Directorate
County Agricultural Office (10) Forest Directorates
Forest management planning, official supervision of forest managements

Other organizations concerned with forestry:

- Central Agricultural Office, Directorate of Plant Production and Horticultural, Department of Forest Reproduction Materials
- Inspectorate of propagation materials
- Ministry of Environmental Protection and Water Management (KvVM), State Secretariat for Nature and Environment Protection, Department of Forestry and Landscape Protection
- Protection of the natural assets in forests on protected natural areas.

Forest research:

Forest Research Institute (ERTI), Budapest  
University of West Hungary (NyME), Sopron

Professional training:

Higher education: University of West Hungary, Sopron  
Professional secondary schools: Barcs, Mátrafüred, Sopron, Szeged  
Trade schools: Ásotthalom, Miskolc, Piliscsaba, Somogyzsitfa-Szöcsénypuszta

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FOREST RESOURCES,  
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## ● Forestation (regeneration and afforestation)

Achievements in the growing year 2006-2007

	State sector	Other forms of management	Total
	(ha)		
<b>Initial stand establishment</b>			
Natural regeneration by seed	2790	608	3398
Natural regeneration by sprouts	2142	4060	6202
Artificial regeneration	6359	4437	10796
Total regeneration	11291	9105	20396
Total afforestation	512	18436	18948
Total initial stand establishment	11803	27541	39344
Total blank filling	4426	1759	6185
Total initial s. e. and blank filling	16229	29300	45529
<b>Established plantations</b>			
Established regenerations	11164	9074	20238
Established afforestations	744	6975	7719
<b>Lead time (year)</b>			
Established regenerations	8.8	6.7	7.9
Established afforestations	5.6	4.3	4.3
<b>Felling site not yet regenerated</b>	1942	7965	9907
<b>Area with delayed regeneration</b>	657	5274	5931

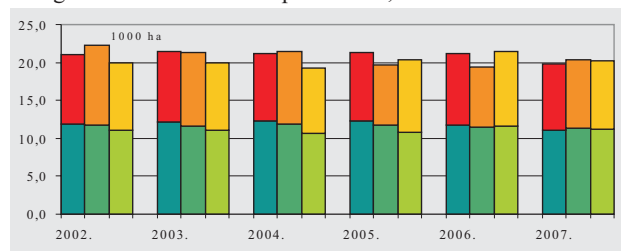
Forest regeneration includes compensatory planting.

Potential forest types in forestations (initial stand establishment)

	Regeneration	Afforestation	Total forestations
	(ha)		
Oak	4575	8168	12743
T. oak, other hard broadleaved	2221	1030	3251
Beech	1112	0	1112
Black locust	7226	4899	12125
Hybrid poplar and white willow	2250	1698	3948
Native poplar, other soft broadl.	2166	3045	5211
Coniferous	847	107	954
Total	20397	18947	39344

Source: State Forest Service "Report on Forestation and Fellings in 2007"

Obligations and established plantations, 2002-2007



The three columns from left to right show the obligations, initial stands and established plantations respectively. The lower part of each column represents the state sector, the upper represents other forms of management.

Source: State Forest Service "Report on Forestation and Fellings in 2007"

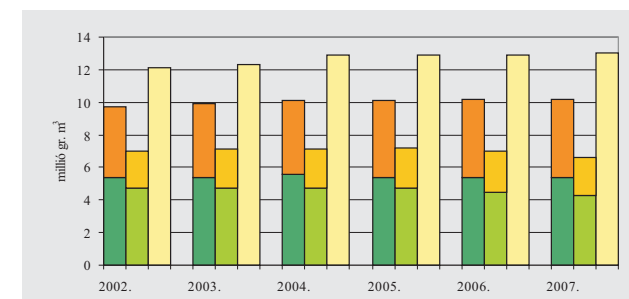
## ● Fellings

Gross fellings in 2007

	State sector	Other forms of management	Total
	(1000 gr. m <sup>3</sup> )		
<b>By type of felling</b>			
Final cutting	2848	1657	4505
Increment thinning	530	109	639
Selection thinning	416	262	678
Cleaning	179	127	306
Sanitary cutting	297	98	395
Other	61	25	86
Total	4333	2276	6609
<b>By area</b>			
	(ha)		
Reduced area of final cutting	10870	8547	19417
Area of increment thinning	14078	3693	17772
Area of selection thinning	17277	9664	26941
Cleaning area	16781	10439	27220
<b>By tree species groups</b>			
	(1000 gr. m <sup>3</sup> )		
Oak	869	220	1089
Turkey oak	682	150	832
Beech	572	77	649
Hornbeam	234	75	309
Black locust	455	751	1206
Other hard broadleaved	147	46	193
Hybrid poplar	375	500	875
Native poplar	118	83	201
Other soft broadleaved	180	136	316
Coniferous	701	237	938
Total	4333	2276	6609

Source: State Forest Service "Report on Forestation and Fellings in 2007"

Total fellings and current annual increment, 2002-2007



The three columns from left to right show exploitable stock as planned in management plans, actual fellings and current annual increment respectively. The lower part of each column represents the state sector, the upper represents other forms of management.

Source: State Forest Service Database and "Report on Forestation and Fellings in 2007"

Exploitable stock is determined by **ten-year management plans** based on the requirements of sustainable forest management and prepared by the state. Fellings are authorized and executions are recorded yearly by forest authorities.



● Notable milestones in the history of modern Hungarian forestry

1791	The Parliament enacted the first feudal forest act.
1879	Enactment of the first modern civil forest act.
1920	As a result of the peace-treaty closing the First World War, Hungary lost 84 % of its forests, and forest cover decreased from 26 % to 12 %.
1935	The IV Act of 1935 was not just a forest act adjusted to the new geographical conditions of the country, but also the first Hungarian law on nature conservation to be promulgated.
1936	Hungary hosted the second World Forestry Congress and the 9th Congress of IUFRO.
1945	Private forest holdings exceeding 58 hectares were nationalized, properties of 6 to 58 hectares were taken into state management.
1959-60	Forest joint tenures were cut back, about 30 % of the forests were assigned to agricultural cooperatives.
1961	Enactment of the Act VII of 1961 on forests and wildlife management based on the socialist ownership structure.
1996	As a result of the change of system, about 40 % of forests were privatised. The legislative control for multiple-use and sustainable forestry is provided in Act LIV of 1996 on forests and protection of forests.

● Main objectives of current hungarian forest policy

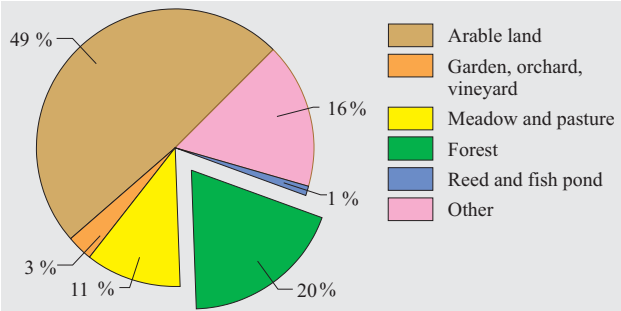
- To ensure long term environmental, economic and social services of forests with sustainable multiple-use forest management.
- To harmonize the interest of the society in sustaniable forest management with the interests of owners and managements.
- To maintain natural or close-to-natural forest stands composed by indigenous tree species and extend their area in accordance with prevailing site conditions.
- To increase the forested lands with afforestation up to the forest ratio of approximately 25-26 %.

● Comprehensive facts

Total area of the country	1000 ha	9303.0
Population	millions	10.0
Forest land area	1000 ha	1890.9
Forest ratio	%	20.3
Forest area per 1,000 inhabitants	ha/1000 cap.	188.2
Area of land in forestry use	1000 ha	2019.2
Growing stock	million gr. m³	347.4
Gross annual increment	million m³/year	13.0
Total fellings	million gr. m³	6.6
Final cutting	million gr. m³	4.5
Area of final cutting (equivalence)	1000 ha	19.4
Regeneration (initial planting) per year	1000 ha	20.4
Afforestation (initial planting) per year	1000 ha	18.9
Ratio of forests under management plans	%	100.0

Sources: Hungarian Central Statistical Office (KSH), Data as of May 15, 2008  
State Forest Service Database, Data as of Dec. 31, 2007  
“Report on Forestation and Fellings in 2007”

● Area by categories of land use



Source: County Land Officeses, Data as of Jul. 31, 2008.

● Forest area according to the National Forestry Database

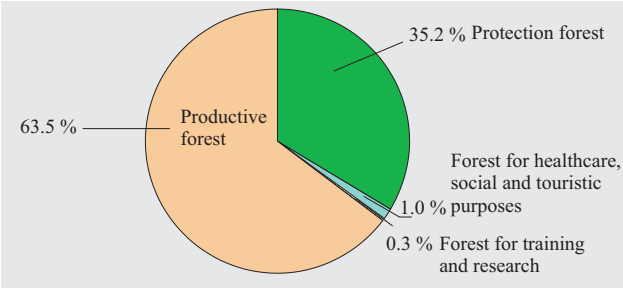
as of Dec. 31, 2007.	(1000 ha)	ratio (%)
Forest area (covered by tree stands or earmarked for plantation)	1890.9	20.3
Other wooded lands (nurseries, rides, permanent clearings)	128.3	1.4
Total area of land in forestry use	2019.2	21.7

● Forest land area and ownership categories in the counties

County	Area (km²)	Forest l. area (km²)	Forest ratio (%)	In forestry use (km²)	State (%)	Com-munal (%)	Private (%)	Un-known (%)
Pest and Budapest	6918	1683	24.3	1790	59.9	1.5	38.3	0.3
Central Hungary	6918	1683	24.3	1790	59.9	1.5	38.3	0.3
Fejér	4359	542	12.4	620	72.8	2.0	25.2	0.0
Komárom-Esztergom	2265	613	27.1	658	81.2	0.8	18.0	0.0
Veszprém	4493	1329	29.6	1532	63.8	0.4	35.5	0.2
Central Transdanubia	11117	248.5	22.4	2811	70.1	0.9	29.0	0.1
Győr-Moson-Sopron	4208	811	19.3	901	69.5	0.4	30.1	0.0
Vas	3336	937	28.1	987	50.3	0.4	49.3	0.0
Zala	3784	1162	30.7	1234	53.4	0.5	44.6	1.6
Western Transdanubia	11328	2899	25.6	3114	57.0	0.4	42.2	0.4
Baranya	4430	1104	24.9	1158	54.0	1.2	44.4	0.4
Somogy	6036	1748	29.0	1870	56.2	0.8	42.6	0.4
Tolna	3703	656	17.7	703	56.1	0.7	43.0	0.1
Southern Transdanubia	14169	3508	24.8	3731	55.5	0.9	43.3	0.3
Borsod-Abaúj-Z.	7247	2036	28.1	2130	60.8	1.1	37.3	0.8
Heves	3637	862	23.7	897	60.4	0.3	39.3	0.0
Nógrád	2546	965	38.1	1006	56.0	0.2	43.8	0.0
Northern Hungary	13430	3867	28.8	4032	59.5	0.7	39.4	0.4
Hajdú-Bihar	6211	669	10.8	709	46.2	0.9	52.3	0.6
Jász-Nagykun-Szolnok	5582	322	5.8	347	42.4	7.1	49.6	0.8
Szabolcs-Szatmár-B.	5936	1167	19.7	1203	27.7	1.4	70.9	0.1
Northern Great Plain	17729	2157	12.2	2260	35.6	2.1	62.0	0.3
Bács-Kiskun	8445	1688	20.0	1792	47.3	0.7	52.0	0.1
Békés	5631	249	4.4	272	60.5	3.7	33.7	2.1
Csongrád	4263	362	8.5	382	48.5	1.3	50.1	0.1
Southern Great Plain	18339	2299	12.5	2445	48.9	1.1	49.7	0.3
Total	93030	18909	20.3	20192	55.8	1.0	42.9	0.4

Source: State Forest Service Database, Data as of Dec. 31, 2007  
The category “unknown” covers areas belonging to new forest owners not yet registered as forest managers, who became owners during the system change. Before the transition the ratio of private forest was below 1 %.

● Distribution of forests by primary function

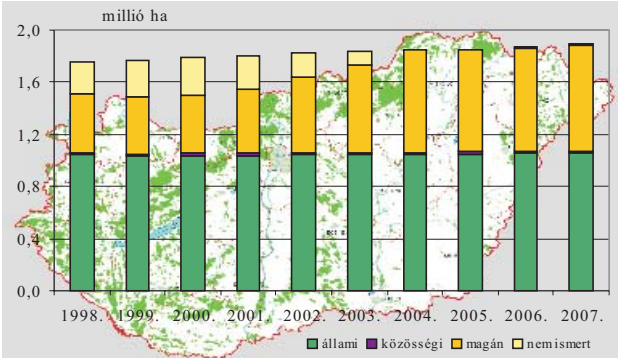


Source: State Forest Service, “Report on Forestation and Fellings in 2007”

Protection forests include protective forests (soil, wildlife, water, settlement protection, etc.) and protected forests (e.g. in protected natural areas). Their area and ratio has been increasing for decades.

● Changes in forest area and afforestations

Changes in forest area, 1998-2007<sup>1</sup>



<sup>1</sup>Following the application of Act LIV of 1996. Source: State Forest Service

The forest ratio increased from 11.9 % to 20.3 % between 1938 and 2007.

Afforestations in the past decade (initial plantings)

Growing year	State sector	Other forms of management	Total
	(ha)		
1998-1999	446	8262	8708
1999-2000	372	9418	9790
2000-2001	665	12472	13137
2001-2002	755	14075	14830
2002-2003	899	11116	12015
2003-2004	437	7137	7574
2004-2005	628	7029	7657
2005-2006	770	13219	13989
2006-2007	552	18436	18948

Source: State Forest Service “Report on Forestation and Fellings in 2007”

● Nature-oriented forestry

Year	Transition system <sup>1</sup>	Selection system <sup>2</sup>	Non-wood-productive forest <sup>3</sup>
	(ha)		
2004	0	208	28593
2005	0	2901	36598
2006	4024	4956	44034
2007	8780	7220	47546

Source: State Forest Service Database, 2007;

<sup>1</sup>The destination is the achievement of the selection system. <sup>2</sup>Individual trees or groups are harvested periodically and frequently.

● Forest regions in Hungary

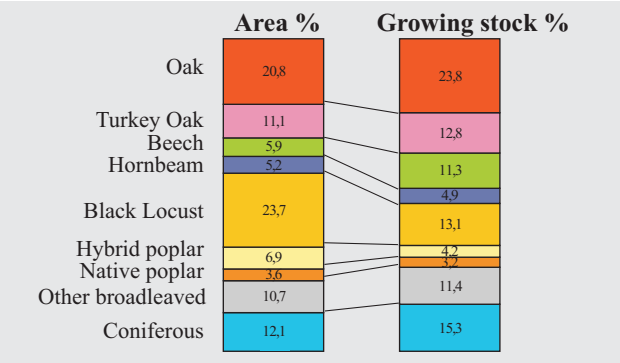


57 forest regions and 6 main regions according to the revision of February, 2004.

	Ratio of total forest area falling into the region (%)	Forest ratio in the region (%)
Western Transdanubia	9.5	34.5
Southern Transdanubia	17.5	28.8
Small Plain	3.9	14.9
Transdanubian Mountain Range	14.4	39.5
Northern Mountain Range	22.1	38.3
Great Plain	32.6	13.1

Source: State Forest Service Database, Data as of Dec. 31, 2007.

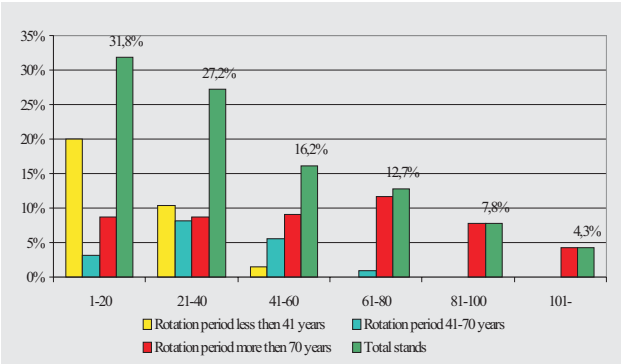
● Tree species distribution



Source: State Forest Service Database, Data as of Dec. 31, 2007.

57 % of the forest area is covered by indigenous species, and 43 % by either introduced (black poplar, red oak, coniferous) or cloned (hybrid poplar) tree species.

● Age class distribution by area



Source: State Forest Service Database, Data as of Dec. 31, 2007.

● Current annual increment and growing stock

Current increment by species (%)	
Oak	20.4
Turkey oak	8.1
Beech	6.9
Black locust	24.2
Other hard broadleaved	8.3
Poplar	12.9
Other soft broadleaved	6.0
Coniferous	13.2

Gross annual increment in Hungarian forests:  
13.0 million m<sup>3</sup> / year

0.41 gr. m<sup>3</sup> per second

74.4 cm

74.4 cm

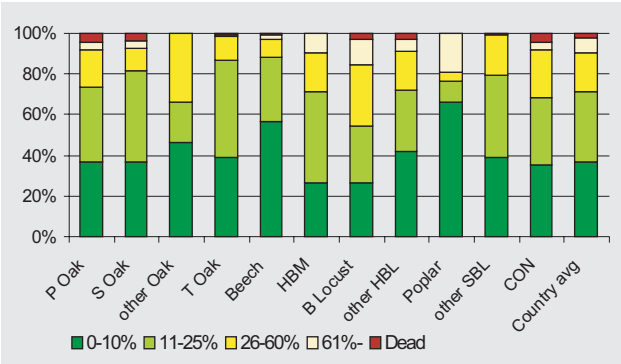
74.4 cm

Source: State Forest Service Database

Development of growing stock (million m <sup>3</sup> )			
Jan. 1, 2003	330.9	Dec. 31, 2005	341.4
Jan. 1, 2004	334.3	Dec. 31, 2006	344.1
Jan. 1, 2005	337.0	Dec. 31, 2006	347.4

● Health conditions in 2007

Defoliation measured by the ICP Forests Monitoring System

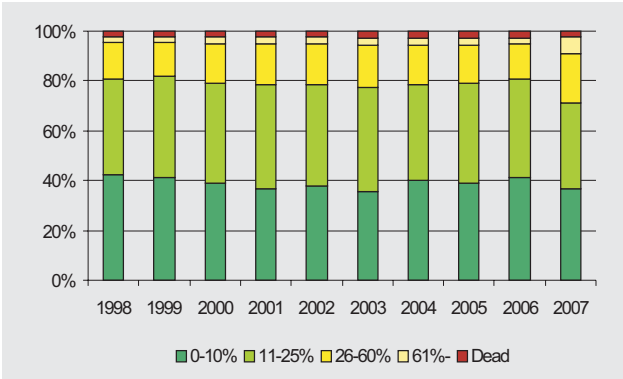


Source: State Forest Service Health Conditions Database, 2007.

Health conditions changed a little in 2007. The number of not and slightly damaged sample trees has decreased while the number of medium and severely damaged sample trees has increased.

● Changes in Health conditions

Defoliation measured by the ICP Forests Monitoring System



Source: State Forest Service Health Conditions Database

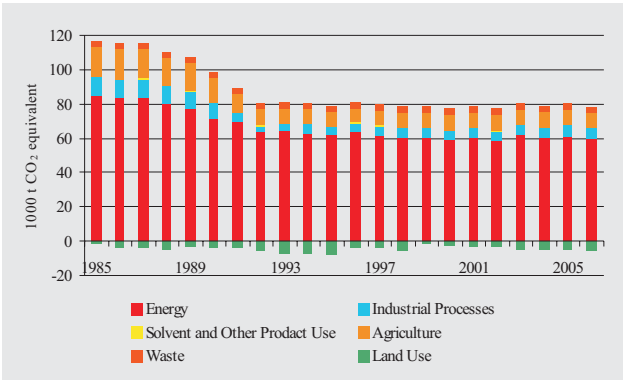
● Damages in forestations caused by game

Growing year	Quantitative damage (ha)	Qualitative damage (ha)
2000-2001	715	5219
2001-2002	475	5944
2002-2003	427	6470
2003-2004	610	5565
2004-2005	282	5871
2005-2006	216	4440
2006-2007	296	4032

Source: State Forest Service, technical acceptance protocols of forestations

● Greenhouse gases

Emissions and removals by sectors



Source: KvVM, National Inventory Report (NIR 2007)

Land Use sector includes forestry, cropland and grazing land management and reforestations.

The Kyoto Protocol keeps count of five carbon pools in forests: above- and below-ground biomass, dead wood, litter and soil.  
(The data of previous years were changed because of recalculation.)