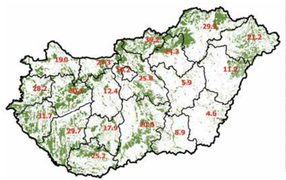
Forest area and growing stock

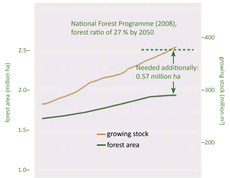
Forest area ratio by counties in Hungary



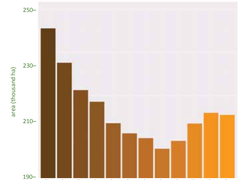
Summary figures on forests	
Registered forest land area	2058.7 thousand ha
Area of forest subcompartments	1939.3 thousand ha
Forest area ratio	20.8 percent
Standing volume	381.9 million gr. m³
Annual increment	13.0 million gr. m³
Total felling volume	7.3 million gr. m³
of which final cut volume	4.9 million gr. m³
Initial planting in afforestations	0.2 thousand ha
Area where reforestation was started	17.8 thousand ha
Reforestation obligation after final cut	20.1 thousand ha
Area where regeneration has been finished	19.1 thousand ha

After the World War I, Hungary lost 84% of its forests. Forest cover decreased from 26% to 12%. Due to afforestation activities carried out in the XXth century, forest area ratio exceeds 20 % at present.

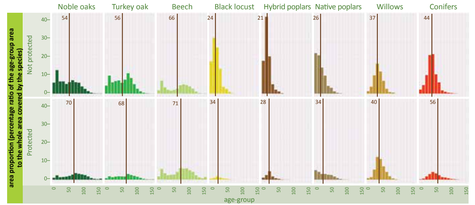
Forest area and growing stock from 1985



Temporarily unmanaged forests



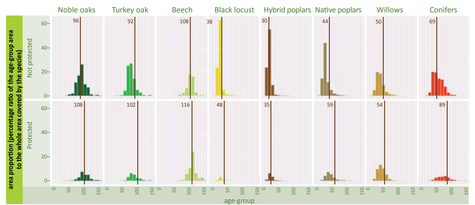
Age distribution



Vertical lines and the figures next to them indicate mean age and mean cutting age.

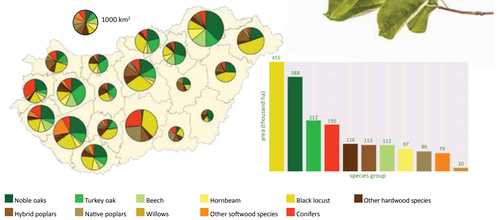
Age and cutting age distributions of the forests are highly important because of yield control. That is, because forest management has to ensure wood supply permanently in accordance with the demand of the society. In protected areas, both mean age and mean cutting age are higher due to ecological reasons.

Cutting age distribution



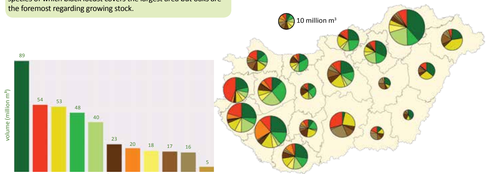
Species composition

Area by species



Growing stock by species

The majority of the Hungarian forests consists of deciduous species of which black locust covers the largest area but oaks are the foremost regarding growing stock.



Naturalness, nature conservation

Forest naturalness

Natural forest	0.01%
Close-to-nature forest	21.05%
Semi-natural forest	31.92%
Non-natural forest	7.2%
Plantation-like stand	33.67%
Plantation	6.15%

Distribution of Natura 2000 and protected areas

Protected	Part of the Natura 2000 network	Area	
		thousand ha	%
×	✓	418	20
×	×	1183	57
✓	✓	416	20
✓	×	42	3

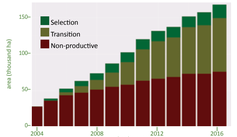
Forest management activities must not decrease naturalness.

Half of the Hungarian forests dominate by species native in the given forestry region. Non-natural forests, plantation-like stands and plantations are originated from afforestations carried out in the past century (amounting to approximately one million ha). Thus, their large area does not refer to degradation.

In the EU, 25 %, whereas in Hungary, 40 % of the forests belongs to the Natura 2000 network. Out of the forests, 12 % and 23 % is protected in Europe and in Hungary, respectively. Natura 2000 and protected forests significantly contribute to ensure the long-term survival of Europe's and Hungary's most valuable and threatened species and habitats.

In order to maintain biodiversity, close-to-nature forest management is recommended in non-protected forests, too.

Evolution of continuous cover forestry systems

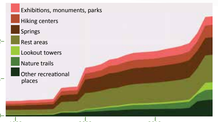


Systems following natural forest dynamics, ensuring continuous forest cover and diverse tree stand structure have been more and more applied in the last years. In Hungary, three kinds of such systems are defined: the selection system (harvests are carried out frequently but only in small patches), the transition system (the main objective of which is to switch from rotation system to selection system) and the 'non-productive' system (with the main aim to let natural processes take their course).

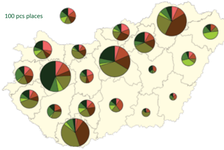
Recreation function of forests

Number of pieces of equipments of recreational places	
Benches, furniture	9 254
Fireplaces	1 539
Information boards	5 170
Buildings	1 162
Spring catchments	633
Sport and game tools	884
Objects useful for hiking (e.g., stairs, bridges, tracks)	1 238
Other (e.g., toilets, litter bins, monuments)	4 038

Amount of recreational places in forests



Distribution of recreational places



Recreational function of forests is more and more demanded. Moreover, it helps to keep people in the countryside. Thus, recreational function should be extended and its quality should be improved.

Organisational structure – Forest administration				
Prime Minister's Office	First instance authority	County Government Offices (10)	Department of Agriculture	
	Second instance authority	Pest County Government Office	Department of Food Chain Safety, Land Registry, Plant Protection and Soil Conservation, Forestry	
Ministry of Agriculture	Department of Forestry and Hunting		Section of State Forest Management	
			Section of Forest Administration	
	Department of National Park and Landscape Protection			
	National Food Chain Safety Office		Forestry Directorate	
			Directorate of Plant Production and Horticulture	Department of Forestry and Energy Reproduction Materials

Published by the National Food Chain Safety Office, Forestry Directorate, Budapest, 2017
Photos were made by: István Czirok and József Dávid.

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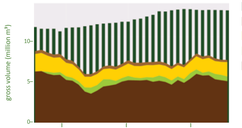
Annual increment and CO_2 removal

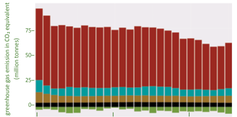
Annual increment and cut volume



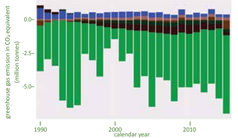
Annual increment of the Hungarian forests has been exceeding cut volume for a long time. This means that standing volume and therefore the removed CO_2 in the wood stock have been increasing year-by-year.

Greenhouse gas emission of Hungary has been decreasing substantially since 1990. Regarding the land use categories quantity of the removed CO_2 was far the highest in forestry.

Greenhouse gas emissions by sectors



Greenhouse gas emission in the Land use, Land use Change and Forestry sector

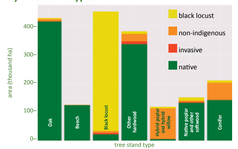


In Hungary, approximately 3-4 million tonnes carbon-dioxide are removed annually through forest management. This amount can be further increased by afforestations. Forests play an important role in mitigation of climate change effects.

Non-indigenous species in the Hungarian forests

In beech and oak stands occuring in mountainous and hilly areas, cover of non-indigenous species is low. By contrast, dominant species of stands planted in the lowlands are not native.

Non-indigenous and native species by tree stand types



Cover of non-indigenous species by forestry regions

Invasive species are non-indigenous and capable of spreading fast throughout the forested ecosystem endangering its biological diversity. Among them, black locust is of great economical importance.

Invasive tree species can decrease forest naturalness. Thus, it is important to monitor them.

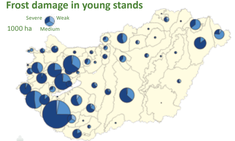
Forest damages

The most severe forest damages

Late frosts during the springtime of 2016 severely damaged many young tree stands. More than 40 thousand hectares of frost damages were registered, mainly in West Hungary.

Figures show data recorded by professional foresters.

Frost damage in young stands



The modern forest protection is preventive and respects ecological processes. It aims to increase forests' resistance.

Wood products from domestic wood

Data on wood products are gathered from forest managers in the frame of National Statistical Data Collection Programme. Country-level statistics are calculated from sample data.

Net harvested volume amounted to 6 million m³ in 2016 which were equally distributed between industrial round-wood and wood fuel . Sawlogs are the most important industrial roundwood products. Black locust is the most widely-used as wood fuel but noble and turkey oaks are also demanded.

Wood fuel production

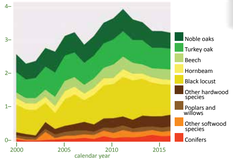
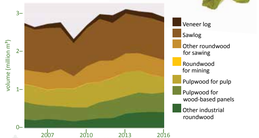


Figure shows net revenues from total wood fuel volume which were corrected for the effects of inflation. It includes fine and thick fuelwood, volume sold to private persons or to companies. It also includes the quantity gathered or cut by the consumers in the forest as well as that logged and split by the forestry companies.

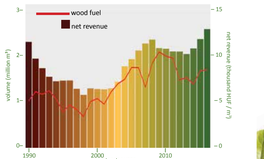
Support of forest product chains and harmonisation of development of industries using forest products is of great importance. Thus, spatial and temporal variability of wood supply is to be forecasted for 10-15 years.

Industrial wood production



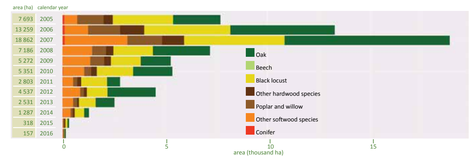
Enhancement of utilization of renewable and environmentally friendly wood products is an important national concern both from ecological and economical aspects.

Wood fuel production and net revenue of state forestry companies from wood fuel volume unit



Afforestations

Newly afforested areas between 2005 and 2016



Distribution of afforestations carried out after 2004

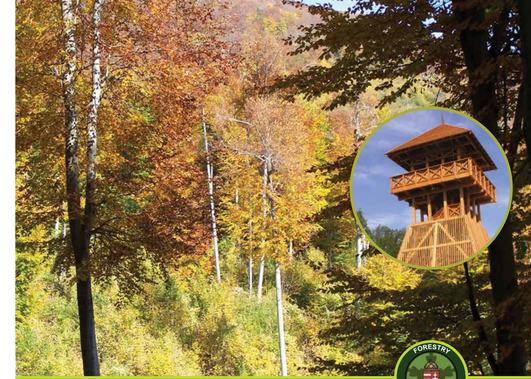
The vast majority of the afforestations can be found in the Great Hungarian Plain. Afforestations consist mainly of black locust and noble oaks.

Interactive online forest map http://erdoterkep.nebih.gov.hu

The map is daily updated from the National Forestry Database. It shows the border lines of forest subcompartments together with various attributes, such as ownership, primary function of the forest, Natura 2000 forests, flammable forest categories.

New public maps created by forest planners can be visualized in a distinct layer.

One can draw and download polygons. Different map files can be uploaded for conversions or in order to orientate yourself.



Forest resources and forest management in Hungary, 2016

This leaflet was made from data of the National Forestry and Forest Damage Databases of Forestry Authority.

National Food Chain Safety Office
Forestry Directorate

National ForestStrategy 2016-2030