

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Hungary

Rome, 2014

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Global Forest Resources Assessment (FRA). This country report is prepared as a contribution to the FAO publication, the Global Forest Resources Assessment 2015 (FRA 2015).

The content and the structure are in accordance with the recommendations and guidelines given by FAO in the document Guide for country reporting for FRA 2015 (<http://www.fao.org/3/a-au190e.pdf>). These reports were submitted to FAO as official government documents.

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Introductory Text

Place an introductory text on the content of this report

In the Hungarian statistics on forest area (area under forest management plans) “forest” includes many area actually not covered by stands but closely related to forest management, like roads, clearings, forest glades, nurseries etc. In the national statistics they are categorised to forest areas.

These areas do not have many attributes that international statistical queries require. In MCPFE 2007, seeing its definitions, we used a sophisticated method to proportionately calculate many attributes to the whole forest area, but on the long run it is not practical by consistency reasons.

In the FRA 2010, FRA 2015 and MCPFE-SoEF 2015 we followed the traditional FRA methodology and many cases we omitted these re-calculations. This is the main reason why FRA 2010 and FRA 2015 data differ from MCPFE 2007 tables.

Desk Study?

Check "yes" if this survey is a Desk Study, "no" otherwise	
Desk Study?	no

1. What is the area of forest and other wooded land and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

1.1 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 ; 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".
...of which with tree cover (<i>sub-category</i>)	Land considered as "Other land", that is predominantly agricultural or urban lands use and has patches of tree cover that span 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. It includes bothe forest and non-forest tree species.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.
Forest expansion	Expansion of forest on land that, until then, was not defined as forest.
...of which afforestation (<i>sub-category</i>)	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not defined as forest.
...of which natural expansion of forest (<i>sub-category</i>)	Expansion of forests through natural succession on land that, until then, was under another land use (e.g. forest succession on land previously used for agriculture).
Deforestation	The conversion of forest to other land use or the longterm reduction of the tree canopy cover below the minimum 10 percent threshold.
...of which human induced (<i>sub-category</i>)	Human induced conversion of forest to other land use or the permanent reduction of the tree canopy cover below the minimum 10 percent threshold.
Reforestation	Natural regeneration or re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.
...of which artificial reforestation (<i>sub-category</i>)	Re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.

1.2 National data

1.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Database, National Food Chain Safety Office	Total area under forest management plan	1976-2012	N/A

2	Hungarian Central Statistic Office	Other lands, orchards, water surfaces	2005-2012	N/A
3	Systematic National Forest Inventory, National Food Chain Safety Office	Other wooded land	2010,2011,2012	The time period partially covers the five years period of NFI which will be ended in 2014.
4	CORINE 2006	Inland water bodies	1990-2012	Corine Land Cover code 5.1

1.2.2 Classification and definitions

National class	Definition
Afforestation	Same as FRA.
Reforestation	Same as FRA.
Natural expansion of forest	Same as FRA.
Other wooded land	Same as FRA

1.2.3 Original data

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1.3 Analysis and processing of national data

1.3.1 Adjustment

<p>Forest area</p> <p>No need for calibration.</p> <p>Forest expansion, reforestation</p> <p>No need for calibration.</p> <p>Other wooded land</p> <p>No need for calibration.</p>

1.3.2 Estimation and forecasting

<p>Forest expansion, reforestation</p> <p>Since figures were available for all reporting years, no estimation and forecasting was needed.</p>
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2015: data of 2012 plus 4500ha expected increase 3 times

1.3.3 Reclassification

1.4 Data

Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	1801	1917	1983	2046	2069
	Other wooded land	0	0	0	0	121
	Other land	7326	7210	7144	7081	6937
	... of which with tree cover	95	95	103	103	103
	Inland water bodies	176	176	176	176	176
	TOTAL	9303.00	9303.00	9303.00	9303.00	9303.00

Table 1b

Categories		Annual forest establishment / loss (000 hectares per year)				...of which of introduced species (000 hectares per year)			
		1990	2000	2005	2010	1990	2000	2005	2010
	Forest expansion	14.2	16.1	13.1	7.3	N/A	N/A	N/A	N/A
	... of which afforestation	7.5	10.9	12	5	5.5	7.3	5.9	1.9
	... of which natural expansion of forest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Deforestation	0.33	0.53	0.54	0.4	N/A	N/A	N/A	N/A
	... of which human induced	0.33	0.53	0.54	0.4	N/A	N/A	N/A	N/A
	Reforestation	22.2	20.4	20.1	14.2	N/A	N/A	N/A	N/A
	... of which artificial	22.2	20.4	20.1	14.2	14.2	11.6	10.4	9.4

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 3	Tier 3

Other wooded land	Tier 3	Tier 1
Forest expansion	Tier 3	Tier 3
Deforestation	Tier 3	Tier 3
Reforestation	Tier 3	Tier 3

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> • Forest • Other wooded land • Afforestation • Reforestation • Natural expansion of forest • Deforestation 	<p>Tier 3 : Data sources: Either recent (less than 10 years ago) National Forest Inventory or remote sensing, with ground truthing, or programme for repeated compatible NFIs Tier 2 : Data sources: Full cover mapping / remote sensing or old NFI (more than 10 years ago) Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	Although the FAO and national definitions are not fully compatible, the forest area where trees does not grow higher than 5 meters and the canopy cover is between 10-30 % is negligible in Hungary. Consequently the two definitions are considered to be identical in Hungary and no recalculation was applied.	Forest area is continuously increasing due to the intensive afforestation of agricultural land. Natural expansion of forests is very limited.
Other wooded land	Assessing of other wooded land started in 2010 in the frame of a systematic National Forest Inventory. As the NFI cycle is not yet finished, a three year average (2010-2012) is reported only. For years 1990-2005 no data available for OWL (N/A), zores used by consistency reasons.	N/A
Other land	N/A	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	The geometrical shape area of CORINE CLC 2006 poygons (codes 5.1.1 "Water courses" plus 5.1.2 "Water bodies") were used.	N/A

Forest expansion	Area of initial planting area. Afforestation completed mainly on former agricultural land, on arid area, for wood supply. That is why the proportion of introduced species, dominated by black locust (<i>Robinia pseudoacacia</i>) is high. Dominant introduced species: black locust (<i>Robinia pseudoacacia</i>), improved poplars (<i>Populus x euramericana</i> ssp.-s), improved willows (<i>Salix</i> ssp.-s), Austrian pine (<i>Pinus nigra</i>), Scotch pine (<i>Pinus silvestris</i>), spruce (<i>Picea abies</i>).	In relation to the changing preferences in the subsidy system of afforestations in the last 5 years, proportion of native species is increasing.
Deforestation	N/A	N/A
Reforestation	Area of initial planting area.	Because of spreading of the natural-like forest management, the native species are preferred where site conditions are suitable.

Other general comments to the table

N/A

2. What is the area of natural and planted forest and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

2.1 Categories and definitions

Term	Definition
Naturally regenerated forest	Forest predominantly composed of trees established through natural regeneration.
Naturalized introduced species	Other naturally regenerated forest where the tree species are predominantly non-native and do not need human help to reproduce/maintain populations over time.
Introduced species	A species, subspecies or lower taxon occurring outside its natural range (past or present) and dispersal potential (i.e. outside the range it occupies naturally or could occupy without direct or indirect introduction or care by humans).
Category	Definition
Primary forest	Naturally regenerated forest of native species where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.
Other naturally regenerated forest	Naturally regenerated forest where there are clearly visible indications of human activities.
...of which of introduced species (<i>sub-category</i>)	Other naturally regenerated forest where the trees are predominantly of introduced species.
...of which naturalized (<i>sub-sub category</i>)	Other naturally regenerated forest where the trees are predominantly of naturalized introduced species.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
...of which of introduced species (<i>sub-category</i>)	Planted forest where the planted/seeded trees are predominantly of introduced species.
Mangroves	Area of forest and other wooded land with mangrove vegetation.
...of which planted (<i>sub-category</i>)	Mangroves predominantly composed of trees established through planting.

2.2 National data

2.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Database, National Food Chain Safety Office	Age class distributions	1976-	N/A
2	National Forest Database, National Food Chain Safety Office	Afforestations	1990-	Quantity and species composition

3	Historical records	Annual data on regeneration and plantation ways	1900- (except wartime)	Breakdown only for categories: seedlings, sproutings, artificial regeneration, afforestation. No data on species composition.
4	N/A	N/A	N/A	N/A

2.2.2 Classification and definitions

National class	Definition
N/A	N/A

2.2.3 Original data

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2.3 Analysis and processing of national data

2.3.1 Adjustment

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2.3.2 Estimation and forecasting

For the year 2005 a breakdown was calculated based on the 2005 age class distribution compared to the historical regeneration-data. For years 1990, 2000, 2010 and 2015 only the effects of afforestations was calculated.
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2.3.3 Reclassification

No reclassification was needed.

2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	0	0	0	0	0
	Other naturally regenerated forest	348	398	417	417	417
	... of which of introduced species	166	190	199	199	199
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	1453	1519	1566	1629	1652
	... of which of introduced species	572	613	650	665	N/A
TOTAL		1801.00	1917.00	1983.00	2046.00	2069.00

Table 2b

Primary forest converted to (000 ha)								
1990-2000			2000-2010			2010-2015		
Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land
0	0	0	0	0	0	0	0	0

Table 2c

Categories	Area (000 hectares)				
	1990	2000	2005	2010	2015
Mangroves (forest and OWL)	0	0	0	0	0
... of which planted	0	0	0	0	0

Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 3	Tier 3
Other naturally regenerated forest	Tier 1	Tier 1
Planted forest	Tier 1	Tier 1
Mangroves	Tier 3	Tier 3

Tier Criteria

Category	Tier for status	Tier for reported trend
Primary forest/Other naturally regenerated forest/Planted forest	<p>Tier 3 : Data sources: Recent (less than 10 years) National Forest Inventory or remote sensing with ground truthing or data provided by official agencies or programme for repeated compatible NFIs</p> <p>Tier 2 : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years) Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>

2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	There are forest areas (strictly protected nature conservation areas, soil protection forests) where no human activity is visible; however there was human activity earlier. We decided not to classify any forests to this category due to the earlier disturbances.	N/A
Other naturally regenerating forest	N/A	Data actually available does not reflect properly the tendency of increasing natural regeneration in forests composed by native tree species.
Planted forest	N/A	Intensive afforestation is an important factor that continuously increases the area of planted forests.
Mangroves	N/A	Not occur.

Other general comments to the table

N/A

3. What are the stocks and growth rates of the forests and how have they changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

3.1 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees with a minimum diameter of 10 cm at breast height (or above buttress if these are higher). Includes the stem from ground level up to a top diameter of 0 cm, excluding branches.
Net Annual Increment (NAI)	Average annual volume of gross increment over the given reference period less that of natural losses on all trees, measured to minimum diameters as defined for "Growing stock".
Above-ground biomass	All living biomass above the soil including stem stump branches bark seeds and foliage.
Below-ground biomass	All 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.
Dead wood	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 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 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	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 the minimum diameter for dead wood (e.g. 10 cm) lying dead in various states of decomposition above the mineral or organic soil.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a soil depth of 30 cm.

3.2 National data

3.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Database	Growing stock, Rotation age, Restriction, Tree species composition, forest function	1976-2010	N/A
2	National Forest Database	Area, Wood volume	1990, 2000, 2005, 2010	N/A
3	IPCC defaults	Root-to-shoot ratio carbon fraction of dry matter, basic wood density	all	N/A

4	Central Agricultural Office Forestry Directorate, IPC Forests, Forest Condition Monitoring Level 1 sampling method, national grid (4×4 km 1200 plots)	Standing dead wood	2007-2010	N/A
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3.2.2 Classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees including all trees higher than 2 m.
Growing stock of non commercial species	Volume of the non-commodity function forests and the forests of specially protected areas where exploitation is prohibited.
Growing stock of commercial species	Total growing stock minus growing stock of non-commercial areas.
Dead wood	The same as in FRA categories but data is available only for standing dead wood.
Below-ground biomass	The same as in FRA categories.
Above-ground biomass	The same as in FRA categories.
Carbon in above-ground biomass	The same as in FRA categories
Carbon in below-ground biomass	The same as in FRA categories
Carbon in dead wood	The same as in FRA categories

3.2.3 Original data

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3.3 Analysis and processing of national data

3.3.1 Adjustment

No need for calibration.

3.3.2 Estimation and forecasting

2015: data of 2012 plus the average GS-change of the last 5 yers, 3 times

3.3.3 Reclassification

3.4 Data

Table 3a

Category		Growing stock volume (million m ³ over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	288.007	325.165	341.394	359.064	377.049	0	0	0	0	N/A
	... of which coniferous	40.875	49.615	52.809	54.064	55.166	0	0	0	0	N/A
	... of which broadleaved	247.133	275.55	288.585	305	321.883	0	0	0	0	N/A

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	Quercus petraea	Sessile oak	44.948	46.715	45.884	45.29
2 nd	Quercus cerris	Turkey oak	38.257	42.472	44.03	45.212
3 rd	Robinia pseudoacacia	Black locust	34.508	39.169	43.253	48.09
4 th	Fagus sylvatica	Beech	36.733	39.092	39.344	39.404
5 th	Pinus sylvestris	Scots pine	27.6	32.59	34.209	34.872
6 th	Quercus robur	English oak	30.546	31.947	31.675	32.974
7 th	Carpinus betulus	Hornbeam	17.208	17.88	17.313	17.277
8 th	Populus x ssp.	Improved poplars	13.315	12.956	12.148	15.834
9 th	Pinus nigra	Austrian pine	8.371	10.82	11.69	11.906
10 th	Fraxinus ssp	Ashes	7.197	9.485	9.81	11.818
Remaining			29.324	42.039	52.038	56.388

TOTAL			288.01	325.16	341.39	359.06
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THE PRE-FILLED VALUES FOR GROWING STOCK REFER TO THE FOLLOWING THRESHOLD VALUES (SEE TABLE BELOW)

Item	Value	Complementary information
Minimum diameter (cm) at breast height of trees included in growing stock (X)	N/A	All trees higher than 2 m are included
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	0	N/A
Minimum diameter (cm) of branches included in growing stock (W)	0	N/A
Volume refers to above ground (AG) or above stump (AS)	AS	N/A

PLEASE NOTE THAT THE DEFINITION OF GROWING STOCK HAS CHANGED AND SHOULD BE REPORTED AS GROWING STOCK DBH 10 CM INCLUDING THE STEM FROM GROUND LEVEL UP TO A DIAMETER OF 0 CM, EXCLUDING BRANCHES.

Table 3c

Category		Net annual increment (m ³ per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	7.07	7.09	7.2	7.06	6.9
	... of which coniferous	8.01	8.16	8.16	7.53	7.04
	... of which broadleaved	6.89	6.91	7.06	7	6.89

Table 3d

Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Above ground biomass	158	177	185	194	204	0	0	0	0	N/A
	Below ground biomass	40	44	46	49	51	0	0	0	0	N/A
	Dead wood	5.2	6.7	8.1	9.9	9.9	0	0	0	0	N/A

TOTAL	203.20	227.70	239.10	252.90	264.90	.00	.00	.00	.00	.00
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Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Carbon in above ground biomass	76.4	85.7	88.5	93.7	97.6	0	0	0	0	N/A
	Carbon in below ground biomass	19.1	21.4	22.1	23.4	24.4	0	0	0	0	N/A
	<i>Subtotal Living biomass</i>	95.5	107.1	110.6	117.2	122	0	0	0	0	N/A
	Carbon in dead wood	N/A	N/A	N/A	4.1	4.5	0	0	0	0	N/A
	Carbon in litter	N/A	N/A	N/A	N/A	N/A	0	0	0	0	N/A
	<i>Subtotal Dead wood and litter</i>	N/A	N/A	N/A	N/A	N/A	0	0	0	0	N/A
	Soil carbon	N/A	N/A	N/A	N/A	N/A	0	0	0	0	N/A
TOTAL		95.50	107.10	110.60	121.20	126.50	.00	.00	.00	.00	.00

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 3	Tier 3
Net annual increment	Tier 2	Tier 2
Above ground biomass	Tier 1	Tier 1
Below ground biomass	Tier 1	Tier 1
Dead wood	Tier 3	Tier 2
Carbon in above-ground biomass	Tier 1	Tier 1
Carbon in below ground biomass	Tier 1	Tier 1

Carbon in dead wood and litter	Tier 1	Tier 1
Soil carbon	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
Total growing stock	Tier 3: Data sources Recent 10 years National Forest Inventory or remote sensing with ground truthing or programme for repeated compatible NFI 10 years Domestic volume functions Tier 2: Data sources/registers and statistics modelling or old NFI 10 years or partial field inventory Tier 1: Other data sources	Tier 3: Estimate based on repeated compatible tiers 3 (tier for status) Domestic growth functions Tier 2: Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 tier for status Tier 1: Other
Net annual increment	Tier 3: Scientifically tested national volume and growth functions Tier 2: Selection of volume and growth functions as relevant as possible Tier 1: Other	Tier 3: Confirmation/adjustment of functions used through scientific work Tier 2: Review work done to seek alternative functions Tier: 1 Other
Biomass	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied or other domestic or otherwise nationally relevant biomass studies Tier 2: Application of country specific national or sub-national biomass conversion factors from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Carbon in above ground biomass • Carbon in below ground biomass • Carbon in dead wood and litter • Soil carbon 	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied Tier 2: Application of country specific national or sub-national biomass conversion factors form from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	N/A	Growing stock is steadily increasing as a result of sustainable forest management. Annual increment is considerably higher than the annual felling. Due to intensive afforestation in the last 20 years the forest area increased about 10 000 hectares annually.

Growing stock of broadleaved coniferous	N/A	Area of oaks, beech and hornbeam is rather stable, therefore the increase of growing stock is modest which is also in relation to the moderate growth of these species compared to black locust or poplars. High proportion of black locust and poplars in afforestations resulted a rapid increase in growing stock. Growing stock of conifers is still increasing what is mainly attributed to the distribution of the age classes. Conifers were widely planted in forestations in the seventies while in the last ten years and also in the future native broadleaves dominate forestations. Close to nature management methods are more frequent than before and in relation to the site conditions have to rely on native broadleaves. Growing stock of <i>Populus x ssp</i> species shows a decline for the reason that a trend of changing these forests with others has started. This change is due to the high intervention of the environmentalist organizations and to the fact that in some places the site was not proper for these stands.
Growing stock composition	Ranking is based on the data of 2010. Potek.	N/A
Net annual increment	Technically the sum of net annual increment of tree species records in the NFD, based on yield tables.	N/A
Above-ground biomass	Calculations are from the UNFCCC report, National Inventory Report for 1985-2012, Hungary (accomplished in 2013). In 2013 some smaller recalculations were applied therefore the new data slightly differs from the former NIRs and the previous FRA. Unfortunately no reliable data is available for carbon pools in the soil and in the litter.	N/A
Below-ground biomass	N/A	N/A
Dead wood	Dead wood is the same in MCPFE 2007 report. It consists only standing dead wood (no data available on dead trees lying on the ground).	N/A
Carbon in above-ground biomass	N/A	N/A
Carbon in below-ground biomass	N/A	N/A
Carbon in dead wood	N/A	N/A
Carbon in litter	N/A	N/A

Soil carbon	N/A	N/A
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Other general comments to the table

Biomass and carbon stock data have changed due to the extensive recalculatins since the submission of FRA 2010. The last available ghg-inventory used (NIR Hungary, 2013).

4. What is the status of forest production and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

4.1 Categories and definitions

Term	Definition
Primary designated function	The primary function or management objective assigned to a management unit either by legal prescription documented decision of the landowner/manager or evidence provided by documented studies of forest management practices and customary use.
Non wood forest product (NWFP)	Goods derived from forests that are tangible and physical objects of biological origin other than wood.
Commercial value of NWFP	For the purpose of this table, value is defined as the commercial market value at the forest gate.
Category	Definition
Production forest	Forest area designated primarily for production of wood, fibre, bio-energy and/or non-wood forest products.
Multiple use forest	Forest area designated for more than one purpose and where none of these alone is considered as the predominant designated function.
Total wood removals	The total of industrial round wood removals and woodfuel removals.
...of which woodfuel	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

4.2 National data

4.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Database, National Food Chain Safety Office	Distribution of primary designations	1976-2010	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

4.2.2 Classification and definitions

National class	Definition
Production forests	Forests with primary function of wood production, producing propagation material and plantations.

Multiple use forest	All forest has a defined and privileged primary designation in the NFD on subcompartment-level, however in the practice nearly all forests (except plantations) are managed for multy purpose use (production, conservation and social purposes).
N/A	N/A
N/A	N/A

4.2.3 Original data

4.3 Analysis and processing of national data

4.3.1 Adjustment

Not needed, the land area figures for the whole country match with FAOSTAT.

4.3.2 Estimation and forecasting

The estimation for 2015 is based on the decreasing trend of share of production forest (expected approx. 58% of forest area in 2015).

4.3.3 Reclassification

4.4 Data

Table 4a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	1468	1263	1251	1260	1262
	Multiple use forest	N/A	N/A	N/A	N/A	N/A

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	N/A	N/A	N/A	N/A
2 nd	N/A	N/A	N/A	N/A

3 rd	N/A	N/A	N/A	N/A
4 th	N/A	N/A	N/A	N/A
5 th	N/A	N/A	N/A	N/A
6 th	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			.00	

2010	
Name of local currency	N/A

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 beeswax
12 Wild meat

13 Raw material for medicine
14 Raw material for colorants
15 Other edible animal products
16 Other non-edible animal products

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m ³ u.b.)	
	Total wood removals	...of which woodfuel
1990	5503	1985
1991	5307	2108
1992	4968	2137
1993	4085	1819
1994	4202	1741
1995	4215	1832
1996	3692	1892
1997	4316	1984
1998	4188	1892
1999	4757	2102
2000	5419	2114
2001	5344	1852
2002	5403	1964
2003	5274	2271
2004	5175	2187
2005	5370	2566
2006	5320	2653
2007	5117	2356
2008	5384	2562
2009	5244	2879

2010	5741	2995
2011	6232	3215

Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 3	Tier 3
Multiple use forest	Tier 1	Tier 1

Tier Criteria

Category	Tier for status	Tier for reported trend
Production forest Multiple use forest	Tier 3: Updated including field verifications national forest maps including functions Tier 2: Forest maps older than 6 years including forest functions Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	There are 3 possible slots to describe the designation of a forest subcompartment in the NFD. In case of only one of the slots is used, and this one is "production" - the subcompartment classified as "production forest".	N/A
Multiple use forest	There is no special designation for multiple use in national law, however in the practice nearly all forests are managed for multiple purpose.	N/A
Total wood removals	It was not possible to add a new row for 2012. The data for 2012 is: Total wood removals: 5946 (1000 m3) ...of which woodfuel: 2959(1000 m3)	N/A
Commercial value of NWFP	No reliable information is available.	N/A

Other general comments to the table

Other subcompartments (areas in forests serving forest management purposes) have no designations in National Forest Database. Their designation is distributed proportional to the distribution of designations of forest subcompartments. No data for NWFP.

5. How much forest area is managed for protection of soil and water and ecosystem services?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

5.1 Categories and definitions

Category	Definition
Protection of soil and water	Forest area designated or managed for protection of soil and water
...of which production of clean water (<i>sub-category</i>)	Forest area primarily designated or managed for water production, where most human uses are excluded or heavily modified to protect water quality.
...of which coastal stabilization (<i>sub-category</i>)	Forest area primarily designated or managed for coastal stabilization.
...of which desertification control (<i>sub-category</i>)	Forest area primarily designated or managed for desertification control.
...of which avalanche control (<i>sub-category</i>)	Forest area primarily designated or managed to prevent the development or impact of avalanches on human life assets or infrastructure.
...of which erosion, flood protection or reducing flood risk (<i>sub-category</i>)	Forest area primarily designated or managed for protecting communities or assets from the impacts of erosion riparian floods and landslides or for providing flood plain services.
...of which other (<i>sub-category</i>)	Forest area primarily designated or managed for other protective functions.
Ecosystem services, cultural or spiritual values	Forest area primarily designated or managed for selected ecosystem services or cultural or spiritual values.
...of which public recreation (<i>sub-category</i>)	Forest area designated or managed for public recreation.
...of which carbon storage or sequestration (<i>sub-category</i>)	Forest area designated or managed for carbon storage or sequestration.
...of which spiritual or cultural services (<i>sub-category</i>)	Forest area designated or managed for spiritual or cultural services.
...of which other (<i>sub-category</i>)	Forest area designated or managed for other ecosystem services.

5.2 National data

5.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Database, National Food Chain Safety Office, Forestry Directorate	designation of forest	1976-2012	N/A

2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

5.2.2 Classification and definitions

National class	Definition
Primary function	The primary designation of forest. Only for forest subcompartments in the NFD.
N/A	N/A
N/A	N/A
N/A	N/A

5.2.3 Original data

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5.3 Analysis and processing of national data

5.3.1 Adjustment

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5.3.2 Estimation and forecasting

Protection of soil and water: no significant changes are expected. Data of 2012 used.
Ecosystem services, cultural or spiritual values: further slight decrease is expected. Data of 2012 used.

5.3.3 Reclassification

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5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
	Protection of soil and water	133.9	138.4	146.9	171.5	175.3

	... of which production of clean water	N/A	0.6	1	0.8	1
	... of which coastal stabilization	0	0	0	0	0
	... of which desertification control	0	0	0	0	0
	... of which avalanche control	0	0	0	0	0
	... of which erosion, flood protection or reducing flood risk	133.9	137.8	145.9	170.7	174.3
	... of which other (please specify in comments below the table)	0	0	0	0	0

Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	96.6	65.8	55.1	43.6	40
...of which public recreation	46.8	27.5	20.6	16.4	15
...of which carbon storage or sequestration	0	0	0	0	0
...of which spiritual or cultural services	N/A	N/A	N/A	N/A	N/A
...of which other (please specify in comments below the table)	49.8	38.3	34.5	27.2	25

Tiers

Category	Tier for reported trend	Tier for status
Protection of soil and water	Tier 3	Tier 3

Ecosystem services, cultural or spiritual values	Tier 2	Tier 2
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Tier criteria

Category	Tier for status	Tier for reported trend
Protection of soil and water	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations or legislation relating to soil and water protection. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Cultural or spiritual values • Public recreation • Spiritual or cultural services • Other 	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

5.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	N/A	N/A
Production of clean water	Protecting wells.	N/A
Coastal stabilization	N/A	N/A
Desertification control	N/A	N/A
Avalanche control	N/A	N/A
Erosion, flood protection or reducing flood risk	Soil protection: steep sites, against drifting sand, erosion gullies.	N/A
Other protective functions	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	Usually these subcompartments are dropped out of NFD, but their function still remains in reality.
Public recreation	Parks, recreation forests.	N/A
Carbon storage or sequestration	N/A	N/A

Spiritual or cultural services	N/A	N/A
Other ecosystem services	Shelterbelt of agricultural lands and settlements, game preserves, landscape protection, protection of engineering structures	N/A

Other general comments to the table

N/A

6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

6.1 Categories and definitions

Category	Definition
Conservation of biodiversity	Forest area designated primarily for conservation of biological diversity. Includes but is not limited to areas designated for biodiversity conservation within the protected areas.
Forest area within protected areas	Forest area within formally established protected areas independently of the purpose for which the protected areas were established.

6.2 National data

6.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Database, National Food Chain Safety Office	Protective forest, protected forests, wood production forest, other productive forest, health-social and touristic forest, education-research forest	1976-2012	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

6.2.2 Classification and definitions

National class	Definition
Protected forests	Forest with nature-conserving orientated primary designation: protected and highly protected forests, forest reserves and nature conservation forests.
Forest area within protected areas	Forest under protection by considering legal act, including forests on protected and highly protected natural areas, forest gene reserves, forest biodiversity reserves and forests of the Natura 2000 network.
N/A	N/A
N/A	N/A

6.2.3 Original data

6.3 Analysis and processing of national data

6.3.1 Adjustment

6.3.2 Estimation and forecasting

Conservation of biodiversity: a slight increase is expected. Expert judgement.

Forest area within protected areas: a slight increase is expected. Expert judgement.

6.3.3 Reclassification

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	51.2	341.1	390.3	419.9	425
	Forest area within protected areas	51.2	337.8	424	872	875

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 3	Tier 3
Forest area within protected areas	Tier 3	Tier 3

Tier criteria

Category	Tier for status	Tier for reported trend
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<ul style="list-style-type: none"> • Conservation of biodiversity • Forests within protected areas 	<p>Tier 3: Data obtained from national or state agencies responsible for conservation and protected area or legislation relating to area protection. Tier 2: Studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates Tier 1 Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>
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6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	N/A	Increased area designated to nature conservation is partially related to the increasing attention of the society to the importance of nature conservation and the perception of conservationists to protect as many areas as possible. Multi-purpose forest management can support more effectively the protection of biodiversity than the authoritative, endless designation of protected areas. Therefore in the future it is not necessary to increase the area of protected forests rather to shift the management practice toward the close to nature methods.
Forest area within protected areas	About half of the protected areas are forests, while the proportion of the forest area is only about 20% that underline that forests represent an outstanding richness of biodiversity in Hungary.	Increase of the area of protected forest is highlighted under conservation of biodiversity.

Other general comments to the table

Other subcompartments (areas in forests serving forest management purposes) have no designations in National Forest Database, but can belong to N2000 network or can have reserve status. In category of "forest area within protected areas" the sum of forest subcompartments and other subcompartments are reported.

7. What is the area of forest affected by woody invasive species?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

7.1 Categories and definitions

Category	Definition
Invasive species	Species that are non-native to a particular ecosystem and whose introduction and spread cause, or are likely to cause, socio-cultural, economic or environmental harm or harm to human health.

7.2 National data

7.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Database, National Food Chain Safety Office	Area of sub-compartments, tree species	2005-2010	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

7.2.2 Classification and definitions

National class	Definition
N/A	N/A

7.2.3 Original data

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7.3 Analysis and processing of national data

7.3.1 Adjustment

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7.3.2 Estimation and forecasting

7.3.3 Reclassification

7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
<i>Fraxinus pennsylvanica</i>	7.4	7.6
<i>Acer negundo</i>	2.3	3.2
<i>Celtis occidentalis</i>	1.2	2.3
<i>Elaeagnus angustifolia</i>	2.4	2.1
<i>Ailanthus altissima</i>	1.3	1.8
<i>Prunus serotina</i>	0.9	1.4
<i>Morus alba</i>	0.1	0.1
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
Total	15.6	18.5

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 3	Tier 3

Tier Criteria

Category	Tier for status	Tier for reported trend
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Invasive species	Tier 3: Systematic assessment in forest inventory or other survey (e.g. by conservation department) within the last 5 years) Tier 2: Systematic assessment in forest inventory or other survey (e.g. by conservation department conducted more than 5 years ago) Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
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7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	The Hungarian National Forest Database (NFD) register tree species within a sub-compartment in case the species composition is at least 5%, both on tree- and shrub-level. Divergence between FRA 2010 & 2015: results of 2010 were derived from another datasource: the National Forest Inventory (also referred as National Forest Damage Registry System as its predecessor DB), is a systematic sampling inventory. <i>Amorpha fruticosa</i> is also considered invasive species, but NFD does not include information on its area.	N/A

Other general comments to the table

N/A

8. How much forest area is damaged each year?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

8.1 Categories and definitions

Category	Definition
Number of fires	Number of fires per year
Burned area	Area burned per year
Outbreaks of insects	A detectable reduction in forest health caused by a sudden increase in numbers of harmful insects.
Outbreaks of diseases	A detectable reduction in forest health caused by a sudden increase in numbers of harmful pathogens, such as bacteria, fungi, phytoplasma or virus.
Severe weather events	Damage caused severe weather events, such as snow, storm, drought, etc.

8.2 National data

8.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Damage Registry System or its predecessor DB, Forest Research Institute	Forest damage	2012-2013	The system has changed in 2012.
2	National Forest Fire Information System and its predecessor DB, National Food Chain Safety Office	Forest fires	2003-2012	The system has changed in 2011.
3	MODIS	Total land area burned	2003-2012	N/A
4	N/A	N/A	N/A	N/A

8.2.2 Classification and definitions

National class	Definition
Forest health	same as FRA
Forest fire	same as FRA
N/A	N/A
N/A	N/A

8.2.3 Original data

8.3 Analysis and processing of national data

8.3.1 Adjustment

8.3.2 Estimation and forecasting

8.3.3 Reclassification

8.4 Data

Table 8a

Category		000 ha, number of fires									
		2003		2004		2005		2006		2007	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	29.41	N/A	27.38	N/A	6.06	N/A	8.9	N/A	19.23	N/A
	... of which forest area burned	1.054	375	0.354	104	3.53	979	0.625	97	2.057	275
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	24.62	N/A	24.83	N/A	6.47	N/A	9.92	N/A	70.03	N/A
	... of which forest area burned	0.402	174	0.845	327	0.239	69	1.189	588	4.303	1070

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
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1	Lymantria dispar - egg-batch	2012	11.7
1	Lymantria dispar - caterpillar	2012	7
1	Lymantria dispar - egg-batch	2013	7.8
2	pine dieback (general term referring to tree decline, caused by complex reasons: insects, fungi and drought)	2012	1.6
2	pine dieback (general term referring to tree decline, caused by complex reasons: insects, fungi and drought)	2013	1.7
3	drought (pine)	2012	3.2
3	drought (pine)	2013	3.9
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Outbreak category

1 Insects

2 Diseases

3 Severe weather events

Tiers

Category	Tier for status	Tier for trend
Area affected by fire	Tier 2	Tier 1
<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	Tier 2	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
Burned area	Tier 3 : National fire monitoring routines Tier 2 : Remote sensing surveys Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	Tier 3 : Systematic survey (e.g. via inventory or aerial damage assessment) Tier 2 : Management records Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
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8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	The new data collecting system from 2007 allows all vegetation fires - that qualified as forest fires by EU definitions – to be recorded in the system. Data on vegetation fires outside forests were not collected in SFS Fire Information System before 2007. Since then some new developments have been carried out for improving the quality of fire data. Total burned area reported through MODIS (provided by FAO).	N/A
Insects	N/A	N/A
Diseases	N/A	N/A
Severe weather events	N/A	N/A

Other general comments to the table

Forest fires: For the period 1990-2001 only the number of forest fires and few data on burned area in state owned forests is available. In 2002 a new data collection method was established by the State Forest Service (SFS) and the Disaster Recovery Service (DRS) In the new system the DRS delivers the location of fires to the SFS, who completes the data with burned area and forest stand information, based on the principles of complementarity and rationality. From the beginning of 2007 this system contains other different data segments on forest fires (such as fuel type of burnt area, data of affected forest sub-compartment, mop-up measures etc.) From 2011 statistics and GIS analyses can be done in the Forest Fire Information System of the forest authority. Gathered fire data are processed and evaluated by size, date, cause, duration of fires and they are compared with traditions in forest management processes and behaviour of visitors and hikers in forest land area. Wildfires (uncontrolled fires) in forests and other vegetation (wildland fires) in Hungary are predominantly caused by humans – about 95% of all known causes. Most fires starts by negligence, only few incidents are caused by arsonists. A typical forest fire cause includes carelessly abandoned camp fires and illicit agricultural fires. Wildland fires in Hungary can be classified in five regimes typically characterized by the prevailing seasonality, type of vegetation affected, size, characteristics and impacts of fire. The number of vegetation fires correlates to weather conditions, fall and fire characterization. Climate change scenarios indicate that despite the efforts made, the number of wildfires are not likely to decrease in the future. The Canadian fire weather index (FWI) adopted and developed by the Joint Research Center of EU Commission was integrated in the fire ban system in 2012. Its values were taken into consideration and they were analyzed throughout the whole fire season supported by JRC.

Forest health: The old system worked till 2011: The law obligated forest managers (up to 200 ha) to report the forest damages annually to the Hungarian Forest Research Institute. This data supply covered about 70% of the total forest area. Linear extrapolation from the 70% to the 100% forest area was not applied considering the site conditions and species composition of the reported 70% and the remaining 30% may differ considerably. Data collection about forest damages changed from 2012. In the new National Forest Damage Registry System the registered forestry professionals report about the recognized damages to the whole country, so there is no need for extrapolation at all.

9. What is the forest area with reduced canopy cover?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

Category	Definition
Reduction in canopy cover	Forest that has undergone a reduction of canopy cover of more than 20% between the years 2000 and 2010 within the forest canopy cover range of 30-80% as detected by the MODIS VCF sensor.

Table 9

Category	Area of forest with reduced canopy cover (000 ha)
Reduction in canopy cover	42.13

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

Tier criteria

Category	Tier for reported trend
Reduction in canopy cover	Tier 3 : Remote sensing with ground truthing and/or Landsat imagery Tier 2 : Remote sensing using Modis (using pre-filled data provided by FAO) Tier 1 : Expert opinion

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	The pre filed data is not verified and detailed explanation can not be provided on national level. However reduced canopy cover is related to fellings (final cuts an thinnings) based on management plans covering the entire forest area. Therefore reduced canopy cover is the normal consequence of sustainable forest management.

Other general comments

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10. What forest policy and regulatory framework exists to support implementation of sustainable forest management SFM?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

10.1 Categories and definitions

Category	Definition
Policies supporting sustainable forest management	Policies or strategies that explicitly encourage sustainable forest management.
Legislation and regulations supporting sustainable forest management	Legislation and regulations that govern and guide sustainable forest management, operations and use.

10.2 National data

10.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Nemzeti Erd#program (National Forest Program)1110\2004 (X. 27.) Korm. határozat (Government decree)	legislation	2004	N/A
2	2009. évi XXXVII. törvény az erd#r#l és az erd#védelm#r#l (Act on forests, forest management and on the protection of forests)	legislation	2009	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

10.2.2 Classification and definitions

National class	Definition
Not applicable	N/A
N/A	N/A
N/A	N/A
N/A	N/A

10.2.3 Original data

10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management	yes	no	no	no
... of which, in <u>publicly</u> owned forests	yes	no	no	no
... of which, in <u>privately</u> owned forests	yes	no	no	no
Legislation and regulations supporting sustainable forest management	yes	no	no	no
... of which, in <u>publicly</u> owned forests	yes	no	no	no
... of which, in <u>privately</u> owned forests	yes	no	no	no

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	National policies cover the whole concept of sustainable forest management and the entire forest area including all ownership categories. Within these policies specific directions exist following the specific problems of a defined area, like private forestry or forest research, however they are elements and integral parts of the whole forest policy concept. Policies of other forestry related sectors like energy, water management, environment protection also interact to forest policies, contributing to the implementation of sustainable forest management.
Legislation and regulations supporting sustainable forest management	See also the explanation provided above (policies supporting SFM). The forest act covers the entire forest area and all ownership categories. However elements of the legislative framework (regulations) may refer exclusively to a defined ownership category or may address defined regions. There is no specific forestry legislation on regional or local level or based on the ownership category.

Other general comments

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11. Is there a national platform that promotes stakeholder participation in forest policy development?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

11.1 Categories and definitions

Category	Definition
National stakeholder platform	A recognized procedure that a broad range of stakeholders can use to provide opinions, suggestions, analysis, recommendations and other input into the development of national forest policy.

11.2 National data

11.2.1 Data sources

	References to sources of information	Years	Additional comments
1	2009. évi XXXVII. törvény az erdészet és az erdő védelméről (Act on forests, forest management and on the protection of forests)	2009	Legislative basis of the Forest Council and additional forums of stakeholder participation
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	N/A	N/A	N/A

Table 11

Is there a national platform that promotes or allows for stakeholder participation in forest policy development?	yes
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11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	Stakeholders are traditionally involved in any processes related to forest policy formulation or preparation of forests related legislation. Special forums are established: - The strategic partnership agreement between the Ministry of Rural Development (responsible for forestry) and the professional organisations (like Association of Hungarian Foresters, Association of Private Forest Owners, Hungarian Federation of Forestry and Wood Industry). - The National Forest Council is the advisory board of the minister responsible for forestry. All important stakeholder groups are represented in the council.

Other general comments

-

12. What is the forest area intended to be in permanent forest land use and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

12.1 Categories and definitions

Category	Definition
Forest area intended to be in permanent forest land use	Forest area that is designated or expected to be retained as forest and is highly unlikely to be converted to other land use.
...of which permanent forest estate (<i>sub-category</i>)	Forest area that is designated by law or regulation to be retained as forest and may not be converted to other land use.

12.2 National data

12.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Stand Database, Forestfy Directorate of the National Food Chain Safety Office	Protective forest, protected forests, wood production forest, other productive forest, health-social and touristic forest, education-research forest, deforestation	1976-2012	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

12.2.2 Classification and definitions

National class	Definition
N/A	N/A

12.2.3 Original data

Deforestations (mainly turn into settlements):	
YEAR	DEFORESTATION (kha)
1990	0,61
1991	0,24
1992	0,13
1993	0,33
1994	0,22
1995	0,36
1996	0,35
1997	0,52
1998	0,40
1999	0,40
2000	0,72
2001	0,52
2002	0,64
2003	0,59
2004	0,94
2005	0,41
2006	0,51
2007	0,25
2008	0,29
2009	0,46
2010	0,21
2011	0,28

2012	0,78
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12.3 Analysis and processing of national data

12.3.1 Adjustment

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12.3.2 Estimation and forecasting

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12.3.3 Reclassification

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12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	2046
	... of which permanent forest estate	2046

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 3
Permanent forest estate	Tier 3

Tier Criteria

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other
Permanent forest estate	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other

12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	In practice, a minimal amount of deforestation (0.5 kha per year) took place (conversions mainly into settlements).
Permanent forest estate	The national forest act protect all forest land. In case the interest of the society requires the conversion, at least the same size of afforestation is obligatory, the forest area can not decrease.

Other general comments

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13. How does your country measure and report progress towards SFM at the national level?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

13.1 Categories and definitions

Category	Definition
Forest area monitored under a national forest monitoring framework	Forest area monitored by a national monitoring framework or systems that provide measurement based periodic monitoring of forest extent and quality.
Forest reporting at national scale	National reporting of forest extent and characteristics that includes some measure of progress toward sustainable forest management.

13.2 National data

13.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Forest report (Erd#beszámoló). Prepared and published by the Forestry Directorate of the National Food Chain Safety Office.	Forest Europe SFM indicators	annually	N/A
2	Annual report of the Minister on the state of forests in Hungary (Miniszteri jelentés az erd#k állapotáról). Prepared by the Forestry Directorate of the National Food Chain Safety Office and the Ministry of Rural Development. Published in the official journal of the ministry.	National set of SFM indicators	annually	N/A
3	Forest stands in Hungary (Magyarország erd#állományai), prepared and published by the State Forest Service (now the Forestry Directorate of the National Food Chain Safety Office).	National set of SFM indicators	1996, 2001, 2006	N/A
4	N/A	N/A	N/A	N/A

13.2.2 Classification and definitions

National class	Definition
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National Forest Database, National Food Chain Safety Office, Forestry Directorate	The forest compartment based national inventory and management planning system covers the entire forest area. Annually 1/10 of the forest area is measured and all inventory data are stored in the National Forest Database (Országos Erd#állomány Adattár).
The Forest Protection Measuring and Monitoring System (FPMMS)	The Forest Protection Measuring and Monitoring System (FPMMS) (Erd#védelmi Mér#- és Megfigyel# Hálózat) also contributes to the reporting on SFM focusing on forest condition (especially health condition). Within the FPMMS a systematic forest inventory system was developed to cross check the traditional inventory data and complement the data collection in the traditional system.
National Statistics System	Some parameters related to SFM are collected through the System of National Statistics (Országos Statisztikai Program, OSAP).
N/A	N/A

13.3 Data

Table 13a

Category	% of total forest area	Most recent year	Check all boxes that apply					
			Continuous	Periodic	Permanent ground plots	Temporary ground plots	Aerial/ remote sensing sample based	Aerial/ remote sensing full coverage
Forest inventory	100	2013	yes	no	no	yes	no	no
Other field assessments	100	2013	yes	no	yes	no	yes	yes
Updates to other sources	N/A	N/A						
Expert estimate	N/A	N/A						

Table 13b

Type of forest reporting used at national scale	Check boxes that apply
1 Criteria and Indicators reporting	yes
2 Periodic national state of the forest report	yes
3 Other (please document)	yes
4 None	

Other type of forest reporting

N/A

13.4 Comments

Category	Comments
1 Criteria and Indicators reporting	The first comprehensive report based on the pan european criteria and indicators of SFM (agreed by the Forest Europe process) was prepared in 2012 (based on the data of 2011). (Annual reports and evaluations are regularly prepared, based on the most important indicators of SFM by the forest authority and the responsible ministry - Ministry of Rural Development).
2 Periodic national state of the forest report	As mentioned above, annual "state of the forests" reports are prepared by the forest authority and the responsible ministry. From 1996 to 2006 Detailed reports were prepared in five years periods.
3 Other (please document)	In the frame of the Forest Protection Measuring and Monitoring System several additional reports are prepared annually like one on forest health condition or an other on forest ecosystem condition.

Other general comments

14. What is the area of forest under a forest management plan and how is this monitored?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

14.1 Categories and definitions

Category	Definition
Forest area with management plan	Forest area that has a long-term documented management plan, aiming at defined management goals which is periodically revised
...of which for production (<i>sub-category</i>)	Forest management plan mainly focused on production
...of which for conservation (<i>sub-category</i>)	Forest management plan mainly focused on conservation
Monitoring of forest management plans	Government monitoring of forest management plan implementation conducted through field visits or audits of forest management plan performance

14.2 National data

14.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Database, National Food Chain Safety Office, Forestry Directorate	Area, primary function	2010	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	2046
... of which for production	1290
... of which for conservation	756

Table 14b

Indicate which (if any) of the following are required in forest management plans in your country	
1 Soil and water management	yes

2 High conservation value forest delineation	yes
3 Social considerations community involvement	yes

Table 14c

Percent of area under forest management plan that is monitored annually	18
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Tiers

Category	Tier for status
Forest area with management plan	Tier 3
Percent of area under forest management plan that is monitored annually	Tier 3

Tier criteria

Category	Tier for status
Forest area with management plan	Tier 3 : Reports that describe national records 5 years old or less that contain long-term forest monitoring plans Tier 2 : Industry or other records indicating the presence of a long-term forest management plan Tier 1 : Other
Percent of area under forest management plan that is monitored annually	Tier 3 : Government documentation of monitoring extent Tier 2 : Reports from forest managers or other documental sources Tier 1 : Other

14.4 Comments

Category	Comments
Forest area with management plan	All forests are covered by regional forest management plans.
Percent of area under forest management plan that is monitored annually	Estimation of "percent of area under forest management plan that is monitored annually": sum of area of: - annually updated forest management plans (205kha) - harvesting (130kha) - afforestation and forestation (initial planting and completion) (38kha) Total forest area (2056kha in 2012)
N/A	N/A

Other general comments

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15. How are stakeholders involved in the management decision making for publicly owned forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

15.1 Categories and definitions

Category	Definition
Stakeholder involvement	Stakeholder involvement is defined as significant inputs into at least one aspect of forest management at the operational scale

Table 15

Please indicate the type of stakeholder involvement in forest management decision making required in your country	
1. Planning phase	yes
2. Operations phase	yes
3. Review of operations	yes

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 3

Tier criteria

Category	Tier for status
Type of stakeholder inputs	Tier 3 : Government (national or sub-national) documentation of stakeholder inputs Tier 2 : Government (national or subnational) requirement but stakeholder inputs not documented Tier 1 : Other

15.2 Comments

Category	Comments
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1, 2, 3	<p>On national level the process is related to the formulation and improvement of forest policy and legislation. As mentioned under question 11 the channels of stakeholders involvement in decision making is well established and documented. On regional level stakeholders inputs are channelled through the management planning process - planning and review of operations - and linked to the forest authority - operations phase. Stakeholders and local citizens are invited to the opening and closing phase of the regional management planning, that also covers the evaluation of the forest management in the preceeding 10 years. During the implementation of the plan - 10 years period - stakeholders can contact the forest authorities in relation to the managemnt of public forests. Thank to the well established consultative forums stakeholders are involved in all levels of decission-making from forest policy formulation and legislation throught the management planning process down to forest management operations.</p>
N/A	N/A
N/A	N/A

Other general comments

-

16. What is the area of forest under an independently verified forest certification scheme?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

16.1 Categories and definitions

Category	Definition
FSC certification	Forest area certified under the Forest Stewardship Council certification scheme
PEFC certification	Forest area certified under the Programme for the Endorsement of Forest Certification scheme
Other international forest management certification	Forest area certified under an international forest management certification scheme with published standards and is independently verified by a third-party, excluding FSC and PEFC certification.
Certified forest area using a domestic forest management certification scheme	Area certified under a forest management certification scheme with published standards that are nationally recognized and independently verified by a thirdparty

16.2 Data

Table 16a

International forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	FSC	0	0	54.7	134.5	134.5	134.5	195.1
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	195.8	195.1	251.9	251.9	248.7	310.3	
	PEFC	0	0	0	0	0	0	
	Other	0	0	0	0	0	0	

Table 16b

Domestic forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
		0	0	0	0	0	0	
		0	0	0	0	0	0	
		0	0	0	0	0	0	

Tier criteria

Category	Tier for status
International forest management certification	Tier 3: International forest management scheme records maintained by the certifying organization for the reporting year Tier 2: International forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other
Domestic forest management certification	Tier 3: National registry reports for domestic forest management certification maintained by the certifying organization for the reporting year Tier 2: Domestic forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other

Tiers

Category	Tier for status
International forest management certification	Tier 2
Domestic forest management certification	Tier 3

16.3 Comments

Category	Comments related to data definitions etc
Certified forest area using an international forest management certification scheme	N/A
Domestic forest management certification	N/A

Other general comments

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17. How much money do governments collect from and spend on forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

17.1 Categories and definitions

Category	Definition
Forest revenue	All government revenue collected from the domestic production and trade of forest products and services. For this purpose revenue include: <ul style="list-style-type: none"> • Goods : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products. • Services : including concession fees and royalties, stumpage payments, public timber sales revenue taxes and charges based on forest area or yield, taxes on domestic trade and export of forest products, special levies on forestry activities and payments into forest related funds, other miscellaneous inspection, licence and administrative fees levied by forest administrations, permit and licence fees for recreation and other forest related activities.
Public expenditure on forestry	All government expenditure on forest related activities.

17.2 National data

17.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	State Assets Management Portfolio, Forestry Section	Forest revenues: rent for state owned forests	2000, 2005	N/A
2	Central Agriculture Office, Forest Directorate	Forest revenues: stumpage price and fines	2000, 2005	N/A
3	Forest Research Institute	Operational expenditure	2000, 2005, 2010	N/A
4	University of West-Hungary, Forestry Faculty	Operational expenditure	2000, 2005, 2010	N/A
5	Ministry of Environment Protection and Water	Operational expenditure	2000, 2005, 2010	N/A
6	Central Agriculture Office, Forestry Directorate	Operational expenditure	2000, 2005, 2010	N/A
7	Central Agriculture Office, Forestry Directorate	Transfer payments	2000, 2005	N/A
8	Ministry of Rural Development	Transfer payments	2010	N/A

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010

Forest revenue	4723958	4019063	N/A
Public expenditure on forestry	7762645	18022574	14561900
	2000	2005	2010
Name of Local Currency	HUF	HUF	HUF

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Only revenues registered by the forest administration are included. It is assumed, that state revenue from forestry sector is considerably higher, however additional types of revenues, including taxes related to wood products are not available and due to the high uncertainty, estimation was not applied.
Public expenditure on forestry	Only transfer payments registered by the forest administration are included.
Other general comments	N/A

Other general comments

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18. Who owns and manages the forests and how has this changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

18.1 Categories and definitions

Category	Definition
Public ownership	Forest owned by the State or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at national scale (<i>sub-category</i>)	Forest owned by the State at the national scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at the sub-national government scale (<i>sub-category</i>)	Forest owned by the State at the sub-national government scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
Private ownership	Forest owned by individuals, families, communities, private cooperatives corporations and other business entities, private, religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.
...of which individuals (<i>sub-category</i>)	Forest owned by individuals and families.
...of which private business entities and institutions (<i>sub-category</i>)	Forest owned by private corporations cooperatives companies and other business entities as well as private nonprofit organizations such as NGOs nature conservation associations, and private religious and educational institutions etc.
...of which local tribal and indigenous communities (<i>sub-category</i>)	Forest owned by a group of individuals belonging to the same community residing within or in the vicinity of a forest area or forest owned by communities of indigenous or tribal people The community members are coowners that share exclusive rights and duties and benefits contribute to the community development.
Unknown ownership	Forest area where ownership is unknown includes areas where ownership is unclear or disputed.
Categories related to management rights of public forests	Definition
Public Administration	The Public Administration (or institutions or corporations owned by the Public Administration) retains management rights and responsibilities within the limits specified by the legislation.
Individuals households	Forest management rights and responsibilities are transferred from the Public Administration to individuals or households through long-term leases or management agreements.
Private companies	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities private cooperatives, private nonprofit institutions and associations, etc., through long-term leases or management agreements.
Communities	Forest management rights and responsibilities are transferred from the Public Administration to local communities (including indigenous and tribal communities) through long-term leases or management agreements.
Other form of management rights	Forests for which the transfer of management rights does not belong to any of the categories mentioned above.

18.2 National data

18.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Database, National Food Chain Safety Office, Forestry Directorate	Total area under forest management plan (total forest area)	1976-2012	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

18.2.2 Classification and definitions

National class	Definition
N/A	N/A

18.2.3 Original data

Same categories like FRA 2010, therefore the data are the same as in the FRA table.

18.3 Analysis and processing of national data

18.3.1 Adjustment

No special calibration was necessary.

18.3.2 Estimation and forecasting

Since figures were available for all reporting years, no estimation and forecasting was needed.

18.3.3 Reclassification

Same categories like FRA 2010, no reclassification.

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	1792	1148	1160	1170
	... of which owned by the state at national scale	1792	1138	1148	1157
	... of which owned by the state at the sub-national government scale	0	10	12	13
	Private ownership	4	769	823	876
	... of which owned by individuals	4	586	781	844
	... of which owned by private business entities and institutions	0	183	42	32
	... of which owned by local, tribal and indigenous communities	0	0	0	0
	Unknown ownership	5	0	0	0
TOTAL		1801.00	1917.00	1983.00	2046.00

Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 3	Tier 3
Private ownership	Tier 3	Tier 3
Unknown ownership	Tier 3	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
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Ownership	Tier 3: National forestry statistics registers of land titles or maps on land ownership or all forest area under one ownership category that is five years old or less. Tier 2: National forestry statistics registers of land titles or maps on land ownership or questionnaires that are more than five years old. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
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Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	1792	1142	1151	1153
Individuals	0	1	1	6
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	5	8	11
TOTAL	1792.00	1148.00	1160.00	1170.00

Category	Tier for reported trend	Tier for status
Public Administration	Tier 3	Tier 3
Individuals	Tier 3	Tier 3
Private companies	Tier 3	Tier 3
Communities	Tier 3	Tier 3
Other	Tier 2	Tier 2

18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	N/A	Decrease is due to the restitution after 1990. Small change of data in year 2000 compared to FRA 2005 is because of some minor changes in classification of some cooperatives (corrections in the database).

Private ownership	N/A	Increase is primarily due to the restitution after 1990. An additional increase of the private forest area is related to the intensive afforestation. Methodological change from FRA 2010: reclassification of forest owned by municipal governments from 18.2.3. (Private ownership of which owned by local, tribal and indigenous communities) into 18.1.2 (Public ownership of which owned by the state at the sub-national government scale).
Unknown ownership	N/A	The trend is related to the disturbances in information after the restitution process between 1990 and 2000. The newly established private ownerships were not perfectly documented and it is visible, that by 2005 the database improved and nearly all forest land can be correctly classified and grouped into the FRA 2010 classes.
Management rights	N/A	The management rights of private corporations and institutions disappeared after 1990 due to the restitution.

Other general comments to the table

After the changes in political structure in 1990 a land restitution process has started in Hungary. This process made changes in the ownership structure of the forests. The implication of the privatization process in forestry can be timely located between the two reporting years with small cross-effects in the period after 2000.

19. How many people are directly employed in forestry?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

19.1 Categories and definitions

Category	Definition
Full-time equivalents (FTE)	A measurement equal to one person working full-time during a specified reference period.
Employment in forestry	Employment in activities related to production of goods derived from forests. This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

19.2 National data

19.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Central Statistical Office and EUROSTAT	employment, gender	2000-2010	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

19.2.2 Classification and definitions

National class	Definition
Employment	Source for all data is the Eurostat Labour Force Survey (LFS).
N/A	N/A
N/A	N/A
N/A	N/A

19.2.3 Original data

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19.3 Data

Table 19

Category	Employment (000 years FTE)
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		1990	2000	2005	2010
	Employment in forestry	24.29	18.11	15.07	16.26
	... of which female	N/A	2.79	2.34	2.55

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	Data for the year 1990 refers to employed workers in state forest management only. State forests covered 69.0% of the total forests of Hungary in 1990. For the rests of forest no data is available to this year	Declining employment in the sector is related to the restitution and economical restructuring.

Other general comments to the table

Unlike FRA 2005, employment of primary wood industry is not included.

20. What is the contribution of forestry to Gross Domestic Product (GDP)?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

20.1 Categories and definitions

Category	Definition
Gross value added from forestry (at basic prices)	This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

20.2 Data

Table 20 (Pre-filled data from UNdata/EUROSTAT)

Category	Million	Currency	Year for latest available information
Gross value added from forestry (at basic prices)	59908	Hungarian forint (HUF)	2012

20.3 Comments

Category	Comments
-	N/A

Other general comments

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21. What is forest area likely to be in the future

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

21.1 Categories and definitions

Category	Definition
Government target/aspiration for forest area	Government target/aspiration for forest area for a specific year.
Forests earmarked for conversion	Forest area that is allocated/classified or scheduled to be converted into non-forest uses.

21.2 National data

21.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Afforestation Program. Prepared by the ministry of Agriculture and Rural Development. (http://erdo.kormany.hu/download/a/6a/20000/Nemzeti%20Erd#telepítési%20Program%20-%202008.pdf)	forest area/other land use categories	2007	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	2110	2220

Table 21b

Category	Forest area (000 ha)
	2013

Forests earmarked for conversion	0.4
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21.4 Comments

Category	Comments
Government target/aspiration for forest area	The National Afforestation Program sets a target of 27% forest cover (compared to the actual 20,8%) by 2050-2060, outlining an intensive afforestation in the forthcoming decades. Due to the limitations of financial resources and other factors, longer period is foreseen to reach the desired target. Intensity of afforestation is dominantly depending on the attractiveness of incentives that is difficult to predict, therefore the estimations are below the ambitions of the National Afforestation Program. Unfavourable effects of climate change may considerably affect existing forests and afforestations further reducing the desired increase of the forest area.
Forests earmarked for conversion	Estimation is based on the trends in the previous years.

Other general comments

Table 21b - Forest conversion in 2013 was about 400 hectares in line with the trend. Most cases the conversion is compensated by afforestation, therefore the conversion does not reduce the forest area.
