GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

The former Yugoslav Republic of Macedonia

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

No report has been received from the country. This report is the result of a desk study prepared by the FRA secretariat in Rome, which is based on the existing available information using the established format for FRA 2015/CFRQ format.

Desk Study?

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

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 *(sub-category)*	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 *(sub-category)*	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 *(sub-category)*	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 *(sub-category)*	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 *(sub-category)*	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	Statistical review: Agriculture, 5.4.5.03 504 Forestry State Statistical Office Republic of Macedonia	Forest	1990, 2000	N/A

2	Special Plan for Forest Management	OL,OWL	1990,2000, 2005	N/A
3	UN Official country Areas	Total Area, Land Area, Inland Water	1990, 2000, 2005	N/A
4	PE "Macedonian Forests" 10 year Report 1998-2008	Reforestation	2000 2005	N/A
5	Program for extended reproduction	Reforestation	2000 2005	N/A
6	Statistical review: Agriculture, 319 Forestry State Statistical Office	Reforestation	1990	N/A

1.2.2 Classification and definitions

National class	Definition
Forest	Forest, as defined in Macedonian law, is forest ecosystem spanning on forest land with forest types of trees and bushes, forest moor lands and meadows, forest roads, forest nurseries, forest fire breaks, wind breaks and other areas closely related to forests, on area larger than 0,2 hectares including forest in protected areas.
Other land	All land that is not classified as "Forest" or "Other wooded land".
Other wooded land	As defined in the Law, alleys, plantations with fast-growing types of trees, parks with populated areas, field protection belts, protective vegetation in the coastal belts of the water flows outside from the forests, isolated groups of forest trees on area of maximum 2 acres, and border trees between agricultural land are not considered forests.
Afforestation	The same as FRA 2010
Reforestation	The same as FRA 2010

1.2.3 Original data

Data for 1990 and 2000 are presented directly in the reporting table. Data for 2005, 2010 and 2015 are estimates.

The data for reforestation and afforestation were reported together. Data for 1990 was reforestation only from one year, data for 2000 was an average for 4 years period (1999, 2000, 2001, 2002), data for 2005 represented a 5-year period.

Lacking new information, the area of forested land was assumed to be constant from 2010 to 2015.

1.3 Analysis and processing of national data

1.3.1 Adjustment

The inland water area from FAO STAT differed from the 28,000 ha previously reported in table 1a. The current FAO STAT inland water area of 49,000 ha was put in table 1a and 21,000 ha was subtracted from the Other Land category, keeping the total country area at 2,571,000 ha.

The forest area figures were not changed and no further adjustments were made.

1.3.2 Estimation and forecasting

1.3.3 Reclassification

1.4 Data
Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
CFRQ	Forest	912	958	975	998	998
CFRQ	Other wooded land	143	143	143	143	143
CFRQ	Other land	1467	1421	1404	1381	1381
CFRQ	... of which with tree cover	N/A	N/A	N/A	N/A	N/A
CFRQ	Inland water bodies	49	49	49	49	49
	TOTAL	2571.00	2571.00	2571.00	2571.00	2571.00

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
CFRQ	Forest expansion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which afforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which natural expansion of forest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CFRQ	Deforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

CFRQ	... of which human induced	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CFRQ	Reforestation	3.981	1.8405	1.3344	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which artificial	3.981	1.8405	1.3344	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 1	Tier 1
Other wooded land	Tier 2	Tier 2
Forest expansion	N/A	N/A
Deforestation	N/A	N/A
Reforestation	Tier 2	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
• Forest • Other wooded land • Afforestation • Reforestation • Natural expansion of forest • Deforestation	**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	**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

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	Forest, as defined in Macedonian law, is forest ecosystem spanning on forest land with forest types of trees and bushes, forest moor lands and meadows, forest roads, forest nurseries, forest fire breaks, wind breaks and other areas closely related to forests, on area larger than 0,2 hectares including forest in protected areas.	The reported data for forest area are official, but the real area of forests is estimated for about 1 million hectares. No inventory is made. For 2015 we assume the forest area is constant.
Other wooded land	As defined in the Law, alleys, plantations with fast-growing types of trees, parks with populated areas, field protection belts, protective vegetation in the coastal belts of the water flows outside from the forests, isolated groups of forest trees on area of maximum 2 acres, and border trees between agricultural land are not considered forests.	In absence of data for 1990 we assume that this area is constant.
Other land	All land that is not classified as "Forest" or "Other wooded land".	For 2015 we assume the area has remained constant since 2010.

Other land with tree cover	No data available	N/A
Inland water bodies	No data available	N/A
Forest expansion	No data available	N/A
Deforestation	No data available	N/A
Reforestation	The data for reforestation and afforestation are reported together. The afforestation is only on bare land as a part of the area within the forest, which is very small. Data for 1990 is reforestation only from one year, data for 2000 is an average for 4 years period (1999, 2000, 2001, 2002), data for 2005 represents 5-year period.	For 2015 we assume the area has remained constant since 2010.

Other general comments to the table
There were no forecasts made for 2015, rather 2010 estimates were carried forward on the assumption of stable conditions.

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 (sub-category)	Other naturally regenerated forest where the trees are predominantly of introduced species.
...of which naturalized (sub-sub category)	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 (sub-category)	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 (sub-category)	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	Expert evaluation	All	2005	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

2.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

2.2.3 Original data

No original data are presented.

2.3 Analysis and processing of national data

2.3.1 Adjustment

2.3.2 Estimation and forecasting

2.3.3 Reclassification

2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
CFRQ	Primary forest	0	0	0	0	0
CFRQ	Other naturally regenerated forest	807	853	870	893	893
CFRQ	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which naturalized	N/A	N/A	N/A	N/A	N/A
CFRQ	Planted forest	105	105	105	105	105

CFRQ	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
TOTAL		912.00	958.00	975.00	998.00	998.00

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
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 2c

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

Tiers

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

Tier Criteria

Category	Tier for status	Tier for reported trend
Primary forest/Other naturally regenerated forest/Planted forest	**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 **Tier 2** : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years) **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

2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend

Primary forest	Experts opinion: Naturally regenerated forests of native species are on very small parcels with no road network. No data is available on the total area, thus areas that could be classified as "primary forest" are reported within category "Other naturally regenerated forest".	N/A
Other naturally regenerating forest	Reporting based on expert opinion: Area of naturally regenerated forest where there are clearly visible indications of human activities is calculated as a difference between "Total forest area" and area of "Planted forest". Reported values comprise also areas that could be classified as "Primary forest".	Based on current situation
Planted forest	Experts opinion: Forest predominantly composed of trees established through planting and/or deliberate seeding are on about 105.000ha .	Based on current situation. No data on trend of this category.
Mangroves	N/A	N/A

Other general comments to the table
No inventory data available for reporting on this table, all reported values basis on expert assessments and may significantly differ from the real situation. There were no forecasts made for 2015, rather 2010 estimates were carried forward on the assumption of stable conditions. Note that the change in forest area reported from 1990 to 2000 was 5.4%, higher than the range check of 3.0%. The following periodic change was 1.9% and 2.6%.

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	Year Report PE "Macedonian Forests"	Total Growing Stock	2000, 2005 2008	N/A
2	Experts opinion	Dead wood	2000	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

3.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

3.2.3 Original data

Data for 2000 and 2005 are presented directly in the reporting table below.

We have no additional data for 2015 estimates so the 2010 estimates were carried forward, assuming stable conditions.

3.3 Analysis and processing of national data

3.3.1 Adjustment

No further adjustments were made in 2015.

3.3.2 Estimation and forecasting

There were no forecasts made for 2015, rather 2010 estimates were carried forward on the assumption of stable conditions. Below are the methods previously used for estimating and forecasting in 2010.

Biomass:

All coefficients received form the FRA Guidelines for Country Reporting - Temperate continental forest

Above ground biomass for 2000, 2005 and 2010 (Table 5.4)

BCEF for hardwoods, stocking level class (41-100 m3/ha) – 1.4

BCEF for conifers (pines), stocking level class (41-100 m3/ha) – 0.75

Calculation of AGB for 2000

AGB hardwood = GS x BCEF = 70.25 x 1.4 = 98.4

AGB conifers = GS x BCEF = 8.64 x 0.75 = 6.5

AGB total = 104.8

Calculation of AGB for 2005

AGB hardwood = GS x BCEF = 68.75 x 1.4 = 96.3

AGB conifers = GS x BCEF = 7.63 x 0.75 = 5.7

AGB total = 102.0

Calculation of AGB for 2010

AGB hardwood = GS x BCEF = 68.77 x 1.4 = 96.3

AGB conifers = GS x BCEF = 7.64 x 0.75 = 5.7

AGB total = 102.0

Above ground biomass for 1990

BCEF for total growing stock was calculated basing on analogical proportion derived for 2000 – 1.33

AGB total 2000 / GS total 2000 * GS total 1990 = 104.8 / 78.89 * 76.29 = 101.4

Below ground biomass for volume of known tree species in 2000 (Table 5.3)

R for Quercus spp, AGB (>70 t/ha) – 0.30 * 19.9 = 6.0

R for other broadleaf, AGB (75-150 t/ha) – 0.23 * 46.3 = 10.6

R for conifers, AGB (50-150 t/ha) – 0.29 * 7.9 = 2.3

R for volume of known tree species in 2000

BGB total/ GS total = (6.0 + 10.6 + 2.3) / (19.9 +46.3+7/9) = 18.9 / 74.0 =0.26

Below ground biomass for 1990, 2000, 2005 and 2010

R for total growing stock was calculated basing on proportion derived for species composition in 2000 – **0.26**

Calculation of BGB for 1990

BGB = AGB x R = 101.4*0.26 = 26.4

Calculation of BGB for 2000

BGB = AGB x R = 104.8*0.26 = 27.3

Calculation of BGB for 2005

BGB = AGB x R = 102.0*0.26 = 26.5

Calculation of BGB for 2010

BGB = AGB x R = 102.0*0.26 = 26.5

Carbon:

The applied factor is the default global carbon fraction recommended by IPCC (FRA Guidelines) – 0.47

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
CFRQ	Total growing stock	76.29	78.89	76.38	76.41	76.41	N/A	N/A	N/A	N/A	N/A

		N/A	8.64	7.63	7.64	7.64	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which coniferous	N/A	8.64	7.63	7.64	7.64	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which broadleaved	N/A	70.25	68.75	68.77	68.77	N/A	N/A	N/A	N/A	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	Fagus sylvatica	Beech	N/A	46.27	N/A	N/A
2 nd	Querqus spp.	Oak	N/A	19.86	N/A	N/A
3 rd	Pinus spp.	Pine	N/A	6.3	N/A	N/A
4 th	Abies alba	Fir	N/A	1.59	N/A	N/A
5 th	N/A	N/A	N/A	N/A	N/A	N/A
6 th	N/A	N/A	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A	N/A	N/A
Remaining			N/A	4.87	N/A	N/A
TOTAL			.00	78.89	.00	.00

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)	10	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	2.5	N/A
Minimum diameter (cm) of branches included in growing stock (W)	2.5	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
CFRQ	Net annual increment	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which coniferous	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which broadleaved	N/A	N/A	N/A	N/A	N/A

Table 3d

Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
CFRQ	Above ground biomass	101.4	104.8	102	102	102	N/A	N/A	N/A	N/A	N/A
CFRQ	Below ground biomass	26.4	27.3	26.5	26.5	26.5	N/A	N/A	N/A	N/A	N/A
CFRQ	Dead wood	N/A	0.23	0.16	0.94	0.94	N/A	N/A	N/A	N/A	N/A
TOTAL		127.80	132.33	128.66	129.44	129.44	.00	.00	.00	.00	.00

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
CFRQ	Carbon in above ground biomass	47.7	49.3	47.9	47.9	47.9	N/A	N/A	N/A	N/A	N/A
CFRQ	Carbon in below ground biomass	12.4	12.8	12.5	12.5	12.5	N/A	N/A	N/A	N/A	N/A

CFRQ	*Subtotal Living biomass*	60.1	62.1	60.4	60.4	60.4	N/A	N/A	N/A	N/A	N/A
CFRQ	Carbon in dead wood	N/A	0.11	0.08	0.44	0.44	N/A	N/A	N/A	N/A	N/A
CFRQ	Carbon in litter	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CFRQ	*Subtotal Dead wood and litter*	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CFRQ	Soil carbon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		60.10	62.21	60.48	60.84	60.84	.00	.00	.00	.00	.00

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 1	Tier 1
Net annual increment	N/A	N/A
Above ground biomass	Tier 1	Tier 1
Below ground biomass	Tier 1	Tier 2
Dead wood	Tier 1	Tier 1
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
• 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	Growing stock refers only on state owned forests for economical use. Forests in National Parks are not included	N/A
Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	N/A	N/A
Net annual increment	N/A	N/A
Above-ground biomass	N/A	N/A
Below-ground biomass	N/A	N/A
Dead wood	Amount of non-living biomass 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	In lack of data for 2005 experts used the data of 2002
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

Other general comments to the table
N/A

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	State Statistical Office	Production	1990,2000,2005	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	Forest area designated primarily for production of wood and non-wood forest products.
N/A	N/A

N/A	N/A
N/A	N/A

4.2.3 Original data

Original data are reported directly in the tables below.

No original data are available for 2010 or 2015.

4.3 Analysis and processing of national data

4.3.1 Adjustment

4.3.2 Estimation and forecasting

4.3.3 Reclassification

4.4 Data

Table 4a

Categories		Forest area (000 hectares)				
		1990	**2000**	**2005**	**2010**	**2015**
CFRQ	Production forest	804	804	804	804	804
CFRQ	Multiple use forest	0	0	0	0	0

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 beewax
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	N/A	N/A
1991	N/A	N/A
1992	N/A	N/A
1993	N/A	N/A
1994	N/A	N/A
1995	N/A	N/A
1996	N/A	N/A
1997	N/A	N/A
1998	N/A	N/A
1999	N/A	N/A
2000	N/A	N/A
2001	N/A	N/A
2002	N/A	N/A
2003	N/A	N/A
2004	N/A	N/A
2005	N/A	N/A
2006	N/A	N/A
2007	N/A	N/A
2008	N/A	N/A
2009	N/A	N/A
2010	N/A	N/A

2011	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 2	Tier 2
Multiple use forest	Tier 2	Tier 2

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	N/A	N/A
Multiple use forest	N/A	N/A
Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

Other general comments to the table
Pursuant to the purpose, forests can be used for economic and special purpose. The forests for economic purpose are forest used primarily for permanent production of wood varieties and other wood products. Forests designated for production also contribute to all the other mentioned purposes. Insufficient inventory data makes more detailed classification impossible. Forests for special purpose are forests which are considered natural rareness and beauty and forest which are primarily used for: land protection, populated areas, water flows and reservoirs, traffic arteries, economic, infrastructural and other facilities, protection and growing rare types of forest trees and game animals, and also for rest, sports and recreation, celebrating important historic events, scientific, teaching, educational, defence and other purposes. Forests for special purpose can be defined as: forests in national parks, protective forests, forest and hunting reserves, forest parks, memorial forests, forests for production of forest seeds, picnic areas and forests for teaching, educational and defence purposes.

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 *(sub-category)*	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 *(sub-category)*	Forest area primarily designated or managed for coastal stabilization.
...of which desertification control *(sub-category)*	Forest area primarily designated or managed for desertification control.
...of which avalanche control *(sub-category)*	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 *(sub-category)*	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 *(sub-category)*	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 *(sub-category)*	Forest area designated or managed for public recreation.
...of which carbon storage or sequestration *(sub-category)*	Forest area designated or managed for carbon storage or sequestration.
...of which spiritual or cultural services *(sub-category)*	Forest area designated or managed for spiritual or cultural services.
...of which other *(sub-category)*	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	N/A	N/A	N/A	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
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

5.2.3 Original data

No recent or past data are available for making these estimates. This section will be left blank.

5.3 Analysis and processing of national data

5.3.1 Adjustment

5.3.2 Estimation and forecasting

5.3.3 Reclassification

5.4 Data

Table 5a

Categories			Forest area (1000 hectares)				
			1990	2000	2005	2010	2015
	CFRQ	Protection of soil and water	N/A	N/A	N/A	N/A	N/A
	CFRQ	... of which production of clean water	N/A	N/A	N/A	N/A	N/A

CFRQ	... of which coastal stabilization	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which desertification control	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which avalanche control	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which erosion, flood protection or reducing flood risk	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Other
N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	**2000**	**2005**	**2010**	**2015**
Ecosystem services, cultural or spiritual values	N/A	N/A	N/A	N/A	N/A
...of which public recreation	N/A	N/A	N/A	N/A	N/A
...of which carbon storage or sequestration	N/A	N/A	N/A	N/A	N/A
...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)	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for reported trend	Tier for status
Protection of soil and water	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A

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
• 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	N/A	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	N/A	N/A
Other protective functions	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A
Public recreation	N/A	N/A
Carbon storage or sequestration	N/A	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	N/A	N/A

Other general comments to the table
No recent or past data are available for making these estimates in 2015. This section will be left blank.

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	N/A	N/A	N/A	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
N/A	N/A
N/A	N/A
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

6.3.3 Reclassification

6.4 Data
Table 6

Categories		Forest area (000 hectares)				
		1990	**2000**	**2005**	**2010**	**2015**
CFRQ	Conservation of biodiversity	N/A	N/A	N/A	N/A	N/A
CFRQ	Forest area within protected areas	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	N/A	N/A
Forest area within protected areas	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
• Conservation of biodiversity • Forests within protected areas	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	**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

6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	N/A	N/A
Forest area within protected areas	N/A	N/A

Other general comments to the table
Previous comments :Pursuant to the purpose, forests can be used for economic and special purpose. The forests for economic purpose are forest used primarily for permanent production of wood varieties and other wood products. Forests designated for production also contribute to all the other mentioned purposes. Insufficient inventory data makes more detailed classification impossible. Forests for special purpose are forests which are considered natural rareness and beauty and forest which are primarily used for: land protection, populated areas, water flows and reservoirs, traffic arteries, economic, infrastructural and other facilities, protection and growing rare types of forest trees and game animals, and also for rest, sports and recreation, celebrating important historic events, scientific, teaching, educational, defence and other purposes. Forests for special purpose can be defined as: forests in national parks, protective forests, forest and hunting reserves, forest parks, memorial forests, forests for production of forest seeds, picnic areas and forests for teaching, educational and defence purposes. No recent or past data are available for making these estimates in 2015. This section will be left blank.

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	N/A	N/A	N/A	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
N/A	N/A
N/A	N/A
N/A	N/A

7.2.3 Original data

7.3 Analysis and processing of national data

7.3.1 Adjustment

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
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
Total	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	N/A	N/A

Tier Criteria

Category	Tier for status	Tier for reported trend

| 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 |

7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	N/A	N/A

Other general comments to the table
No recent or past data are available for making these estimates in 2015. This section will be left blank.

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	Annual reports on health conditions of forests in Macedonia, 1988-2007, Faculty of Forestry	Disturbance by insects	1990, 2000, 2005	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

8.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

8.2.3 Original data

No original data was presented from the 2010 or earlier reports, nor is there further description of the annual forest health assessments cited as the source of this information. It appears that only insect outbreaks were included.

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	5.28	N/A	6.2	N/A	7.54	N/A	6.22	N/A	45.22	N/A
... of which forest area burned	0.44	N/A	0.21	N/A	0.08	N/A	0.35	N/A	0.5	N/A
Category	2008		2009		2010		2011		2012	
	000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
Total land area burned	14.95	N/A	1.32	N/A	7.92	N/A	29.61	N/A	18.28	N/A
... of which forest area burned	0.31	N/A	0.08	N/A	0.44	N/A	0.38	N/A	0.33	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	N/A	2004	29.3
1	N/A	1997	41.8
1	N/A	1997	41.8
1	N/A	1997	49.9
1	N/A	1994	14
1	N/A	2001	26.5
1	N/A	1997	1.67
1	N/A	2001	2.26
1	N/A	2003	2.76
1	N/A	constant	3

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 2
• Insects • Diseases • Severe weather events	Tier 1	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

| • 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 |

8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	N/A	N/A
Insects	Tier 1 due to the lack of original data or description of the data.	N/A
Diseases	N/A	N/A
Severe weather events	N/A	N/A

Other general comments to the table
N/A

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	N/A

Tiers

Category	Tier for reported trend
Reduction in canopy cover	N/A

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	N/A

Other general comments

No recent or past data are available for making these estimates in 2015. This section will be left blank.

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	N/A	N/A	N/A	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

10.2.2 Classification and definitions

National class	Definition
N/A	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				
... of which, in publicly owned forests				
... of which, in privately owned forests				
Legislation and regulations supporting sustainable forest management				
... of which, in publicly owned forests				
... of which, in privately owned forests				

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	N/A
Legislation and regulations supporting sustainable forest management	N/A

Other general comments

No recent or past data are available for making these estimates in 2015. This section will be left blank.

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	N/A	N/A	N/A
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?	

11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	N/A

Other general comments

No recent or past data are available for making these estimates in 2015. This section will be left blank.

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 *(sub-category)*	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	No data cited but a permanent forest estate area was reported in 2010.	N/A	N/A	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
N/A	N/A
N/A	N/A
N/A	N/A

12.2.3 Original data

12.3 Analysis and processing of national data

12.3.1 Adjustment

12.3.2 Estimation and forecasting

12.3.3 Reclassification

12.4 Data
Table 12

Categories		Forest area 2010 (000 ha)
CFRQ	Forest area intended to be in permanent forest land use	918
CFRQ	... of which permanent forest estate	918

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 1
Permanent forest estate	Tier 1

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	N/A

Permanent forest estate	By Constitution and by Law Forests are managed in a manner which permanently preserves their area and increase their value, to enable the largest increase according to the natural conditions and to preserve and improve their productive and generally beneficial functions. State forests cannot be sold

Other general comments

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	N/A	N/A	N/A	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

13.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
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	N/A	N/A						
Other field assessments	N/A	N/A						
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	
2 Periodic national state of the forest report	
3 Other (please document)	
4 None	

Other type of forest reporting
N/A

13.4 Comments

Category	Comments
N/A	N/A
N/A	N/A
N/A	N/A

Other general comments

No recent or past data are available for making these estimates in 2015. This section will be left blank.

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 *(sub-category)*	Forest management plan mainly focused on production
...of which for conservation *(sub-category)*	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	No national data is cited but an area of forest under management plans was reported in 2010.	N/A	N/A	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	918
... of which for production	N/A
... of which for conservation	N/A

Table 14b

Indicate which (if any) of the following are required in forest management plans in your country

1 Soil and water management	
2 High conservation value forest delineation	
3 Social considerations community involvement	

Table 14c

Percent of area under forest management plan that is monitored annually	N/A

Tiers

Category	Tier for status
Forest area with management plan	Tier 1
Percent of area under forest management plan that is monitored annually	N/A

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 with the Management Plans are managed in a sustainable way
N/A	N/A
N/A	N/A

Other general comments

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	
2. Operations phase	
3. Review of operations	

Tiers

Category	Tier for status
Type of stakeholder inputs	N/A

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
N/A	N/A
N/A	N/A
N/A	N/A

Other general comments

No recent or past data are available for making these estimates in 2015. This section will be left blank.

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
CFRQ	FSC	0	0	0	0	0	0	0
CFRQ	PEFC	0	0	0	0	0	0	0
CFRQ	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
CFRQ	FSC	0	0	0	0	0	0	
CFRQ	PEFC	0	0	0	0	0	0	
CFRQ	Other	0	0	0	0	0	0	

Table 16b

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

		2007	2008	2009	2010	2011	2012	
CFRQ		0	0	0	0	0	0	
CFRQ		0	0	0	0	0	0	
CFRQ		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	N/A
Domestic forest management certification	N/A

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

No recent or past data are available for making these estimates in 2015. This section will be left blank.

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: • 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	Yearly financial report, PEMF	Forest revenue	2000 2005	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

17.3 Data
Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	**2005**	**2010**
Forest revenue	2231616	2037195	N/A
Public expenditure on forestry	N/A	N/A	N/A

	2000	2005	2010
Name of Local Currency	Macedonian Denar	Macedonian Denar	Macedonian Denar

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	We assume that past revenue figures are reported in Macedonian Denars as instructed. No estimates available for 2015.
Public expenditure on forestry	N/A
Other general comments	N/A

Other general comments

We chose not to carry forward the 2010 forest revenue estimate to 2015, so 2015 is considered not available.

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 (sub-category)	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 (sub-category)	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 (sub-category)	Forest owned by individuals and families.
...of which private business entities and institutions (sub-category)	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 (sub-category)	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	Statistical review: Agriculture, 5.4.5.03 504 Forestry State Statistical Office Republic of Macedonia 1997-2004	Public ownership	1990, 2000, 2005	N/A
2	Statistical review: Agriculture, 5.4.5.03 504 Forestry State Statistical Office Republic of Macedonia 1997-2004	Private ownership	1990, 2000, 2005	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
Public ownership	As defined in the Law: Managing the forests in state ownership for economic and protective purpose, is perform by public enterprise for forest management Macedonian Forests
Private ownership	Forests in private ownership are managed by their owners, association of private forest owners and licensed legal and physical entities .
N/A	N/A
N/A	N/A

18.2.3 Original data

As reported directly in the reporting tables below. All areas under private ownership are owned by individuals. All publicly owned forests are managed by the public administration.

2010 figures were carried forward for 2015, assuming no change.

18.3 Analysis and processing of national data

18.3.1 Adjustment

18.3.2 Estimation and forecasting

18.3.3 Reclassification

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	**2000**	**2005**	**2010**
CFRQ	Public ownership	818	864	881	904
CFRQ	... of which owned by the state at national scale	N/A	N/A	N/A	N/A
CFRQ	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A
CFRQ	Private ownership	94	94	94	94
CFRQ	... of which owned by individuals	94	94	94	94
CFRQ	... of which owned by private business entities and institutions	0	0	0	0
CFRQ	... of which owned by local, tribal and indigenous communities	0	0	0	0
CFRQ	Unknown ownership	0	0	0	0
TOTAL		912.00	958.00	975.00	998.00

Tiers

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

Tier criteria

Category	Tier for status	Tier for reported trend
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

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	**2000**	**2005**	**2010**
Public Administration	818	864	881	904
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	818.00	864.00	881.00	904.00

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

18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	N/A	N/A
Private ownership	N/A	It is expected that the forest in private ownership will rise up to 20% (currently is about 10%) with the process on denationalisation

Unknown ownership	Not applicable. The Forests in the Law are defined as in private and state property. No other classifications exist.	N/A
Management rights	N/A	N/A

Other general comments to the table
N/A

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	Department for Human resources in PE Macedonian Forest	1990,2000,2005	N/A	N/A
2	Department for Human resources in the Ministry of Environment and Physical Planning	1990,2000,2005	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
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

19.2.3 Original data

19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	**2000**	**2005**	**2010**
CFRQ	Employment in forestry	4.315	3.036	2.597	N/A
CFRQ	... of which female	N/A	N/A	N/A	N/A

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	The data are for Public Enterprise Macedonian Forests only. No data are available for self-employment in forestry	N/A

Other general comments to the table
We chose not to carry forward the 2005 figures to 2010.

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)	1349	TFYR Macedonian Denar	2009

20.3 Comments

Category	Comments
N/A	N/A

Other general comments

No changes made for FRA 2015; no new information provided since the 2009 figure.

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	N/A	N/A	N/A	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	N/A	N/A

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	N/A

21.4 Comments

Category	Comments
Government target/aspiration for forest area	N/A

Forests earmarked for conversion	N/A

Other general comments

No recent or past data are available for making these estimates in 2015. This section will be left blank.