

# GLOBAL FOREST RESOURCES ASSESSMENT 2015

## COUNTRY REPORT

# **Cyprus**

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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## Report preparation and contact persons

### Contact persons

The present report was prepared by the following person(s)

Name (FAMILY NAME, first name)	Institution/address	Email	Tables
ANDREA, Savvas	Department of Forests CY-1414 Nicosia, CYPRUS	planning@fd.moa.gov.cy	1-21
MICHAEL, Achilleas	Department of Forests CY-1414 Nicosia, CYPRUS	planning@fd.moa.gov.cy	4, 6-8, 17, 18-20
SARRIS, Antonis	Department of Forests CY-1414 Nicosia, CYPRUS	planning@fd.moa.gov.cy	1-3, 5, 9-16, 21
ANDREOU, Andreas	Department of Forests CY-1414 Nicosia, CYPRUS	planning@fd.moa.gov.cy	1-3, 5

### Introductory Text

Place an introductory text on the content of this report

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### 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 both the 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	Chapman, G.W. 1954 Forest Report (Annual Report of the Department of Forests)	Privately owned forests	1954	Census of privately owned forests and plantations.

2	Department of Agriculture. Register of Agricultural crops	Other land with tree cover (Area of certain agricultural crops)	2004	Register kept for the agricultural crops, which includes, among others, data on cultivations of olive trees, citrus trees, almond trees and other fruit trees. It does not include carob trees. Data are based on the declarations submitted by owners for the purposes of the Rural Development Plan. Parts of the areas recorded do not comply with the FRA threshold value for minimum area but refer to scattered trees. The land cover of these trees is calculated by the use of a standard coefficient and it is currently impossible to separate it from the rest of the areas included.
3	Department of Forests, Forest vegetation mapping	Vegetation cover	1999	Forest vegetation mapping using field surveys in state and private forests.
4	Department of Forests. Register of State Forest Land	Area of State Forest Land	1988-2012	Register kept for the changes on the land officially declared as State Forest Land
5	Department of Forests, Mapping of Hali-land vegetation	Hali-land vegetation	2005	Vegetation mapping of hali-lands based on existing maps and field survey. Until 2005, these areas were included in the categories of private forests and OWL.
6	Department of Forests, Annual Report	Area of reforestations and afforestations	1988-2007	Aggregated data on afforestations and reforestations in the state land (forest and hali-land)
7	Department of Forests, Register on Afforestations and Reforestations	Area of reforestations and afforestations	2008-2012	Analytical data on afforestation and reforestation works in the state land (state forest land and hali-land)
8	Department of Forests, Register of activities funded by the Rural Development Plan 2007 – 2013, under the “Forest measures”	Afforestation of private land and Reforestation of burnt areas	2007-2012	Data on private land afforested through the forestry measures of RDP 2007-2013.
9	Department of Agriculture. Data from the Cyprus Agricultural Payments Organization on Agricultural Cultivations	Other land with tree cover	2012	Data on trees outside forests, falling within the threshold values of the FAO FRA definition, as kept by the Cyprus Agricultural Payments Organization.

10	Water Development Department, 2009. Dams of Cyprus. Press and Information Office	Area of Inland Water Bodies	2009	Data on reservoirs' surface including both large and small water dams (pp 14-15 and 16-17). Definition of "large" dams is according to the World Register of Dams.
11	Water Development Department, data on Salt-lakes	Area of Inland Water Bodies	2009	Data on salt-lakes' surface area.

### 1.2.2 Classification and definitions

National class	Definition
Forest	It corresponds to FRA except the threshold value for minimum area, which is 1 ha.
Maquis	Land spanning more than 1 ha with evergreen, sclerophyllous shrubs of different heights (1-5 m) mixed with bushes and scattered trees with a combined cover above 10%
Garigue	Land spanning more than 1 ha with bushes and a cover above 10%
Other land	Includes all land not classified as "Forest" or "Other Wooded Land"
Hali-land	Hali-land is scattered land throughout the island, not regularly exploited for the last 300 years. Hali-lands are areas never been claimed by anyone due to heavy property and farming taxes imposed by the Ottoman administration (Thirgood, 1987). Later on, these areas were declared as common lands and the ownership passed to the State (Ioannou, 1991). Some of these areas have been naturally forested. Periodically, parts of these areas are declared as State Forests.
Afforestation	It corresponds to FRA2015 Definition
Reforestation	It corresponds to FRA2015 Definition
Natural expansion of forest	It corresponds to FRA2015 Definition
Inland Water Bodies	Total surface area of large and small water dams plus the surface area of all salt-lakes. Large dams are considered all dams fulfilling the criteria of the World Register of Dams.

### 1.2.3 Original data

<b>Forest area</b>
Private Forests

National class	Area (hectares)	Source
	1954	
Private Forests	13 550	Chapman, G.W. 1954 Forest Report (Annual Report of the Department of Forests)

## Other land with tree cover

National class	Area (hectares)		Source
	2004	2012	
Other land with tree cover	25 931	-	Department of Agriculture. Register of Agricultural crops
Other land with tree cover	-	9 872.5	Department of Agriculture. Data from the Cyprus Agricultural Payments Organization on Agricultural Cultivations

## Forest Vegetation Mapping

National class	Area (hectares)	Source
	1999	
State Forests	105 800	Department of Forests. Forest vegetation mapping based on existing maps for state forest areas and on a survey for the private forest areas
Private Forests	65 810	
State maquis	35 770	
State garigue	14 970	
Private maquis	90 320	
Private garigue	72 800	
Total Forest & OWL	385 470	



Other land	536 180	
Total land area	921 650	
Inland Water	3 500	
Total Area	925 150	

## State Forest Land

National class	Area (hectares)						Source
	1990	1999	2000	2005	2010	2012	
State Forests	105 800	105 800	105 800	107 041	107 054	107 125	Department of Forests. Register of State Forest Land
State maquis	35 770	35 770	35 770	35 775	35 758	35 721	
State garigue	14 970	14 970	14 970	14 970	14 931	14 922	

## Vegetation cover in Hali-lands

National class	Area (hectares)	Source Department of Forests, Vegetation mapping of hali-lands based on existing maps and field survey.
	2005	
Hali-land Forests	11 800	
Hali-land maquis	9 100	
Hali-land garigue	9 700	
<b>Total Area</b>	<b>30 600</b>	

## Inland Water Bodies

National class	Area (ha)	Ref. Year	Source
Large Dams	1 825.6	2009	Water Development Department, 2009 “Dams of Cyprus”, pp.: 14-15
Small Dams	104.8	2009	Water Development Department, 2009 “Dams of Cyprus”, pp.: 16-17
Salt Lakes	1 948.9	2012	Water Development Department- (by E-mail dated 9 May 2013)
<b>Total Inland Water Bodies</b>	<b>3 879.3</b>		

## Compilation of Original Data

National class	Area (hectares)							
	1954	1990	1999	2004	2005	2009	2010	2012
State Forests		105 800	105 800		107 041		107 054	107 125
Private Forests	13 550	n.a.	65 810		54 010		53 920	53 826
Hali-land Forests					11 800		11 867	11 827
State maquis		35 770	35 770		35 775		35 758	35 721
State garigue		14 970	14 970		14 970		14 931	14 922
Private maquis		n.a.	90 320		81 220		143 961	144 063
Private garigue		n.a.	72 800		63 100			

Hali-land maquis					9 100		9 089	18 683
Hali-land garigue					9 700		9 546	
Total Forest & OWL		ID	385 470		386 716		386 127	386 166
Other land		ID	536 180		509 003		535 144	525 232
Other land with tree cover		n.a.	n.a.	25 931	25 931		ID	9 873
Total land area		921 650	921 650		921 650		921 271	921 271
Inland Water		3 500	3 500		3 500	3 879	3 879	3 879
Total Area	925 150	925 150	925 150	925 150	925 150	925 150	925 150	925 150

- Year 1954 has been selected for the provision of information on “Private forests”,
- Year 2004 has been selected for the provision of information on “Other Land with tree cover”, although the data recorded for this year is of very low quality. Data for “Other Land with tree cover” for 2010 is considered as Insufficient due the recognition of a considerable deviation from the actual data given for 2012, based on the mapped records falling within the threshold values of the specific term.
- In 2005, the vegetation mapping of Hali-lands has been concluded, providing separate data for Private areas and Hali-lands,
- Land for private maquis and garigue includes land that is predominantly under grazing,
- “Other land” area was estimated from original data as: “Total land area” – “Total forest land”,
- n.a.: No data available for which a safe estimate can be given.
- Data for “Total Forest & OWL” for year 1990 are Insufficient (ID) since there were no data available on private forests, maquis and garigue.
- Data for “Other Land” for year 1990 are Insufficient (ID) since it was impossible to separate private forests, maquis and garigue from Other land.
- Data for “Inland water” are based on mapping of the maximum capacity of water dams and lakes. More accurate data are available after the publication of the updated full list of Large and Small dams of Cyprus in 2009 and the mapping of all Salt lakes. It differs from the one maintained by FAOSTAT. The latter is used only for the Reporting Table 1a since the national competent authority has not yet applied any official request for change.

### Forest expansion, reforestation

National class	ForestArea (Ha)
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	1988-1992	1998-2002	2003-2007	2008-2012
Artificial Reforestation using native species	91	34	676	430.2
Artificial Reforestation using introduced species	0	0	0	0
Artificial reforestation on areas previously planted	298	266	258	714.5
<b>Total Reforestations</b>	<b>389</b>	<b>300</b>	<b>934</b>	<b>1144.7</b>
Artificial afforestation using native species	1605	1262	622	94.4
Artificial afforestation using introduced species	0	0	0	0

### 1.3 Analysis and processing of national data

#### 1.3.1 Adjustment

##### Forest area

The total land area according to original data is 921 271 hectares (as from 2009), while FAOSTAT reports 924 000 hectares. The difference lies on the area of Inland Water bodies, for which until now there is not any official request by the competent authority to change the official figures. However, it remains a fact that Inland water bodies cover an area of 3879ha (minimum) and not 1000ha. In order to align the figures to FAOSTAT, the difference has been allocated to the category Other land in the final reporting table 1a .

##### Forest expansion, reforestation

There is no need to perform any calibration

## 1.3.2 Estimation and forecasting

<b>Forest area</b>						
<b>National class</b>	<b>Area (hectares)</b>					
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2012</b>	<b>2015</b>
State forests	105 800	105 800	107 041	107 054	107 125	107 150
Private forests	55 310	65 810	54 010	53 920	53 826	53 750
Hali-land forests	n.a.	n.a.	11 800	11 867	11 827	11 800
State maquis	35 770	35 770	35 775	35 758	35 721	35 720
State garigue	14 970	14 970	14 970	14 931	14 922	14 920
Private maquis	n.a.	90 320	81 220	143 961	144 063	144 150
Private garigue	n.a.	72 800	63 100			
Hali-land maquis	n.a.	n.a.	9 100	9 089	18 683	18 700
Hali-land garigue	n.a.	n.a.	9 700	9 546		
Total forest and OWL	211 850	385 470	386 716	386 127	386 166	386 190
Other land	709 800	536 180	509 003	535 144	525 232	525 181
Other land WTC	n.a.	n.a.	25 931	ID	9 873	9 900
Total land area	921 650	921 650	921 650	921 271	921 271	921 271

- Figures on State land (forest, maquis, garigue) are highly accurate and come from records kept by the Department of Forests.
- The “Private forest” value shall be considered as the minimum. Even though an increase is expected due to natural regression, no safe forecasts can be made.
- The Hali-land areas (forests, maquis, garigue) were not known until the mapping of Hali-land vegetation, carried out in 2005. For 1990 and 2000, Hali-land Forests and OWL were counted in private Forests and OWL areas, respectively.
- As from 2010, data for Private Other Wooded Land is no longer provided separately for Private Maquis and Private Garigue. The same applies for Hali-land Other Wooded Land, from 2012 onwards.

- Data for 2010 have been replaced by the actual values since those reported in FRA2010 were forecasts, either as extrapolations of data for a series of previous years, or based on experts knowledge and assumptions.
- The reduction of the area of Total Forests and OWL from 2005 to 2010 is mainly due to the big fires of 2007 where private forests and OWL were burnt. Although most of these areas may recover to their original vegetation form, no safe estimations can be made.

### Forest expansion, reforestation

No estimation or forecasting is required.

### 1.3.3 Reclassification

#### Forest area

National class	FRA Categories				
	Forest	OWL	Other Land	Total	OLWTC
State forests	100%			100%	0%
Private forests	100%			100%	0%
Hali-land forests	100%			100%	0%
State maquis		100%		100%	0%
State garigue		100%		100%	0%
Private maquis		100%		100%	0%
Private garigue		100%		100%	0%
Hali-land maquis		100%		100%	0%
Hali-land garigue		100%		100%	0%
Other land			100%	100%	n.a.

### Forest expansion, reforestation

There is no need for reclassification into FRA2015 Categories.

## 1.4 Data

Table 1a













Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	161.11	171.61	172.851	172.841	172.7
	Other wooded land	195	213.86	213.865	213.285	213.49
	Other land	568.04	538.68	537.434	538.024	537.96
	... of which with tree cover	N/A	N/A	25.931	N/A	9.873
	Inland water bodies	1	1	1	1	1
	TOTAL	925.15	925.15	925.15	925.15	925.15

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	N/A	N/A	N/A	N/A	0	0	0	0
	... of which afforestation	0.321	0.252	0.124	0.019	0	0	0	0
	... of which natural expansion of forest	N/A	N/A	N/A	N/A	0	0	0	0
	Deforestation	N/A	N/A	N/A	N/A	0	0	0	0
	... of which human induced	N/A	N/A	N/A	N/A	0	0	0	0
	Reforestation	0.078	0.06	0.187	0.229	0	0	0	0
	... of which artificial	0.078	0.06	0.187	0.229	0	0	0	0

### Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 1	Tier 1
Other wooded land	Tier 1	Tier 1
Forest expansion	Tier 1	Tier 1
Deforestation	Tier 1	Tier 1

Reforestation	Tier 2	Tier 1
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## Tier criteria

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

## 1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	It corresponds to FRA definition except the threshold value for minimum area, which is 1 ha. Data for 2010 (State forest, Private forest etc.) have been corrected since they were the result of extrapolation done in 2007	Forest area under state ownership is increasing through time due to land acquisition, afforestation plans, rural development programme and forest regression. The private forest area is reported as decreasing due to the removal/ deduction of burnt areas based on the records kept on forest fires. No evidence on the status of these areas after fires are kept. However, due to the fact that abandoned agricultural land and burnt areas are gradually recovering due to forest regression, the actual private forest area is definitely higher than the reported.
Other wooded land	The value of OWL for year 1990 was estimated based on experts' knowledge.	N/A
Other land	N/A	N/A
Other land with tree cover	No data available for 1990 and 2000. No safe estimate can be made for these years. Data reported for 2012 are more well justified than those of 2004.	N/A
Inland water bodies	For the Reporting Table 1a, the Official figure for inland water area from FAOSTAT was used. However, in National Data processing, the actual data from the Water Development Department was used, for a more clear picture.	N/A
Forest expansion	N/A	Afforestation The decrease is due to the fact that the potential area for afforestation is dropping through time because of the already executed forest expansion plans. The competition in land use limits the potential area for afforestation.



Deforestation	The policy of the Department of Forests implies that all State Forest Land burnt maintains the status of forest and is either naturally regenerated or artificially reforested, whereas for the private forests such a policy does not exist. However most of the private burnt areas may normally recover to either Forest or OWL.	N/A
Reforestation	The data refer to the artificial reforestations carried out in state land and to reforestations of private burnt land, under the Rural Development Plan	N/A

**Other general comments to the table**

- Data for state areas are annual and of high quality. - Data for private areas do not exist on regular intervals and when they exist are estimates of medium to low quality. - The main weakness in the existing National data is the lack of data for Private Other Wooded Land for 1990. The estimate made is very rough and is not very reliable. - Another weakness is the lack of data for the part of the Other Land With Tree Cover for the year 1990 and 2000. No safe estimate can be made for these years.

## 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	Department of Forests. Annual Report	Area of reforestations	1960-2012	N/A
2	Department of Forests, Criteria and Indicators for SFM	Naturalness, Introduced tree Species	2006	N/A
3	N/A	N/A	N/A	N/A

4	N/A	N/A	N/A	N/A
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## 2.2.2 Classification and definitions

National class	Definition
Undisturbed by man	It corresponds to FRA2015 Definition for “Primary Forests”
Area Artificially Reforested/ afforested using native species	Self-explanatory
Area Artificially Reforested/ afforested using introduced, species	Self-explanatory
Area Naturally reforested/ afforested by native species	Self-explanatory

## 2.2.3 Original data

National class	ForestArea (Ha)				
	1990	2000	2005	2010	2012
Area artificially Reforested/ afforested using native species	22 946	26 158	28 034	29 024	29 320
Area artificially Reforested/ afforested using introduced species	1 399	1 400	1 400	1 400	1 400
Native forest naturally regenerated	136 765	144 052	143 417	142 417	142 057
... of which Undisturbed by man	13 241	13 241	13 241	13 241	13 241
<b>TOTAL FORESTS</b>	<b>161 110</b>	<b>171 610</b>	<b>172 851</b>	<b>172 841</b>	<b>172777</b>

## 2.3 Analysis and processing of national data

### 2.3.1 Adjustment

### 2.3.2 Estimation and forecasting

National class	ForestArea (Ha)					
	1990	2000	2005	2010	2012	2015
Area Artificially Reforested/afforested using native species	22 946	26 158	28 034	29 024	29 320	29 345
Area Artificially Reforested/afforested using introduced species	1 399	1 400	1 400	1 400	1 400	1 400
Native forest naturally regenerated	136 765	144 052	143 417	142 417	142 057	141 955
...of which undisturbed by man	13 241	13 241	13 241	13 241	13 241	13 241
<b>TOTAL FORESTS</b>	<b>161 110</b>	<b>171 610</b>	<b>172 851</b>	<b>172 841</b>	<b>172 777</b>	<b>172 700</b>



## 2.3.3 Reclassification

## 1.1.1

National Class	FRA2015 Categories				
	Primary forest	Other naturally regenerated forest	..of which of introduced species	Planted forest	..of which of introduced species
Area Artificially Reforested/ afforested using native species				100%	
Area Artificially Reforested/ afforested using introduced species				100%	100%
Native forest naturally regenerated	9.5%	90.5%			
.. of which undisturbed by man	100%				

## 2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	13.241	13.241	13.241	13.241	13.241
	Other naturally regenerated forest	123.524	130.811	130.176	129.176	128.714





	... of which of introduced species	0	0	0	0	0
	... of which naturalized	0	0	0	0	0
	Planted forest	24.345	27.558	29.434	30.424	30.745
	... of which of introduced species	1.399	1.4	1.4	1.4	1.4
TOTAL		161.11	171.61	172.85	172.84	172.70

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 1	Tier 1
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
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Primary forest/Other naturally regenerated forest/Planted forest	<b>Tier 3</b> : 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 <b>Tier 2</b> : Data sources: Full cover mapping/remote sensing or old NFI (more than 10 years) <b>Tier 1</b> : Other	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other
--	--	---

## 2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	N/A	N/A
Other naturally regenerating forest	N/A	N/A
Planted forest	N/A	The increase is due to restoration of burnt and degraded forests, land acquisition and afforestation plans and rural development programmes
Mangroves	Not applicable	N/A

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	Department of Forests, Reports on Continuous Forest Inventory of the exploitable state forests of Pinus brutia	Growing stock	1981,1991, 2001	Continuous Forest Inventory of the exploitable state forests of Pinus brutia
2	Department of Forests, Report on Forest Inventory of non-exploitable state forests of Pinus brutia	Growing stock	2005	Forest inventory of the non-exploitable state forest of Pinus brutia.



3	Department of Forests 2003, Criteria and Indicators for Sustainable Forest Management.	Wood Density, BEF, Root-Shoot Ratio carbon content in woody biomass and soils	2003	The IPCC 1996, Guidelines for National Greenhouse Gas Inventories, were used for the preparation of the Carbon Stock Indicator.
4	Department of Forests, preliminary results of 2011 inventory of Pinus brutia state forests	Growing stock	2011	Continuous Forest Inventory of the exploitable, non-exploitable and reforestations of Pinus brutia state forests
5	Department of Forests, Forest Inventory Database (2001)	Growing stock	2001	Forest Inventory of artificially reforested areas of Pinus brutia in the state forests
6	Department of forests, Report on Forest Inventory of Cedrus brevifolia (2012)	Growing stock – other Conifers	2010	Forest Inventory of Cedrus brevifolia

### 3.2.2 Classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees more than 12 cm in diameter at breast height. Includes the stem from stump height up to a top diameter of 7cm. It does not include branches. (deviation from the relevant FRA2015 definition in relation to dbh and top diameter)
Above-ground biomass	All living biomass above the soil including stem, stump, branches and bark.
Below-ground biomass	It corresponds to FRA 2015 definition.
Dead wood	It corresponds to FRA 2015 definition.
Carbon in above-ground biomass	It corresponds to FRA 2015 definition apart of the inclusion of seeds and foliage.
Carbon in below-ground biomass	It corresponds to FRA 2015 definition.
Carbon in dead wood	It corresponds to FRA 2015 definition.
Soil carbon	It corresponds to FRA 2015 definition.
MU1	N/A
MU2	N/A

### 3.2.3 Original data

<b>Growing stock2010-2012</b>
-------------------------------

Forest Type		Area Covered (ha)			Estimated growing stock (m <sup>3</sup> )		
		2010	2011	2012	2010	2011	2012
Exploitable Forests (FAWS)	MU1	14383	13901	13901	913.384	954.860	966.132
	MU2	27016	27219	27219	2.387.169	2.412.420	2.448.036
Non-Exploitable Forests	MU1	6403	10111	10111	278.548	593.617	602.681
	MU2	16512	17391	17391	692.852	801.725	828.226
Reforestation	MU1	n.a	3344	3344	n.a.	109.750	113.783
	MU2	n.a	9608	9608	n.a.	401.710	415.966
Other forests ( <i>Pinus brutia</i> )	All	73429	56170	56170	3.730.900	3.152.822	3.225.512
Total forests ( <i>Pinus brutia</i> )	all	137744	137744	137744	8.002.853	8.426.904	8.600.336
Other conifers		33 967	33912	33903	1.688.822	1.704.757	1.720.446
<b>Total Conifers</b>		<b>171711</b>	<b>171656</b>	<b>171647</b>	9.691.675	10.131.661	10.320.783
Broadleaves		1130	1130	1130	227.576	228.702	228.770
<b>TOTAL FORESTS</b>		<b>172841</b>	<b>172786</b>	<b>172777</b>	9.919.251	10.360.363	10.549.553

### Total Growing Stock

Forest Type	Area Covered (ha)					Estimated growing stock (m <sup>3</sup> )				
	1990	2000	2005	2010	2012	1990	2000	2005	2010	2012

TOTAL Forests	161 110	172 770	172 851	172 841	172 777	7 404 950	7 929 650	8 382 748	9 919 251	10 549 553
- All conifers	160 110	171 770	171 721	171 711	171 647	7 204 950	7 729 650	8 156 748	9 961 675	10 320 783
- Broadleaves forests	1 000	1 000	1 130	1 130	1 130	200 000	200 000	226 000	227 576	228 770

The estimated growing stock for broadleaves is based on experts' knowledge and estimation. (Average Volume of growing stock per hectare was estimated to be  $200\text{m}^3/\text{ha}$  for 2007 and an estimated NAI of  $2\text{m}^3/\text{ha/y}$  is there after added, Fellings are also considered).

The estimated growing stock for conifers, for the period before 2008, refers to the total coniferous forest and is based on rough estimations made for the average stocking of generally all coniferous forests ( $45\text{m}^3/\text{ha}$  for 1990 and 2000,  $47,5\text{m}^3/\text{ha}$  for 2005). As from 2009, the total growing stock for coniferous forests has been based on the calculations for each forest types and Management Units (exploitable, non-exploitable and reforestations of *Pinus brutia*, and other conifers) separately. Therefore, the total growing stock for conifers derives from the summation of these different calculations

### Biomass stock

Data on growing stock were used to obtain biomass data.

### Carbon stock

Data from Question 1, and on growing and biomass stock were used to obtain carbon stock data.

### Net Annual Increment

Cate-gory	NAI ( $\text{m}^3/\text{ha/y}$ )											
	1990	2000	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Conifers	0,5799	0,5405	0,6976	0,6976	0,6954	0,6954	0,6954	0,8445	0,9431	0,9435	1,1687	1,1688
Broad-leaves	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	2,0000	2,0000	2,0000	2,0000	2,0000
TOTAL FOREST	0,5991	0,5587	0,6979	0,6996	0,7050	0,7010	0,6985	0,8520	0,9500	0,9504	1,1742	1,1742

### 3.3 Analysis and processing of national data

#### 3.3.1 Adjustment

There is no need to perform any calibration.

#### 3.3.2 Estimation and forecasting

##### Growing stock

Forest Type	Area Covered (ha)				Estimated growing stock (m <sup>3</sup> )			
	2005	2010	2012	2015	2005	2010	2012	2015
TOTAL Forests	172 851	172 841	172 777	172 700	8 382 748	9 919 251	10 549 553	11 120 635
- All conifers	171 721	171 711	171 647	171 570	8 156 748	9 961 675	10 320 783	10 889 585
- Broadleaves forests	1 130	1 130	1 130	1 130	226 000	227 576	228 770	231 050

##### Biomass stock

For national data reporting, the IPCC 1996 Guidelines for National Greenhouse Gas Inventories were followed. To this direction, biomass was estimated based on growing stock (T3a). Growing stock was multiplied by the Biomass Expansion Factor 1.16, which is the average factor taking into account also the volume of tree branches, stump and foliage, resulting in an estimation of the Above-Ground Volume. This value is multiplied by the Average Basic Density (0,45 tons/m<sup>3</sup>) to find out the Above-Ground Biomass.

The Below-Ground Volume was estimated by multiplying the Growing stock by 1.16 (which is the Above-Ground Volume) by the factor 0,320 which is an average factor taking into account the volume of tree roots. This value is multiplied by the Average Basic Density (0,45 tons/m<sup>3</sup>) to find out the Below-Ground Biomass

Data on dead wood biomass is available from Forest Inventories but only refers to forest available for wood supply. It was not possible to estimate dead wood for the entire forest area.

### Carbon stock

No estimation or forecasting is required.

Carbon in Above-Ground Biomass is estimated by multiplication of the Above Ground Biomass value given in table 3d by 0.5, which is the IPCC GPG average value for carbon content of living biomass. It does not include carbon stored in seeds and foliage.

Carbon in Below-Ground Biomass is estimated by multiplication of the Below Ground Biomass value given in table 3d by 0.5, which is the IPCC GPG average value for carbon content of living biomass

Carbon in soil is estimated by multiplying the forest area by the IPCC average value which is 22,5 tons of Carbon per hectare.

### Net Annual Increment

Category	NAI (m <sup>3</sup> /ha/y)				
	1990	2000	2005	2010	2015
<b>Conifers</b>	n.a	0.572	0.700	1.020	1.174
<b>Broadleaves</b>	n.a	0.554	0.696	1.014	1.169
<b>TOTAL FOREST</b>	n.a	n.a	n.a	2	2

### 3.3.3 Reclassification

### 3.4 Data

Table 3a




Category		Growing stock volume (million m <sup>3</sup> over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	7.405	7.93	8.383	9.919	11.121	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	7.205	7.73	8.157	9.692	10.89	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	0.2	0.2	0.226	0.228	0.231	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	Pinus brutia	Calabrian pine	N/A	N/A	7.415	8.003
2 nd	N/A	N/A	N/A	N/A	N/A	N/A
3 rd	N/A	N/A	N/A	N/A	N/A	N/A
4 th	N/A	N/A	N/A	N/A	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	N/A	0.968	1.916
TOTAL			.00	.00	8.38	9.92

**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)	12 cm	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	7 cm	N/A
Minimum diameter (cm) of branches included in growing stock (W)	N/A	Not included
Volume refers to above ground (AG) or above stump (AS)	AG	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 <sup>3</sup> per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	N/A	0.572	0.7	1.02	1.174
	... of which coniferous	N/A	0.554	0.696	1.014	1.169
	... of which broadleaved	N/A	N/A	N/A	2	2

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	3.865	4.139	4.376	5.178	5.805	N/A	N/A	N/A	N/A	N/A
	Below ground biomass	1.237	1.324	1.4	1.657	1.858	N/A	N/A	N/A	N/A	N/A
	Dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		5.10	5.46	5.78	6.84	7.66	.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
	Carbon in above ground biomass	1.933	2.07	2.188	2.589	2.903	N/A	N/A	N/A	N/A	N/A
	Carbon in below ground biomass	0.619	0.663	0.7	0.828	0.929	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Living biomass</i>	2.552	2.733	2.888	3.417	3.831	N/A	N/A	N/A	N/A	N/A
	Carbon in dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Carbon in litter	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Dead wood and litter</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Soil carbon	3.625	3.861	3.889	3.899	3.887	4.388	4.812	4.812	4.799	4.804
TOTAL		6.18	6.59	6.78	7.32	7.72	4.39	4.81	4.81	4.80	4.80

## Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 3	Tier 3
Net annual increment	Tier 3	Tier 3
Above ground biomass	Tier 1	Tier 1
Below ground biomass	Tier 1	Tier 1
Dead wood	N/A	N/A
Carbon in above-ground biomass	Tier 1	Tier 1
Carbon in below ground biomass	Tier 1	Tier 1
Carbon in dead wood and litter	N/A	N/A
Soil carbon	Tier 1	Tier 1

## 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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other
<ul style="list-style-type: none"> <li>Carbon in above ground biomass</li> <li>Carbon in below ground biomass</li> <li>Carbon in dead wood and litter</li> <li>Soil carbon</li> </ul>	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : 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	N/A
Growing stock of broadleaved coniferous	The estimated growing stock for broadleaves is based on experts' knowledge and estimation. (Average Volume of growing stock per hectare is estimated to be 200m <sup>3</sup> /ha for 2007 and an estimated MAI of 2 m <sup>3</sup> /ha/y is there after added, Fellings were also considered As from 2008 (after the compilation of FRA 2010 Report) the approach of the estimation of the Growing Stock was reconsidered. The general category of Conifers has been broken down into several subcategories (Pinus brutia managements units, other Conifers managements units) for more accurate estimations.	The reported trend for Conifers is based on the preliminary results of 2011 inventory of Pinus brutia state Forests
Growing stock composition	N/A	N/A

Net annual increment	The NAI for 2000 is based on the averages for the sixteenth years period 1990-2005 The NAI for 2005 is based on the averages for the five years period 2003-2007 The NAI 2010 is based on the averages for the five years period 2008-2012	The NAI 2015 is based on the forecasted value for the reference year
Above-ground biomass	It does not include biomass in seeds and foliage.	The biomass in forests is increasing because of low harvesting to increment ratio.
Below-ground biomass	N/A	N/A
Dead wood	No data are available for the entire forest.	N/A
Carbon in above-ground biomass	Estimated by multiplication of the Above Ground Biomass value given in table 3d by 0.5, which is the IPCC GPG average value for carbon content of living biomass. It does not include carbon stored in seeds and foliage.	The carbon stored in forests is increasing because of low harvesting to increment ratio.
Carbon in below-ground biomass	Estimated by multiplication of the Below Ground Biomass value given in table 3d by 0.5, which is the IPCC GPG average value for carbon content of living biomass	N/A
Carbon in dead wood	No estimate for dead wood biomass is available for the entire forest, thus no value can be given for its carbon content.	N/A
Carbon in litter	N/A	N/A
Soil carbon	It is estimated by multiplying the forest area by the IPCC average value which is 22,5 tons of Carbon per hectare.	N/A

#### Other general comments to the table

Growing stock: One of the main weaknesses is the lack of data for Other Wooded Land. Biomass stock: The method used was the same as the one used for the National Criteria and Indicators for SFM, based on IPCC1996 Guidelines. No further work has been done so far, to improve the procedure for the estimation of the biomass stock.

## 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	Department of Forests	Forest functions	1990, 2000, 2005, 2010, 2012	Register kept by the Department of Forests on land officially declared as State forest land, including those areas classified as Nature Reserves, National Forest Parks and Minor State Forests.
2	Department of Forests	NWFP removals	2010	Annual Report
3	Preliminary results of 2011 inventory of Pinus brutia state forests	PPFR	2011	Continuous Forest Inventory of the exploitable, non-exploitable and reforestations of Pinus brutia state forests
4	N/A	N/A	N/A	N/A

## 4.2.2 Classification and definitions

National class	Definition
Productive Permanent Forest Reserve	Area of Main State Forest designated to be used in the perpetuity for forestry and particularly for wood production
Multiple-use Permanent Forest Reserve	Area of Main State Forest designated to be used in the perpetuity for multiple-use forestry
Multiple use (Minor State Forests)	Area designated for a number of different uses including grazing, communal forests, forest nursery, etc.
No function	Area, which has not been designated to any specific function.

## 4.2.3 Original data

National class	Forest Area (hectares)				
	Primary function				
	1990	2000	2005	2010	2012
<b>Total state Forest</b>	<b>105 800</b>	<b>105 800</b>	<b>107 041</b>	<b>107 054</b>	<b>107 125</b>
- Productive Permanent Forest Reserve	43 222	43 173	41 399	41 399	41 120
- Multiple-use Permanent Forest Reserve <sup>1</sup>	59 514	48 656	48 807	48 820	49 170
- Nature Reserves	764	3 387	3 387	3 387	3 387
- National Forest Park	2 300	10 584	13 448	13 448	13 448
No Function <sup>2</sup>	55 310	65 810	65 810	65 787	65 653
<b>Total Forests</b>	<b>161 110</b>	<b>171 610</b>	<b>172 851</b>	<b>172 841</b>	<b>172 777</b>

<sup>1</sup> It is the result of the subtraction of NR, NFP and PPFR from Total State Forests.

<sup>2</sup> The area of “No function” is the sum of private and hali-land forests.

Original Data regarding the value of NWFP are directly presented on 4b

### 4.3 Analysis and processing of national data

#### 4.3.1 Adjustment

There is no need to perform any calibration.

#### 4.3.2 Estimation and forecasting

National class	Forest Area (hectares)				
	Primary function				
	1990	2000	2005	2010	2015
<b>Total state Forest</b>	<b>105 800</b>	<b>105 800</b>	<b>107 041</b>	<b>107 054</b>	<b>107 150</b>
- Productive Permanent Forest Reserve	43 222	43 173	41 399	41 399	41 120
- Multiple-use Permanent Forest Reserve <sup>1</sup>	59 514	48 656	48 807	48 820	49 195
- Nature Reserves	764	3 387	3 387	3 387	3 387
- National Forest Park	2 300	10 584	13 448	13 448	13 448
No Function <sup>2</sup>	55 310	65 810	65 810	65 787	65 550
<b>Total Forests</b>	<b>161 110</b>	<b>171 610</b>	<b>172 851</b>	<b>172 841</b>	<b>172 700</b>

<sup>1</sup> It is the result of the subtraction of NR, NFP and PPFR from Total State Forests

<sup>2</sup> The area of “No function” is the sum of private and hali-land forests.

#### 4.3.3 Reclassification

National Class	Primary Function for FRA2015 Classes						
	Production	Protection of soil and water	Conservation of biodiversity	Social Services	Multiple Use	Other	No/unknown
Productive Permanent Forest Reserve	100%						
Multiple-use Permanent Forest Reserve					100%		
Nature Reserves			100%				
National Forest Park				100%			
No function							100%

#### 4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	43.222	43.173	41.399	41.399	41.12
	Multiple use forest	59.514	48.656	48.807	48.82	49.195

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	Cristmas trees	Pinus brutia	9.5	8
2 nd	Forests seeds	Pinus brutia	71.43	8
3 rd	Aromatic and medicinal plants	Origanum spp., Salvia spp	0.27	3
4 th	Pine cones	Pinus brutia	0.09	8
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			81.29	

2010

Name of local currency

Euro (€)

Category
<b>Plant products / raw material</b>
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

<b>Animal products / raw material</b>
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 <sup>3</sup> u.b.)	
	Total wood removals	...of which woodfuel
1990	62.8	14.8
1991	53.8	12.1
1992	45.1	11.2
1993	53.1	13.9
1994	46.5	11.1
1995	48	10.9
1996	45.1	9.9
1997	41	9.7
1998	35.3	8.32
1999	36.5	8.04
2000	20.6	5.42
2001	18.3	6.55
2002	15.4	5.21
2003	12	4.27
2004	10.1	3.29



2005	9.7	3.86
2006	7.4	2.86
2007	19.7	7.73
2008	19.8	6.7
2009	9.9	3.72
2010	9	3.63
2011	8.5	3.54

## Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 2	Tier 2
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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	N/A	The reported estimations for 2015 are based on the current classification of Forest areas. The House of Representatives has recently adopted a new forestry legislation under which a reclassification of forests will be carried out soon.
Multiple use forest	The reported values derive by subtracting Nature Reserves, National Forest Parks and Permanent Forest Reserves from Total State Forests.	N/A
Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

## Other general comments to the table

N/A
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## 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	Department of Forests. Register of State Forest Land	Area of State Forest Land, Protection of soil and water	1988-2012	Register kept for the changes on the land officially declared as State Forest Land

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
State forests	Forest on state forest land. Forest corresponds to FRA definition except the threshold value for minimum area, which is 1 ha.
State maquis	State land spanning more than 1 ha with evergreen, sclerophyllous shrubs of different heights (1-5 m) mixed with bushes and scattered trees with a combined cover above 10%
State garigue	State land spanning more than 1 ha with bushes and a cover above 10%
N/A	N/A

### 5.2.3 Original data

Original Data are presented in the Table 1.2.3 under the heading “State Forest Land”
--

## 5.3 Analysis and processing of national data

### 5.3.1 Adjustment

No adjustment is needed.
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### 5.3.2 Estimation and forecasting

Estimation and forecasting is presented in table 1.3.2 above. It is possible that, by 2015 some areas will be legally designated as “Protective Forests” for soil or water protection, according to the new, very recently enacted Forest Law.
--

### 5.3.3 Reclassification







According to Forest Policy and forestry practise in Cyprus, all <u>state forest areas</u> (Forest, Maquis and Garigue) are managed for soil and water protection. Thus, all these areas are considered as falling within the FRA Category “Protection of Soil and Water”. Currently, there is not any particular designation for specific protective function.
--


National Class	FRA Category
	Protection of soil and water
State forests	100%
State maquis	100%
State garigue	100%

According to Forest Policy and forestry practise in Cyprus, all state forest areas (Forest, Maquis and Garigue) are managed for multiple ecosystem services. Thus, all these areas are considered as falling within the FRA Category “Ecosystem services, cultural or spiritual values”. However, currently there is not any particular designation for these specific services. It is possible that, by 2015 some areas will be legally designated as “areas providing cultural or spiritual services”, according to the new, very recently enacted Forest Law.

## 5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
	Protection of soil and water	156.54	156.54	157.786	157.743	157.79
	... of which production of clean water	N/A	N/A	N/A	N/A	N/A
	... of which coastal stabilization	0	0	0	0	0
	... of which desertification control	N/A	N/A	N/A	N/A	N/A
	... of which avalanche control	0	0	0	0	0
	... of which erosion, flood protection or reducing flood risk	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
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## Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	156.54	156.54	157.786	157.743	157.79
...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	Tier 1	Tier 1
Ecosystem services, cultural or spiritual values	Tier 1	Tier 1

## 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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

<ul style="list-style-type: none"> <li>• Cultural or spiritual values</li> <li>• Public recreation</li> <li>• Spiritual or cultural services</li> <li>• Other</li> </ul>	<p>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</p>	<p><b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other</p>
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## 5.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	According to Forest Policy and forestry practise in Cyprus, all state forest areas (Forest, Maquis and Garigue) are managed for soil and water protection. Thus, all these areas are considered as falling within the FRA Category “Protection of Soil and Water”. Currently, there is not any particular designation for specific protective function.	It is possible that, by 2015 some areas will be legally designated as “Protective Forests” for soil or water protection, according to the new, very recently enacted Forest Law.
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	According to Forest Policy and forestry practise in Cyprus, all state forest areas (Forest, Maquis and Garigue) are managed for multiple ecosystem services. Thus, all these areas are considered as falling within the FRA Category “Ecosystem services, cultural or spiritual values”. Currently, there is not any particular designation for these specific services.	It is possible that, by 2015 some areas will be legally designated as “areas providing cultural or spiritual services”, according to the new, very recently enacted Forest Law.
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

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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	Department of Forests	Forest functions	1990, 2000, 2005, 2010, 2012	Register kept by the Department of Forests on land officially declared as State forest land, including those areas classified as Nature Reserves, National Forest Parks and Minor State Forests.
2	Ministry of Agriculture, Natural Resources and Environment (MANRE) Natural Resources Information and Remote Sensing Centre (NRIRSC) European Environment Service (EEA)	Land use	2006	Co-ordination of information on the Environment (CORINE) Land Cover 2006
3	Department of Forests	Area of State Forest Land	2013	Database (FD.gdb) digitised from 1:5000 and 1:2500 plans of the Department of Land and Survey of the Ministry of Interior
4	N/A	N/A	N/A	N/A

#### 6.2.2 Classification and definitions

National class	Definition
Nature Reserves	Area designated for conservation of biological diversity

National Forest Park	Area designated for the provision of social services mainly recreation
N/A	N/A
N/A	N/A

### 6.2.3 Original data

See 4.2.3.
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## 6.3 Analysis and processing of national data

### 6.3.1 Adjustment

There is no need to perform any calibration.
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### 6.3.2 Estimation and forecasting



See 4.3.2.
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### 6.3.3 Reclassification

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## 6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	0.764	3.387	3.387	3.387	3.387
	Forest area within protected areas	3.064	13.971	16.835	16.835	16.835

### 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
<ul style="list-style-type: none"> <li>Conservation of biodiversity</li> <li>Forests within protected areas</li> </ul>	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	The area remains the same because no other forest areas were declared to Nature Reserves	N/A
Forest area within protected areas	It includes all forests within National Forest Parks and Nature Reserves.	N/A

Other general comments to the table
N/A

## 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	Rough Estimates by the Department of Forests on invasive species	Area affected by Invasive species	2003-2010	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
Invasive species	It corresponds to FRA 2015 definition
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

There is no need to perform any calibration.

### 7.3.2 Estimation and forecasting

There is no need to carry out any estimation or forecasting.

### 7.3.3 Reclassification

## 7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
<i>Ailanthus altissima</i>	0.02	0.02
<i>Acacia cyanophylla</i>	0.5	0.5
<i>Dodonaea viscosa</i>	0.05	0.05
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	0.57	0.57

### Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 1	Tier 1

### 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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	Rough estimation on the affected 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	Department of Forests. Database of Forest Fires	Number of Forest fires, Area Burnt	2003-2012	The Database of Forest Fires is an MS Access database kept by the Department of Forests. It includes data for each forest fire incident within state forest and other wooded land, since 1960.
2	Department of Forests. Database of fires in land other than forests and other wooded land	Number of fires, Area Burnt	2004-2012	The Database of fires in the countryside is an MS Access database kept by the Department of Forests. It includes data for each fire incident within other land, since 2004
3	Fire Service. Database of fires in the countryside, excluding state forests.	Number of Forest fires, Area Burnt	2003-2012	The Fire Database is an MS Access database kept by the Cyprus Fire Service. It includes data for each fire incident within private forest and other wooded land, since 2000.
4	Department of Forests, Research Sector	Forest areas treated with insecticides	2008- 2012	The main insects affecting the Cyprus forests are primarily <i>Thaumetopoea wilkinsonii</i> and secondarily <i>Leucaspis knemion</i>

5	Department of Forests, Report on factors causing desertification	Drought	2008	Report prepared in the framework of the development of a National Action Programme on Combating Desertification
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## 8.2.2 Classification and definitions

National class	Definition
Forest Fire	It corresponds to EC Regulation No2152/2003
Number of Fires	It corresponds to FRA 2015.
Area affected by fire	It corresponds to FRA 2015.
N/A	N/A

## 8.2.3 Original data

Number of fires and burnt area in Cyprus for the period 2003-2012							
Year	Total number of fires	Number of forest fires	Number of non- forest fires	Total burnt area (ha)	Forest fires (ha)		Non- forest fires
					Burnt area (ha) (Forest and other wooded land)	Burnt area (ha) (Agriculture and other artificial land)	Burnt area (Other land)
2003	427	427	n.a.	2349	921	1428	n.a.
2004	266	221	45	1250	667	551	32
2005	224	185	39	2377	962	876	539
2006	232	172	60	1228	888	272	68
2007	197	111	86	4595	3704	779	112
2008	207	114	93	2907	1997	395	515



<b>2009</b>	174	91	83	990	460	425	105
<b>2010</b>	245	133	112	2627	1559	441	627
<b>2011</b>	194	85	109	2008	1220	379	409
<b>2012</b>	198	78	120	3044	2330	201	513

### Disturbances for the period 2007-2012

Category	Affected forest area (ha)					
	2007	2008	2009	2010	2011	2012
Disturbance by insects	8500	10352	6450	1228	3266	1310
Disturbance by diseases	0	0	0	0	0	0
Disturbance by Severe weather events	0	6633	0	0	0	0
<b>Total area affected by disturbances</b>	<b>8500</b>	<b>16985</b>	<b>6450</b>	<b>1228</b>	<b>3266</b>	<b>1310</b>

### Disturbances by Insects

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	<i>Thaumetopoea wilkinsonii</i>	2007, 2008, 2009, 2010, 2011, 2012	8.1 8.0 6.4 1.2 3.1 1.3

1	<i>Leucaspis knemion</i>	2006, 2007, 2008, 2009	0.2 0.2 0.3 0.1
1	<i>Orthotomicus erosus</i>	2008, 2011	2.0 0.2
1	<i>Tomicus piniperda</i>	2008	0.1

### 8.3 Analysis and processing of national data

#### 8.3.1 Adjustment

--

#### 8.3.2 Estimation and forecasting



There is no need to carry out any estimation or forecasting.
--

#### 8.3.3 Reclassification

There is no need to carry out any reclassification.
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### 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	2.349	N/A	1.25	266	2.377	224	1.228	232	4.595	197
	... of which forest area burned	0.921	427	0.667	221	0.962	185	0.888	172	3.704	111



Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	2.907	207	0.99	174	2.627	245	2.008	194	3.044	198
	... of which forest area burned	1.997	114	0.46	91	1.559	133	1.22	85	2.33	78

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	Thaumetopoea wilkinsonii	2012	1.3
1	Leucaspis knemion	2009	0.1
1	Orthotomicus erosus	2011	0.2
1	Tomicus piniperda	2008	0.1
3	Drought	2008	6.6
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

Outbreak category
1 Insects
2 Diseases
3 Severe weather events

## Tiers

Category	Tier for status	Tier for trend
Area affected by fire	Tier 3	Tier 3

<ul style="list-style-type: none"> <li>• Insects</li> <li>• Diseases</li> <li>• Severe weather events</li> </ul>	Tier 2	Tier 1
--	--------	--------

## Tier criteria

Category	Tier for status	Tier for reported trend
Burned area	<b>Tier 3</b> : National fire monitoring routines <b>Tier 2</b> : Remote sensing surveys <b>Tier 1</b> : Other	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other
<ul style="list-style-type: none"> <li>• Insects</li> <li>• Diseases</li> <li>• Severe weather events</li> </ul>	<b>Tier 3</b> : Systematic survey (e.g. via inventory or aerial damage assessment) <b>Tier 2</b> : Management records <b>Tier 1</b> : Other	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	Database kept by the Department of Forests which is the competent authority for reporting to the European Commission (Joint Research Center) Regulation "Forest Focus" was implemented in 2004 and since then separate data is kept on forest fires than the rest. Prior to 2004, both the number of fires and the area burned, refers to all fires irrespective of what burned	N/A
Insects	Management records kept by the Department of Forests	N/A
Diseases	Management records kept by the Department of Forests	N/A
Severe weather events	Management records kept by the Department of Forests	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	2.55

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

Tier criteria

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

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	N/A

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	Ministry of Agriculture, Natural Resources and Environment, 2013, Statement on Forest Policy	National Forest Policy	2013	National Forest Policy Statement adopted by the Council of Ministers
2	Forest Law [L.25(I)/2012]	Legislation supporting sustainable forest management	2012	National Forest Law voted by the House of Representatives
3	Forest Regulations (132,133,134/2012)	Legislation supporting sustainable forest management	2012	Forest Regulations voted by the House of Representatives
4	N/A	N/A	N/A	N/A

#### 10.2.2 Classification and definitions

National class	Definition
Statement of National Forest Policy	A forest policy document, formulated by the Ministry of Agriculture, Natural Resources and Environment through public consultation, finalised in the Forest Consultative Body and adopted by the Council of Ministers.
Forest Law and Regulations	National Law setting the relevant legal framework for the Conservation, Protection, Sustainable Management and Development of forests
N/A	N/A

N/A	N/A
-----	-----

## 10.2.3 Original data

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## 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	It is a very recently adopted Statement (January 2013) and it is available only in Greek
Legislation and regulations supporting sustainable forest management	It is available only in Greek. The English translation has not been finalised yet.

## Other general comments

--

## 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	Forest Law [L.25(I)/2012], Article 5	2012	Article 5 provides for the establishment of the Forest Consultative Body
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
--	-----

### 11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	It is a very recent development in the field of public participation in forest management and for the first time there is a legally established framework for structured public participation.

Other general comments

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## 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	Department of Forests, Register of State Forest Land	Area of State Forest Land	2010	Forest area of state ownership that is managed by the Department of Forests
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
State Forest Land	Area of state ownership that is managed by the Department of forests and it is classified as Permanent Forest Reserves, National Forests Parks, Nature Reserves and Minor Forests
N/A	N/A
N/A	N/A
N/A	N/A

### 12.2.3 Original data

See 1.3.2 and 4.2.3.

## 12.3 Analysis and processing of national data

### 12.3.1 Adjustment

See 1.3.2 and 4.3.2



### 12.3.2 Estimation and forecasting

See 4.3.2.

### 12.3.3 Reclassification

## 12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	107.054
	... of which permanent forest estate	107.054

### 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	<b>Tier 3</b> : National or sub-national land use plans strategy documents or other reports within the past 10 years <b>Tier 2</b> : National or sub-national land use plans strategy documents or other reports within the past 20 years <b>Tier 1</b> : Other

Permanent forest estate	<b>Tier 3</b> : National or sub-national land use plans strategy documents or other reports within the past 10 years <b>Tier 2</b> : National or sub-national land use plans strategy documents or other reports within the past 20 years <b>Tier 1</b> : Other
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## 12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	Corresponds to the total area of State forest.
Permanent forest estate	Corresponds to the total area of State forest.

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	Criteria and Indicators for SFM	Forest extent and quality, Criteria and Indicators reporting	2006	10-year-period reporting of forest extent and characteristics that includes assessment of progress toward sustainable forest management (national level).
2	Unified Forest Inventory	Forest extent and quality, Forest Inventory	2011	Continuous Forests Inventory of the exploitable, non-exploitable and reforestations of Pinus brutia state forests (every 10 years)
3	Annual Report of the Department of Forests	Forest extent and quality, periodic national state of the forest report	Annually	Annual reporting of forest extent and characteristics that includes assessment of progress toward sustainable forest management (national level).
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	100	2011	yes	no	yes	no	no	no
Other field assessments	0	N/A						
Updates to other sources	0	N/A						
Expert estimate	52	2011						

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
Annual Report of the Department of Forests

### 13.4 Comments

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

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	Department of Forests, Register of State Forest Land	Area of State Forest Land	2010	Forest area of state ownership that is managed by the Department of Forests
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	107.054
... of which for production	41.399
... of which for conservation	3.387

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

<b>Percent of area under forest management plan that is monitored annually</b>	<b>100</b>
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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	<b>Tier 3</b> : Reports that describe national records 5 years old or less that contain long-term forest monitoring plans <b>Tier 2</b> : Industry or other records indicating the presence of a long-term forest management plan <b>Tier 1</b> : Other
Percent of area under forest management plan that is monitored annually	<b>Tier 3</b> : Government documentation of monitoring extent <b>Tier 2</b> : Reports from forest managers or other documental sources <b>Tier 1</b> : Other

## 14.4 Comments

Category	Comments
Forest area with management plan	It includes all State Forests that are considered as falling within the categories with “forest management plans” or “equivalents” of MCPFE. The reported areas for “production” and “conservation” are those that are mainly focused on the respective management goals. For the remaining state forest area, there is not any specific focus on a particular management goal but they are managed for several management objectives simultaneously (habitat protection, recreation management, removal of dead and diseased trees, landscape conservation, fuelwood extraction etc). For this reason, the sum of the the two reported figures (“..of which..”) is less than the total “Forest area with management plan”.
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	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	<b>Tier 3</b> : Government (national or sub-national) documentation of stakeholder inputs <b>Tier 2</b> : Government (national or subnational) requirement but stakeholder inputs not documented <b>Tier 1</b> : Other

### 15.2 Comments

Category	Comments
----------	----------

Stakeholders involvement	Stakeholders involvement is regulated through the Forest Advisory Body. The Forest Advisory Body established by Article (5) of Forest Law, is the advisory platform where all relevant to forest and forest sector governmental services, local authorities, forest and environmental NGO's, employees and farmers are represented and have the right to provide opinions, suggestions, analysis, recommendations and other input. It advises the Council of Ministers, the Minister of Agriculture, Natural Resources and Environment and the Director of the Department of Forests on the declaration of new state forests, the adoption or amendment of National Forest Policy and the National Forest Programme and any other issue relevant to forests. This Body has the authority to raise and discuss any issue relevant to all phases of forest management decision making. This privilege is enacted upon the request of at least 4 out of its 18 members. These issues include among others, the implementation and revision of forest management plans, the establishment and extent of forest infrastructure etc.
N/A	N/A
N/A	N/A

## Other general comments

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## 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	0	0	0	0	0
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	0	0	0	0	0	0	
	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
<b>International</b> 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
<b>Domestic</b> 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
<b>International</b> forest management certification	Tier 1
<b>Domestic</b> forest management certification	Tier 1

## 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"> <li>• <u>Goods</u> : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products.</li> <li>• <u>Services</u> : 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.</li> </ul>
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	Department of Forests, Departmental Ordinary and Development Budget.	Departmental Expenditure,	2000, 2005, 2010	N/A
2	Department of Forests, Revenue-Book.	a) Revenue from the sale of wood and non-wood forest products b) Grants from international organizations.	2000, 2005, 2010	N/A
3	Department of Forests, Annual Report	Payments to NGO's and private sector under the Rural Development Plan.	2005, 2010	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	556.985	344.755	537.192
Public expenditure on forestry	10386.623	17801.292	38208

	2000	2005	2010
Name of Local Currency	CY Pounds	CY Pounds	Euro

#### 17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Department of Forests Revenue collected from the production of forests products and services (wood and non-wood). There is no active private forestry in Cyprus.
Public expenditure on forestry	Department of Forests expenditure on forests related activities. It comes from Departmental Ordinary and Development Budget, as well as from grants by international organisations. The specific transfer payment is made to an NGO for its contribution to the promotion of public awareness on forests protection
Other general comments	N/A

Other general comments

The Data reported for 2000 and 2005 are in CY Pounds and for 2010 in Euro.
--

## 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.
<b>Categories related to management rights of public forests</b>	<b>Definition</b>
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	Department of Forests. Register of State Forest Land	Area of State Forest Land	1988-2012	Register kept for the changes on the land officially declared as State Forest Land
2	Annual Report of the Department of Forests	Forest extent	Annually (1988-2012)	Annual reporting of forest extent and changes.
3	Department of Forests, Mapping of Hali-land vegetation	Hali-land vegetation	2005	Vegetation mapping of hali-lands based on existing maps and field survey. Until 2005, these areas were included in the categories of private forests and OWL.
4	N/A	N/A	N/A	N/A

## 18.2.2 Classification and definitions

National class	Definition
Private ownership	It corresponds to FRA 2015 definition
Public ownership	It corresponds to FRA 2015 definition
Hali-land	Hali-land is scattered land throughout the island, not regularly exploited for the last 300 years. Hali-lands are areas never been claimed by anyone due to heavy property and farming taxes imposed by the Ottoman administration (Thirgood, 1987). Later on, these areas were declared as common lands and the ownership passed to the State (Ioannou, 1991). Some of these areas have been naturally forested. Periodically, parts of these areas are declared as State Forests.
N/A	N/A

## 18.2.3 Original data

Original data used for Question 1 were used as input to this Question.

## 18.3 Analysis and processing of national data

## 18.3.1 Adjustment

There is no need to perform any calibration.



## 18.3.2 Estimation and forecasting

Original data from Question 1 were used as input to this table

National class	Area (hectares)			
	1990	2000	2005	2010
State forests	105 800	105 800	107 041	107 054
Private forests	55 310	65 810	54 010	53 920
Hali-land forests*	n.a.	n.a.	11 800	11 867
<b>Total forests</b>	161 110	171 610	172 851	172 841

\* The Hali-land areas (forests, maquis, garigue) were not known until the mapping of Hali-land vegetation, carried out in 2005. For 1990 and 2000, Hali-land forests and OWL were counted in private forests and OWL areas, respectively. After 2005 (Mapping of Hali-land vegetation), the area of Hali-land forest is reported under Public ownership.









## 18.3.3 Reclassification

National class	FRA Categories		
	Public ownership	Private ownership	Other type of ownership
State forests	100%		
Private forests		100%	
Hali-land forests	100%		

## 18.4 Data

Table 18a

Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010

	Public ownership	105.8	105.8	118.841	118.921
	... of which owned by the state at national scale	105.8	105.8	118.841	118.921
	... of which owned by the state at the sub-national government scale	0	0	0	0
	Private ownership	55.31	65.81	54.01	53.92
	... of which owned by individuals	N/A	N/A	N/A	N/A
	... of which owned by private business entities and institutions	N/A	N/A	N/A	N/A
	... of which owned by local, tribal and indigenous communities	0	0	0	0
	Unknown ownership	0	0	0	0
TOTAL		161.11	171.61	172.85	172.84

## Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 2	Tier 2
Private ownership	Tier 1	Tier 1
Unknown ownership	Tier 1	Tier 1

## 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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010

Public Administration	105.8	105.8	118.841	118.921
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	105.80	105.80	118.84	118.92

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	The private forests consist of small, scatter holdings that have been acquired by inheritance from parents to children. A lot of these holdings were under small vineyards or other minor agricultural plantations on steep slopes or on poor in quality sites, scattered and far way from roads. Constituting uneconomic investments, these areas have been abandoned by their owners and have been forested naturally by nearby expanding forest vegetation. Because of this, the total number of private owners (individuals, private business entities or institutions) is not known and is very difficult to find.	N/A
Unknown ownership	N/A	N/A
Management rights	N/A	N/A

**Other general comments to the table**

Data on private ownership for Year 1990 and 2000 includes #haliland# forest area which is considered state land, but could not be separately reported. After the Mapping of Haliland vegetation in 2005, which was based on the extensive Mapping of 1999, the area of Hali-land forest is known and it is reported under Public ownership.

## 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 of Forests, Annual Report	Staff and labour	1990, 2000, 2005, 2010	Employment in the forest sector
2	Department of Forests, Workforce Survey	Personnel work-time by forestry activities	2005, 2010	Distribution of personnel work-time by forestry activities
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
Foresters	The foresters employed by the Department of Forests
Regular Labourers	Labourers employed by the Department of Forests on a permanent basis
Casual Labourers	Labourers employed by the Department of Forests on a temporary basis (less than a year)
Labourers employed by private contractors for wood removal from State Forest areas	Self-explained
Labourers employed by private contractors for wood removal from private forest areas	Self-explained

## 19.2.3 Original data

<b>National Category</b>	<b>Employment (persons)</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
Foresters	254	281	289	293
Regular labourers	141	158	165	167
Casual labourers	87	174	359	465
Labourers employed by private contractors for wood removal from State Forest <sup>1</sup>	73	23	10	9
Labourers employed by private contractors for wood removal from private forest areas	5	2	2	2
<b>TOTAL</b>	<b>560</b>	<b>638</b>	<b>825</b>	<b>936</b>

The through-time increase of casual labourers is due to:

- the increased employment of workforce for fire protection purposes and the upgraded role of the Department of Forests for the provision of recreational facilities, as it derives from the change in managerial priorities for forests (1990-2000),
- the adoption of a new employment system for the fire fighting workforce (system of shifts) (2000-2005).



<sup>1</sup> Calculated figures using the following assumption: for years 2000 and 2005 a labour could harvest 5m<sup>3</sup> per day and for year 1990 this value was equal to 4m<sup>3</sup>. The significant decrease to the number of labourers employed by private contractors for wood removal between 1990 and 2005 is due to the fact that the total wood removals from the forests have been significantly reduced.

#### Reclassification into FRA 2010 categories

National Category	FRA 2010 Categories		
	Employment in primary production of goods %	Employment in management of protected areas %	Unspecified forestry activities %
Foresters	37.11	8.46	54.43
Regular and Casual labourers employed directly by the Department of Forests	41.98	6.45	52.57
Labourers employed by private contractors for wood removal from State Forest	100	0	0
Labourers employed by private contractors for wood removal from private forest areas	100	0	0

### 19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	0.268	0.269	0.339	0.385
	... of which female	N/A	N/A	N/A	0.036

### 19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	N/A	The through-time increase is due to the increased employment of workforce for fire protection purposes and the upgraded role of the Department of Forests for the provision of recreational facilities, as it derives from the change in managerial priorities for forests.

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Other general comments to the table
N/A



## 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)	1.969	Euro	2011

### 20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices)	The pre-filled values are not consistent with the national statistics. The latest available values are those for 2011. The value 1969 million was reported from the competent authority in the framework of IEEAF_ACC_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	Ministry of Agriculture, Natural Resources and Environment, 2013, Statement on Forest Policy	National Forest Policy	2013	National Forest Policy Statement adopted by the Council of Ministers
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	172.8	172.9

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	0

### 21.4 Comments

Category	Comments
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Government target/aspiration for forest area	N/A
Forests earmarked for conversion	N/A

Other general comments

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