

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Portugal

Rome, 2014

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

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

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Introductory Text

Place an introductory text on the content of this report

Question number 17 in not answered by now. If possible, will be answered in a near future

Desk Study?

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

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

Documents for this question:

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

1.1 Categories and definitions

Category	Definition
Forest	Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.
Other wooded land	Land not classified as "Forest" spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of 5-10 percent or trees able to reach these thresholds ; or with a combined cover of shrubs bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use.
Other land	All land that is not classified as "Forest" or "Other wooded land".
...of which with tree cover (<i>sub-category</i>)	Land considered as "Other land", that is predominantly agricultural or urban lands use and has patches of tree cover that span more than 0.5 hectares with a canopy cover of more than 10 percent of trees able to reach a height of 5 meters at maturity. It includes bothe forest and non-forest tree species.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.
Forest expansion	Expansion of forest on land that, until then, was not defined as forest.
...of which afforestation (<i>sub-category</i>)	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not defined as forest.
...of which natural expansion of forest (<i>sub-category</i>)	Expansion of forests through natural succession on land that, until then, was under another land use (e.g. forest succession on land previously used for agriculture).
Deforestation	The conversion of forest to other land use or the longterm reduction of the tree canopy cover below the minimum 10 percent threshold.
...of which human induced (<i>sub-category</i>)	Human induced conversion of forest to other land use or the permanent reduction of the tree canopy cover below the minimum 10 percent threshold.
Reforestation	Natural regeneration or re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.
...of which artificial reforestation (<i>sub-category</i>)	Re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.

1.2 National data

1.2.1 Data sources

References to sources of information	Variables	Years	Additional comments

1	6.º Inventário Florestal Nacional (6th National Forest Inventory – NFI6 - preliminary results)	Forest, OWL, inland water, other land, afforestation and deforestation	2010, 2005 and 1995	Mainland (continental territory). The NFI5 area data were collected in 2005. The field data were collected mainly in 2005, but also in 2006.
2	Inventário Florestal da Região Autónoma dos Açores (IFRAA) (Azores regional forest inventory)	Forest, OWL, inland water, other land.	2007	Azores inventory data collection is a continuous process. The reported data reference year is 2007.
3	1.º Inventário Florestal da Região Autónoma da Madeira (IFRAM1) (Madeira's regional forest inventory)	Forest, OWL, inland water, other land.	2004	The Madeira's area data were collected in 2004. The field data were collected in 2008
4	N/A	N/A	N/A	N/A

1.2.2 Classification and definitions

National class	Definition
N/A	The national classification and definition for forest are equivalent to those being used by FRA 2010.
N/A	N/A
N/A	N/A
N/A	N/A

1.2.3 Original data

Territory	Category	Area (1000 ha)		
		1995	2005	2010
Mainland territory	Reference year			
	Forest	3 352	3 212	3 155
	Other wooded land	1 088	1 278	1 500
	Other land	4 421	4 242	4 071
	... of which with tree cover	n.a	n.a	n.a

	Inland water	48	177	183
	Total area	8 909	8 909	8 909
Autonomous Region of Azores	Reference year			2007
	Forest			56.0
	Other wooded land			3.44
	Other land			172
	... of which with tree cover			n.a.
	Inland water			1.06
	Total area			232
Autonomous Region of Madeira	Reference year			2004
	Forest			32.7
	Other wooded land			1.56
	Other land			45.8
	... of which with tree cover			n.a.
	Inland water			0.11
	Total area			80.1

Sources:

Mainland territory (1995, 2005 and 2010):

All variables: NF15

Autonomous Region of Azores, (2007):

All variables: IFRAA

Autonomous Region of Madeira, (2004):

All variables: IFRAM1

Afforestation:

Territory	Year(s)	Total afforestation (ha)	Afforestation of Introduced species (ha)
Mainland Territory	1995-2005	370 713	131 856
	2005-2010	127 805	60 064

Deforestation:

Territory	Year(s)	Total desforestation (ha)	Desforestation of Introduced species (ha)
Mainland Territory	1995-2005	464 285	115 302
	2005-2010	184 844	51 287

1.3 Analysis and processing of national data

1.3.1 Adjustment

The total land area values reported in the different national data sets are not equal to the FAOstat figure reported at Appendix 2 of the *Guidelines for county reporting to FRA 2010* (9.209.000 hectares). Therefore, a slight calibration was done in those data sets.

The area of inland water bodies reported at Table 2.1 of the *Guidelines for county reporting to FRA 2010* (62 thousand hectares) was not considered for 2000 and 2010 because this figure underestimates the real value.

1.3.2 Estimation and forecasting

For the mainland territory, the year 1990 values were extrapolated from the NFI6 (1995) and NFI (2005). The year 2000 values were interpolated from the NFI6 (1995) and NFI6 (2005). The year 2015 forest forecasted values were extrapolated from the NFI (2005) and NFI6 (2010). The year 2015 inland water bodies figure was considered to be the same as 2010. Although Portuguese government has recently launched a new dam programme in which the building of 10 new water dams is planned, none of these is expected to be finished before 2015.

Both Azores and Madeira's territories have only one single forest inventory each (IFRAM1 for Madeira and IFRAA for Azores). Although other sources of information are available for past years, these are not completely consistent and are not compatible with FAO definitions. Therefore, for consistency reasons it was decided to adopt the forest inventory data of each territory for all reference years. Notice that Azores and Madeira's contributions for global figures of Portugal are relatively small, since these territories occupy only approximately 3% of the Portuguese total area.

1.3.3 Reclassification

1.4 Data

Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	3436	3343	3296	3239	3182
	Other wooded land	1091	1218	1281	1503	1725
	Other land	4633	4522	4454	4284	4119
	... of which with tree cover	N/A	N/A	N/A	N/A	N/A
	Inland water bodies	49	126	178	183	183
	TOTAL	9209.00	9209.00	9209.00	9209.00	9209.00

Table 1b

Categories		Annual forest establishment / loss (000 hectares per year)				...of which of introduced species (000 hectares per year)			
		1990	2000	2005	2010	1990	2000	2005	2010
	Forest expansion	N/A	N/A	37.1	25.6	N/A	N/A	13.2	12
	... of which afforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which natural expansion of forest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

	Deforestation	N/A	N/A	46.4	37	N/A	N/A	11.5	10.3
	... of which human induced	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which artificial	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 3	Tier 3
Other wooded land	Tier 3	Tier 3
Forest expansion	Tier 3	Tier 3
Deforestation	Tier 3	Tier 3
Reforestation	N/A	N/A

Tier criteria

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

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	N/A	N/A
Other wooded land	It was decided to consider all shrubland area as OWL as specified in the 2nd option of OWL FRA2015 definition (Terms and Definitions). Consequently, the 1990, 2000, 2005 and 2010 values were updated	N/A
Other land	N/A	N/A
Other land with tree cover	Not available	N/A

Inland water bodies	N/A	During the 1995-2010 period several water-dams were constructed (the Alqueva dam reservoir alone was responsible for 25 thousand hectares of new inland water area), and in result, the area of inland water bodies has largely increased.
Forest expansion	The NFI6 provided new accurate data as it comprehended the landcover classification of the same sample points for 1995, 2005 and 2010. This allowed to estimate the forest expansion area by comparing classifications of different years.	N/A
Deforestation	The NFI6 provided new accurate data as it comprehended the landcover classification of the same sample points for 1995, 2005 and 2010. This allowed to estimate the deforestation area by comparing classifications of different years.	N/A
Reforestation	Not available	N/A

Other general comments to the table

The NFI6 land use/cover data included the classification of 356 thousand sample points for 2010, 2005 and 1995, based on airborne imagery and field surveying. In result, the 1990, 2000 and 2005 national estimations have been updated in FRA2015.

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 <i>outside</i> 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	6.º Inventário Florestal Nacional (6th National Forest Inventory – NFI6 - preliminary results)	Primary forest, other naturally regenerated forest and planted forest	2010, 2005 and 1995	Mainland (continental territory). The NFI6 land use/cover data included the classification of 356 thousand sample points for 2010, 2005 and 1995, based on airborne imagery and field surveying . In result, the 1995 and 2005 national estimations have been updated

2	Inventário Florestal da Região Autónoma dos Açores (IFRAA) (regional forest inventory)	Primary forest, other naturally regenerated forest and planted forest	2007	Autonomous Region of Azores.
3	1.º Inventário Florestal da Região Autónoma da Madeira (IFRAM1) (regional forest inventory)	Primary forest, other naturally regenerated forest and planted forest	2004	Autonomous Region of Madeira.
4	N/A	N/A	N/A	N/A

2.2.2 Classification and definitions

National class	Definition
There is no official or commonly used classification or definition for these categories. The FRA definitions were adopted.	N/A
N/A	N/A
N/A	N/A
N/A	N/A

2.2.3 Original data

Territory	Category	Area (1000 ha)		
		1995	2005	2010
Mainland territory	Reference year	1995	2005	2010
	Primary forest	0,00	0,00	0,00
	Other naturally regenerated forest	2557	2389	2306
	...of which of introduced species	111	126	131
	...of which naturalized	3	5	5
	Planted forest	748	822	849
	...of which of introduced species	748	822	849
	Total	3305	3212	3155

Autonomous Region of Azores	Reference year			2007
	Primary forest			7.97
	Other naturally regenerated forest			30.12
	...of which of introduced species			28.66
	Planted forest			17.87
	...of which of introduced species			17.87
	Total			56.0
Autonomous Region of Madeira	Reference year			2004
	Primary forest			16.1
	Other naturally regenerated forest			16.5
	...of which of introduced species			16.5
	Planted forest			0.00
	...of which of introduced species			0.00
	Total			32.7

2.3 Analysis and processing of national data

2.3.1 Adjustment

A calibration was required to assure that the sum of areas of different categories matches the forest area reported in Table T1.

2.3.2 Estimation and forecasting

For the mainland territory, the years 2000 values were interpolated/extrapolated from the NFI6 (1995) and NFI5 (2005). The year 2015 forest forecasted values were extrapolated from the NFI6 (2005) and NFI6 (2010).

For Azores and Madeira's territories the respective inventory data were used for every reference years (as explained at Table 1).

2.3.3 Reclassification

Reclassification was made by forest tree species. A category was assigned for each forest tree species, depending on the territory considered (mainland, Azores and Madeira).

2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	N/A	24.1	24.1	24.1	24.1
	Other naturally regenerated forest	N/A	2517	2433	2350	2267
	... of which of introduced species	N/A	164	171	176	180
	... of which naturalized	N/A	3.71	4.72	5.34	5.97
	Planted forest	N/A	802	839	865	891
	... of which of introduced species	N/A	802	839	865	891
TOTAL		.00	3343.10	3296.10	3239.10	3182.10

Table 2b

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

Table 2c

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

Tiers

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

Tier Criteria

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

2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	N/A	N/A
Other naturally regenerating forest	N/A	N/A
Planted forest	N/A	N/A
Mangroves	N/A	N/A

Other general comments to the table

The NFI6 land use/cover data included the classification of 356 thousand sample points for 2010, 2005 and 1995, based on airborne imagery and field surveying. In result, the 2000 and 2005 national estimations have been updated in FRA2015.

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	MCPFE, 2003. State of Europe's Forests 2003	Forest growing stock	1984	Secondary data source based on NFI3. The NFI3 area data were collected in a 12 year period, but 1982 is considered to be the reference year. Field data were collected in a 5 year period, but 1984 is considered to be the reference year.

2	Inventário Florestal Nacional, 3. ^a Revisão. 2001. (4th National Forest Inventory - NFI4)	Forest growing stock	1998	Mainland (continental territory). The NFI4 area data were collected in 1995, while the field data were collected in 1997/1998.
3	5.º Inventário Florestal Nacional (5th National Forest Inventory – NFI5)	Forest growing stock, OWL growing stock, aboveground biomass	2005	Mainland (continental territory). The NFI5 area data were collected in 2005, while the field data were collected mainly in 2005 but also in 2006.
4	Inventário Florestal da Região Autónoma dos Açores (IFRAA) (regional forest inventory)	Forest growing stock	2007	Azores data has been collected and updated till 2007. Biomass values were not estimated in this inventory. Growing stock values were converted to biomass values.
5	1.º Inventário Florestal da Região Autónoma da Madeira (IFRAM1) (regional forest inventory)	Forest growing stock	2008	Madeira's area data were collected in 2004, while the field data were collected in 2008.

3.2.2 Classification and definitions

National class	Definition
Growing stock	Sum of the volume of all standing living trees. Includes: • All trees with DBH higher than zero; • Stem volume, including the top end, stump and bark. Excludes: • Volume of branches, roots and leaves; • Dead trees • Downed trees; • Trees outside the forest.
Growing stock of commercial species	Growing stock of forest species which have no specific-law that restricts its felling.
N/A	The Portuguese definition of above-ground biomass is identical to the FRA definition. There is no national definition for below-ground biomass and dead-wood biomass.
N/A	N/A

3.2.3 Original data

Territory	Category	Volume (million cubic meters over bark)		
		1984	1998	2005
Mainland territory	Reference year	1984	1998	2005
	Forest growing stock	185	185	167

	... of which coniferous	114	105	84.0
	... of which broadleaved	71.5	79.7	82.5
	Forest Growing stock of commercial species	149	153	136
	OWL Growing stock			1.73
Autonomous Region of Azores	Reference year			2007
	Forest growing stock			12.1
	... of which coniferous			6.70
	... of which broadleaved			5.44
	Forest Growing stock of commercial species			11.3
Autonomous Region of Madeira	Reference year			2008
	Forest growing stock			5.90
	... of which coniferous			1.81
	... of which broadleaved			4.09
	Forest Growing stock of commercial species			4.33

Biomass:

Territory	Category	Units	Year	Value
	Above-ground biomass	1000 t	1998	n.a.

	Forest growing stock	1000 m ³	1998	185
	... of which coniferous	1000 m ³	1998	105
	... of which broadleaved	1000 m ³	1998	79.7
	Above-ground biomass	1000 t	2005	137.7
	Forest growing stock	1000 m ³	2005	167
	... of which coniferous	1000 m ³	2005	84.0
	... of which broadleaved	1000 m ³	2005	82.5
Autonomous Region of Azores	Above-ground biomass	1000 t	2007	n.a.
	Forest growing stock	1000 m ³	2007	12.1
	... of which coniferous	1000 m ³	2007	6.70
	... of which broadleaved	1000 m ³	2007	5.44
Autonomous Region of Madeira	Above-ground biomass	1000 t	2008	5.08
	Forest growing stock	1000 m ³	2008	5.90
	... of which coniferous	1000 m ³	2008	1.81
	... of which broadleaved	1000 m ³	2008	4.09

Carbon:

The biomass values were used as data sources. Biomass values were used as original data.

3.3 Analysis and processing of national data

3.3.1 Adjustment

Calibration is not required.

3.3.2 Estimation and forecasting

The year 1990 figures were interpolated from the NFI3 (1984) and NFI4 (1998). In similar way, the year 2000 figures were interpolated from the NFI4 (1995) and NFI5 (2005).

The year 2010 forest forecasted figures were extrapolated from the NFI3 (1984), NFI4 (1998) and NFI5 (2005) figures.

Both Azores and Madeira's territories have only one single forest inventory each (IFRAM1 for Madeira and IFRAA for Azores). Although other sources of information are available for past years, these are not completely consistent and are not compatible with FAO definitions. Therefore, for consistency reasons it was decided to adopt the forest inventory data of each territory for all reference years. Notice that Azores and Madeira's contributions for global figures of Portugal are relatively small, since these territories occupy only approximately 3% of the Portuguese total area.

Azores and Madeira territories do not have data regarding the OWL growing stock. To estimate these variables, the mainland's average growing stock (per hectare) was used.

Biomass:

The forecasted values for 2010 were obtained assuming the same ratio biomass:growing stock of 2005.

Carbon:

Data was directly obtained by multiplying the biomass values by the default value of carbon fraction of aboveground forest biomass indicated at Table 5.2 of Appendix 5 of the FRA 2010 Guidelines document.

3.3.3 Reclassification

Reclassification is not required.

3.4 Data

Table 3a

Category	Growing stock volume (million m ³ over bark)	
	Forest	Other wooded land

		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
CFRQ	Total growing stock	203	198	185	186	N/A	N/A	N/A	1.79	1.8	N/A
CFRQ	... of which coniferous	118	107	92.5	90.8	N/A	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which broadleaved	84.6	90	92.1	95.1	N/A	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 pinaster	Maritime pine	N/A	94.7	80.6	N/A
2 nd	Eucalyptus spp.	Eucalyptus	N/A	41.4	45.1	N/A
3 rd	Quercus suber	Cork oak	N/A	23.9	23.3	N/A
4 th	Quercus ilex	Holm oak	N/A	7.87	7.12	N/A
5 th	Remaining Quercus sp.	N/A	N/A	4.75	4.72	N/A
6 th	Pinus pinea	Umbrella pine	N/A	4.72	4.06	N/A
7 th	Castanea sativa	Chestnut Oak	N/A	1.77	1.43	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	18.46	18.27	N/A
TOTAL			.00	197.57	184.60	.00

THE PRE-FILLED VALUES FOR GROWING STOCK REFER TO THE FOLLOWING THRESHOLD VALUES (SEE TABLE BELOW)

Item	Value	Complementary information
------	-------	---------------------------

Minimum diameter (cm) at breast height of trees included in growing stock (X)	0	Although there is a dbh threshold of 5/7.5 cm (depending on the specie) for measuring individual trees, volume of smaller trees (dbh<5/7.5 cm) is considered as well (smaller trees are counted and the correspondent average height is recorded for every sample plot).
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	0	The reported growing stock includes the volume of the top end of the stem.
Minimum diameter (cm) of branches included in growing stock (W)	N/A	The reported growing stock does not include the volume of branches.
Volume refers to above ground (AG) or above stump (AS)	AG	The reported growing stock includes the stump volume.

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

Table 3c

Category		Net annual increment (m ³ per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A

Table 3d

Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Above ground biomass	168	164	153	154	N/A	N/A	N/A	N/A	N/A	N/A
	Below ground biomass	69	68	63.3	63.7	N/A	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		237.00	232.00	216.30	217.70	.00	.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	79	77	72	72.5	N/A	N/A	N/A	N/A	N/A	N/A
	Carbon in below ground biomass	33	32	29.8	29.9	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Living biomass</i>	112	109	102	102	N/A	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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		112.00	109.00	101.80	102.40	.00	.00	.00	.00	.00	.00

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 1	Tier 1
Net annual increment	N/A	N/A
Above ground biomass	Tier 1	Tier 1
Below ground biomass	Tier 1	Tier 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	N/A	N/A

Tier criteria

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

3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	N/A	N/A
Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	The NFI5 distinguishes 10 different forest species/genders, while the NFI4 (1995) only distinguishes 9 (acacia spp. growing stock is reported in remaining broadleaved species). In order to be comparable to the NFI4 value, growing stock of acacia spp in 2005 was reported in the remaining broadleaved species as well.	N/A
Net annual increment	N/A	N/A

Above-ground biomass	For Azores forest inventory, above-ground biomass was not collected. For this territory, biomass values were estimated by converting growing stock to biomass values (BCEF were used). The reported above-ground biomass does not include the under storey biomass as it concerns to the tree biomass only. 1990 and 2000 DATA ESTIMATED.	The forecasted values for 2010 were obtained assuming the same ratio biomass:growing stock of 2005.
Below-ground biomass	Expansion factors to convert above-ground biomass to below-ground biomass were used. Values were collected from Table 5.3 of Appendix 5 of the FRA 2010 Guidelines document. 1990 and 2000 DATA ESTIMATED.	N/A
Dead wood	This variable can not be estimated since this kind of data is not collected in any of the Portuguese NFI.	N/A
Carbon in above-ground biomass	N/A	N/A
Carbon in below-ground biomass	N/A	N/A
Carbon in dead wood	N/A	N/A
Carbon in litter	N/A	N/A
Soil carbon	Soil depth na	N/A

Other general comments to the table

No updates were made in growing stock, biomass and carbon tables because new field data is not available at this moment. A new biometric data gathering campaign (field plots) will occur during 2014. The reported above-ground biomass values do not include the understory component as this information is not available.

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	6.º Inventário Florestal Nacional (6th National Forest Inventory – NFI6 - preliminary results)	Area of permanent forest estate, Forest area within protected areas, Forest area under sustainable forest management, Primary designated function.	1995, 2005, 2010	Land cover and statistical information
2	Inventário Florestal da Região Autónoma dos Açores (IFRAA) (Regional Forest Inventory)	Area of permanent forest estate, Forest area within protected areas, Forest area under sustainable forest management, Primary designated function.	2007	Land cover and statistical information
3	1.º Inventário Florestal da Região Autónoma da Madeira (IFRAM1) (regional forest inventory)	Area of permanent forest estate, Forest area within protected areas, Forest area under sustainable forest management, Primary designated function.	2004	Land cover and statistical information

4	Rede Nacional de Matas e Perímetros Florestais - RNMPF (national network of forest areas managed by national and regional forest agencies)	Area of permanent forest estate, Forest area under sustainable forest management, Forest area with management plan, Primary designated function	N/A	Cartographic information
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4.2.2 Classification and definitions

National class	Definition
Forest areas within protected areas	Forest areas within Rede Natura 2000 and forest areas within Rede Nacional de Áreas Protegidas (national protected areas network).
N/A	N/A
N/A	N/A
N/A	N/A

4.2.3 Original data

Territory	Category	Area (1000 ha)	
Mainland territory	Reference year	2005	
	Production	1997	
	Protection of soil and water	187	
	Conservation of biodiversity	145	
	Multiple use	1018	
	Other (please specify in comments below the table)	0.00	
	No / unknown	0.00	
	Total	3347	
Autonomous Region of Azores	Reference year	2007	
	Production	17.4	
	Protection of soil and water	28.3	

	Conservation of biodiversity	9.49	
	Social use/Multiple use	0.69	
	Other (please specify in comments below the table)	0.00	
	No / unknown	0.00	
	Total	56.0	
Autonomous Region of Madeira	Reference year	2004	
	Production	0.00	
	Protection of soil and water	16.5	
	Conservation of biodiversity	16.1	
	Multiple use	0.00	
	Other (please specify in comments below the table)	0.00	
	No / unknown	0.00	
	Total	32.7	

Territory	Category	Area (1000 ha)		
		1995	2005	
Mainland territory	Reference year	1995	2005	
	Area of permanent forest estate	1391	1237	
	Forest area within protected areas	616	648	
	Forest area under sustainable forest management	1590	1419	

Autonomous Region of Azores	Reference year		2007	
	Area of permanent forest estate		15.8	
	Forest area within protected areas		23.6	
	Forest area under sustainable forest management		20.3	
Autonomous Region of Madeira	Reference year		2004	
	Area of permanent forest estate		20.9	
	Forest area within protected areas		24.4	
	Forest area under sustainable forest management		17.5	

4.3 Analysis and processing of national data

4.3.1 Adjustment

4.3.2 Estimation and forecasting

The year 1990 values were extrapolated from the NFI6 (1995) and NFI (2005). The year 2000 values were interpolated from the NFI6 (1995) and NFI6 (2005). The year 2015 forest forecasted values were extrapolated from the NFI (2005) and NFI6 (2010).

These values were finally interpolated to total national forest referred on tabela 1a), taking in consideration Açores, Madeira e Continental mainland.

4.3.3 Reclassification

For the mainland territory, the table T4a figures for the year 2010 were calculated, assuming IFN6 data (1995, 2005 e 2010):

- Pinus pinaster, Eucalyptus globulus and other coniferous stands (less Pinus pinea) belong to Production Forest categories

- Quercus stands, Pinus pinea, Castanea sativa, Ceratonia siliqua and other broadleaves stands belong to Multiple Use Forest categorie

4.4 Data

Table 4a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	1864.008	1766.621	1702.901	1647.837	1586.598
	Multiple use forest	1305.293	1309.68	1112.09	1067.573	1071.812

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	Cork	Quercus suber	147000	8
2 nd	Pinecone fruit	Pinus pinea	43076.9	8
3 rd	Chestnut	Castanea sativa	32668.5	1
4 th	Wild mushrooms	several species	22750	1
5 th	Honey	N/A	16857.02	11
6 th	Resin	Pinus pinaster	6687.6	7
7 th	Carob	Ceratonia siliqua	6436.25	8
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			275476.27	

2010	
Name of local currency	euro

Category
Plant products / raw material
1 Food
2 Fodder
3 Raw material for medicine and aromatic products
4 Raw material for colorants and dyes
5 Raw material for utensils handicrafts construction
6 Ornamental plants
7 Exudates
8 Other plant products
Animal products / raw material
9 Living animals
10 Hides skins and trophies
11 Wild honey and beeswax
12 Wild meat
13 Raw material for medicine
14 Raw material for colorants
15 Other edible animal products
16 Other non-edible animal products

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m ³ u.b.)	
	Total wood removals	...of which woodfuel
1990	11205	500
1991	10809	500

1992	10278	500
1993	10207	500
1994	9819	500
1995	9350	500
1996	8978	550
1997	8978	550
1998	8548	600
1999	8978	600
2000	10831	600
2001	8946	600
2002	8742	600
2003	9673	600
2004	10869	600
2005	10746.2	600
2006	10804.6	600
2007	10822.9	600
2008	10168.7	600
2009	9564.1	600
2010	9648.4	600
2011	9139.8	600

Tiers

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

Tier Criteria

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

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	N/A	N/A
Multiple use forest	N/A	N/A
Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

Other general comments to the table

N/A

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	6 ° Inventário Florestal Nacional (IFN6)	Forest	2010	Mainland (continental territorial). The NIF6 area data were collected in 2012

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

5.2.2 Classification and definitions

National class	Definition
N/A	N/A

5.2.3 Original data

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5.3 Analysis and processing of national data

5.3.1 Adjustment

Portugal doesn't have forest stands specifically managed towards the targets above presented. Therefore, we consider that is adequate to consider that:

- "Forest area primarily designated or managed for coastal stabilization", the forested coastal area, including the dune sites.
- "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", the forest area sites that have slope above 30% plus forest mountain areas (altitude above 800 meters) and forest installed to protect river and hidric lines, as well as public water reservoirs.

The above mentioned values are refered to mainland territory (continental).

On what concerns Azores and Madeira, a estimation of 28300 ha (Açores) and 16500 ha (Madeira), concerning forest for protection of soil and water, was added to "Protection of soil and water" total, along the period (1990 to 2015).

5.3.2 Estimation and forecasting

- "Forest area primarily designated or managed for coastal stabilization" - it is assumed that the this forest category is much stabilized along the last decades. So the value from 1990 to 2010 is the same and the trend to 2015 is also the same, because is not expected to have changes on this forest category.

5.3.3 Reclassification

5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
CFRQ	Protection of soil and water	309.699	309.699	354.009	380	380
CFRQ	... of which production of clean water	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which coastal stabilization	43	43	43	43	43
CFRQ	... of which desertification control	N/A	N/A	N/A	N/A	N/A
CFRQ	... of which avalanche control	0	0	0	0	0
CFRQ	... of which erosion, flood protection or reducing flood risk	266.699	266.699	311.009	337	337
CFRQ	... of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	N/A	N/A	N/A	N/A	N/A
...of which public recreation	N/A	N/A	N/A	N/A	N/A
...of which carbon storage or sequestration	N/A	N/A	N/A	N/A	N/A
...of which spiritual or cultural services	N/A	N/A	N/A	N/A	N/A
...of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for reported trend	Tier for status
Protection of soil and water	Tier 3	Tier 3
Ecosystem services, cultural or spiritual values	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
Protection of soil and water	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations or legislation relating to soil and water protection. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

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

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	N/A	N/A
Production of clean water	N/A	N/A
Coastal stabilization	N/A	N/A
Desertification control	N/A	N/A
Avalanche control	N/A	N/A
Erosion, flood protection or reducing flood risk	N/A	N/A
Other protective functions	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A
Public recreation	N/A	N/A
Carbon storage or sequestration	N/A	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	N/A	N/A

Other general comments to the table

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	See 4.2.1.	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

6.2.2 Classification and definitions

National class	Definition
See 4.2.2.	N/A
Conservation of biodiversity	Forest areas within Rede Nacional de Areas Protegidas (natural protected areas network)
N/A	N/A
N/A	N/A

6.2.3 Original data

See 4.2.3

6.3 Analysis and processing of national data

6.3.1 Adjustment

6.3.2 Estimation and forecasting

See 4.2.3

6.3.3 Reclassification

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	N/A	N/A	170	186.59	186.59
	Forest area within protected areas	N/A	681	697	672.75	672.75

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"> Conservation of biodiversity Forests within protected areas 	Tier 3: Data obtained from national or state agencies responsible for conservation and protected area or legislation relating to area protection. Tier 2: Studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates Tier 1 Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	Mainland/continenta territorial values plus Azores and Madeira areas	N/A

Forest area within protected areas	Mainland/continental territorial values plus Azores and Madeira areas	N/A
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Other general comments to the table

Forest area has decreased in 2010 due to a high rate of forest fires in previous years. Not expected that such a high rate of forest fires will occur again

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	6.º Inventário Florestal Nacional (6th National Forest Inventory – NFI6 – preliminary results)	Area of forest affected by woody invasive species	2010 and 2005	This source concerns Acacia spp. area
2	Inventário Florestal da Região Autónoma dos Açores (IFRAA) (Azores regional forest inventory)	Area of forest affected by woody invasive species	2007	This source concerns Acacia spp. area and Pittosporum undulatum area
3	1º Inventário Florestal da Região Autónoma da Madeira (IFRAM 1) (Madeira regional forest inventory)	Area of forest affected by woody invasive species	2004	This source concerns Acacia spp. area
4	N/A	N/A	N/A	N/A

7.2.2 Classification and definitions

National class	Definition
N/A	N/A

7.2.3 Original data

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7.3 Analysis and processing of national data

7.3.1 Adjustment

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7.3.2 Estimation and forecasting

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7.3.3 Reclassification

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7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
Acacia spp.	14.5	15.2
Pittosporum undulatum	29.9	29.9
N/A	N/A	N/A
Total	44.4	45.1

Tiers

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

Tier Criteria

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

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	N/A	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	ICNF/Forest Focus Regulation	Disturbances areas; Major outbreaks	1990, 2000, 2003, 2004, 2005, 2006, 2007, 2007, 2008, 2009, 2010, 2011, 2012	N/A
2	ICNF/Severe weather events	Disturbances areas	2013	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

8.2.2 Classification and definitions

National class	Definition
Number of fires of which forest area burned	Number of fires with burned forest area exclusively
Area damaged by Pinewood Nematode (PWN) / <i>Bursaphelenchus xylophilus</i>	Area of coniferous stands damaged by PWN
Area damaged by <i>Gonipterus</i> spp.	Area of damaged Eucalyptus stands
N/A	N/A

8.2.3 Original data

8.3 Analysis and processing of national data

8.3.1 Adjustment

8.3.2 Estimation and forecasting

8.3.3 Reclassification

On what concerns PWN, in 2005, Portugal has submitted 519 000 hectares which reflected the territorial area with intervention (Setubal Peninsula and Centro) where disease showed up.

In 2010, the area now submitted is 193.000 hectares which reflects the area of coniferous stands damaged by PWN.

In 2005, the area of coniferous stands damaged by PWN was 47 335 hectares.

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	#
CFRQ	Total land area burned	426	26219	130	22165	339	35823	76	20444	33	20316
CFRQ	... of which forest area burned	286	6705	56	5382	214	9187	36	4349	10	2853
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
CFRQ	Total land area burned	18	14930	87	26136	133	22028	74	25222	110	21179

	... of which forest area burned	5	2089	24	3924	46	3523	20	4440	48	4385
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Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	Gonipterus spp.	2012	130
2	Pinewood Nematode (PWN) / Bursaphelenchus xylophilus	2012	193
3	Storm, January 2013	2013	28
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Outbreak category
1 Insects
2 Diseases
3 Severe weather events

Tiers

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

Tier criteria

Category	Tier for status	Tier for reported trend
----------	-----------------	-------------------------

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

8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	N/A	N/A
Insects	Gonipterus spp.	N/A
Diseases	Pinewood Nematode (PWN)/ Bursaphelenchus xylophilus	N/A
Severe weather events	Area affected in mainland by a severe weather event (January 2013). A storm that occurred mainly during 18th and 19th of January with winds that reached 140 km.	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	53.388

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 3

Tier criteria

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

Comments

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

Other general comments

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

10.2.2 Classification and definitions

National class	Definition
N/A	N/A

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	yes	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	yes	no	no
... of which, in <u>publicly</u> owned forests	yes	yes	no	no
... of which, in <u>privately</u> owned forests	yes	yes	no	no

10.4 Comments

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

Other general comments

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

Documents for this question:

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

11.1 Categories and definitions

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

11.2 National data

11.2.1 Data sources

	References to sources of information	Years	Additional comments
1	N/A	N/A	N/A
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	N/A	N/A	N/A

Table 11

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

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

Other general comments

Portugal has a Forest Consultive Council (Conselho Consultivo Florestal) which is a national platform that enhances stakeholder participation towards forest policy development.

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	6.º Inventário Florestal Nacional (6th National Forest Inventory – NFI6 - preliminary results)	Area of permanent forest estate and Forest area within protected areas	2005, 2010	Land cover and statistical information
2	Inventário Florestal da Região Autónoma dos Açores (IFRAA) (Regional Forest Inventory)	Area of permanent forest estate, Forest area within protected areas, Forest area under sustainable forest management, Primary designated function.	2007	Land cover and statistical information
3	1.º Inventário Florestal da Região Autónoma da Madeira (IFRAM1) (regional forest inventory)	Area of permanent forest estate, Forest area within protected areas, Forest area under sustainable forest management, Primary designated function.	2004	Land cover and statistical information
4	Rede Nacional de Matas e Perímetros Florestais - RNMPF (national network of forest areas managed by national and regional forest agencies)	Area of permanent forest estate, Forest area under sustainable forest management, Forest area with management plan, Primary designated function	N/A	Cartographic information

12.2.2 Classification and definitions

National class	Definition
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Area of permanent forest estate	Forest areas subjected to legislation that designates them to be retained as forest, disallowing land use conversions. For the mainland territory, these areas comprehend forest areas within Rede Nacional de Matas e Perímetros Florestais (national network of forest areas managed by national and regional forest agencies which are under the Forest Regime) and forest stands of <i>Quercus ilex</i> and <i>Quercus suber</i> (protected by a specific decree-law). For Azores and Madeira these areas comprehend forest areas managed by forest agencies and the primary forest areas.
Primary function of forest areas	The primary functions are established on a land cover basis and management/conservation status, defined by the national and regional forest agencies (Autoridade Florestal Nacional for the mainland territory, Direcção Regional dos Recursos Florestais for Azores and Direcção Regional de Florestas for Madeira).
N/A	N/A
N/A	N/A

12.2.3 Original data

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12.3 Analysis and processing of national data

12.3.1 Adjustment

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12.3.2 Estimation and forecasting

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12.3.3 Reclassification

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12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	1326.087
	... of which permanent forest estate	1326.087

Tiers

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

Permanent forest estate	Tier 1
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Tier Criteria

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

12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	N/A
Permanent forest estate	N/A

Other general comments

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

Documents for this question:

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

13.1 Categories and definitions

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

13.2 National data

13.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

13.2.2 Classification and definitions

National class	Definition
N/A	N/A

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	2010	no	yes	no	yes	no	yes
Other field assessments	N/A	N/A	yes	no	no	no	no	no
Updates to other sources	N/A	N/A						
Expert estimate	N/A	N/A						

Table 13b

Type of forest reporting used at national scale	Check boxes that apply
1 Criteria and Indicators reporting	yes
2 Periodic national state of the forest report	yes
3 Other (please document)	no
4 None	no

Other type of forest reporting
N/A

13.4 Comments

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

Other general comments

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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	ICNF / Forest areas with management plan	Area with forest management plan	2010	statistical information
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	726
... of which for production	686
... of which for conservation	40

Table 14b

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

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

Table 14c

Percent of area under forest management plan that is monitored annually	5.01
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Tiers

Category	Tier for status
Forest area with management plan	Tier 2
Percent of area under forest management plan that is monitored annually	Tier 2

Tier criteria

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

14.4 Comments

Category	Comments
Percent of area under forest management plan that is monitored annually	There is no legal requirement for the government to monitor forest management plans (annually or not). However, the main forestry operations require prior licensing and accordingly must be monitored / audited. In the case of forest management plans for the Forest Estates, these are subject to continuous monitoring.
Forest area with management plan	Forest areas with management plan comprehend forest areas which have a forest management plan approved by forest authorities. In this definition we include private forest areas with management plan and public forest estates under National Forest Authority management.
N/A	N/A

Other general comments

- Table 14b - 3 Social considerations community involvement - applied only to forest management areas of national estates, community areas and to areas integrated in Forest Intervention Zones (ZIF).
- It is somehow "reducing" to divide forest area between "conservation aimed" and "production aimed". This is emphasized on the mediterranean forest ecosystems where both functions are usually linked.

Nevertheless, an adaptation to Portuguese reality was made:

Conservation - forest stands inside national protected areas

Production - the rest of national forest stands (includes multifunction stands)

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	no
3. Review of operations	no

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 3

Tier criteria

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

15.2 Comments

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

Other general comments

All public forest areas ought to have a forest management plan (PGF) and are submitted to a public consultation process before being approved. In this phase, it is supposed that stakeholders state their opinion about PGF.

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	51.3	51.3
	PEFC	0	0	0	0	0	50	50
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	74.6	186.1	192.8	433.9	268.4	299.9	
	PEFC	0	0	200	205	217	219	
	Other	0	0	0	0	0	0	

Table 16b

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

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

Tier criteria

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

Tiers

Category	Tier for status
International forest management certification	Tier 3
Domestic forest management certification	N/A

16.3 Comments

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

Other general comments

For the time being, there are no domestic forest management certification schemes.

Annual values provided by FSC and PEFC are based on reports for July in each year. Values change from month to month which is why July was used for all reports.

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"> • <u>Goods</u> : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products. • <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.
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	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	N/A	N/A	N/A
Public expenditure on forestry	N/A	N/A	N/A
	2000	2005	2010
Name of Local Currency	N/A	N/A	N/A

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	N/A
Public expenditure on forestry	N/A
Other general comments	N/A

Other general comments

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

Documents for this question:

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

18.1 Categories and definitions

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

18.2 National data

18.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Rede Nacional de Matas e Perímetros Florestais - RNMPF (national network of forest areas managed by national and regional forest agencies)	Area of Forest land ownership (mainland territory)	2010	Land cover information
2	Boletim estatístico da CELPA 2010 (pulp industry companies statistics)	Area of Forest land ownership (mainland territory)	2010	N/A
3	6.º Inventário Florestal Nacional (6th National Forest Inventory – NFI6 - preliminary results)	Area of Forest land ownership (mainland territory)	2010, 2005, 1995	Land cover information
4	Internal statistics of DRRF (Azores regional forest authority)	Forest land ownership (Autonomous Region of Azores)	2007	Since there is no available data for other years, the 2007 land ownership relative distribution was applied to all the reference years.
5	Internal statistics of DRF (Madeira's regional forest authority)	Forest land ownership (Autonomous Region of Madeira)	2004	Since there is no available data for other years, the 2004 land ownership relative distribution was applied to all the reference years.

18.2.2 Classification and definitions

National class	Definition
The national classifications and definitions are equivalent to those being used by FRA 2010.	N/A
N/A	N/A
N/A	N/A
N/A	N/A

18.2.3 Original data

Territory	Category	Area (%)
Mainland territory	Reference year	2005
	Public ownership	1.50%

	Private ownership	98.5%
	...of which owned by individuals	88.9%
	...of which owned by private business entities and institutions	5.31%
	...of which owned by local communities	4.33%
	...of which owned by indigenous / tribal communities	0.00%
	Other types of ownership	0.00%
Autonomous Region of Azores	Reference year	2007
	Public ownership	0.7%
	Private ownership	99.3%
	...of which owned by individuals	71.7%
	...of which owned by private business entities and institutions	0.0%
	...of which owned by local communities	27.5%
	...of which owned by indigenous / tribal communities	0.0%
	Other types of ownership	0.0%
Autonomous Region of Madeira	Reference year	2004
	Public ownership	11.8%
	Private ownership	88.2%
	...of which owned by individuals	36.1%
	...of which owned by private business entities and institutions	0.0%
	...of which owned by local communities	52.0%
	...of which owned by indigenous / tribal communities	0.0%
	Other types of ownership	0.0%

18.3 Analysis and processing of national data

18.3.1 Adjustment

Calibration is not required because relative proportions were used. These values were multiplied by the total forest area of each reference year, which were already calibrated, as explained in Table 1 comments.

18.3.2 Estimation and forecasting

Estimation and forecasting was not required because relative proportions were used. These values were multiplied by the total forest area of each reference year, which were already estimated (interpolated for mid-years, between data-source years), as explained in Table 1 comments.

18.3.3 Reclassification

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	52.8	54.1	54.4	98.28
	... of which owned by the state at national scale	N/A	N/A	N/A	74.64
	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	23.64
	Private ownership	3383.2	3288.9	3241.6	3140.72
	... of which owned by individuals	3039.2	2935.9	2886.6	2788.758
	... of which owned by private business entities and institutions	172	177	178	180.216
	... of which owned by local, tribal and indigenous communities	172	176	177	171.746

	Unknown ownership	0	0	0	0
TOTAL		3436.00	3343.00	3296.00	3239.00

Tiers

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

Tier criteria

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

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	53	54	54	98.28
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	53.00	54.00	54.00	98.28

Category	Tier for reported trend	Tier for status
Public Administration	Tier 3	Tier 3
Individuals	N/A	N/A
Private companies	N/A	N/A

Communities	N/A	N/A
Other	N/A	N/A

18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	N/A	Due to the implementation of a specific forest procedure, more forest estates under public ownership have been identified and thus taken in consideration on the 2010 statistics
Private ownership	N/A	N/A
Unknown ownership	N/A	N/A
Management rights	N/A	N/A

Other general comments to the table

The NFI6 land use/cover data included the classification of 356 thousand sample points for 2010, 2005 and 1995, based on airborne imagery and field surveying. In result, the 1990, 2000 and 2005 national estimations have been updated in FRA2015.

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	ILO statistics of Employment in forestry, logging and related services, 2003	N/A	N/A	Employment in forestry, logging and related services (secondary data reported at FRA 2005)
2	Gabinete de Estratégia e Planeamento - SISED – Ministério do Trabalho e da Solidariedade Social – National employment statistics	N/A	2005	These statistics do not include workers related to part of the forest support services, as forest inventory, forest management, timber assessment and forest pest control. The national employment statistics do not provide data for these types of workers.
3	Gabinete de Estratégia e Planeamento (GEP), Ministério da Solidariedade, Emprego e Segurança Social (MSESS)/Strategy and Planning Office (SPO) Ministry of Solidarity, Employment and Social Security (MSESS)	N/A	2010	N/A
4	N/A	N/A	N/A	N/A

19.2.2 Classification and definitions

National class	Definition
Employment 2010	Total number of employes on the Forest Sector

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

19.2.3 Original data

Category	FRA Category	Reference year		
		1990	2000	2005
Total employment in forestry, logging and related services	Total employment	16192	10990	
CNP 6.1.4.1 – Forest workers	Paid employment			2184
CNP 9.2.1.2 – Forest workers with no qualification	Paid employment			1371
CNP 6.1.2.3 – Beekeepers	Paid employment			559
CNP 5.1.6.1 – Fire fighters	Paid employment			2734
CNP 6.1.1.2.15 – Cork extractor	Paid employment			56
CNP 6.1.4.2.10 – Resin extractor	Paid employment			35
CNP 8.3.3.1.90 – Other agriculture and forest heavy machinery drivers	Paid employment			410
CNP 6.1.4.1 – Forest workers	Self-employment			257
CNP 9.2.1.2 – Forest workers with no qualification	Self-employment			5
CNP 6.1.2.3 – Beekeepers	Self-employment			18

CNP 5.1.6.1 – Fire fighters	Self-employment			0
CNP 6.1.1.2.15 – Cork extractor	Self-employment			7
CNP 6.1.4.2.10 – Resin extractor	Self-employment			1
CNP 8.3.3.1.90 – Other agriculture and forest heavy machinery drivers	Self-employment			3

19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	16.2	11	7.64	5.91
	... of which female	N/A	N/A	N/A	N/A

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	The data reported for 2010 is the number of total employes in the Forest Sector (production, manufactured products and sales)	Different data sources were used between 1990/2005 and 2010. The reported trend is consistent with the social change within the primary sector

Other general comments to the table

Not available data related to female employment in forestry

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)	172.86	Euros	2010

20.3 Comments

Category	Comments
N/A	N/A

Other general comments

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

Documents for this question:

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

21.1 Categories and definitions

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

21.2 National data

21.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	ICNF /National Forest Strategy	area with forest occupation in 2030	2030	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	3288	3500

Table 21b

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

21.4 Comments

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

Forests earmarked for conversion	N/A
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Other general comments

The value for 2020 considers the forest trend for 2015 (3182000 hectares) and it was interpolated between 2015 and the main target for 2030.