

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

**Dominica**

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

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

### Introductory Text

Place an introductory text on the content of this report

<p>No report has been received from Dominica.</p> <p>This report is the result of a desk study prepared by the FRA secretariats in Rome, which is based on the existing available information using the established format for FRA 2015 country reports</p>
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### Desk Study?

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

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

Documents for this question:

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

### 1.1 Categories and definitions

Category	Definition
Forest	Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.
Other wooded land	Land not classified as "Forest" spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of 5-10 percent or trees able to reach these thresholds ; or with a combined cover of shrubs bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use.
Other land	All land that is not classified as "Forest" or "Other wooded land".
...of which with tree cover ( <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	a) Wood, E. 2000. Land cover map for Dominica. Caribbean Vegetation and Landcover Mapping Initiative. The Nature Conservancy, International Institute of Tropical Forestry, US Forest Service, EROS Data Center, and US Geological Service.	Forest cover	2000	Data derived from the Landsat based land cover and vegetation map produced as part of the Caribbean Vegetation Mapping project.
2	b) Earth Satellite Corporation. 1986. Preparation of Natural Vegetation Map for Dominica, West Indies.	Vegetation map with forest cover	1984	Data from aerial photograph interpretation. Although the authors and others cite inadequacies in the aerial photographs used for the vegetation mapping and discrepancies in the forest typing, this report has been used as a source in past forest resource assessments.
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

### 1.2.2 Classification and definitions

National class	Definition
Dry Scrub Woodland (1984) Lowland Drought Deciduous Shrub/Semi-deciduous (2000)	This vegetation type occurs at lower elevation on the West Coast in areas that represent the most xeric conditions of the island. Community is dominated by a shrub layer that form a closed canopy of 15-18 m in height, while there is a lower stratum of small trees and shrubs below. Their crowns carry abundant epiphytes, bromeliads, orchids and ferns. <i>Lonchocarpus benthamianus</i> is generally dominant often with <i>Pisonia fragrans</i> , <i>Chrysophyllum argenteum</i> , <i>Haematoxylon campechianum</i> . The under story contains <i>Erythroxylum ovatum</i> , <i>Tabernaemontana citrifolia</i> .
Elfin Woodland (1984) Montane Cloud Forest (2000)	N/A
Littoral Woodland (1984) (No equivalent class in year 2000)	N/A

Mature Rain Forest (1984) Submontane Rain Forest (2000)	This vegetation type occurs toward the interior of the island, generally between elevations of 270 and 430 m and having few periods without precipitation, customarily between April and June. The forest is dense and closely ranked, with dominant trees from 27 to 33 m tall. The canopy is dominated by the typical forest alliance <i>Dacryodes excelsa</i> - <i>Sloanea massonii</i> : this is mostly a submontane rain forest of the Lesser Antilles, with <i>Dacryodes excelsa</i> , <i>Sloanea massonii</i> , <i>Licania ternatensis</i> , <i>Amanoa caribaea</i> , <i>Chimarrhis cymosa</i> dominant in the upper canopy, and a middle story of trees usually dominated by members of Lauraceae, especially of the genera <i>Nectandra</i> and <i>Ocotea</i> ; the under canopy may include also other species, e.g. <i>Tovomita plumieri</i> , <i>Tapura antillana</i> and numerous epiphytes and lianas.
Montane forest (1984) Montane Rain Forest (2000)	This vegetation type occurs approximately above 2000 feet (Beard's Lower Montane Rain Forest). Frequently covered by cloud at canopy level (fog) and with little soil on the steep slopes. The species composition is similar to the mature rain forest, but much is reduced in stature. It is characteristically covered with non-vascular epiphytes.
Montane thicket (1984) Evergreen Montane Shrubland (2000)	N/A
Secondary Rain Forest (1984) Disturbed Submontane Rain Forest (2000)	In certain areas, disturbed by primarily logging and by shifting agriculture, it is possible to find secondary rain forest; vestigial old stands, surrounded by smaller re-growth and characterized by <i>Miconia</i> species ( <i>Miconia mirabilis</i> in particular), <i>Cecropia schreberiana</i> , and in the smaller gaps, <i>Simaruba amara</i> . Canopy climax forest trees such as <i>Sloanea</i> exist but are not dominant.
Swamp Forest (1984) Seasonally Flooded R.F./W.L./G.L. (2000)	This vegetation type is restricted to an area immediately east of the Cabrits Peninsula in the North west of the islands, an area experiencing a seasonal supply of fresh water. Characteristic species are <i>Pterocarpus officinalis</i> , <i>Laguncularia racemosa</i> and <i>Avicennia germinans</i> .
Semi-Evergreen Forest (1984) Lowland/Submontane Seasonal Evergreen Forest (2000)	These are areas subject to drought and some of the species may lose their leaves. The height of the forest is only medium and the understory lacks epiphytes and lianas. Species include <i>Tabebuia pallida</i> and <i>Lonchocarpus pentaphyllus</i> .
Other Land (1984)	Non-forest land, including the 2000 national classes Fallow/Cleared Land, Active Agriculture, Urban/Residential/Bare Soil/Rock, Short/Medium/Tall Grassland, Fumerole, and Fumerole Sulphurous

### 1.2.3 Original data

#### Note comments related to 1.2.2

National classes used in 1984 and 2000 were very similar. The definitions presented below were published with the 1984 data. The corresponding year 2000 national class is included below the 1984 national class.

Note that there are some year 2000 non-forest national classes which appear in subsequent tables that are not defined below.

The forest area data from 1984 comes from the Earth Satellite Corporation (1986) documentation for the preparation of Natural Vegetation Map for Dominica, West Indies. Break-down of total other land by categories was not available.

<b>National Classes 1984</b>	<b>1984</b> <b>(1000 ha) <sup>1</sup></b>
Mature Rain Forest	24.49
Montane Forest	3.64
Montane Thicket	0.80
Elfin Woodland	0.17
Littoral Woodland	0.14
Dry Scrub Woodland	6.24
Secondary Rain Forest	9.09
Swamp Forest	0.03
Semi-Evergreen Forest	7.17
<b>Total forest land</b>	<b>51.77</b>
<b>Total other forest land</b>	<b>n.a.</b>
<b>Total other land <sup>2</sup></b>	<b>23.23</b>
<b>Total land</b>	<b>75.00</b>

The year 2000 data comes from Wood (2000) land cover map for Dominica, produced by the Caribbean Vegetation and Landcover Mapping Initiative, The Nature Conservancy, International Institute of Tropical Forestry, US Forest Service, EROS Data Center, and US Geological Service.

<b>National Classes 2000</b>	<b>2000</b> <b>(1000 ha) <sup>1</sup></b>
Montane Cloud Forest	0.25



Evergreen Montane Shrubland	1.07
Montane Rain Forest	3.04
Submontane Rain Forest	23.63
Disturbed Submontane Rain Forest	8.40
Lowland/Submontane Seasonal Evergreen Forest	5.68
Lowland Drought Deciduous Shrub/Semi-Deciduous	5.55
Seasonally Flooded R.F./W.L./G.L	0.25
<b>Total forest</b>	<b>47.88</b>
Fallow/Cleared Land	2.69
Active Agriculture	21.90
Urban/Residential/Bare Soil/Rock	1.30
Short/Medium/Tall Grassland	1.68
Fumerole	0.02
Fumerole Sulphurous	0.00
<b>Total other land</b>	<b>27.59</b>
<b>Total land area</b>	<b>75.47</b>

### 1.3 Analysis and processing of national data

#### 1.3.1 Adjustment

National data from 1984 did not need calibration because total land area was the same as FAO STAT total area.	
<b>Source</b>	<b>Total Land Area (1000 ha)</b>
National data 1984	75.00
National data 2000	75.47

FAOSTAT	75.00
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National data for each of the national forest classes for the year 2000 (table 1.2) was multiplied by 0.9937 to calibrate the area of each class to the FAO STAT total area.

<b>National Classes 2000</b>	<b>2000 (1000 ha)</b>	<b>Calibrated 2000 (1000 ha)</b>
Montane Cloud Forest	0.25	0.25
Evergreen Montane Shrubland	1.07	1.06
Montane Rain Forest	3.04	3.02
Submontane Rain Forest	23.63	23.49
Disturbed Submontane Rain Forest	8.40	8.35
Lowland/Submontane Seasonal Evergreen Forest	5.68	5.65
Lowland Drought Deciduous Shrub/Semi-	5.55	5.51
Seasonally Flooded R.F./W.L./G.L	0.25	0.25
<b>Total forest</b>	<b>47.88</b>	<b>47.58</b>
Fallow/Cleared Land	2.69	2.68
Active Agriculture	21.90	21.76
Urban/Residential/Bare Soil/Rock	1.30	1.29
Short/Medium/Tall Grassland	1.68	1.67
Fumerole	0.02	0.02
Fumerole Sulphurous	0.00	0.00
<b>Total other land</b>	<b>27.59</b>	<b>27.42</b>
<b>Total land area</b>	<b>75.47</b>	<b>75.00</b>

## 1.3.2 Estimation and forecasting

Data for the years 1990, 2005 and 2010 were forecast using linear interpolation and extrapolation of the data from 1984 and 2000 (total annual forest loss of 260 ha/yr). Estimation and forecasting were done by national forest classes, and then the classes were summed for a total forest cover estimate. Annual rates of change were calculated for each national forest class using the 1984 and 2000 data.

<b>National Classes 2000</b>	<b>1984 (1000 ha)</b>	<b>2000 (1000 ha)</b>	<b>Change</b>	<b>Annual rate</b>
Montane Cloud Forest	0.17	0.25	0.081	0.005
Evergreen Montane Shrubland	0.80	1.06	0.262	0.016
Montane Rain Forest	3.64	3.02	-0.617	-0.039
Submontane Rain Forest	24.49	23.48	-1.006	-0.063
Disturbed Submontane Rain Forest	9.09	8.35	-0.742	-0.046
Lowland/ Submontane Seasonal Evergreen Forest	7.17	5.65	-1.522	-0.095
Lowland Drought Deciduous Shrub/ Semi-	6.24	5.51	-0.729	-0.046
Seasonally Flooded R.F./ W.L./G.L	0.17	0.25	0.081	0.005
<b>Total forest</b>	<b>51.77</b>	<b>47.58</b>	<b>-4.192</b>	<b>-0.262</b>
<b>Total other land</b>	<b>23.23</b>	<b>27.42</b>	<b>4.192</b>	<b>0.262</b>
<b>Total land area</b>	<b>75.00</b>	<b>75.00</b>	<b>0.000</b>	<b>0.000</b>

Estimations and forecasted forest cover for Dominica appears below.

<b>National Classes 2000</b>	<b>1990 (1000 ha)</b>	<b>2000 (1000 ha)</b>	<b>2005 (1000 ha)</b>	<b>2010 (1000 ha)</b>
Montane Cloud Forest	0.20	0.25	0.28	0.30
Evergreen Montane Shrubland	0.90	1.06	1.14	1.23
Montane Rain Forest	3.41	3.02	2.83	2.64
Submontane Rain Forest	24.11	23.48	23.17	22.85
Disturbed Submontane Rain Forest	8.81	8.35	8.12	7.88
Lowland/ Submontane Seasonal Evergreen Forest	6.60	5.65	5.17	4.70
Lowland Drought Deciduous Shrub/ Semi-	5.97	5.51	5.28	5.06
Seasonally Flooded R.F./ W.L./G.L	0.20	0.25	0.28	0.30
<b>Total forest</b>	<b>50.20</b>	<b>47.58</b>	<b>46.27</b>	<b>44.96</b>
<b>Total other land</b>	<b>24.80</b>	<b>27.42</b>	<b>28.73</b>	<b>30.04</b>
<b>Total land area</b>	<b>75.00</b>	<b>75.00</b>	<b>75.00</b>	<b>75.00</b>

## 1.3.3 Reclassification

National Classes 2000	FRA Categories				Total	OLWTC
	Forest	OWL	Other land			
Montane Cloud Forest		100%			100%	NDA
Evergreen Montane Shrubland	100%				100%	NDA
Montane Rain Forest	100%				100%	NDA
Submontane Rain Forest	100%				100%	NDA
Disturbed Submontane Rain Forest	100%				100%	NDA
Lowland/ Submontane Seasonal Evergreen Forest	100%				100%	NDA
Lowland Drought Deciduous Shrub/ Semi-deciduous	100%				100%	NDA
Seasonally Flooded R.F./W.L./ G.L	100%				100%	NDA
Non forest			100%		100%	NDA

## 1.4 Data

Table 1a











Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	50	47.33	45.99	44.66	43.33
	Other wooded land	0.2	0.25	0.28	0.3	0.32
	Other land	24.8	27.42	28.73	30.04	31.35
	... of which with tree cover	N/A	N/A	N/A	N/A	N/A
	Inland water bodies	0	0	0	0	0
	TOTAL	75.00	75.00	75.00	75.00	75.00

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	N/A	N/A	N/A	N/A	N/A	N/A
	... 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	N/A	N/A	N/A	N/A	N/A	N/A
	... 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 1	Tier 1
Other wooded land	Tier 1	Tier 1
Forest expansion	N/A	N/A
Deforestation	N/A	N/A
Reforestation	N/A	N/A

## 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>	<p><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</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>

### 1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	All of the 2000 national forest classes were considered forest according to the FRA 2010 definitions except Montane Cloud Forest.	Data for the years 1990, 2005 and 2010 were forecast using linear interpolation and extrapolation of the data from 1984 and 2000 (total annual forest loss of 260 ha/yr).Data for 2015 were forecasted using the same trend as estimated for the period 2005-2010. Estimation and forecasting were done by national forest classes, and then the classes were summed for a total forest cover estimate. Annual rates of change were calculated for each national forest class using the 1984 and 2000 data.
Other wooded land	Only the 2000 class Montane Cloud Forest was considered Other Wooded Land.	N/A
Other land	N/A	N/A
Other land with tree cover	No data available for other land with tree cover.	N/A
Inland water bodies	N/A	N/A
Forest expansion	N/A	N/A
Deforestation	N/A	N/A
Reforestation	N/A	N/A

#### Other general comments to the table

Montane cloud forest, which was called elfin woodland in 1984, was considered a shrub category in FRA 2000 and not included in the forest cover estimate. This forest type is considered Other Wooded Land for FRA 2010.

## 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	a) Charles, Ronald. 2000. Dominica Country Report. EC-FAO Workshop on data collection and outlook effort for forestry in the Caribbean. Trinidad and Tobago, February 21-25.	Plantation area estimate	2000	Estimate made without presenting data or citing source of information.



2	b) International Institute of Tropical Forestry. 2000. Dominica. The 2000 FAO Forest Resource Assessment for the Caribbean. IITF, USDA Forest Service.	Plantation area estimate	2000	Estimate based on personal communications without presenting data.
3	c) Wood, E. 2000. Land cover map for Dominica. Caribbean Vegetation and Landcover Mapping Initiative. The Nature Conservancy, International Institute of Tropical Forestry, US Forest Service, EROS Data Center, and US Geological Service.	Forest cover	2000	Data derived from the LandSat based land cover and vegetation map produced as part of the Caribbean Vegetation Mapping project.
4	d) Earth Satellite Corporation. 1986. Preparation of Natural Vegetation Map for Dominica, West Indies.	Vegetation map with forest cover	1984	Data from aerial photograph interpretation.

### 2.2.2 Classification and definitions

National class	Definition
Plantation	Forest / Other wooded land of introduced species, and in some cases native species, established through planting or seeding mainly for production of wood or non wood goods.
Dry Scrub Woodland (1984) Lowland Drought Deciduous Shrub/Semi-deciduous (2000)	This vegetation type occurs at lower elevation on the West Coast in areas that represent the most xeric conditions of the island. Community is dominated by a shrub layer that form a closed canopy of 15-18 m in height, while there is a lower stratum of small trees and shrubs below. Their crowns carry abundant epiphytes, bromeliads, orchids and ferns. <i>Lonchocarpus benthamianus</i> is generally dominant often with <i>Pisonia fragrans</i> , <i>Chrysophyllum argenteum</i> , <i>Haematoxylon campechianum</i> . The under story contains <i>Erythroxylum ovatum</i> , <i>Tabernaemontana citrifolia</i> .
Elfin Woodland (1984) Montane Cloud Forest (2000)	N/A
Littoral Woodland (1984) (No equivalent class in year 2000)	N/A

Mature Rain Forest (1984) Submontane Rain Forest (2000)	This vegetation type occurs toward the interior of the island, generally between elevations of 270 and 430 m and having few periods without precipitation, customarily between April and June. The forest is dense and closely ranked, with dominant trees from 27 to 33 m tall. The canopy is dominated by the typical forest alliance <i>Dacryodes excelsa</i> - <i>Sloanea massonii</i> : this is mostly a submontane rain forest of the Lesser Antilles, with <i>Dacryodes excelsa</i> , <i>Sloanea massonii</i> , <i>Licania ternatensis</i> , <i>Amanoa caribaea</i> , <i>Chimarrhis cymosa</i> dominant in the upper canopy, and a middle story of trees usually dominated by members of Lauraceae, especially of the genera <i>Nectandra</i> and <i>Ocotea</i> ; the under canopy may include also other species, e.g. <i>Tovomita plumieri</i> , <i>Tapura antillana</i> and numerous epiphytes and lianas.
Montane forest (1984) Montane Rain Forest (2000)	This vegetation type occurs approximately above 2000 feet (Beard's Lower Montane Rain Forest). Frequently covered by cloud at canopy level (fog) and with little soil on the steep slopes. The species composition is similar to the mature rain forest, but much is reduced in stature. It is characteristically covered with non-vascular epiphytes.
Montane thicket (1984) Evergreen Montane Shrubland (2000)	N/A
Secondary Rain Forest (1984) Disturbed Submontane Rain Forest (2000)	In certain areas, disturbed by primarily logging and by shifting agriculture, it is possible to find secondary rain forest; vestigial old stands, surrounded by smaller re-growth and characterized by <i>Miconia</i> species ( <i>Miconia mirabilis</i> in particular), <i>Cecropia schreberiana</i> , and in the smaller gaps, <i>Simaruba amara</i> . Canopy climax forest trees such as <i>Sloanea</i> exist but are not dominant.
Swamp Forest (1984) Seasonally Flooded R.F./W.L./G.L. (2000)	This vegetation type is restricted to an area immediately east of the Cabrits Peninsula in the North west of the islands, an area experiencing a seasonal supply of fresh water. Characteristic species are <i>Pterocarpus officinalis</i> , <i>Laguncularia racemosa</i> and <i>Avicennia germinans</i> .
Semi-Evergreen Forest (1984) Lowland/Submontane Seasonal Evergreen Forest (2000)	These are areas subject to drought and some of the species may lose their leaves. The height of the forest is only medium and the understory lacks epiphytes and lianas. Species include <i>Tabebuia pallida</i> and <i>Lonchocarpus pentaphyllus</i> .
Other Land (1984)	Non-forest land, including the 2000 national classes Fallow/Cleared Land, Active Agriculture, Urban/Residential/Bare Soil/Rock, Short/Medium/Tall Grassland, Fumerole, and Fumerole Sulphurous

### 2.2.3 Original data

For estimation of primary and naturally regenerated forest, the forest area data from 1984 comes from the Earth Satellite Corporation (1986) documentation for the preparation of Natural Vegetation Map for Dominica, West Indies. Break-down of total other land by categories was not available.

<b>National Classes 1984</b>	<b>1984</b> <b>(1000 ha) <sup>1</sup></b>
Mature Rain Forest	24.49
Montane Forest	3.64
Montane Thicket	0.80
Elfin Woodland	0.17
Littoral Woodland	0.14
Dry Scrub Woodland	6.24
Secondary Rain Forest	9.09
Swamp Forest	0.03
Semi-Evergreen Forest	7.17
<b>Total forest land</b>	<b>51.77</b>
<b>Total other forest land</b>	<b>NDA</b>
<b>Total other land <sup>2</sup></b>	<b>23.23</b>
<b>Total land</b>	<b>75.00</b>

The year 2000 data comes from Wood (2000) land cover map for Dominica, produced by the Caribbean Vegetation and Landcover Mapping Initiative, The Nature Conservancy, International Institute of Tropical Forestry, US Forest Service, EROS Data Center, and US Geological Service.

<b>National Classes 2000</b>	<b>2000</b> <b>(1000 ha) <sup>1</sup></b>
Montane Cloud Forest	0.25
Evergreen Montane Shrubland	1.07
Montane Rain Forest	3.04
Submontane Rain Forest	23.63
Disturbed Submontane Rain Forest	8.40

Lowland/Submontane Seasonal Evergreen Forest	5.68
Lowland Drought Deciduous Shrub/Semi-Deciduous	5.55
Seasonally Flooded R.F./W.L./G.L	0.25
<b>Total forest</b>	<b>47.88</b>
Fallow/Cleared Land	2.69
Active Agriculture	21.90
Urban/Residential/Bare Soil/Rock	1.30
Short/Medium/Tall Grassland	1.68
Fumerole	0.02
Fumerole Sulphurous	0.00
<b>Total other land</b>	<b>27.59</b>
<b>Total land area</b>	<b>75.47</b>

No data was presented in either of the sources of information. Figures for plantation area cited in the information sources came from personal communications.

## 2.3 Analysis and processing of national data

### 2.3.1 Adjustment

National data from 1984 did not need calibration because total land area was the same as FAO STAT total area.

Source	Total Land Area (1000 ha)
National data 1984	75.00
National data 2000	75.47
FAOSTAT	75.00

National data for each of the national forest classes for the year 2000 (table 1.2) was multiplied by 0.9937 to calibrate the area of each class to the FAO STAT total area.

<b>National Classes 2000</b>	<b>2000 (1000 ha)</b>	<b>Calibrated 2000 (1000 ha)</b>
Montane Cloud Forest	0.25	0.25
Evergreen Montane Shrubland	1.07	1.06
Montane Rain Forest	3.04	3.02
Submontane Rain Forest	23.63	23.49
Disturbed Submontane Rain Forest	8.40	8.35
Lowland/Submontane Seasonal Evergreen Forest	5.68	5.65
Lowland Drought Deciduous Shrub/Semi-	5.55	5.51
Seasonally Flooded R.F./W.L./G.L	0.25	0.25
<b>Total forest</b>	<b>47.88</b>	<b>47.58</b>
Fallow/Cleared Land	2.69	2.68
Active Agriculture	21.90	21.76
Urban/Residential/Bare Soil/Rock	1.30	1.29
Short/Medium/Tall Grassland	1.68	1.67
Fumerole	0.02	0.02
Fumerole Sulphurous	0.00	0.00
<b>Total other land</b>	<b>27.59</b>	<b>27.42</b>
<b>Total land area</b>	<b>75.47</b>	<b>75.00</b>

## 2.3.2 Estimation and forecasting

Overall forest area estimation and forecasting is described in section 1.3.2. Data for the years 1990, 2005 and 2010 were forecast using linear interpolation and extrapolation of the data from 1984 and 2000 (total annual forest loss of 260 ha/yr). Estimation and forecasting were done by national forest classes, and then the classes were summed for a total forest cover estimate. Annual rates of change were calculated for each national forest class using the 1984 and 2000 data.

<b>National Classes 2000</b>	<b>1984 (1000 ha)</b>	<b>2000 (1000 ha)</b>	<b>Change</b>	<b>Annual rate</b>
Montane Cloud Forest	0.17	0.25	0.081	0.005
Evergreen Montane Shrubland	0.80	1.06	0.262	0.016
Montane Rain Forest	3.64	3.02	-0.617	-0.039
Submontane Rain Forest	24.49	23.48	-1.006	-0.063
Disturbed Submontane Rain Forest	9.09	8.35	-0.742	-0.046
Lowland/ Submontane Seasonal Evergreen Forest	7.17	5.65	-1.522	-0.095
Lowland Drought Deciduous Shrub/ Semi-	6.24	5.51	-0.729	-0.046
Seasonally Flooded R.F./ W.L./G.L	0.17	0.25	0.081	0.005
<b>Total forest</b>	<b>51.77</b>	<b>47.58</b>	<b>-4.192</b>	<b>-0.262</b>
<b>Total other land</b>	<b>23.23</b>	<b>27.42</b>	<b>4.192</b>	<b>0.262</b>

<b>Total land area</b>	<b>75.00</b>	<b>75.00</b>	<b>0.000</b>	<b>0.000</b>
------------------------	--------------	--------------	--------------	--------------

Estimations and forecasted forest cover for Dominica appears below.

<b>National Classes 2000</b>	<b>1990 (1000 ha)</b>	<b>2000 (1000 ha)</b>	<b>2005 (1000 ha)</b>	<b>2010 (1000 ha)</b>
Montane Cloud Forest	0.20	0.25	0.28	0.30
Evergreen Montane Shrubland	0.90	1.06	1.14	1.23
Montane Rain Forest	3.41	3.02	2.83	2.64
Submontane Rain Forest	24.11	23.48	23.17	22.85
Disturbed Submontane Rain Forest	8.81	8.35	8.12	7.88
Lowland/ Submontane Seasonal Evergreen Forest	6.60	5.65	5.17	4.70
Lowland Drought Deciduous Shrub/ Semi-	5.97	5.51	5.28	5.06
Seasonally Flooded R.F./ W.L./G.L	0.20	0.25	0.28	0.30
<b>Total forest</b>	<b>50.20</b>	<b>47.58</b>	<b>46.27</b>	<b>44.96</b>
<b>Total other land</b>	<b>24.80</b>	<b>27.42</b>	<b>28.73</b>	<b>30.04</b>
<b>Total land area</b>	<b>75.00</b>	<b>75.00</b>	<b>75.00</b>	<b>75.00</b>

No estimation or forecasting was done for forest plantations. The IITF (2000) report states that the annual rate of planting was negligible. Estimates of productive forest plantation were not made for 1990. No change in the area of productive forest plantation was assumed between the years 2000 to 2005.

### 2.3.3 Reclassification

The following table from section 1.3.3 shows which national classes correspond to the FRA 2010 forest categories.

National Classes 2000	FRA 2010 Categories				Total	OLWTC
	Forest	OWL	Other land			
Montane Cloud Forest		100%			100%	NDA
Evergreen Montane Shrubland	100%				100%	NDA
Montane Rain Forest	100%				100%	NDA
Submontane Rain Forest	100%				100%	NDA
Disturbed Submontane Rain Forest	100%				100%	NDA
Lowland/ Submontane Seasonal Evergreen Forest	100%				100%	NDA
Lowland Drought Deciduous Shrub/ Semi-deciduous	100%				100%	NDA



Seasonally Flooded R.F./W.L./G.L	100%			100%	NDA
Non forest			100%	100%	NDA

The following national classes from the year 2000 were assumed to be primary (relatively undisturbed) forest; Evergreen Montane Shrubland, Montane Rain Forest, and Submontane Rain Forest.

Disturbed Submontane Rain Forest, Lowland/Submontane Seasonal Evergreen Forest, Lowland Drought Deciduous Shrub/Semi- and Seasonally Flooded R.F./W.L./G.L were considered to be other naturally regenerating forests.

## 2.4 Data

Table 2a







Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	28.42	27.57	27.14	26.72	26.3
	Other naturally regenerated forest	21.58	19.66	18.75	17.84	16.93
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	0	0.1	0.1	0.1	0.1
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
TOTAL		50.00	47.33	45.99	44.66	43.33

Table 2b

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

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

Table 2c

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

## Tiers

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

## Tier Criteria

Category	Tier for status	Tier for reported trend
Primary forest/Other naturally regenerated forest/Planted forest	<p><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</p> <p><b>Tier 2</b> : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years) <b>Tier 1</b> : 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>

## 2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	The following national classes from the year 2000 were assumed to be primary (relatively undisturbed) forest; Evergreen Montane Shrubland, Montane Rain Forest, and Submontane Rain Forest.	Overall forest area estimation and forecasting is described in section 1.3.2. Data for the years 1990, 2005 and 2010 were forecast using linear interpolation and extrapolation of the data from 1984 and 2000 (total annual forest loss of 260 ha/yr). Same trend was applied to estimate 2015 data. Estimation and forecasting were done by national forest classes, and then the classes were summed for a total forest cover estimate. Annual rates of change were calculated for each national forest class using the 1984 and 2000 data.

Other naturally regenerating forest	The national classes from the year 2000 Disturbed Submontane Rain Forest, Lowland/Submontane Seasonal Evergreen Forest, Lowland Drought Deciduous Shrub/Semi- and Seasonally Flooded R.F./W.L./G.L were considered to be other naturally regenerating forests.	Overall forest area estimation and forecasting is described in section 1.3.2. Data for the years 1990, 2005 and 2010 were forecast using linear interpolation and extrapolation of the data from 1984 and 2000 (total annual forest loss of 260 ha/yr). Estimation and forecasting were done by national forest classes, and then the classes were summed for a total forest cover estimate. Annual rates of change were calculated for each national forest class using the 1984 and 2000 data.
Planted forest	Estimates of forest plantation were entirely based on personal communications and no actual data were presented by either of the information sources. All forest plantations were assumed to be closed forest, and none were placed in the FRA 2010 Other Wooded Land category.	No forecasting of plantation area was done because annual planting was considered negligible and there was no information on plantation loss. Plantation estimates were not made for 1990 because there was no information regarding plantation area prior to 2000.
Mangroves	N/A	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	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

## 3.2.2 Classification and definitions

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

## 3.2.3 Original data

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## 3.3 Analysis and processing of national data

## 3.3.1 Adjustment

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## 3.3.2 Estimation and forecasting

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## 3.3.3 Reclassification

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## 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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A	N/A	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	N/A	N/A	N/A	N/A	N/A	N/A
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	N/A	N/A
TOTAL			.00	.00	.00	.00

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

Item	Value	Complementary information
Minimum diameter (cm) at breast height of trees included in growing stock (X)	N/A	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	N/A	N/A
Minimum diameter (cm) of branches included in growing stock (W)	N/A	N/A
Volume refers to above ground (AG) or above stump (AS)	N/A	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	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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Below ground biomass	N/A	N/A	N/A	N/A	N/A	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	N/A
TOTAL		.00	.00	.00	.00	.00	.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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Carbon in below ground biomass	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Living biomass</i>	N/A	N/A	N/A	N/A	N/A	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	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	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		.00	.00	.00	.00	.00	.00	.00	.00	.00	.00

## Tiers

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

#### Other general comments to the table

N/A

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

Documents for this question:

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

### 4.1 Categories and definitions

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

### 4.2 National data

#### 4.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	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

#### 4.2.2 Classification and definitions

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

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

#### 4.2.3 Original data

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### 4.3 Analysis and processing of national data

#### 4.3.1 Adjustment

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#### 4.3.2 Estimation and forecasting

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#### 4.3.3 Reclassification

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### 4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	N/A	N/A	N/A	N/A	N/A
	Multiple use forest	N/A	N/A	N/A	N/A	N/A

Table 4b

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

7 th	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			.00	

2010	
Name of local currency	N/A

Category
<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	8.6	8.61
1991	8.5	8.52
1992	8.5	8.51
1993	8.4	8.36
1994	8.3	8.34
1995	8	8.02
1996	8	7.99
1997	8.3	8.26
1998	8.2	8.2
1999	8.2	8.17
2000	8.1	8.09
2001	8	8.04
2002	8	7.99
2003	7.9	7.94
2004	7.9	7.9
2005	7.8	7.85
2006	7.8	7.78
2007	7.7	7.71
2008	7.6	7.65
2009	7.6	7.58
2010	7.5	7.52
2011	7.5	7.52

Tiers

Category	Tier for status	Tier for reported trend
Production forest	N/A	N/A
Multiple use forest	N/A	N/A

## 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	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	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A

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

### 5.2.2 Classification and definitions

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

### 5.2.3 Original data

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## 5.3 Analysis and processing of national data

### 5.3.1 Adjustment

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### 5.3.2 Estimation and forecasting




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### 5.3.3 Reclassification





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## 5.4 Data

Table 5a

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



	... of which desertification control	N/A	N/A	N/A	N/A	N/A
	... of which avalanche control	N/A	N/A	N/A	N/A	N/A
	... 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

<b>Other</b>
--------------

N/A
-----

Table 5b

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

## Tiers

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

## Tier criteria

Category	Tier for status	Tier for reported trend
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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>	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	<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

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

Documents for this question:

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

### 6.1 Categories and definitions

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

### 6.2 National data

#### 6.2.1 Data sources

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

#### 6.2.2 Classification and definitions

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

#### 6.2.3 Original data

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### 6.3 Analysis and processing of national data



## 6.3.1 Adjustment

## 6.3.2 Estimation and forecasting

## 6.3.3 Reclassification

## 6.4 Data

Table 6

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

## Tiers

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

## Tier criteria

Category	Tier for status	Tier for reported trend
<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	N/A	N/A
Forest area within protected areas	N/A	N/A

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<b>Other general comments to the table</b>
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N/A
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## 7. What is the area of forest affected by woody invasive species?

Documents for this question:

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

### 7.1 Categories and definitions

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

### 7.2 National data

#### 7.2.1 Data sources

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

#### 7.2.2 Classification and definitions

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

#### 7.2.3 Original data

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

## Tiers

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

## Tier Criteria

Category	Tier for status	Tier for reported trend



Invasive species	Tier 3: Systematic assessment in forest inventory or other survey (e.g. by conservation department) within the last 5 years) Tier 2: Systematic assessment in forest inventory or other survey (e.g. by conservation department conducted more than 5 years ago) Tier 1: Other	<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
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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	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

#### 8.2.2 Classification and definitions

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

#### 8.2.3 Original data

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## 8.3 Analysis and processing of national data

### 8.3.1 Adjustment

### 8.3.2 Estimation and forecasting

### 8.3.3 Reclassification

## 8.4 Data

Table 8a

Category		000 ha, number of fires									
		2003		2004		2005		2006		2007	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which forest area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which forest area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	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"> <li>• Insects</li> <li>• Diseases</li> <li>• Severe weather events</li> </ul>	N/A	N/A

### 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
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Burned area	N/A	N/A
Insects	N/A	N/A
Diseases	N/A	N/A
Severe weather events	N/A	N/A

**Other general comments to the table**

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	5.47

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

#### 10.2.2 Classification and definitions

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

#### 10.2.3 Original data

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### 10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management				
... of which, in <u>publicly</u> owned forests				
... of which, in <u>privately</u> owned forests				
Legislation and regulations supporting sustainable forest management				
... of which, in <u>publicly</u> owned forests				
... of which, in <u>privately</u> owned forests				

#### 10.4 Comments

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

Other general comments

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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

<b>Is there a national platform that promotes or allows for stakeholder participation in forest policy development?</b>	
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### 11.3 Comments

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

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	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

#### 12.2.2 Classification and definitions

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

#### 12.2.3 Original data

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### 12.3 Analysis and processing of national data



## 12.3.1 Adjustment

## 12.3.2 Estimation and forecasting

## 12.3.3 Reclassification

## 12.4 Data

Table 12

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

## Tiers

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

## 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

## 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
N/A	N/A
N/A	N/A
N/A	N/A

#### 13.3 Data

Table 13a

Category	% of total forest area	Most recent year	Check all boxes that apply					
			Continuous	Periodic	Permanent ground plots	Temporary ground plots	Aerial/remote sensing sample based	Aerial/remote sensing full coverage
Forest inventory	N/A	N/A						
Other field assessments	N/A	N/A						
Updates to other sources	N/A	N/A						
Expert estimate	N/A	N/A						

Table 13b

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

Other type of forest reporting
N/A

### 13.4 Comments

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

Other general comments

--

## 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	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

### 14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	N/A
... of which for production	N/A
... of which for conservation	N/A

Table 14b

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

2 High conservation value forest delineation	
3 Social considerations community involvement	

Table 14c

<b>Percent of area under forest management plan that is monitored annually</b>	<b>N/A</b>
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## Tiers

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

## Tier criteria

<b>Category</b>	<b>Tier for status</b>
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

<b>Category</b>	<b>Comments</b>
Forest area with management plan	N/A
N/A	N/A
N/A	N/A

## Other general comments

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

Documents for this question:

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

### 15.1 Categories and definitions

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

Table 15

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

Tiers

Category	Tier for status
Type of stakeholder inputs	N/A

Tier criteria

Category	Tier for status
Type of stakeholder inputs	<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
N/A	N/A
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 3
<b>Domestic</b> 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

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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	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	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

## 18.2.2 Classification and definitions

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

## 18.2.3 Original data

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## 18.3 Analysis and processing of national data

## 18.3.1 Adjustment

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## 18.3.2 Estimation and forecasting

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## 18.3.3 Reclassification

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## 18.4 Data

Table 18a

Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010

CFRQ	Public ownership	N/A	N/A	N/A	N/A
CFRQ	... of which owned by the state at national scale	N/A	N/A	N/A	N/A
CFRQ	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A
CFRQ	Private ownership	N/A	N/A	N/A	N/A
CFRQ	... of which owned by individuals	N/A	N/A	N/A	N/A
CFRQ	... of which owned by private business entities and institutions	N/A	N/A	N/A	N/A
CFRQ	... of which owned by local, tribal and indigenous communities	0	0	0	N/A
CFRQ	Unknown ownership	N/A	N/A	N/A	N/A
TOTAL		.00	.00	.00	.00

## Tiers

Category	Tier for status	Tier for reported trend
Public ownership	N/A	N/A
Private ownership	N/A	N/A
Unknown ownership	N/A	N/A

## 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	N/A	N/A	N/A	N/A
Individuals	N/A	N/A	N/A	N/A
Private companies	N/A	N/A	N/A	N/A
Communities	N/A	N/A	N/A	N/A
Other	N/A	N/A	N/A	N/A
TOTAL	.00	.00	.00	.00

Category	Tier for reported trend	Tier for status
Public Administration	N/A	N/A
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	N/A
Private ownership	N/A	N/A
Unknown ownership	N/A	N/A
Management rights	N/A	N/A

Other general comments to the table
N/A

## 19. How many people are directly employed in forestry?

Documents for this question:

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

### 19.1 Categories and definitions

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

### 19.2 National data

#### 19.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	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

#### 19.2.2 Classification and definitions

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



#### 19.2.3 Original data

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### 19.3 Data

Table 19

Category	Employment (000 years FTE)
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		1990	2000	2005	2010
	Employment in forestry	N/A	N/A	N/A	N/A
	... 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	N/A	N/A

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)	3.47	EC dollar	2011

### 20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices)	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	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

### 21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	N/A	N/A

Table 21b

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

### 21.4 Comments

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

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Forests earmarked for conversion	N/A
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Other general comments

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