



Forestry Department

Food and Agriculture Organization of the United Nations

**GLOBAL FOREST RESOURCES
ASSESSMENT 2010**

COUNTRY REPORT

DOMINICA

FRA2010/057
Rome, 2010



The Forest Resources Assessment Programme

Sustainably managed forests have multiple environmental and socio-economic functions important at the global, national and local scales, and play a vital part in sustainable development. Reliable and up-to-date information on the state of forest resources - not only on area and area change, but also on such variables as growing stock, wood and non-wood products, carbon, protected areas, use of forests for recreation and other services, biological diversity and forests' contribution to national economies - is crucial to support decision-making for policies and programmes in forestry and sustainable development at all levels.

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Forest Resources Assessment Programme. This country report forms part of the Global Forest Resources Assessment 2010 (FRA 2010).

The reporting framework for FRA 2010 is based on the thematic elements of sustainable forest management acknowledged in intergovernmental forest-related fora and includes variables related to the extent, condition, uses and values of forest resources, as well as the policy, legal and institutional framework related to forests. More information on the FRA 2010 process and the results - including all the country reports - is available on the FRA Web site (www.fao.org/forestry/fra).

The Global Forest Resources Assessment process is coordinated by the Forestry Department at FAO headquarters in Rome. The contact person for matters related to FRA 2010 is:

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The Global Forest Resources Assessment Country Report Series is designed to document and make available the information forming the basis for the FRA reports. The Country Reports have been compiled by officially nominated country correspondents in collaboration with FAO staff. Prior to finalisation, these reports were subject to validation by forestry authorities in the respective countries.

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This report only contains the reporting tables T1, T4, T14 and T15. For the remaining tables there is no or insufficient information available.

1 Table T1 – Extent of Forest and Other wooded land

1.1 FRA 2010 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 <i>in situ</i> . 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 <i>in situ</i> ; 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”.
Other land with tree cover (Subordinated to “Other land”)	Land classified as “Other land”, spanning 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.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.

1.2 National data

1.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
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.	High	Forest cover	2000	Data derived from the LandSat based land cover and vegetation map produced as part of the Caribbean Vegetation Mapping project.
b) Earth Satellite Corporation. 1986. Preparation of Natural Vegetation Map for Dominica, West Indies.	Low – Medium	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.

1.2.2 Classification and definitions

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.

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)	"Elfin woodland" is the highest of the montane formations and occurs at the summits and on the upper slopes of the principal peaks. It consist of a low, gnarled, impenetrable growth of small trees 3 to 6 m high with rambling branches and distorted trunks, loaded with moss and epiphytes. <i>Clusia venosa</i> is the dominant species that grows in large pure patches interlaced with its aerial roots.
Littoral Woodland (1984) (No equivalent class in year 2000)	"Littoral woodland" occurs along the eastern and north-eastern coastline and is exceptionally magnificent. As a rule, littoral woodland is not strictly a single formation but rather a series of closely associated formations grouped together for convenience. It includes the littoral hedge and all the transition from this to the tall evergreen woodland behind, where growth is sheltered from the wind. The littoral hedge, immediately fronting the sea, consists of a dense, matted, and interlaced woody growth of gnarled shrubs, usually of distorted form, which rises in height rapidly inland, unless trees of 18 m tall are seen. Crowns of the trees are matted and windswept, but where the woodland is high enough it is open below and largely devoid of ground vegetation. <i>Coccoloba uvifera</i> , is the principal species in the frontal hedge, with <i>Chrysobalanus icaco</i> . In taller growth the monophyllous form of <i>Tabebuia pallida</i> is dominant. Other conspicuous species are <i>Calophyllum antillanum</i> and <i>Terminalia catappa</i> .
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-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)	"Montane thicket" can be found at lower elevations: it is a forest formation extremely mossy and there are often quantities of bromeliads and other epiphytes on the branches. All the component species are evergreen, with simple leaves, toughened but not reduced in size. In Dominica it is possible to find a swamp phase of this formation that differs in height of the trees, the openness of the canopy, the thin stems with small crowns and the

	predominance of aerial roots. Characteristic dominant species are <i>Richeria grandis</i> , <i>Byrsonima martinicensis</i> and <i>Podocarpus coriaceus</i> (the island's only native conifer), with <i>Heliconia bihai</i> , the tree ferns <i>Cyathea imrayana</i> and <i>Hemitelia spp.</i> , and razor grass <i>Scleria latifolia</i> , forming the understory.
Secondary Rain Forest (1984)	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> .
Disturbed Submontane Rain Forest (2000)	Canopy climax forest trees such as <i>Sloanea</i> exist but are not dominant.
Swamp Forest (1984)	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> .
Seasonally Flooded R.F./W.L./G.L (2000)	
Semi-Evergreen Forest (1984)	These are areas subject to drought and some of the species may loose 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> .
Lowland/Submontane Seasonal Evergreen Forest (2000)	
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

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.

National Classes 1984	1984 (1000 ha) ¹
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
Total forest land	51.77
Total other forest land	n.a.
Total other land²	23.23
Total land	75.00

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.

National Classes 2000	2000 (1000 ha)¹
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
Total forest	47.88
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
Total other land	27.59
Total land area	75.47

1.3 Analysis and processing of national data

1.3.1 Calibration

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.

National Classes 2000	2000 (1000 ha)	Calibrated 2000 (1000 ha)
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
Total forest	47.88	47.58
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
Total other land	27.59	27.42
Total land area	75.47	75.00

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.

National Classes 2000	1984 (1000 ha)	2000 (1000 ha)	Change	Annual rate
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
Total forest	51.77	47.58	-4.192	-0.262
Total other land	23.23	27.42	4.192	0.262
Total land area	75.00	75.00	0.000	0.000

Estimations and forecasted forest cover for Dominica appears below.

National Classes 2000	1990 (1000 ha)	2000 (1000 ha)	2005 (1000 ha)	2010 (1000 ha)
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
Total forest	50.20	47.58	46.27	44.96
Total other land	24.80	27.42	28.73	30.04
Total land area	75.00	75.00	75.00	75.00

1.3.3 Reclassification into FRA 2010 categories

National Classes 2000	FRA 2010 Categories				
	Forest	OWL	Other land	Total	OLWTC
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 for Table T1

FRA 2010 categories	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	50.00	47.33	45.99	44.66
Other wooded land	0.20	0.25	0.28	0.30
Other land	24.80	27.42	28.73	30.04
...of which with tree cover	n.a.	n.a.	n.a.	n.a.
Inland water bodies	0	0	0	0
TOTAL	75.00	75.00	75.00	75.00

1.5 Comments to Table T1

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
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). 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.	
Other land		
Other land with tree cover	No data available for other land with tree cover.	
Inland water bodies		

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.

Expected year for completion of ongoing/planned national forest inventory and/or RS survey / mapping

Field inventory	n.a.
Remote sensing survey / mapping	n.a.

2 Table T4 – Forest characteristics

2.1 FRA 2010 Categories and definitions

Term / category	Definition
Naturally regenerated forest	Forest predominantly composed of trees established through natural regeneration.
Introduced species	A species, subspecies or lower taxon, occurring <u>outside</u> 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).
Characteristics categories	
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.
Other naturally regenerated forest of introduced species (sub-category)	Other naturally regenerated forest where the trees are predominantly of introduced species.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
Planted forest of introduced species (sub-category)	Planted forest, where the planted/seeded trees are predominantly of introduced species.
Special categories	
Rubber plantations	Forest area with rubber tree plantations.
Mangroves	Area of forest and other wooded land with mangrove vegetation.
Bamboo	Area of forest and other wooded land with predominant bamboo vegetation.

2.2 National data

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
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.	Low	Plantation area estimate	2000	Estimate made without presenting data or citing source of information.
b) International Institute of Tropical Forestry. 2000. Dominica. The 2000 FAO Forest Resource Assessment for the Caribbean. IITF, USDA Forest Service.	Low	Plantation area estimate	2000	Estimate based on personal communications without presenting data.
c) Wood, E. 2000. Land cover map for Dominica. Caribbean	High	Forest cover	2000	Data derived from the LandSat based land cover and vegetation

Vegetation and Landcover Mapping Initiative. The Nature Conservancy, International Institute of Tropical Forestry, US Forest Service, EROS Data Center, and US Geological Service.				map produced as part of the Caribbean Vegetation Mapping project.
d) Earth Satellite Corporation. 1986. Preparation of Natural Vegetation Map for Dominica, West Indies.	Low – Medium	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)	"Elfin woodland" is the highest of the montane formations and occurs at the summits and on the upper slopes of the principal peaks. It consist of a low, gnarled, impenetrable growth of small trees 3 to 6 m high with rambling branches and distorted trunks, loaded with moss and epiphytes. <i>Clusia venosa</i> is the dominant species that grows in large pure patches interlaced with its aerial roots.
Littoral Woodland (1984) (No equivalent class in year 2000)	"Littoral woodland" occurs along the eastern and north-eastern coastline and is exceptionally magnificent. As a rule, littoral woodland is not strictly a single formation but rather a series of closely associated formations grouped together for convenience. It includes the littoral hedge and all the transition from this to the tall evergreen woodland behind, where growth is sheltered from the wind. The littoral hedge, immediately fronting the sea, consists of a dense, matted, and interlaced woody growth of gnarled shrubs, usually of distorted form, which rises in height rapidly inland, unless trees of 18 m tall are seen. Crowns of the trees are matted and windswept, but where the woodland is high enough it is open below and largely devoid of ground vegetation. <i>Coccoloba uvifera</i> , is the principal species in the frontal hedge, with <i>Chrysobalanus icaco</i> . In taller growth the monophyllous form of <i>Tabebuia pallida</i> is dominant. Other conspicuous species are <i>Calophyllum antillanum</i> and <i>Terminalia catappa</i> .
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-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	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

(2000)	forest, but much is reduced in stature. It is characteristically covered with non-vascular epiphytes.
Montane thicket (1984) Evergreen Montane Shrubland (2000)	"Montane thicket" can be found at lower elevations: it is a forest formation extremely mossy and there are often quantities of bromeliads and other epiphytes on the branches. All the component species are evergreen, with simple leaves, toughened but not reduced in size. In Dominica it is possible to find a swamp phase of this formation that differs in height of the trees, the openness of the canopy, the thin stems with small crowns and the predominance of aerial roots. Characteristic dominant species are <i>Richeria grandis</i> , <i>Byrsonima martinicensis</i> and <i>Podocarpus coriaceus</i> (the island's only native conifer), with <i>Heliconia bihai</i> , the tree ferns <i>Cyathea imrayana</i> and <i>Hemitelia spp.</i> , and razor grass <i>Scleria latifolia</i> , forming the understory.
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.

National Classes 1984	1984 (1000 ha) ¹
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
Total forest land	51.77
Total other forest land	NDA
Total other land²	23.23
Total land	75.00

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.

National Classes 2000	2000 (1000 ha)¹
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
Total forest	47.88
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
Total other land	27.59
Total land area	75.47

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 Calibration

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.

National Classes 2000	2000 (1000 ha)	Calibrated 2000 (1000 ha)
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
Total forest	47.88	47.58
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
Total other land	27.59	27.42
Total land area	75.47	75.00

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.

National Classes 2000	1984 (1000 ha)	2000 (1000 ha)	Change	Annual rate
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
Total forest	51.77	47.58	-4.192	-0.262
Total other land	23.23	27.42	4.192	0.262
Total land area	75.00	75.00	0.000	0.000

Estimations and forecasted forest cover for Dominica appears below.

National Classes 2000	1990 (1000 ha)	2000 (1000 ha)	2005 (1000 ha)	2010 (1000 ha)
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
Total forest	50.20	47.58	46.27	44.96
Total other land	24.80	27.42	28.73	30.04
Total land area	75.00	75.00	75.00	75.00

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 into FRA 2010 categories

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				
	Forest	OWL	Other land	Total	OLWTC
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 for Table T4

Table 4a

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Primary forest	28.42	27.57	27.14	26.72
Other naturally regenerated forest	21.58	19.66	18.75	17.84
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
Planted forest ¹	0	0.10	0.10	0.10
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
TOTAL	50.00	47.33	45.99	44.66

Table 4b

FRA 2010 Categories	Area (1000 hectares)			
	1990	2000	2005	2010
Rubber plantations (Forest)				
Mangroves (Forest and OWL)				
Bamboo (Forest and OWL)				

2.5 Comments to Table T4

Variable / category	Comments related to data, definitions, etc.	Comments on the 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). 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.
Rubber plantations		
Mangroves		
Bamboo		

Other general comments to the table

3 Table T14 – Policy and legal framework

3.1 FRA 2010 Categories and definitions

Term	Definition
Forest policy	A set of orientations and principles of actions adopted by public authorities in harmony with national socio-economic and environmental policies in a given country to guide future decisions in relation to the management, use and conservation of forest and tree resources for the benefit of society.
Forest policy statement	A document that describes the objectives, priorities and means for implementation of the forest policy.
National forest programme (nfp)	A generic expression that refers to a wide range of approaches towards forest policy formulation, planning and implementation at national and sub-national levels. The national forest programme provides a framework and guidance for country-driven forest sector development with participation of all stakeholders and in consistence with policies of other sectors and international policies.
Law (Act or Code) on forest	A set of rules enacted by the legislative authority of a country regulating the access, management, conservation and use of forest resources.

3.2 Data for Table T14

Indicate the existence of the following (2008)			
Forest policy statement with national scope	<input checked="" type="checkbox"/>	Yes	
	<input type="checkbox"/>	No	
If Yes above, provide:	Year of endorsement	(1949- but not officially endorsed)	
	Reference to document		
National forest programme (nfp)	<input type="checkbox"/>	Yes	
	<input checked="" type="checkbox"/>	No	
If Yes above, provide:	Name of nfp in country		
	Starting year		
	Current status	<input type="checkbox"/>	In formulation
		<input type="checkbox"/>	In implementation
		<input type="checkbox"/>	Under revision
<input type="checkbox"/>		Process temporarily suspended	
Reference to document or web site			
Law (Act or Code) on forest with national scope	<input checked="" type="checkbox"/>	Yes, specific forest law exists	
	<input type="checkbox"/>	Yes, but rules on forests are incorporated in other (broader) legislation	
	<input type="checkbox"/>	No, forest issues are not regulated by national legislation	
If Yes above, provide:	Year of enactment	1976	
	Year of latest amendment	1990	
	Reference to document		

In case the responsibility for forest policy- and/or forest law-making is decentralized, please indicate the existence of the following and explain in the comments below the table how the responsibility for forest policy- and law-making is organized in your country.	
Sub-national forest policy statements	Yes
	√ No
If Yes above, indicate the number of regions/states/provinces with forest policy statements	
Sub-national Laws (Acts or Codes) on forest	Yes
	√ No
If Yes above, indicate the number of regions/states/provinces with Laws on forests	

3.3 Comments to Table T14

Variable / category	Comments related to data, definitions, etc.
Forest policy statement with national scope	Note: Forest policy was never officially adopted.
National forest programme (nfp)	
Law (Act or Code) on forest with national scope	1990 amendment made provisions for declaring Dominica's two indigenous species of parrots as specially protected under the Forestry and Wildlife Act (Chapter 60:02) of 1976.
Sub-national forest policy statements	
Sub-national Laws (Acts or Codes) on forest	

Other general comments to the table

4 Table T15 – Institutional framework

4.1 FRA 2010 Categories and definitions

Term	Definition
Minister responsible for forest policy-making	Minister holding the main responsibility for forest issues and the formulation of the forest policy.
Head of Forestry	The Head of Forestry is the Government Officer responsible for implementing the mandate of the public administration related to forests.
Level of subordination	Number of administrative levels between the Head of Forestry and the Minister.
University degree	Qualification provided by University after a minimum of 3 years of post secondary education.

4.2 Data for Table T15

Table 15a – Institutions

FRA 2010 Category	2008	
Minister responsible for forest policy formulation : please provide full title	Minister of Agriculture, Fisheries and Forestry	
Level of subordination of Head of Forestry within the Ministry		1 st level subordination to Minister
	√	2 nd level subordination to Minister
		3 rd level subordination to Minister
		4 th or lower level subordination to Minister
Other public forest agencies at national level		
Institution(s) responsible for forest law enforcement	Forestry, Wildlife and Parks Division	

Table 15b – Human resources

FRA 2010 Category	Human resources within public forest institutions					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Total staff	23	4	23	4	23	4
...of which with university degree or equivalent	3	0	3	33	4	25

Notes:

1. Includes human resources within public forest institutions at sub-national level
2. Excludes people employed in State-owned enterprises, education and research, as well as temporary / seasonal workers.

4.3 Comments to Table T15

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Minister responsible for forest policy formulation		
Level of subordination of Head of Forestry within the Ministry		
Other public forest agencies at national level		
Institution(s) responsible for forest law enforcement		
Human resources within public forest institutions		

Other general comments to the table