Forestry Department
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GLOBAL FOREST RESOURCES ASSESSMENT

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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 2005 (FRA 2005), which is the most comprehensive assessment to date. More than 800 people have been involved, including 172 national correspondents and their colleagues, an Advisory Group, international experts, FAO staff, consultants and volunteers. Information has been collated from 229 countries and territories for three points in time: 1990, 2000 and 2005.

The reporting framework for FRA 2005 is based on the thematic elements of sustainable forest management acknowledged in intergovernmental forest-related fora and includes more than 40 variables related to the extent, condition, uses and values of forest resources. More information on the FRA 2005 process and the results - including all the country reports - is available on the FRA 2005 Web site (www.fao.org/forestry/fra2005).

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 2005 is:

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This country report comprises only the national reporting tables
T1 Extend of forest and other wooded land.
T4 Characteristics of forest and other wooded land
T9 Diversity of tree species.
For other reporting tables, there is no information available.

Contents

1 Table T1 – Extent of Forest and Other wooded land

1.1 FRA 2005 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 *in situ*; 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 (1)	Vegetation map with forest cover	1984	Data from aerial photograph interpretation.

[1] 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 area some year 2000 non-forest national classes which appear in subsequent tables that are not defined below.

National Classes	Definition[1]
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. *Lonchocarpus benthamianus* is generally dominant often with *Pisonia fragrans, Chrysophyllum argenteum, Haematoxylon campechianum*. The under story contains *Erythroxylum ovatum, Tabernaemontana citrifolia*.
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. *Clusia venosa* is the dominant species that grows in large pure patches interlaced with its aerial roots.
Littoral Woodland (1984) (non equivalent 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. *Coccolobis uvifera,* is the principal species in the frontal hedge, with *Chrysobalanus icaco*. In taller growth the monophyllous form of *Tabebuia pallida* is dominant. Other conspicuous species are *Calophyllum antillanum* and *Terminalia cattapa*.
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 *Dacroydes excelsa-Sloanea massonii*: this is mostly a submontane rain forest of the Lesser Antilles, with *Dacroydes excelsa*, *Sloanea massonii*, *Licania ternatensis*, *Amanoa caribaea*, *Chimarrhis cymosa* dominant in the upper canopy, and a middle story of trees usually dominated by members of Lauraceae, especially of the genera *Nectandra* and *Ocotea*; the under canopy may include also other species, e.g. *Tovomita plumieri*, *Tapura antillana* 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	"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

Shrubland (2000)	simple leaves, toughened but not reduced in size. In Dominica is it 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 *Richeria grandis, Byrsonima martinicensis* and *Podocarpus coriaceous* (the island's only native conifer), with *Heliconia bihai*, the tree ferns *Cyathea imrayana* and *Hemitelia spp*., and razor grass *Scleria latifolia*, 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 *Miconia* species (*Miconia mirabilis* in particular), *Cecropia schreberiana*, and in the smaller gaps, *Simaruba amara*. Canopy climax forest trees such as *Sloanea* 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 *Pterocarpus officinalis*, *Laguncularia racemosa* and *Avicennia germinans*.
Semi-Evergreen Forest (1984) Lowland/Submontane Seasonal Evergreen Forest (2000)	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 *Tabebuia pallida* and *Lonchocarpus pentaphyllus*.
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] Source: Earth Satellite Corporation. 1986. Preparation of Natural Vegetation Map for Dominica, West Indies.

1.2.3 Original data

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 land[2]	**23.23**
Total land	**75.00**

[1] Source: Earth Satellite Corporation. 1986. Preparation of Natural Vegetation Map for Dominica, West Indies.
[2] Break-down of total other land by categories was not available.

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] Source: 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.

1.3 Analysis and processing of national data

1.3.1 Calibration

Source	Total Land Area (1000 ha)
National data 1984[1]	75.00
National data 2000	75.47
FAOSTAT	75.00

[1] National data from 1984 did not need calibration because total land area was the same as FAO STAT total area. 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)	FAO STAT 2000 (1000 ha) [1]
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] National data for each national class from the year 2000 (table 1.2) was multiplied by 0.9937 to calibrate the each national class'area to the FAO STAT total area.

1.3.2 Estimation and forecasting

National Classes 2000	1984 (1000 ha)	1990[1] (1000 ha)	2000 (1000 ha)	2005[1] (1000 ha)
Montane Cloud Forest	0.17	0.20	0.25	0.28
Evergreen Montane Shrubland	0.80	0.90	1.06	1.14
Montane Rain Forest	3.64	3.41	3.02	2.83
Submontane Rain Forest	24.49	24.11	23.48	23.17
Disturbed Submontane Rain Forest	9.09	8.81	8.35	8.12
Lowland/Submontane Seasonal Evergreen Forest	7.17	6.60	5.65	5.17
Lowland Drought Deciduous Shrub/Semi-	6.24	5.97	5.51	5.28
Seasonally Flooded R.F./W.L./G.L	0.17	0.20	0.25	0.28
Total forest and other wooded land	**51.77**	**50.20**	**47.58**	**46.27**
Total other land	**23.23**	**24.80**	**27.42**	**28.73**
Total land area	**75.00**	**75.00**	**75.00**	**75.00**

[1] Data for the years 1990 and 2005 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.

1.4 Reclassification into FRA 2005 classes

National Classes 2000	FRA 2005 Categories				
	Forest	**OWL**	**Other land**	**Total**	**OLWTC**[1]
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-deciduos	100%			100%	NDA
Seasonally Flooded R.F./W.L./G.L	100%			100%	NDA
Non forest			100%	100%	NDA

[1] No data available for other land with tree cover.

1.5 Data for National reporting table T1

FRA 2005 Categories	Area (1000 hectares)		
	1990	**2000**	**2005**
Forest	50.00	47.33	45.99
Other wooded land[1]	0.20	0.25	0.28
Other land	24.80	27.42	28.73
...of which with tree cover	NDA	NDA	NDA
Inland water bodies	0	0	0
TOTAL	75.00	75.00	75.00

1.6 Comments to National reporting table T1

[1] 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 2005.

2 Table T4 – Characteristics of Forest and Other wooded land

2.1 FRA 2005 Categories and definitions

Category	Definition
Primary	Forest / Other wooded land of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.
Modified natural	Forest / Other wooded land of naturally regenerated native species where there are clearly visible indications of human activities.
Semi-natural	Forest / Other wooded land of native species, established through planting, seeding or assisted natural regeneration.
Productive 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.
Protective plantation	Forest / Other wooded land of native or introduced species, established through planting or seeding mainly for provision of services.

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 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.
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.

2.2.3 Original data

No data was presented in either of the sources of information. The figure for plantation area cited in the information sources came from personal communications, and is estimated at 100ha.

2.3 Analysis and processing of national data

2.3.1 Calibration

Calibration to FAO STAT land area is described in section 1.3.1.

2.3.2 Estimation and forecasting

Overall forest area estimation and forecasting is described in section 1.3.2. No estimation or forecasting was done for forest plantations. The IITF (2000) report states that the annual rate of planting was neglible. 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.

2.4 Reclassification into FRA 2005 classes

National Classes 2000	Primary	Modified natural	Primary other wooded land
Montane Cloud Forest			100
Evergreen Montane Shrubland	100		
Montane Rain Forest	100		
Submontane Rain Forest	100		
Disturbed Submontane Rain Forest		100	
Lowland/Submontane Seasonal Evergreen Forest		100	
Lowland Drought Deciduous Shrub/Semi-		100	
Seasonally Flooded R.F./W.L./G.L		100	

All productive forest plantations were assumed to be closed forest and were deducted from the FRA category of modified natural forest.

2.5 Data for National reporting table T4

FRA 2005 Categories	Area (1000 hectares)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Primary	28.42	27.56	27.14	0.2	0.25	0.28
Modified natural	21.58	19.66	18.75	NDA	NDA	NDA
Semi-natural	0	0	0	NDA	NDA	NDA
Productive plantation[1]	NDA	0.10	0.10	0	0	0
Protective plantation	NDA	NDA	NDA	NDA	NDA	NDA
TOTAL	50	47.32	45.99	NDA	NDA	NDA

[1] All productive forest plantations were assumed to be closed forest.

2.6 Comments to National reporting table T4

Estimates of forest plantation were entirely based on personal communications and no actual data were presented by either of the information sources. Productive plantation estimates were not made for 1990 because there was no information regarding plantation area prior to 2000. No forecasting of plantation area was done because annual planting was considered neglible and there was no information on plantation loss.

3 Table T9 – Diversity of tree species

3.1 FRA 2005 Categories and definitions

Category	Definition
Number of native tree species	The total number of native tree species that have been identified within the country.
Number of critically endangered tree species	The number of native tree species that are classified as "Critically endangered" in the IUCN red list.
Number of endangered tree species	The number of native tree species that are classified as "Endangered" in the IUCN red list.
Number of vulnerable tree species	The number of native tree species that are classified as "Vulnerable" in the IUCN red list.

3.2 National data

3.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
IUCN Species Survival Commision. 2004. IUCN Red List of Threatened Species.	High	Species status	2004	Website search used http://www.redlist.org/

3.2.2 Classification and definitions

The IUCN classification was used.

3.2.3 Original data

The IUCN Red List of Threatened Species at http://www.redlist.org/ was used to gather information on threatened species.

3.3 Analysis and processing of national data

3.3.1 Estimation and forecasting

3.4 Reclassification

3.5 Data for National reporting table T9

FRA 2005 Categories	Number of species (year 2000)
Native tree species	NDA
Critically endangered tree species	0
Endangered tree species	4
Vulnerable tree species	5

3.6 Comments to National reporting table T9

The following species were found in the 2004 IUCN Red List of Threatened Species:
Endangered:

Guaiacum officinale, Nectandra krugii, Pouteria pallida, Swietenia mahagoni

Vulnerable:

Cedrela odorata, Freziera cordata, Inga dominicensis,
Pouteria semecarpifolia, Swietenia macrophylla