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Food and Agriculture Organization of the United Nations

**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:

Mette Løyche Wilkie
Senior Forestry Officer
FAO Forestry Department
Viale delle Terme di Caracalla
Rome 00100, Italy

E-mail: Mette.LoycheWilkie@fao.org

Readers can also use the following e-mail address: fra@fao.org

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The Global Forest Resources Assessment 2005 Country Report Series is designed to document and make available the information forming the basis for the FRA 2005 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.

Report preparation and contact persons

Mr Cornelius Isaac

Assistant Chief Forestry Officer

Department of Forestry < Ministry of Agriculture, Forestry and Fisheries

Email deptforest@slumaffe.org

chiefforest@slumaffe.org

http://www.slumaffe.org/Forestry_Department/forestry_department.html

Telephone number: 001 1758 4502231

Fax number: 001 1758 4502287

Address: Sir Stamlans James Building The Waterfront Castries Saint Lucia

This report presents the results from

Table 1: Extent of forest and other wooded land

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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 <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
Organization of American states, 1987. Saint Lucia Development Atlas: Map Preparation. OAS, Dept. Reg. Dev., Washington, DC.	M	Land use, forest type, Vegetation type	1977	Land use information was obtained from 1977 conventional airphotos
Canadian International development Agency, 1983. Forest Management And Conservation plan (1983-1994). Ottawa, Canada	H	Land use, forest type, Vegetation type	1977	Land use information was obtained from 1977 conventional airphotos
Canadian International development Agency, 1992. Forest Management And Conservation plan (1992-2002). Ottawa, Canada	H	Land use, forest type, Vegetation type	1989	Land use information was obtained from 1989 French satellite image (SPOT).
Saint Lucia Government, 1976. Agricultural census data. Castries, Saint Lucia	M		1973	
Saint Lucia Government, 1987. Agricultural census data. Castries, Saint Lucia			1986	

1.2.2 Classification and definitions

National class	Sub-class	Definition
Natural Forest		Primary and secondary forested areas that are used primarily for forestry. This includes natural forest, mangrove and plantations.
Scrub Forest		Areas with shrubs or stunted trees covering more than 20% of the area, not primarily used for Agriculture or non-forestry purposes.
Open woodlands		Lands with scattered trees or shrubs over a graminaceous layer.
Agriculture	Intensive	Areas where 70% or more of the surface is devoted primarily to Agriculture.
	Mix	Areas where less than 70% of the surface is devoted primarily to Agriculture that is organised as scattered individual holdings. The predominant non-agricultural coverage is secondary forest.
	Eroded lands	Eroded agricultural lands
Settlements		Rural settlement areas occupied by clusters of houses and intensive urban development.
Water		Dams and marinas
Other	Rock and Exposed soil	Beaches, mines and other rocky outcrops.
	Undefined	Deficit in total area not described by referenced report.

1.2.3 Original data

National class	Sub-class	1977* (1000 ha)	1989*** (1000 ha)
Forest	Natural	25.1**	12.9
	Scrub	12.5	7.5
Open woodlands		2.5	1.3
Agriculture	Intensive	7.1	17.6
	Mix	12.3**	16.2
	Eroded lands		0.2
Settlements		1.7	5.4
Water			0.1
Other	Rock and Exposed soil		0.4
	Undefined		
Total		61.1	61.6

* Canadian International development Agency, 1983.

**A relative proportion of secondary forest to mixed agriculture reported by the Organization of American states, 1987 using the same airphotos was used to separate the bulk figure reported by CIDA.

*** Canadian International development Agency, 1992.

1.3 Analysis and processing of national data

1.3.1 Calibration

	Total area (1000 ha)	In land water area (1000 ha)
FAO STAT	62	0.1
NATIONAL STAT	61.6	1

Calibration factor = 1.006494

This factor was applied to the figures presented in year 1989.

Estimation and forecasting

Modified national data to facilitate forecasting.

National classes	Sub-class	1977 ¹ (1000 ha)	1989 ² (1000 ha)
Natural Forest		16.7	12.9
Scrub Forest		12.7	7.5
Open woodlands		2.7	1.3
Agriculture	Intensive	14.5	17.6
	Mix	8.6	16.2
	Eroded lands	0.0	0.2
Settlements		5.7	5.4
Water		0.1	0.1
Other	Rock, Exposed soil & Undefined	0.7	0.4
Total		61.6	61.6

NB. 1 Rock and exposed soil and water were assumed to be the same in 1977 as in 1989.

2. Eroded agricultural lands was added to mixed agriculture to simplify calculations.

Using linear extrapolation was not appropriate for the estimation of 2000 and 2005 it does not reflect reality since more recent national census reveal significant reduction in agricultural activity and increases in population. Country correspondent pointed out that these shifts have resulted in increases in forest, open woodlands and settlements. Additionally, there were modest increases to protected state forest that is now 7,000+ ha. Therefore, it was decided to report the forest area of the year 1989, as constant for the year 1990, 2000 and 2005, knowing that this area might be underestimated. Calibration factor was applied to the final figures of forest, other wooded land, and in-land water. Results are presented in section 1.5.

1.4 Reclassification into FRA 2005 classes

National Classes	Sub-class	FRA 2005 Categories				
		Forest	OWL	OL	OWLTC	IWB
Forest	Natural	100%				
	Scrub	50%	50%			
Open woodlands			100%			
Agriculture	Intensive			100%		
	Mix			100%		
	Eroded lands			100%		
Settlements				100%		
Water						100%
Other	Rock and Exposed soil			100%		
	Undefined			100%		

1.5 Data for National reporting table T1

FRA 2005 Categories	Area (1000 hectares)		
	1990	2000	2005
Forest	17	17	17
Other wooded land	5	5	5
Other land	39	39	39
...of which with tree cover ¹⁾	0	0	0
Inland water bodies	1	1	1
TOTAL	62	62	62

1.6 Comments to National reporting table T1

For the purpose of this document, the forest, other wooded land and other land area was considered constant since 1990. The national country correspondent highlight the fact that forest area might be increasing as there is agriculture land area that has been abandoned, and reconverted into forest. There is no data available to estimate this areas, so the total forest land might be underestimated.

2 Table T2 – Ownership of Forest and Other wooded land

2.1 FRA 2005 Categories and definitions

Category	Definition
Private ownership	Land owned by individuals, families, private co-operatives, corporations, industries, religious and educational institutions, pension or investment funds, and other private institutions.
Public ownership	Land owned by the State (national, state and regional governments) or government-owned institutions or corporations or other public bodies including cities, municipalities, villages and communes.
Other ownership	Land that is not classified either as “Public ownership” or as “Private ownership”.

2.2 National data

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Canadian International development Agency, 1992. Forest Management And Conservation plan (1992-2002). Ottawa, Canada	H	Land use, Land tenure	1989	Land use information was obtained from 1989 French satellite image (SPOT).
Saint Lucia Gazette	H	Watershed protection	2000/01	Acquisition of lands for Watershed protection

2.2.2 Classification and definitions

National class	Definition
Forest Reserve	Crown lands so declared under the Forest, Soil and Water Act, 1964
Crown lands	All lands owned by the state
Private lands	All lands not owned by the state

2.2.3 Original data (1000 ha)

National Classes	Forest Reserve	Crown Lands	Private Lands	Total
Natural Forest	7.3	0.2	5.5	12.9
Scrub Forest	0.1	0.2	7.2	7.5
Open woodlands	0	0.0	0.0	1.3
Total	7.4	0.4	13.9	21.7

Source : Canadian International development Agency, 1992. Forest Management And Conservation plan

2.3 Analysis and processing of national data

2.3.1 Calibration

Calibration factor = $(62/62) = 1.00$

2.3.2 Estimation and forecasting

National Classes	1990				2000			
	FR	CL	PL	Total	FR	CL	PL	Total
Natural Forest	7.3	0.2	5.5	12.9	8.0	0.2	5.5	13.7
Scrub Forest	0.1	0.2	7.2	7.5	0.1	0.2	7.2	7.5
Open woodlands	0.0	0.0	1.3	1.3	0.0	0.0	1.3	1.3
Total	7.4	0.4	13.9	21.7	8.2	0.4	13.9	22.5

FR- Forest Reserve; CL- Crown lands; PL- Private lands

NB. No record of change in data from the source year to 1990 was found and therefore the assumption of no change was made. Changes in 2000 were on the basis of recorded new acquisitions by the state.

2.4 Reclassification into FRA 2005 classes

National Classes	Sub-class	FRA 2005	
		Forest	OWL
Natural Forest		100%	
Scrub Forest		50%	50%
Open woodlands			100%

¹ It is the country correspondent's observation that the areas classified as Scrub Forest by the Canadian International development Agency, 1992, consist of roughly equal spatial zones with trees higher than 5 meters and that with shrubs or stunted trees.

National classes	FRA classes
Forest Reserve and Crown land areas	Public ownership
Private lands areas	Private ownership

2.5 Data for National reporting table T2

FRA 2005 Categories	Area (1000 hectares)			
	Forest		Other wooded land	
	1990	2000	1990	2000
Private ownership	9	9	4.9	4.9
Public ownership	8	8	0.2	0.2
Other ownership				
TOTAL	17	17	5	5

2.6 Comments to National reporting table T2

3 Table T3 – Designated function of Forest and Other wooded land

3.1 FRA 2005 Categories and definitions

Types of designation

Category	Definition
Primary function	A designated function is considered to be primary when it is significantly more important than other functions. This includes areas that are legally or voluntarily set aside for specific purposes.
Total area with function	Total area where a specific function has been designated, regardless whether it is primary or not.

Designation categories

Category / Designated function	Definition
Production	Forest / Other wooded land designated for production and extraction of forest goods, including both wood and non-wood forest products.
Protection of soil and water	Forest / Other wooded land designated for protection of soil and water.
Conservation of biodiversity	Forest / Other wooded land designated for conservation of biological diversity.
Social services	Forest / Other wooded land designated for the provision of social services.
Multiple purpose	Forest / Other wooded land designated to any combination of: production of goods, protection of soil and water, conservation of biodiversity and provision of social services and where none of these alone can be considered as being significantly more important than the others.
No or unknown function	Forest / Other wooded land for which a specific function has not been designated or where designated function is unknown.

3.2 National data

3.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Canadian International development Agency, 1992. Forest Management And Conservation plan (1992-2002). Ottawa, Canada	H	Land use, Land tenure	1989	Land use information was obtained from 1989 French satellite image (SPOT).

3.2.2 Classification and definitions

National class	Definition
Forest Reserve	Crown lands so declared under the Forest, Soil and Water Act, 1964
Protected Areas	Forest Reserve and private land declared under the Forest, Soil and Water Act, 1964; Fisheries Act, 1984; and the National Trust Act, 1975.

3.2.3 Original data

National class	Sub-class	1989 (1000 ha)
Forest Reserves	Castries Waterworks	1.393
	Barre-de-l'Isle North	0.231
	Barre-de-l'Isle South	0.724
	Central Forest A	1.631
	Central Forest B	1.474
	Quillesse	1.400
	Saltibus Grand Magazin	0.107
	Addition Central Forest	0.121
	Dennerly	0.145
	Dennerly Ridge	0.071
	Marquis Estate 1	0.134
	Marquis Estate 2	0.035
	Marquis Estate 3-6	0.019
	Forestierre Blocks	0.012
	Sub Total	7.497
Protected Areas	The Parrot Sanctuary	1.578
	Maria Islands Nature Reserve	0.012
	Pigeon Island National Park:	0.018
	Anse La Liberte	0.056
	Savannes Bay Area:	0.486
	Savannes Bay mangrove.	0.051
	Praslin mangroves.	0.016
	Marquis mangroves.	0.005
	Marigot Bay mangroves.	0.003
	Esperance harbour mangroves.	0.005
	Anse Lavoutte (Cas-en-Bas) mangroves.	0.011
	Bois d'Orange mangroves.	0.003
	Anse Pointe Sable Mankote mangroves.	0.049
	Fregate Island Nature Reserve.	0.000
	Anse Galet	0.071
Sub Total	2.362	
Total	9.860	

Source : Canadian International development Agency, 1992. Forest Management And Conservation plan

3.3 Analysis and processing of national data

3.3.1 Calibration

Calibration factor = $(62/62) = 1.00$

3.3.2 Estimation and forecasting

National class	Sub-class	1989 (1000 ha)	1990 (1000 ha)
Forest Reserves	Castries Waterworks	1.393	1.393
	Barre-de-l'Isle North	0.231	0.231
	Barre-de-l'Isle South	0.724	0.724
	Central Forest A	1.631	1.631
	Central Forest B	1.474	1.474
	Quillesse	1.400	1.400
	Saltibus Grand Magazin	0.107	0.107
	Addition Central Forest	0.121	0.121
	Dennery Waterworks	0.145	0.145
	Dennery Ridge	0.071	0.071
	Marquis Estate 1	0.134	0.134
	Marquis Estate 2	0.035	0.035
	Marquis Estate 3-6	0.019	0.019
	Forestierre Blocks	0.012	0.012
	Vie litre		0.216
	Fond Estate		0.315
		Sub Total	7.497
Protected Areas	The Parrot Sanctuary	1.578	1.578
	Maria Islands Nature Reserve	0.012	0.012
	Pigeon Island National Park:	0.018	0.018
	Anse La Liberte	0.056	0.056
	Savannes Bay Area:	0.486	0.486
	Savannes Bay mangrove.	0.051	0.051
	Praslin mangroves.	0.016	0.016
	Marquis mangroves.	0.005	0.005
	Marigot Bay mangroves.	0.003	0.003
	Esperance harbour mangroves.	0.005	0.005
	Anse Lavoutte (Cas-en-Bas) mangroves.	0.011	0.011
	Bois d'Orange mangroves.	0.003	0.003
	Anse Pointe Sable Mankote mangroves.	0.049	0.049
	Fregate Island Nature Reserve.	0.000	0.000
	Anse Galet	0.071	0.071
	Sub Total	2.362	2.362
Total		9.860	10.390

3.4 Reclassification into FRA 2005 classes

National Classes	Sub-class	FRA 2005	
		Forest	OWL
Forest	Natural	100%	
	Scrub	50%	50%
	Mangroves	100%	
Protected Areas		100%	

NB. There seem to be an insignificant amount of area with functions designated by legal prescription that is OWL. (National correspondent).

3.5 Data for National reporting table T3

FRA 2005 Categories / Designated function	Area (1000 hectares)					
	Primary function			Total area with function		
	1990	2000	2005	1990	2000	2005
Forest						
Production						
Protection of soil and water						
Conservation of biodiversity						
Social services						
Multiple purpose	10	10	10	not appl.	not appl.	not appl.
No or unknown function	7	7	7	not appl.	not appl.	not appl.
Total - Forest	17	17	17	not appl.	not appl.	not appl.
Other wooded land						
Production						
Protection of soil and water						
Conservation of biodiversity						
Social services						
Multiple purpose				not appl.	not appl.	not appl.
No or unknown function	5	5	5	not appl.	not appl.	not appl.
Total – Other wooded land	5	5	5	not appl.	not appl.	not appl.

3.6 Comments to National reporting table T3

4 Table T9: Diversity of tree species

4.1 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.

4.2 National data

4.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
IUCN red list of species. http://www.fao.org/forestry/site/20747/en				

4.2.2 Classification and definitions

IUCN classification.

4.2.3 Original data

Same as reported.

4.3 Analysis and processing of national data

4.4 Reclassification into FRA classes

4.5 Data for National reporting table T9

FRA 2005 Categories	Number of species (year 2000)
Native tree species	ID
Critically endangered tree species	0
Endangered tree species	2
Vulnerable tree species	4

4.6 Comments to National reporting table T9

The IUCN Red List contains the following endangered and vulnerable tree species:

-endangered tree species:

Pouteria pallida

Swietenia mahagany

-vulnerable tree species:

Cedrela odorata

Juniperus barbadensis

Pouteria semecarpifolia

Zanthoxylum flavum