



Forestry Department

Food and Agriculture Organization of the United Nations

**GLOBAL FOREST RESOURCES
ASSESSMENT 2010**

COUNTRY REPORT

**SAINT VINCENT AND
THE GRENADINES**

FRA2010/181
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).

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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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Report preparation and contact persons

No official report has been received from Saint Vincent and the Grenadines.

This report is the result of a desk study prepared by the FRA secretariat in Rome, which summarizes existing available information using the established format for FRA 2010 country reports.

This country report comprises only the following national reporting tables:

- Table T1 – Extent of Forest and Other wooded land
- Table T4 – Characteristics of Forest and Other wooded land
- Table T5 – Forest establishment and regeneration

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
FAOSTAT	H	Country area	2008	Secondary data source
Schill et.al., 2007. Forest Formation and Land Cover Map Series: St. Vincent and the Grenadines	H	Forest formation and land cover.	2000	Based on satellite imagery
Gumbs, F.A. 1992. Report on land use/watershed management in st Vincent and the grenadines. Tropical Forestry action Programme, FAO, rome	H	Land use area	1984	Secondary data source
Anon. 2000. Country report for St. Vincent and the Grenadines, submitted to EC-FAO Workshop “Data collection and outlook effort for forestry in the Caribbean”.	H	Plantation area	1994-1999	Secondary data source
Forestry Division of the Ministry of Agriculture, Industry and Labour. 1994. National Forest Inventory Report. Annex 1 of the National Forest Resource Conservation Plan	H	Land use area	1993	Primary data source

1.2.2 Original data

1984

National Class	Area (ha)
Young secondary forest	3 570
Secondary forest	3 706
Primary forest	1 632
Palm forest	1 734
Dwarf forest	952
Dry scrub forest	1 326
Forest land destroyed by 1979 soufriere eruption	2 754

1993

National Class	Area (ha)
Rain Forest	7 759
Dry Scrub Woodlands	2 179
Elfin Woodland	457
Palm Brake	518
Regeneration	1 776
TOTAL	12 689

2000

According to Anon. (2000), 66.41 ha of forest plantations were established during 1994-1999 and the total area reached 241.31 ha in 1999.

2001 (data extracted from the GIS data set)

Land cover class	Area (hectares)
Water	32.9
Barren	123.8
Barren	6.8
Beach White	47.6
Beach Black	73.8
Urban Light Density	2133.8
Urban High Density	1606.7
Banana	1186.1
Banana-Coconut Mix	1351.7
Agriculture Cultivated Land	2985.2
Golf Course	35.4
Pasture High Altitude	72.2
Forest Dry Deciduous	3304.1
Forest Semi Deciduous	2051.5
Forest Evergreen and Seasonal	14436.4
Cloud Forest	3879.8
Coconut	34.2
Forest Cloud Elfin	290.5
Forest Cloud Transitional	1961.4
Mangrove	37.0
Agriculture Woody	2955.6
Forest Plantation	101.9
Wetland	0.5
TOTAL	38708.8

1.3 Analysis and processing of national data

1.3.1 Calibration

The total country area according to FAOSTAT is 39 (000) hectares, which is a rounded figures that correspond to national data. No calibration was therefore made.

1.3.2 Reclassification into FRA 2010 categories

All data sets use different sets of categories, a reclassification has to be made first in order to see to what extent they can be compared.

1984

National Classification	Forest	Other wooded land	Other land
Young secondary forest	100%		
Secondary forest	100%		
Primary forest	100%		
Palm forest		100%	
Dwarf forest		100%	
Dry scrub forest		100%	
Forest land destroyed by 1979 soufriere eruption			100%

1993

National Classification	Forest	Other wooded land	Other land
Rain Forest	100%		
Dry Scrub Woodlands		100%	
Elfin Woodland		100%	
Palm Brake		100%	
Regeneration	100%		

2001

Land cover class	Forest	Other wooded land	Other land	Other land with tree cover	Water
Water					100%
Barren			100%		
Barren			100%		
Beach White			100%		
Beach Black			100%		
Urban Light Density			100%		
Urban High Density			100%		

Banana			100%		
Banana-Coconut Mix			100%		
Agriculture Cultivated Land			100%		
Golf Course			100%		
Pasture High Altitude			100%		
Forest Dry Deciduous	100%				
Forest Semi Deciduous	100%				
Forest Evergreen and Seasonal	100%				
Cloud Forest	100%				
Coconut			100%	100%	
Forest Cloud Elfin	100%				
Forest Cloud Transitional	100%				
Mangrove	100%				
Agriculture Woody			100%	100%	
Forest Plantation	100%				
Wetland			100%		

The results of the reclassification are as follows:

	1984 (ha)	1993 (ha)	2001 (ha)
Forest	8 908	9 535	26 062
Other wooded land	4 012	3 154	0
Other land with tree cover			2 990

It can clearly be seen that the three data sets are not compatible. The 2001 data are considered to be of best quality and is used as a baseline for the estimation and forecasting to the FRA reporting years.

1.3.3 Estimation and forecasting

The 2001 data were used as baseline. There has been an increase of forest area due to forest recovering areas destroyed by a volcanic eruption in 1979 and also to abandoned sugar cane plantations that have reverted to forest. The 1983 and 1993 data were used to establish a change rate in forest area which is estimated at about 70 hectares per year. This change rate was then used to calculate backwards and forward from the 2001 baseline data. Other land with tree cover is assumed constant.

1.4 Data for Table T1

FRA 2010 categories	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	25.3	26.0	26.3	26.7
Other wooded land	0	0	0	0
Other land	13.7	13.0	12.7	12.3
...of which with tree cover	3	3	3	3
Inland water bodies	0	0	0	0
TOTAL	39	39	39	39

1.5 Comments to Table T1

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest		There has been an increase of forest area due to forest recovering areas destroyed by a volcanic eruption in 1979 and also to abandoned sugar cane plantations that have reverted to forest.
Other wooded land		
Other land		
Other land with tree cover		
Inland water bodies		

Other general comments to the table

Expected year for completion of ongoing/planned <u>national forest inventory and/or RS survey / mapping</u>	
Field inventory	
Remote sensing survey / mapping	

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
Anon. 2000. Country report for St. Vincent and the Grenadines, submitted to EC-FAO Workshop “Data collection and outlook effort for forestry in the Caribbean”.	H	Plantation area	1994-1999	Secondary data source
Schill et.al., 2007. Forest Formation and Land Cover Map Series: St. Vincent and the Grenadines	H	Forest formation and land cover.	2000	Based on satellite imagery
Bacon, P. R. 1991. The Status of Mangrove Conservation in the Caricom Islands of the Eastern Caribbean. Report to the Commission of the European Communities as part of the Tropical Forestry Action Plan for the Caribbean Region. University of the West Indies, Mona, Jamaica.	H	Mangroves	1991	

2.2.2 Original data

According to Anon (2000), 66.41 ha of forest plantations were established during 1994-1999 and the total area reached 241.31 ha in 1999. These figures indicate an average planting rate of about 11 hectares per year during the indicated period.

The latest vegetation mapping from 2001 indicate a presence of 101.9 hectares of forest plantations.

The difference between the two datasets may lie in that the first one just accumulated the areas that were planted without taking into consideration the survival rate and other factors.

The 2001 data set also indicate the existence of 37 hectares of mangroves, while Bacon (1991) reported 51 hectares of mangroves.

2.3 Analysis and processing of national data

2.3.1 Estimation and forecasting

There are no data available to support a trend in forest plantations since 2001. The figure from 2001 has therefore been used for the years 2000, 2005 and 2010. Remaining areas are considered as other naturally regenerated forests.

For 1990, the data has been left without any estimates, as the planting trend of 11 hectares per year would yield a negative value if applied to the 2001 data.

As for the mangroves, the data from Bacon (1991) were used for 1990, and the data from Schill et.al. (2007) were used for 2000, 2005 and 2010 in the absence of reliable trend data since 2000.

2.4 Data for Table T4

Table 4a

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Primary forest	n.a.	0	0	0
Other naturally regenerated forest	n.a.	25.9	26.2	26.6
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
Planted forest	n.a.	0.10	0.10	0.10
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
TOTAL	25.3	26.0	26.3	26.7

Table 4b

FRA 2010 Categories	Area (1000 hectares)			
	1990	2000	2005	2010
Rubber plantations (Forest)	n.a.	n.a.	n.a.	n.a.
Mangroves (Forest and OWL)	0.051	0.034	0.034	0.034
Bamboo (Forest and OWL)	n.a.	n.a.	n.a.	n.a.

2.5 Comments to Table T4

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Primary forest		
Other naturally regenerating forest		
Planted forest		
Rubber plantations		
Mangroves		
Bamboo		

Other general comments to the table

3 Table T5 – Forest establishment and reforestation

3.1 FRA 2010 Categories and definitions

Term	Definition
Afforestation	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not classified as forest.
Reforestation	Re-establishment of forest through planting and/or deliberate seeding on land classified as forest.
Natural expansion of forest	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).

3.2 National data

3.2.1 Data sources

References to sources of information	Quality H/M/L	Variable	Year(s)	Additional comments
Anon. 2000. Country report for St. Vincent and the Grenadines, submitted to EC-FAO Workshop “Data collection and outlook effort for forestry in the Caribbean”.	H	Plantation area	1994-1999	Secondary data source

3.2.2 Original data

According to Anon (2000), 66.41 ha of forest plantations were established during 1994-1999. These figures indicate an average planting rate of about 11 hectares per year during the indicated period.

3.3 Analysis and processing of national data

3.3.1 Estimation and forecasting

The planting rate indicated under original data was used to report the years 1990 and 2000. No data are available to estimate the planting rate for 2005.

3.4 Data for Table T5

FRA 2010 Categories	Annual forest establishment (hectares/year)			...of which of introduced species ¹⁾ (hectares/year)		
	1990	2000	2005	1990	2000	2005
Afforestation	11	11	n.a.	n.a.	n.a.	n.a.
Reforestation	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
...of which on areas previously planted	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Natural expansion of forest	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Note: The figures for the reporting years refer to the averages for the 5-year periods 1988-1992, 1998-2002 and 2003-2007 respectively.

3.5 Comments to Table T5

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Afforestation		
Reforestation		
Natural expansion of forest		

Other general comments to the table