



Forestry Department

Food and Agriculture Organization of the United Nations

**GLOBAL FOREST RESOURCES
ASSESSMENT 2010**

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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 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 Bahamas.

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.

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
Bacon P.R. 1993. Mangroves in the Lesser Antilles, Jamaica and Trinidad and Tobago. <i>In: Lacerda L.D. 1993. Conservation and sustainable utilization of mangrove forests in Latin America and Africa regions, Part I - Latin America.</i> p. 155 210 Mangrove Ecosystems technical reports ITTO/ISME Project PD114/90 (F). Okinawa, Japan. 272 pp.	H	Mangrove area	1991	Based on a ground survey
FAOSTAT	H	Land area		Secondary data source
Russell, C. 2000. Bahamas Country Report: Forestry Outlook Study for the Caribbean. Project GCP/INT, FAO, Rome	H	Forest area	1986	Secondary data source
FAO 2001. Validation Sheet Bahamas. FAO Rome	M	Forest area	2000	Estimated the area of coppice forest

1.2.2 Classification and definitions

1986

National class	Definition
Density Class 1 (70-100%)	Forest with 70-100% canopy cover
Density Class 2 (50-69%)	Forest with 50-69% canopy cover
Density Class3 (11-49%)	Forest with 11-49% canopy cover
Density Class 4 (0-10%)	Forest with 0-10% canopy cover
Swamp	No definition given
Bluehole	No definition given
Other	No definition given

1.2.3 Original data

1986 (Source: Russel, 2000)

National Classes	Area (acres)	Area (hectares)
Density Class 1 (70-100%)	154 470	62 512
Density Class 2 (50-69%)	121 022	48 976
Density Class3 (11-49%)	139 381	56 406
Density Class 4 (0-10%)	88 239	35 709
Swamp	11 165	4 518
Bluehole	304	123
Other	423	171
Total pine forest	515 004	208 415

The areas in acres were converted to hectares by applying a factor of 0.404686

Russell (2000) also notes that the total area of wetlands is 4 28 600 hectares, some of which contains mangroves and that there are areas of coppice hardwood forests which have been harvested in the past for sawlogs. These areas have never been inventoried.

1991 (Source: Bacon, 1993)

Mangrove = 141 957 ha

2000

FRA 2000 estimated the area of coppice forest to be 200 000 ha based on the following assumptions:

“The Coppice Forest was estimated, by taking into consideration the total land area, and subtracting the total area cover by wetland and pine forest. The remaining area (527,539 ha) is a combination of urban areas, agriculture and coppice forest. According to the country general description, it was estimated that at least half of this extension has being used for urban areas and agriculture. The coppice forest was then estimated at 200,000 ha.”

1.3 Analysis and processing of national data

1.3.1 Reclassification into FRA 2010 categories

All the pine forests, except density class 4 were classified as forests. Pine forests in density class 4 were classified as Other wooded land.

All mangroves and all coppice forests were reclassified as forests.

The mangrove area of 1991 and the estimated area of coppice forest were added to the pine forest area of 1986

	Forest (ha)	OWL (ha)
Pine forest (1986)	172 705	35 709
Coppice forest	200 000	
Mangroves (1991)	141 957	
Total	514 662	35 709

1.3.2 Calibration

No calibration of forest and other wooded land areas was made. Remaining land area is assumed to be other land.

1.3.3 Estimation and forecasting

As no reliable trend data are available, the same values are reported for all reporting years.

1.4 Data for Table T1

FRA 2010 categories	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	515	515	515	515
Other wooded land	35.7	35.7	35.7	35.7
Other land	450	450	450	450
...of which with tree cover	n.a.	n.a.	n.a.	n.a.
Inland water bodies	387	387	387	387
TOTAL	1 388	1 388	1 388	1 388

1.5 Comments to Table T1

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest	Data are old and partly based on expert estimates.	There are no reliable data to make an accurate forest change estimation, although an increase in forest area is likely due to the closing of banana plantations which return to forests
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 T2 – Forest ownership and management rights

2.1 FRA 2010 Categories and definitions

Category	Definition
Public ownership	Forest owned by the State; or administrative units of the public administration; or by institutions or corporations owned by the public administration.
Private ownership	Forest owned by individuals, families, communities, private co-operatives, corporations and other business entities, private religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.
Individuals (<i>sub-category of Private ownership</i>)	Forest owned by individuals and families.
Private business entities and institutions (<i>sub-category of Private ownership</i>)	Forest owned by private corporations, co-operatives, companies and other business entities, as well as private non-profit organizations such as NGOs, nature conservation associations, and private religious and educational institutions, etc.
Local communities (<i>sub-category of Private ownership</i>)	Forest owned by a group of individuals belonging to the same community residing within or in the vicinity of a forest area. The community members are co-owners that share exclusive rights and duties, and benefits contribute to the community development.
Indigenous / tribal communities (<i>sub-category of Private ownership</i>)	Forest owned by communities of indigenous or tribal people.
Other types of ownership	Other kind of ownership arrangements not covered by the categories above. Also includes areas where ownership is unclear or disputed.
Categories related to the holder of management rights of public forest resources	
Public Administration	The Public Administration (or institutions or corporations owned by the Public Administration) retains management rights and responsibilities within the limits specified by the legislation.
Individuals/households	Forest management rights and responsibilities are transferred from the Public Administration to individuals or households through long-term leases or management agreements.
Private institutions	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities, private co-operatives, private non-profit institutions and associations, etc., through long-term leases or management agreements.
Communities	Forest management rights and responsibilities are transferred from the Public Administration to local communities (including indigenous and tribal communities) through long-term leases or management agreements.
Other form of management rights	Forests for which the transfer of management rights does not belong to any of the categories mentioned above.

2.2 National data

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Russell, C. 2000. Bahamas Country Report: Forestry Outlook Study for the Caribbean. Project GCP/INT, FAO, Rome	H	Ownership	1986	Secondary data source

2.2.2 Original data

According to Russell (2000), 80% of the forest is owned by the Government while 20% is privately owned. It is not clear whether the ownership refers to the forest land, to the trees or both.

2.3 Analysis and processing of national data

2.3.1 Estimation and forecasting

The percentages are applied to the forest area as of table T1.

2.4 Data for Table T2

Table 2a - Forest ownership

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public ownership	412	412	412
Private ownership	103	103	103
...of which owned by individuals			
...of which owned by private business entities and institutions			
...of which owned by local communities			
...of which owned by indigenous / tribal communities			
Other types of ownership	0	0	0
TOTAL	515	515	515

Note: If other types of ownership is reported, please specify details in comment to the table.

Does ownership of trees coincide with ownership of the land on which they are situated?	<input type="checkbox"/>	Yes
	<input type="checkbox"/>	No
If No above, please describe below how the two differ:		

Table 2b - Holder of management rights of public forests

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public Administration			
Individuals			
Private corporations and institutions			
Communities			
Other			
TOTAL			

2.5 Comments to Table T2

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Public ownership		
Private ownership		
Other types of ownership		
Management rights		

Other general comments to the table

3 Table T3 – Forest designation and management

No information is available for this reporting table.

4 Table T4 – Forest characteristics

4.1 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.

4.2 National data

4.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Russell, C. 1998. Bahamas national report on the state of forestry for the period 1996-1997. 20 th session of the Latin American and Caribbean Forestry Commission, 10- 14 th September 1998. FAO, Rome	H	Planted forest	1997	
Bacon P.R. 1993. Mangroves in the Lesser Antilles, Jamaica and Trinidad and Tobago. <i>In: Lacerda L.D. 1993. Conservation and sustainable utilization of mangrove forests in Latin America and Africa regions, Part I - Latin America.</i> p. 155 210 Mangrove Ecosystems technical reports ITTO/ISME Project PD114/90 (F). Okinawa, Japan. 272 pp.	H	Mangrove area	1991	Based on a ground survey

4.2.2 Original data

There are no planted forests in Bahamas.

The area of mangroves 1991 was 141 957 hectares.

4.3 Analysis and processing of national data

4.3.1 Reclassification into FRA 2010 categories

All forest area is considered to belong to the category “Other naturally regenerated forest”.

4.3.2 Estimation and forecasting

As no data are available to support and trend estimates, the same figures have been used for all reporting years.

4.4 Data for Table T4

Table 4a

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Primary forest	0	0	0	0
Other naturally regenerated forest	515	515	515	515
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
Planted forest	0	0	0	0
...of which of introduced species	0	0	0	0
TOTAL	515	515	515	515

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)	142	142	142	142
Bamboo (Forest and OWL)	n.a.	n.a.	n.a.	n.a.

4.5 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

5 Table T5 – Forest establishment and reforestation

5.1 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).

5.2 National data

5.2.1 Original data

There are no planted forests in Bahamas, and hence no afforestation or reforestation activities have been taking place.

5.3 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	0	0	0	0	0	0
Reforestation	0	0	0	0	0	0
...of which on areas previously planted	0	0	0	0	0	0
Natural expansion of forest	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.

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

5.4 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

6 Table T6 – Growing stock

6.1 FRA 2010 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees more than X cm in diameter at breast height (or above buttress if these are higher). Includes the stem from ground level or stump height up to a top diameter of Y cm, and may also include branches to a minimum diameter of W cm.
Growing stock of commercial species	Growing stock (see def. above) of commercial species.

6.2 National data

6.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Russell, C. 2000. Bahamas Country Report: Forestry Outlook Study for the Caribbean. Project GCP/INT, FAO, Rome	H	Standing volume of pine forests that have been inventoried, Pine forest area	1986	Secondary data source

6.2.2 Original data

Area of pine inventoried (acres)	Standing volume (1000 ft ³)
362 783	165 068

Converting to hectares (using 1 acre = 0.404686 ha) and m³ (using 1ft³ = 0.02832 m³) gives the results in the table below:

Area of pine inventoried (ha)	standing volume (1000 m ³)
146 813	4 674.7

This gives an average volume of 31.84 m³/ha for pine forest.

There are no other data available for the other forest types. The reporting table has therefore been left without any data.

7 Table T7 – Biomass stock

No data are available for this reporting table.

8 Table T8 – Carbon stock

No data are available for this reporting table.

9 Table T9 – Forest fires

No data are available for this reporting table.

10 Table T10 – Other disturbances affecting forest health and vitality

No data are available for this reporting table.

11 Table T11 – Wood removals and value of removals

11.1 FRA 2010 Categories and definitions

Category	Definition
Industrial roundwood removals	The wood removed (volume of roundwood over bark) for production of goods and services other than energy production (woodfuel).
Woodfuel removals	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

11.2 National data

11.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
FAOSTAT (2009)	M	Removals	1988-2007	Secondary data source

11.2.2 Original data

Year	Industrial roundwood	Year	Industrial roundwood	Year	Industrial roundwood
1988	115 000	1998	17 000	2003	17 000
1989	115 000	1999	17 000	2004	17 000
1990	115 000	2000	17 000	2005	17 000
1991	115 000	2001	17 000	2006	17 000
1992	115 000	2002	17 000	2007	17 000
1988-1992	115 000	1998-2002	17 000	2003-2007	17 000

FAOSTAT does not report any data on woodfuel until year 2007. It is therefore reported as “not available” for all years.

11.3 Analysis and processing of national data

A bark factor of 1.15 was multiplied by the 5-year averages in the table above.

11.4 Data for Table T11

FRA 2010 Category	Industrial roundwood removals			Woodfuel removals		
	1990	2000	2005	1990	2000	2005
Total volume (1000 m ³ o.b.)	132	19.5	19.5	n.a.	n.a.	n.a.
... of which from forest	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Unit value (local currency / m ³ o.b.)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total value (1000 local currency)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

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

	1990	2000	2005
Name of local currency			

11.5 Comments to Table T11

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Total volume of industrial roundwood removals		
Total volume of woodfuel removals		
Unit value		
Total value		

Other general comments to the table

12 Table T12 – Non-wood forest products removals and value of removals

No data are available for this reporting table.

13 Table T13 – Employment

No data are available for this reporting table.

14 Table T14 – Policy and legal framework

No data are available for this reporting table.

15 Table T15 – Institutional framework

No data are available for this reporting table.

16 Table T16 – Education and research

No data are available for this reporting table.

17 Table T17 – Public revenue collection and expenditure

No data are available for this reporting table.