

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Trinidad and Tobago

Rome, 2014

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Global Forest Resources Assessment (FRA). This country report is prepared as a contribution to the FAO publication, the Global Forest Resources Assessment 2015 (FRA 2015).

The content and the structure are in accordance with the recommendations and guidelines given by FAO in the document Guide for country reporting for FRA 2015 (<http://www.fao.org/3/a-au190e.pdf>). These reports were submitted to FAO as official government documents.

The content and the views expressed in this report are the responsibility of the entity submitting the report to FAO. FAO may not be held responsible for the use which may be made of the information contained in this report.

TABLE OF CONTENTS

Report preparation and contact persons.....	4
1. What is the area of forest and other wooded land and how has it changed over time?	5
2. What is the area of natural and planted forest and how has it changed over time?	18
3. What are the stocks and growth rates of the forests and how have they changed?	22
4. What is the status of forest production and how has it changed over time?	42
5. How much forest area is managed for protection of soil and water and ecosystem services?	48
6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?	53
7. What is the area of forest affected by woody invasive species?	56
8. How much forest area is damaged each year?	59
9. What is the forest area with reduced canopy cover?	63
10. What forest policy and regulatory framework exists to support implementation of sustainable forest management SFM?	64
11. Is there a national platform that promotes stakeholder participation in forest policy development?	66
12. What is the forest area intended to be in permanent forest land use and how has it changed over time?	67
13. How does your country measure and report progress towards SFM at the national level?	70
14. What is the area of forest under a forest management plan and how is this monitored?	72
15. How are stakeholders involved in the management decision making for publicly owned forests?	74
16. What is the area of forest under an independently verified forest certification scheme?	75
17. How much money do governments collect from and spend on forests?	77
18. Who owns and manages the forests and how has this changed?	79
19. How many people are directly employed in forestry?	85
20. What is the contribution of forestry to Gross Domestic Product (GDP)?	87
21. What is forest area likely to be in the future	88

Report preparation and contact persons

Contact persons

The present report was prepared by the following person(s)

Name (FAMILY NAME, first name)	Institution/address	Email	Tables
ROBERTS Carlton	Forestry Division Long Circular Road Port of Spain	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Introductory Text

Place an introductory text on the content of this report

--

Desk Study?

Check "yes" if this survey is a Desk Study, "no" otherwise	
Desk Study?	no

1. What is the area of forest and other wooded land and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

1.1 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 ; 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".
...of which with tree cover (<i>sub-category</i>)	Land considered as "Other land", that is predominantly agricultural or urban lands use and has patches of tree cover that span 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. It includes bothe forest and non-forest tree species.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.
Forest expansion	Expansion of forest on land that, until then, was not defined as forest.
...of which afforestation (<i>sub-category</i>)	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not defined as forest.
...of which natural expansion of forest (<i>sub- category</i>)	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).
Deforestation	The conversion of forest to other land use or the longterm reduction of the tree canopy cover below the minimum 10 percent threshold.
...of which human induced (<i>sub-category</i>)	Human induced conversion of forest to other land use or the permanent reduction of the tree canopy cover below the minimum 10 percent threshold.
Reforestation	Natural regeneration or re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.
...of which artificial reforestation (<i>sub- category</i>)	Re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.

1.2 National data

1.2.1 Data sources

References to sources of information	Variables	Years	Additional comments
---	-----------	-------	---------------------

1	Forest Resource Inventory and Management Section Inventory of the indigenous Forests of Trinidad and Tobago 1980. Government of Trinidad and Tobago	Forest cover, forest type classification, land use/cover change	1970	Inventory of all public forests using Aerial photography from 1969 and ground truth in 1979
2	Internal Records Drawing Office Forestry Division	Forest cover,	1994	Aerial photography of forest reserves.
3	Internal records Forestry Division	Areas reforested	1988 to 2007	N/A
4	Internal Records; National Reforestation and Watershed Rehabilitation Programme	Areas reforested	2005,2006,2007	N/A
5	Helmer, E. H., T. S. Ruzycki, J. Benner, S. M. Voggeser, B. P. Scobie, C. Park, D. W. Fanning and S. Ramnarine. 2012. Detailed maps of tropical forest types are within reach: forest tree communities for Trinidad and Tobago mapped with multiseason Landsat and multiseason fine-resolution imagery. Forest Ecology and Management 279, 147-166.	Forest Cover	2012	N/A

1.2.2 Classification and definitions

National class	Definition
Evergreen Seasonal forest	This is also termed moist forest and is found at slightly higher (100-300 m) or more sheltered locations. It comprises mainly broad-leaved evergreen trees with some foliage reduction in the dry season. Imagine the semi-evergreen seasonal forest just described but with scattered, emergent trees like sandbox (<i>Hura crepitans</i>), silk cotton (<i>Ceiba pentandra</i>) and cabbage palm (<i>Roystonea oleracea</i>). Some species in this community are also found in rainforest.

Semi evergreen seasonal forests	<p>< 1/3) may shed their leaves in the dry season, e.g. locust (<i>Hymenaea coubaril</i>). The lower layer is evergreen (e.g. balata - <i>Manilkara bidentata</i>) with the macaw palm (<i>Aiphanes minima</i>) in this layer. A shrub layer with members of the coffee and guava families is present but there are few herbs and epiphytes. The canopy has many woody vines or lianas. " /> This is also termed moist forest and is found at slightly higher (100-300 m) or more sheltered locations. This is a two storied forest with an upper closed canopy at 20 m high and a lower tree layer at about half that height. The upper trees are mainly evergreens like Spanish oak (<i>Inga laurina</i>) and beefwood (<i>Pisonia fragrans</i>) but a minority (< 1/3) may shed their leaves in the dry season, e.g. locust (<i>Hymenaea coubaril</i>). The lower layer is evergreen (e.g. balata - <i>Manilkara bidentata</i>) with the macaw palm (<i>Aiphanes minima</i>) in this layer. A shrub layer with members of the coffee and guava families is present but there are few herbs and epiphytes. The canopy has many woody vines or lianas.</p>
Deciduous seasonal forests*	<p>This is also termed dry forest and is found in low-lying areas. It has an upper open canopy at 20 m high and a lower closed shrub/tree layer. The upper trees are mainly deciduous, shedding their leaves in the dry season, e.g. Whitewood (<i>Tabebuia</i> spp.) and birchgum (<i>Bursera simaruba</i>). The lower shrubby layer can be quite dense and includes thorny species like bread 'n cheese (<i>Pithecellobium unguis-cati</i>) and ink berry (<i>Randia aculeata</i>). There are lianas but few if any epiphytes. What remains of this forest is often heavily impacted.</p>
Dry evergreen forests	<p>Is the littoral woodlands. It is situated near the sea exposed to the sea-blast. Structure varies greatly with exposure an amount of gale damage from low recumbent scrub to high forest or pure palm forest. Trees are evergreen and have thickly cutinized mesophyllous leaves and windswept crowns which present only a narrow edge to the wind. Flora is limited.</p>
Seasonal montane forests	<p>Sub-tropical temperatures. Evaporation ability of the air high on clear days due to exposure. Frequent mist. Abundant precipitation but available moisture seasonally low due to excessive soil drainage. A close tree canopy at 60 to 80 ft. somewhat open below. Deciduous trees present. Tremendously luxuriant lianas and epiphytes with abundant moss. Dense herbaceous ground layer, rare palms and tree ferns. Trees are often strongly buttressed.</p>
Montane forests**	<p>Includes lower montane rainforest, montante rain forest, Elfin woodlands.</p>
Secondary Forests	<p>Secondary forest is rainforest that has been disturbed in some way, naturally or unnaturally. Secondary forest can be created in a number of ways, from degraded forest recovering from selective logging, to areas cleared by slash and burn agriculture that have been reclaimed by forest. Generally, secondary forest is characterized (depending on its level of degradation) by a less developed canopy structure, smaller trees, and less diversity. Due to the lack of a full canopy, more light will reach the floor, supporting vigorous ground vegetation.</p>

Swamp forests	Due to low relief the area is shallowly and more or less perpetually inundated with fresh water varying from few inches to 3 ft. deep. A close and even tree canopy about 60 ft with no lower stratification. Trees developed enormous sinous and spreading plank buttresses. 100 per cent evergreen leaves compound, mesophyllous and leathery. Very limited flora.
Bamboo	Clumps and stands of pure bamboo stand
Water	Dams for water production and open water bodies in the swamps
Abandoned forest plantation	Planted forest and abandoned
Mixed conversion forest	Degraded lands planted with a mixture of forest species
Teak and pine plantations	Pure stands of teak plantations and pure stands of pine plantations
Other plantations	Plantation of other local species

1.2.3 Original data

Note to 1.2.2

* Tropical dry forests in [Trinidad and Tobago](#) include both **deciduous** and **semi-evergreen** forests. A recent work by [Howard Nelson](#) suggests that areas which were formerly classified as **evergreen** forest also fit the criteria for dry forests.

In contrast to the moist forest ecoregion on Trinidad and Tobago, dry forest ecoregion is characterized by much more open forest, owing to the lack of a proper canopy. There is a greater proportion of deciduous trees and fewer large trees. Mosses and epiphytes are not common owing to the greatly reduced rainfall. Prominent trees in this area include *Lonchocarpus punctatus*, *Bursera simaruba*, *Machaerium robinifolium* and *Pithecellobium unguisati*. Along the coast several species of cactus and the century plant (*Agave evadens*) are common. In the foothills of the Northern Range, especially the area north and east of Port of Spain, *Cordia alliodora* becomes common in the semi-deciduous forest. A small portion of this ecoregion also is found on the northern tip of Tobago. Here the canopy is at about 15 m and dominant trees include *Bursera simaruba*, *Lonchocarpus domingensis*, *Coccothrinax australis*. Though many of the dominant species are deciduous, the understory is mostly evergreen with *Eugenia* spp. and *Mayepea caribaea* prominent.

** Lower montane forest: subtropical temperatures. No season drought. Available moisture more or less evenly distributed throughout the year and over 70 inches. Freedom from water logging and inundations. Exposure causes variations from true rainforest type. Canopy is lowered to between 70 and 100 ft. but is close at this level. No readily definable lower stratification. Dominants have long thin and clear boles. Lianas epiphytes poorly developed. Palms very rare. Ferns abundant but only small tree ferns. 100 percent evergreen. Leaves simple, mesophyllous, shiny and slightly leathery. Ground vegetation extremely sparse.

Montane rain forest: Canopy at 60 ft. much wind damage. Lowered stratum 20 40 ft and under storey of free ferns and small palms Lianas very abundant. Epiphytes tremendously luxuriant. Only small stemmed palms but abundant and several species of large tree-fern. 100 percent evergreen leaves simple, mesophyllous, leathery with epiphyllous. Dense herbaceous ground vegetation. Tree flora extremely poor.

Elfin woodland: Stunted gnarled thicket 15-25 ft. in height of stilt rooted, fleshy leaved trees with long straggling branches, festooned with moss and lichen. Canopy formed at 6-10 ft. under story of trees-ferns and small palms. Flora extremely limited.

Forest area

National classes	1970 ha_a	1994 ha_b
Forests land use		
Evergreen Seasonal Forest	98180	88718
Semi-evergreen seasonal forest	13928	12586
Deciduous Seasonal Forests	3617	3268
Dry evergreen forests	495	447
Seasonal montane forests	926	837
Montane forests	21619	19535
Swamp forests	16789	15171
Secondary forests	22650	20467
Teak and pine plantations	16308	15000
Other plantations	5306	5306
Bamboo	528	528
Water	1613	1613
Other areas within forests	53729	72212
Total forest land owned by state	255688	255688
Total Private forests	56000	56000
Private lands	201312	201312
Total land area	513000	513000

Forest expansion, reforestation

Table - Annual establishment of plantations on lands belonging to the state and on private lands from 1990 to 2007.

year	state lands (ha)				private lands (ha)
	teak plantations	pine plantations	other plantations	NRWRP ¹	other plantations
1990	54.5	200	50		
1991	52	220	95		
1992	54.5	65	68.8		
1993	5	21	65		
1994	16	32	58		
1995	9	30.4	44.5		
1996	20	77.4	70.2		
1997	12	55	71.4		
1998	28	115	110		692.5
1999	7	108	101.5		713
2000	4	125	138		138
2001	7	67.5	50.2		109
2002	7	39	124.5		209
2003	20	42.5	79.5		317
2004	6	48	111		301
2005	18	35	137	658	476

2006	18	60	124	617	626
2007	18	39.3	115	447	326

¹ NRWRP is the National Reforestation and Watershed Rehabilitation Programme

1.3 Analysis and processing of national data

1.3.1 Adjustment

Water area was calibrated to UN statistics and added to the of other land class.

1.3.2 Estimation and forecasting

Forest area

The assumption of a rate of loss of forest cover for all forest types was made on the rate of loss of forest from forest reserves. This rate was applied to all forested lands in Reserves and other lands owned by the state except for lands under teak, pine, other plantations, water, and bamboo which are assumed as constant. Attempts are being made to collect data on loss of forest cover from all other land agencies but due to the steep deadline this approach is being used. This is shown under estimation and forecasting. All lands lost from forests are placed under other areas within forests.

National classes	1970 ha _a	1994 ha _b	1990 ¹ ha _c	2000 ¹ ha _d	2005 ¹ ha _e	2010
Evergreen Seasonal Forest	98180	88718	90295	86352	84381	82410

Semi-evergreen seasonal forest	13928	12586	12810	12251	11971	11691
Deciduous Seasonal Forests	3617	3268	3326	3181	3108	3035
Dry evergreen forests	495	447	455	435	425	415
Seasonal montane forests	926	837	852	815	796	778
Montane forests	21619	19535	19882	19014	18580	18146
Swamp forests	16789	15171	15441	14767	14429	14092
Secondary forests	22650	20467	20831	19921	19466	19012
Teak and pine plantations	16308	15000	15000	15000	15000	15000
Other plantations	5306	5306	5306	5306	5306	5306
Bamboo	528	528	528	528	528	528
Water	1613	1613	1613	1613	1613	1613
Other areas within forests	53729	72212	69349	76505	80086	83662
Private lands	201312	201312	201312	201312	201312	201312
Total forest land owned by state	255688	255688	255688	255688	255688	255688
Private forests	56000	56000	56000	56000	56000	56000
Total land area	513000	513000	513000	513000	513000	513000

ha_a = original data for year 1970

ha_b = estimated data for year 1994

$ha_c = ha_b + (ha_a - ha_b) / 24 * 4$

$ha_d = (ha_b - (ha_a - ha_b) / 24 * 6)$

$ha_e = (ha_b - (ha_a - ha_b) / 24 * 11)$

$ha_f = (ha_b - (ha_a - ha_b) / 24 * 16)$

Forest expansion, reforestation

Table - Annual establishment of plantations on lands belonging to the state and on private lands from 1990 to 2007 along with 5 year averages.

	state lands				private lands
year	teak	pine	Other	NRWRP	other plantations
	plantations	plantations	plantations		
1990	54.5	200	50		
1991	52	220	95		
1992	54.5	65	68.8		
Average (1990 to 1992)	54	162	71		NIL
1993	5	21	65		
1994	16	32	58		
1995	9	30.4	44.5		
1996	20	77.4	70.2		
1997	12	55	71.4		
Average (1993 to 1997)					NIL

1998	28	115	110		692.5
1999	7	108	101.5		713
2000	4	125	138		138
2001	7	67.5	50.2		109
2002	7	39	124.5		209
Average (1998 to 2002)	11	91	105		372
2003	20	42.5	79.5		317
2004	6	48	111		301
2005	18	35	137	658	476
2006	18	60	124	617	626
2007	18	39.3	115	447	326
Average (2003 to 2007)	16	45	113.3	344	409

1.3.3 Reclassification

Forest area					
	Forest	other wooded land	other land	other land with trees	inland water
Evergreen Seasonal Forest	100%				
Semi- evergreen seasonal forest	100%				
Deciduous Seasonal Forests	100%				

Dry evergreen forests	100%				
Seasonal montane forests	100%				
Montane forests	100%				
Swamp forests	100%				
Secondary forests	100%				
Teak and pine plantations	100%				
Other plantations	100 %				
Bamboo	100%				
Water			100%		
Other areas within forests		100%			
Private lands			81.7	18.3	
Private forests	100%				

Forest expansion, reforestation

Reforestation for 1990=sum of (teak, pine and other plantations)

That Equals $(54+72+162)= 287$

Similarly for 2000 reforestation $= (11+91+105+372)$ equals 579

Similarly for 2005 reforestation $= (16+45+113+344+409)$ that is 909.

The average for lands established by NRWPR is 574 for 3 years so for 5 years the average would be 344.

Plantations of teak and pine are introduced species but the plantations of other species are considered indigenous.

The teak plantations are established in existing degraded forests while the pine plantations and plantations of other species are established on areas which were recently harvested.

1.4 Data

Table 1a













Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	240.7	233.6	230	226.4	234.476
	Other wooded land	69.3	76.5	80.1	83.7	128.714
	Other land	203	202.9	202.9	202.9	149.81
	... of which with tree cover	37	37	37	37	50
	Inland water bodies	0	0	0	0	0
	TOTAL	513.00	513.00	513.00	513.00	513.00

Table 1b

Categories		Annual forest establishment / loss (000 hectares per year)				...of which of introduced species (000 hectares per year)			
		1990	2000	2005	2010	1990	2000	2005	2010
	Forest expansion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which afforestation	0	0	0	N/A	0	0	0	0
	... of which natural expansion of forest	0	0	0	N/A	0	0	0	N/A
	Deforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which human induced	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reforestation	0.287	0.579	0.909	N/A	0.216	0.102	0.06	1
	... of which artificial	0.287	0.579	0.909	N/A	0.216	0.102	0.06	1

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 3	Tier 2
Other wooded land	Tier 3	Tier 2
Forest expansion	Tier 3	Tier 2
Deforestation	N/A	N/A
Reforestation	Tier 3	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> • Forest • Other wooded land • Afforestation • Reforestation • Natural expansion of forest • Deforestation 	Tier 3 : Data sources: Either recent (less than 10 years ago) National Forest Inventory or remote sensing, with ground truthing, or programme for repeated compatible NFIs Tier 2 : Data sources: Full cover mapping / remote sensing or old NFI (more than 10 years ago) Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	The figures are different to FRA 2010 because other plantations area was added to forests, and new information made available.	N/A
Other wooded land	N/A	N/A
Other land	N/A	N/A
Other land with tree cover	Refers to abandoned cocoa , coffee and coconut plantations	N/A
Inland water bodies	The pass reports did not include the country water reservoirs.	N/A
Forest expansion	N/A	N/A
Deforestation	N/A	N/A
Reforestation	N/A	N/A

Other general comments to the table
--

N/A

2. What is the area of natural and planted forest and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

2.1 Categories and definitions

Term	Definition
Naturally regenerated forest	Forest predominantly composed of trees established through natural regeneration.
Naturalized introduced species	Other naturally regenerated forest where the tree species are predominantly non-native and do not need human help to reproduce/maintain populations over time.
Introduced species	A species, subspecies or lower taxon occurring <i>outside</i> 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).
Category	Definition
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.
...of which of introduced species (<i>sub-category</i>)	Other naturally regenerated forest where the trees are predominantly of introduced species.
...of which naturalized (<i>sub-sub category</i>)	Other naturally regenerated forest where the trees are predominantly of naturalized introduced species.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
...of which of introduced species (<i>sub-category</i>)	Planted forest where the planted/seeded trees are predominantly of introduced species.
Mangroves	Area of forest and other wooded land with mangrove vegetation.
...of which planted (<i>sub-category</i>)	Mangroves predominantly composed of trees established through planting.

2.2 National data

2.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Internal Documents Drawing Office Forestry Division	Productive Forest and protective forests	1990	Area determined by planimeter based on a scale of 1:150000 map.
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A

4	N/A	N/A	N/A	N/A
---	-----	-----	-----	-----

2.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

2.2.3 Original data

See table 1.3.2 and the following table:

National data	1990 Area(ha)	FRA classification
Watersheds	8334	Protection of soil and water
Nature reserves	458	Conservation of biological diversity
Wildlife Sanctuaries	19004	Conservation of biological diversity
National Parks	5002	Social Services
Production forests	75,875	Production
Protective forests	42,986	Protection of soil and water
Total reserve and unproclaimed reserve	143,324.7	

2.3 Analysis and processing of national data

2.3.1 Adjustment

--

2.3.2 Estimation and forecasting

2.3.3 Reclassification

Primary forests are considered to be all forests (42,986 ha) above the 152m contour along with the wildlife Sanctuaries (19004 ha) and nature reserves (458 ha) which equals 62,448 ha.

2.4 Data

Table 2a







Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	62.4	62.4	62.4	62.4	62.4
	Other naturally regenerated forest	163.3	155.2	150.6	146	160.831
	... of which of introduced species	0	0	0	0	0
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	15	16	17	18	11.244
	... of which of introduced species	15	16	17	18	11.244
TOTAL		240.70	233.60	230.00	226.40	234.48

Table 2b

Primary forest converted to (000 ha)								
1990-2000			2000-2010			2010-2015		
Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land
N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 2c

Categories	Area (000 hectares)				
	1990	2000	2005	2010	2015
Mangroves (forest and OWL)	5.372	5.372	5.372	5.372	7.492

... of which planted	N/A	N/A	N/A	N/A	N/A
----------------------	-----	-----	-----	-----	-----

Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 3	Tier 2
Other naturally regenerated forest	Tier 3	Tier 2
Planted forest	Tier 3	Tier 2
Mangroves	Tier 3	Tier 2

Tier Criteria

Category	Tier for status	Tier for reported trend
Primary forest/Other naturally regenerated forest/Planted forest	<p>Tier 3 : Data sources: Recent (less than 10 years) National Forest Inventory or remote sensing with ground truthing or data provided by official agencies or programme for repeated compatible NFIs</p> <p>Tier 2 : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years) Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>

2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	Consists of the Wildlife Sanctuaries (19004 ha) and all protective forests within the forest reserves (42,982ha) and the nature reserves.	No reduction in area has been assumed over the periods since these are totally protected
Other naturally regenerating forest	N/A	N/A
Planted forest	N/A	The amount of planted forest is increasing
Mangroves	N/A	N/A

Other general comments to the table

N/A

3. What are the stocks and growth rates of the forests and how have they changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

3.1 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees with a minimum diameter of 10 cm at breast height (or above buttress if these are higher). Includes the stem from ground level up to a top diameter of 0 cm, excluding branches.
Net Annual Increment (NAI)	Average annual volume of gross increment over the given reference period less that of natural losses on all trees, measured to minimum diameters as defined for "Growing stock".
Above-ground biomass	All living biomass above the soil including stem stump branches bark seeds and foliage.
Below-ground biomass	All biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead wood	All non-living woody biomass not contained in the litter either standing lying on the ground or in the soil. Dead wood includes wood lying on the surface dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in above-ground biomass	Carbon in all living biomass above the soil including stem stump branches bark seeds and foliage.
Carbon in below-ground biomass	Carbon in all biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Carbon in dead wood	Carbon in all non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in litter	Carbon in all non-living biomass with a diameter less than the minimum diameter for dead wood (e.g. 10 cm) lying dead in various states of decomposition above the mineral or organic soil.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a soil depth of 30 cm.

3.2 National data

3.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Forest Resource Inventory and Management Section Inventory of the indigenous Forests of Trinidad and Tobago 1980. Government of Trinidad and Tobago	Biomass Volume	1980	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A

4	N/A	N/A	N/A	N/A
---	-----	-----	-----	-----

3.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

3.2.3 Original data

National classes	Vol/ha
Evergreen Seasonal Forest	131.68
Semi-evergreen seasonal forest	98.73
Deciduous Seasonal Forests	73.44
Dry evergreen forests	98.73
Seasonal montane forests	142.41
Montane forests	142.41
Swamp forests	58.32
Secondary forests	82.45
Teak plantations	See below
Pine Plantations	See below
Other plantations	60
Bamboo	20
Water	NIL
Other areas within forests	18.82

Private forests	50
-----------------	----

Table. Average volume per ha for teak plantations from local data

Age	Volume
	Per ha
5	28.21
10	72.28
15	122.44
20	163.8
25	192.75
30	235.3
35	262.38
40	285.93
45	303.23
50	320.5
>50	328.84

Table. Average volume per ha for pine plantations from local data.

Age	Volume per ha
5	54.3
10	108.64
15	197.14

20	296.39
25	388.65
30	480.9

3.3 Analysis and processing of national data

3.3.1 Adjustment

--

3.3.2 Estimation and forecasting

Table. Growing stock by year based on the original data in Table 1.3.2 and multiplying by average volume per ha.

	GROWING STOCK			
ForestType	1990	2000	2005	2010
Evergreen Seasonal Forest	11890046	11370831	11111290	10851749
Semi-evergreen seasonal forest	1264731	1209541	1181897	1154252
Deciduous Seasonal Forests	244261.4	233612.6	228251.5	227223.4
Dry evergreen forests	44922.15	42947.55	41960.25	40972.95
Seasonal montane forests	121333.3	116064.2	113358.4	110795
Montane forests	2831396	2707784	2645978	2584172
Swamp forests	900519.1	861211.4	841499.3	821845.4
Secondary forests	1717516	1642486	1604972	1567539
teak plantations				
pine plantations	3297876	3407249	3438779	3165738

Other plantations	318360	318360	318360	318360
Bamboo	10560	10560	10560	10560
Water	NIL	NIL	NIL	NIL
Other areas within forests (OWL)	1305148	1439862	1488380	1574519
Private lands				
Total forest land owned by state				
Private forests	2800000	2800000	2800000	2800000
total growing stock	26746669	26160509	25825285	25227726

Biomass:

Table . Above Ground Biomass

National Class	BCEF ¹	ABOVE GROUND BIOMASS			
		1990	2000	2005	2010
Evergreen Seasonal Forest	1.3	15457059	14782081	14444677	14107273
Semi-evergreen seasonal forest	1.5	1897097	1814312	1772845	1731379
Deciduous Seasonal Forests	1.7	415244.4	397141.5	388027.6	386279.7
Dry evergreen forests	1.5	67383.23	64421.33	62940.38	61459.43
Seasonal montane forests	1.3	157733.3	150883.4	147365.9	144033.5
Montane forests	1.3	3680814	3520119	3439771	3359423

Swamp forests	2.05	1846064	1765483	1725074	1684783
Secondary forests	1.5	2576274	2463730	2407458	2351309
Teak and pine plantations		3132982	3236887	3266840	3007451
Other plantations	2.05	652638	652638	652638	652638
Bamboo	4	42240	42240	42240	42240
Water					
Other areas within forests (OWL)	4	5220593	5759447	5953519	6298075
Private lands					
Total forest land owned by state					
Private forests	2.05	5740000	5740000	5740000	5740000
total above ground biomass		40886123	40389382	40043395	39566345

¹ BCEF:FAO Guidelines for Country Reporting to FRA 2010, Appendix5, Table 5.4

Table . Below Ground Biomass in tonnes

All forests within Trinidad was assumed to be Tropical moist with the R either being 0.20 or 0.24 based on biomass values.

	Ratio (R)	BELOW GROUND BIOMASS			
		1990	2000	2005	2010
Evergreen Seasonal Forest	0.24	3709694	3547699	3466723	3385746

Semi-evergreen seasonal forest	0.2	379419.4	362862.4	354569	380903.3
Deciduous Seasonal Forests	0.2	83048.89	79428.3	77605.52	77255.94
Dry evergreen forests	0.2	13476.65	12884.27	12588.08	12291.89
Seasonal montane forests	0.24	37856	36212.01	35367.81	34568.03
Montane forests	0.24	883395.4	844828.5	825545.1	806261.6
Swamp forests	0.2	369212.8	353096.7	345014.7	336956.6
Secondary forests	0.2	515254.8	492745.9	481491.5	470261.8
teak plantations					
pine plantations	0.24	751915.7	776852.8	784041.6	721788.3
Other plantations	0.2	130527.6	130527.6	130527.6	130527.6
Bamboo	0.2	8448	8448	8448	8448
Water					
Other areas within forests (OWL)	0.2	1044119	1151889	1190704	1259615
Private lands					
Total forest land owned by state					
Private forests	0.2	1148000	1148000	1148000	1148000
total below ground biomass		9074368	8945475	8860625	8772624

¹ Ratio of above ground to below ground biomass (R): FAO Guidelines for Country Reporting to FRA 2010, Appendix 5, Table 5.3.

Biomass of deadwood

	tonne/ha	DEAD WOOD			
		1990	2000	2005	2010
Evergreen Seasonal Forest	3.81	344024	329001.1	321491.6	313982.1
Semi- evergreen seasonal forest	3.81	48806.1	46676.31	45609.51	44542.71
Deciduous Seasonal Forests	3.81	12672.06	12119.61	11841.48	11788.14
Dry evergreen forests	3.81	1733.55	1657.35	1619.25	1581.15
Seasonal montane forests	3.81	3246.12	3105.15	3032.76	2964.18
Montane forests	3.81	75750.42	72443.34	70789.8	69136.26
Swamp forests	3.81	58830.21	56262.27	54974.49	53690.52
Secondary forests	3.81	79366.11	75899.01	74165.46	72435.72
teak plantations		36195	36195	36195	36195
pine plantations		20955	20955	20955	20955
Other plantations	3.81	20215.86	20215.86	20215.86	20215.86
Bamboo	3.81	2011.68	2011.68	2011.68	2011.68
Water					

Other areas within forests (OWL)	3.81	264219.7	291491.7	301313.9	318752.2
Private lands					
Total forest land owned by state					
Private forests	3.81	213360	213360	213360	213360
total deadwood		1181386	1181393	1177576	1181611

Carbon in above ground biomass

	Carbon fraction	1990	2000	2005	2010
Evergreen Seasonal Forest	0.47	7264818	6947578	6788998	6630419
Semi-evergreen seasonal forest	0.47	891635.6	852726.6	833237.3	813748
Deciduous Seasonal Forests	0.47	195164.9	186656.5	182373	181551.5
Dry evergreen forests	0.47	31670.12	30278.02	29581.98	28885.93
Seasonal montane forests	0.47	74134.66	70915.2	69261.96	67695.73
Montane forests	0.47	1729983	1654456	1616692	1578929
Swamp forests	0.47	867650.2	829777.2	810784.6	791848.1
Secondary forests	0.47	1210849	1157953	1131505	1105115

teak plantations	0.47				
pine plantations	0.47	1472502	1521337	1535415	1413502
Other plantations	0.47	306739.9	306739.9	306739.9	306739.9
Bamboo	0.47	19852.8	19852.8	19852.8	19852.8
Water					
Other areas within forests (OWL)	0.47	2453679	2706940	2798154	2960095
Private lands					
Total forest land owned by state					
Private forests	0.47	2697800	2697800	2697800	2697800
total carbon in above-ground biomass		19216478	18983010	18820396	18596182

Below ground biomass

	carbon fraction	1990	2000	2005	1010
Evergreen Seasonal Forest	0.47	1743556	1667419	1629360	1591300
Semi-evergreen seasonal forest	0.47	178327.1	170545.3	166647.5	179024.6
Deciduous Seasonal Forests	0.47	39032.98	37331.3	36474.59	36310.29

Dry evergreen forests	0.47	6334.023	6055.605	5916.395	5777.186
Seasonal montane forests	0.47	17792.32	17019.65	16622.87	16246.98
Montane forests	0.47	415195.9	397069.4	388006.2	378943
Swamp forests	0.47	173530	165955.4	162156.9	158369.6
Secondary forests	0.47	242169.7	231590.6	226301	221023.1
teak plantations					
pine plantations	0.47	353400.4	365120.8	368499.6	339240.5
Other plantations	0.47	61347.97	61347.97	61347.97	61347.97
Bamboo	0.47	3970.56	3970.56	3970.56	3970.56
Water	0.47				
Other areas within forests (OWL)	0.47	490735.7	541388	559630.8	592019.1
Private lands	0.47				
Total forest land owned by state	0.47				
Private forests	0.47	539560	539560	539560	539560
total carbon in below-ground biomass	0.47	4264953	4204373	4164494	4123133

Carbon in deadwood

	Carbon fraction	1990	2000	2005	2010
--	-----------------	------	------	------	------

Evergreen Seasonal Forest	0.47	161691.3	154630.5	151101.1	147571.6
Semi-evergreen seasonal forest	0.47	22938.87	21937.87	21436.47	20935.07
Deciduous Seasonal Forests	0.47	5955.868	5696.217	5565.496	5540.426
Dry evergreen forests	0.47	814.7685	778.9545	761.0475	743.1405
Seasonal montane forests	0.47	1525.676	1459.421	1425.397	1393.165
Montane forests	0.47	35602.7	34048.37	33271.21	32494.04
Swamp forests	0.47	27650.2	26443.27	25838.01	25234.54
Secondary forests	0.47	37302.07	35672.53	34857.77	34044.79
teak plantations	0.47	17011.65	17011.65	17011.65	17011.65
pine plantations	0.47	9848.85	9848.85	9848.85	9848.85
Other plantations	0.47	9501.454	9501.454	9501.454	9501.454
Bamboo	0.47	945.4896	945.4896	945.4896	945.4896
Water					
Other areas within forests (OWL)	0.47	124183.3	137001.1	141617.5	149813.5
Private lands					
Total forest land owned by state					
Private forests	0.47	100279.2	100279.2	100279.2	100279.2
total carbon in deadwood	0.47	555251.3	555254.9	553460.6	555357

Carbon in litter

	Default values	1990	2000	2005	2010
Evergreen Seasonal Forest	2.1	189619.5	181339.2	177200.1	173061
Semi- evergreen seasonal forest	2.1	26901	25727.1	25139.1	24551.1
Deciduous Seasonal Forests	2.1	6984.6	6680.1	6526.8	6497.4
Dry evergreen forests	2.1	955.5	913.5	892.5	871.5
Seasonal montane forests	2.1	1789.2	1711.5	1671.6	1633.8
Montane forests	2.1	41752.2	39929.4	39018	38106.6
Swamp forests	2.1	32426.1	31010.7	30300.9	29593.2
Secondary forests	2.1	43745.1	41834.1	40878.6	39925.2
teak plantations	2.1	19950	19950	19950	19950
pine plantations	5.2	28600	28600	28600	28600
Other plantations	2.1	11142.6	11142.6	11142.6	11142.6
Bamboo	2.1	1108.8	1108.8	1108.8	1108.8
Water					
Other areas within forests (OWL)	2.1	145632.9	160664.7	166078.5	175690.2
Private lands					

Total forest land owned by state					
Private forests	2.1	117600	117600	117600	117600
total carbon in litter		668207.5	668211.7	666107.5	668331.4

Soil Carbon

	Default value	1990	2000	2005	2010
Evergreen Seasonal Forest	47	4243865	4058544	3965907	3873270
Semi-evergreen seasonal forest	47	602070	575797	562637	549477
Deciduous Seasonal Forests	47	156322	149507	146076	145418
Dry evergreen forests	47	21385	20445	19975	19505
Seasonal montane forests	63	53676	51345	50148	49014
Montane forests	63	1252566	1197882	1170540	1143198
Swamp forests	86	1327926	1269962	1240894	1211912
Secondary forests	47	979057	936287	914902	893564
teak plantations	47	446500	446500	446500	446500
pine plantations	47	258500	258500	258500	258500
Other plantations	47	249382	249382	249382	249382
Bamboo	47	24816	24816	24816	24816

Water		0	0	0	0
Other areas within forests (OWL)	47	3259403	3595829	3716995	3932114
Private lands		0	0	0	0
Total forest land owned by state		0	0	0	0
Private forests	47	2632000	2632000	2632000	2632000
total soil carbon		15507468	15466796	15399272	15428670

Source: FAO Guidelines for Country Reporting to FRA 2010, Appendix 5, Table 5.10.

3.3.3 Reclassification

3.4 Data

Table 3a




Category		Growing stock volume (million m ³ over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	25.44	24.72	24.34	23.66	N/A	1.31	1.44	1.49	1.57	N/A
	... of which coniferous	1.27	1.24	1.28	1.09	N/A	0	0	0	0	N/A
	... of which broadleaved	24.17	23.48	23.06	22.57	N/A	1.31	1.44	1.49	1.57	N/A

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	Mora excelsor	Mora	3.469	3.317	3.241	N/A


2 nd	Tectona grandis	Teak	2.028	2.167	2.16	N/A
3 rd	Pinus caribaea	Caribbean Pine	1.27	1.24	1.279	N/A
4 th	Spondias mombin	Hogplum	1.118	1.069	1.045	N/A
5 th	Pentaclethra macroloba	Fineleaf	0.958	0.916	0.895	N/A
6 th	Sterculia caribaea	Mahoe	0.923	0.993	0.863	N/A
7 th	Carapa guianensis	Crappo	0.853	0.916	0.798	N/A
8 th	Eschweilera subglandulosa	Guatecare	0.836	0.799	0.781	N/A
9 th	Pachira insignis Wild	Chataigne	0.789	0.755	0.737	N/A
10 th	Bucida buceras	Bois gris	0.508	0.486	0.475	N/A
Remaining			12.69	12.06	12.07	0.486
TOTAL			25.44	24.72	24.34	.49

THE PRE-FILLED VALUES FOR GROWING STOCK REFER TO THE FOLLOWING THRESHOLD VALUES (SEE TABLE BELOW)

Item	Value	Complementary information
Minimum diameter (cm) at breast height of trees included in growing stock (X)	20	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	Crown point or 10 cm . for teak and pine 7.3 cm	N/A
Minimum diameter (cm) of branches included in growing stock (W)	Natural forests no branches	Teak and pine plantation branches included
Volume refers to above ground (AG) or above stump (AS)	AG	N/A

PLEASE NOTE THAT THE DEFINITION OF GROWING STOCK HAS CHANGED AND SHOULD BE REPORTED AS GROWING STOCK DBH 10 CM INCLUDING THE STEM FROM GROUND LEVEL UP TO A DIAMETER OF 0 CM, EXCLUDING BRANCHES.

Table 3c

Category		Net annual increment (m ³ per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	N/A	N/A	N/A	N/A	N/A



	... of which coniferous	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A

Table 3d











Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Above ground biomass	35.67	34.63	34.26	33.27	N/A	5.22	5.76	5.95	6.3	N/A
	Below ground biomass	8.03	7.79	7.67	7.51	N/A	1.04	1.15	1.19	1.26	N/A
	Dead wood	0.92	0.89	0.88	0.86	N/A	0.26	0.29	0.3	0.32	N/A
TOTAL		44.62	43.31	42.81	41.64	.00	6.52	7.20	7.44	7.88	.00

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Carbon in above ground biomass	16.77	16.09	16.02	15.64	N/A	2.45	2.71	2.8	2.96	N/A
	Carbon in below ground biomass	3.77	3.66	3.6	3.53	N/A	0.49	0.54	0.56	0.59	N/A
	<i>Subtotal Living biomass</i>	20.54	19.75	19.62	19.17	N/A	2.94	3.25	3.36	3.55	N/A
	Carbon in dead wood	0.43	0.41	0.41	0.41	N/A	0.12	0.14	0.14	0.15	N/A
	Carbon in litter	0.53	0.51	0.5	0.49	N/A	0.14	0.16	0.17	0.18	N/A
	<i>Subtotal Dead wood and litter</i>	0.96	0.92	0.9	0.9	N/A	0.26	0.3	0.31	0.33	N/A

	Soil carbon	12.25	11.87	11.68	11.5	N/A	3.26	3.6	3.72	3.93	N/A
TOTAL		33.75	32.54	32.21	31.57	.00	6.46	7.15	7.39	7.81	.00

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 2	Tier 2
Net annual increment	N/A	N/A
Above ground biomass	Tier 1	Tier 1
Below ground biomass	N/A	N/A
Dead wood	N/A	N/A
Carbon in above-ground biomass	N/A	N/A
Carbon in below ground biomass	N/A	N/A
Carbon in dead wood and litter	N/A	N/A
Soil carbon	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
Total growing stock	Tier 3: Data sources Recent 10 years National Forest Inventory or remote sensing with ground truthing or programme for repeated compatible NFI 10 years Domestic volume functions Tier 2: Data sources/registers and statistics modelling or old NFI 10 years or partial field inventory Tier 1: Other data sources	Tier 3: Estimate based on repeated compatible tiers 3 (tier for status) Domestic growth functions Tier 2: Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 tier for status Tier 1: Other
Net annual increment	Tier 3: Scientifically tested national volume and growth functions Tier 2: Selection of volume and growth functions as relevant as possible Tier 1: Other	Tier 3: Confirmation/adjustment of functions used through scientific work Tier 2: Review work done to seek alternative functions Tier: 1 Other
Biomass	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied or other domestic or otherwise nationally relevant biomass studies Tier 2: Application of country specific national or sub-national biomass conversion factors from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

<ul style="list-style-type: none"> • Carbon in above ground biomass • Carbon in below ground biomass • Carbon in dead wood and litter • Soil carbon 	<p>Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied Tier 2: Application of country specific national or sub-national biomass conversion factors form from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>
---	--	--

3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	Data on 2005 was based on individual species. For 2010 gross forest areas by mean volumes per ha were used. This may cause the increase in growing stock.	N/A
Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	The category "remainder species" was calibrated in order to have the same results for total growing stock	N/A
Net annual increment	N/A	N/A
Above-ground biomass	Growing stock data was converted by the various BCEF from Table 5.4 in the Guidelines..	N/A
Below-ground biomass	N/A	N/A
Dead wood	Mortality data from natural forests based on an analysis of over 100 sample plots showed an average of 5.22 cubic metres per ha. This value was divided by 1.37 (FAO Guidelines for Country Reporting to FRA 2010Appendix 4, Table of weight and volume) to convert into biomass mortality of 3.81 metric tonne per ha. This value was applied to all forest types.	N/A
Carbon in above-ground biomass	N/A	N/A
Carbon in below-ground biomass	N/A	N/A
Carbon in dead wood	N/A	N/A
Carbon in litter	N/A	N/A

Soil carbon	For soil carbon values most of the forests were assumed to be on LAC soils with 47 tonnes of carbon per ha. For the montane and seasonal montane forests 63 tonnes of carbon per ha was used; and for the swamp forests the global figure for wetland soils of 86 tonnes per ha was used.	N/A
-------------	---	-----

Other general comments to the table		
N/A		

4. What is the status of forest production and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

4.1 Categories and definitions

Term	Definition
Primary designated function	The primary function or management objective assigned to a management unit either by legal prescription documented decision of the landowner/manager or evidence provided by documented studies of forest management practices and customary use.
Non wood forest product (NWFP)	Goods derived from forests that are tangible and physical objects of biological origin other than wood.
Commercial value of NWFP	For the purpose of this table, value is defined as the commercial market value at the forest gate.
Category	Definition
Production forest	Forest area designated primarily for production of wood, fibre, bio-energy and/or non-wood forest products.
Multiple use forest	Forest area designated for more than one purpose and where none of these alone is considered as the predominant designated function.
Total wood removals	The total of industrial round wood removals and woodfuel removals.
...of which woodfuel	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

4.2 National data

4.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Internal Documents Drawing Office Forestry Division	Productive Forest and protective forests	1990	Area determined by planimeter based on a scale of 1:150000 map.
2	Internal reports – Forestry division	Bush meat and other plant products	2005	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

4.2.2 Classification and definitions

National class	Definition
Same as FRA	N/A

N/A	N/A
N/A	N/A
N/A	N/A

4.2.3 Original data

National data	1990 Area(ha)	FRA classification
Watersheds	8334	Protection of soil and water
Nature reserves	458	Conservation of biological diversity
Wildlife Sanctuaries	19004	Conservation of biological diversity
National Parks	5002	Social Services
Production forests	75,875	Production
Protective forests	42,986	Protection of soil and water
Total reserve and unproclaimed reserve	143,324.7	

4.3 Analysis and processing of national data

4.3.1 Adjustment

--

4.3.2 Estimation and forecasting

Using the above table, percentages were calculated and applied to the different forest areas for the reporting year 1990, 2000 and the categories of production, protection and social service of the year 2005. In 2005 a further 3000 hectares was managed as national parks. The area managed for production, protection of soil and water, conservation of biological diversity are considered fixed for the period 1990 to 2010. The rest of the area is considered to be multiple purpose.

4.3.3 Reclassification

National classes	FRA Classes					
	Production	Multiple purpose	Protection	Conservation of biodiversity	Social service	Protection of Soil and Water
Watershed						100%
Nature reserve				100%		
Wildlife				100%		
National parks					100%	
Production of forests	100%					
Protective forests						100%
All other forested areas		100%				

4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	75.9	75.9	75.9	75.9	N/A
	Multiple use forest	89	81.9	75.3	71.9	N/A

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	N/A	N/A	N/A	N/A

2 nd	N/A	N/A	N/A	N/A
3 rd	N/A	N/A	N/A	N/A
4 th	N/A	N/A	N/A	N/A
5 th	N/A	N/A	N/A	N/A
6 th	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			.00	

2010	
Name of local currency	N/A

Category
Plant products / raw material
1 Food
2 Fodder
3 Raw material for medicine and aromatic products
4 Raw material for colorants and dyes
5 Raw material for utensils handicrafts construction
6 Ornamental plants
7 Exudates
8 Other plant products
Animal products / raw material
9 Living animals
10 Hides skins and trophies
11 Wild honey and beeswax

12 Wild meat
13 Raw material for medicine
14 Raw material for colorants
15 Other edible animal products
16 Other non-edible animal products

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m ³ u.b.)	
	Total wood removals	...of which woodfuel
1990	89.95	39.75
1991	85.48	39.48
1992	95.64	39.44
1993	91.27	39.67
1994	121.87	39.27
1995	156.31	38.91
1996	97.67	37.27
1997	111.32	37.92
1998	72.22	37.22
1999	70.81	36.81
2000	108.52	36.52
2001	102.08	36.08
2002	92.66	35.66
2003	95.25	35.25
2004	85.86	34.86
2005	99.47	34.47
2006	99.12	34.12
2007	98.8	33.8
2008	80.4	33.4

2009	80.14	33.14
2010	79.82	32.82
2011	79.52	32.52

Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 2	Tier 2
Multiple use forest	Tier 2	Tier 2

Tier Criteria

Category	Tier for status	Tier for reported trend
Production forest Multiple use forest	Tier 3: Updated including field verifications national forest maps including functions Tier 2: Forest maps older than 6 years including forest functions Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	N/A	N/A
Multiple use forest	N/A	N/A
Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

Other general comments to the table

Although 100,000 hectares are proposed in the system of national parks and protected areas only 8000 hectares of forested lands are managed as national parks

5. How much forest area is managed for protection of soil and water and ecosystem services?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

5.1 Categories and definitions

Category	Definition
Protection of soil and water	Forest area designated or managed for protection of soil and water
...of which production of clean water (<i>sub-category</i>)	Forest area primarily designated or managed for water production, where most human uses are excluded or heavily modified to protect water quality.
...of which coastal stabilization (<i>sub-category</i>)	Forest area primarily designated or managed for coastal stabilization.
...of which desertification control (<i>sub-category</i>)	Forest area primarily designated or managed for desertification control.
...of which avalanche control (<i>sub-category</i>)	Forest area primarily designated or managed to prevent the development or impact of avalanches on human life assets or infrastructure.
...of which erosion, flood protection or reducing flood risk (<i>sub-category</i>)	Forest area primarily designated or managed for protecting communities or assets from the impacts of erosion riparian floods and landslides or for providing flood plain services.
...of which other (<i>sub-category</i>)	Forest area primarily designated or managed for other protective functions.
Ecosystem services, cultural or spiritual values	Forest area primarily designated or managed for selected ecosystem services or cultural or spiritual values.
...of which public recreation (<i>sub-category</i>)	Forest area designated or managed for public recreation.
...of which carbon storage or sequestration (<i>sub-category</i>)	Forest area designated or managed for carbon storage or sequestration.
...of which spiritual or cultural services (<i>sub-category</i>)	Forest area designated or managed for spiritual or cultural services.
...of which other (<i>sub-category</i>)	Forest area designated or managed for other ecosystem services.

5.2 National data

5.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A

3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

5.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

5.2.3 Original data

--

5.3 Analysis and processing of national data

5.3.1 Adjustment

--

5.3.2 Estimation and forecasting




--





5.3.3 Reclassification

--

5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
	Protection of soil and water	N/A	N/A	N/A	N/A	N/A
	... of which production of clean water	N/A	N/A	N/A	N/A	N/A
	... of which coastal stabilization	N/A	N/A	N/A	N/A	N/A

	... of which desertification control	N/A	N/A	N/A	N/A	N/A
	... of which avalanche control	N/A	N/A	N/A	N/A	N/A
	... of which erosion, flood protection or reducing flood risk	N/A	N/A	N/A	N/A	N/A
	... of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	N/A	N/A	N/A	N/A	N/A
...of which public recreation	N/A	N/A	N/A	N/A	N/A
...of which carbon storage or sequestration	N/A	N/A	N/A	N/A	N/A
...of which spiritual or cultural services	N/A	N/A	N/A	N/A	N/A
...of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for reported trend	Tier for status
Protection of soil and water	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
----------	-----------------	-------------------------

Protection of soil and water	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations or legislation relating to soil and water protection. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Cultural or spiritual values • Public recreation • Spiritual or cultural services • Other 	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

5.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	N/A	N/A
Production of clean water	N/A	N/A
Coastal stabilization	N/A	N/A
Desertification control	N/A	N/A
Avalanche control	N/A	N/A
Erosion, flood protection or reducing flood risk	N/A	N/A
Other protective functions	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A
Public recreation	N/A	N/A
Carbon storage or sequestration	N/A	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	N/A	N/A

Other general comments to the table

N/A

6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

6.1 Categories and definitions

Category	Definition
Conservation of biodiversity	Forest area designated primarily for conservation of biological diversity. Includes but is not limited to areas designated for biodiversity conservation within the protected areas.
Forest area within protected areas	Forest area within formally established protected areas independently of the purpose for which the protected areas were established.

6.2 National data

6.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Internal Documents Drawing Office Forestry Division	Productive Forest and protective forests	1990	Area determined by planimeter based on a scale of 1:150000 map.
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

6.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

6.2.3 Original data

See 4.2.3

6.3 Analysis and processing of national data

6.3.1 Adjustment

6.3.2 Estimation and forecasting



See 4.3.2.

6.3.3 Reclassification

See 4.3.3.

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	19.5	19.5	19.5	19.5	N/A
	Forest area within protected areas	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 2	Tier 2
Forest area within protected areas	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> Conservation of biodiversity Forests within protected areas 	Tier 3: Data obtained from national or state agencies responsible for conservation and protected area or legislation relating to area protection. Tier 2: Studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates Tier 1 Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
----------	--	--------------------------------

Conservation of biodiversity	N/A	N/A
Forest area within protected areas	N/A	N/A

Other general comments to the table

Although 100,000 hectares are proposed in the system of national parks and protected areas only 8000 hectares of forested lands are managed as national parks

7. What is the area of forest affected by woody invasive species?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

7.1 Categories and definitions

Category	Definition
Invasive species	Species that are non-native to a particular ecosystem and whose introduction and spread cause, or are likely to cause, socio-cultural, economic or environmental harm or harm to human health.

7.2 National data

7.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Annual reports of Forestry Division	Disturbance and invasive species	1990, 2000,2005	No disturbance by insects, diseases, biotic and abiotic agents reported.
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

7.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

7.2.3 Original data

--

7.3 Analysis and processing of national data

7.3.1 Adjustment

--

7.3.2 Estimation and forecasting

--

7.3.3 Reclassification

--

7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
N/A	N/A	N/A
Total	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	N/A	N/A

Tier Criteria

Category	Tier for status	Tier for reported trend
----------	-----------------	-------------------------

Invasive species	Tier 3: Systematic assessment in forest inventory or other survey (e.g. by conservation department) within the last 5 years) Tier 2: Systematic assessment in forest inventory or other survey (e.g. by conservation department conducted more than 5 years ago) Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
------------------	--	---

7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	Acacia mangium (tree species) was introduced in Trinidad in 1984. Possesses invasive tendencies especially in areas where fires are frequent in the dry season. It has been found in the natural forests but there is no widespread occurrence. May be affecting only a few hectares possibly less than 5 ha.	N/A

Other general comments to the table
N/A

8. How much forest area is damaged each year?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

8.1 Categories and definitions

Category	Definition
Number of fires	Number of fires per year
Burned area	Area burned per year
Outbreaks of insects	A detectable reduction in forest health caused by a sudden increase in numbers of harmful insects.
Outbreaks of diseases	A detectable reduction in forest health caused by a sudden increase in numbers of harmful pathogens, such as bacteria, fungi, phytoplasma or virus.
Severe weather events	Damage caused severe weather events, such as snow, storm, drought, etc.

8.2 National data

8.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

8.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

8.2.3 Original data

--

8.3 Analysis and processing of national data

8.3.1 Adjustment

8.3.2 Estimation and forecasting

8.3.3 Reclassification

8.4 Data

Table 8a

Category		000 ha, number of fires									
		2003		2004		2005		2006		2007	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	0.58	N/A	0.06	N/A	N/A	N/A	0.48	N/A	0.56	N/A
	... of which forest area burned	0.42	N/A	0.06	N/A	N/A	N/A	0.44	N/A	0.4	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	N/A	N/A	0.02	N/A	1.21	N/A	N/A	N/A	N/A	N/A
	... of which forest area burned	N/A	N/A	N/A	N/A	1.15	N/A	N/A	N/A	N/A	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Outbreak category

1 Insects

2 Diseases

3 Severe weather events

Tiers

Category	Tier for status	Tier for trend
Area affected by fire	Tier 2	Tier 2
<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
Burned area	Tier 3 : National fire monitoring routines Tier 2 : Remote sensing surveys Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	Tier 3 : Systematic survey (e.g. via inventory or aerial damage assessment) Tier 2 : Management records Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
----------	--	--------------------------------

Burned area	N/A	N/A
Insects	N/A	N/A
Diseases	N/A	N/A
Severe weather events	N/A	N/A

Other general comments to the table		
N/A		

9. What is the forest area with reduced canopy cover?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

Category	Definition
Reduction in canopy cover	Forest that has undergone a reduction of canopy cover of more than 20% between the years 2000 and 2010 within the forest canopy cover range of 30-80% as detected by the MODIS VCF sensor.

Table 9

Category	Area of forest with reduced canopy cover (000 ha)
Reduction in canopy cover	78.4

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

Tier criteria

Category	Tier for reported trend
Reduction in canopy cover	Tier 3 : Remote sensing with ground truthing and/or Landsat imagery Tier 2 : Remote sensing using Modis (using pre-filled data provided by FAO) Tier 1 : Expert opinion

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	N/A

Other general comments

--

10. What forest policy and regulatory framework exists to support implementation of sustainable forest management SFM?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

10.1 Categories and definitions

Category	Definition
Policies supporting sustainable forest management	Policies or strategies that explicitly encourage sustainable forest management.
Legislation and regulations supporting sustainable forest management	Legislation and regulations that govern and guide sustainable forest management, operations and use.

10.2 National data

10.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

10.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

10.2.3 Original data

--

10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management	yes			
... of which, in <u>publicly</u> owned forests	yes			
... of which, in <u>privately</u> owned forests				
Legislation and regulations supporting sustainable forest management	yes			
... of which, in <u>publicly</u> owned forests				
... of which, in <u>privately</u> owned forests				

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	N/A
Legislation and regulations supporting sustainable forest management	New legislation being drafted at present

Other general comments

--

11. Is there a national platform that promotes stakeholder participation in forest policy development?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

11.1 Categories and definitions

Category	Definition
National stakeholder platform	A recognized procedure that a broad range of stakeholders can use to provide opinions, suggestions, analysis, recommendations and other input into the development of national forest policy.

11.2 National data

11.2.1 Data sources

	References to sources of information	Years	Additional comments
1	National Forest Policy	2011	N/A
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	N/A	N/A	N/A

Table 11

Is there a national platform that promotes or allows for stakeholder participation in forest policy development?	yes
--	-----

11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	National consultations

Other general comments

--

12. What is the forest area intended to be in permanent forest land use and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

12.1 Categories and definitions

Category	Definition
Forest area intended to be in permanent forest land use	Forest area that is designated or expected to be retained as forest and is highly unlikely to be converted to other land use.
...of which permanent forest estate (<i>sub-category</i>)	Forest area that is designated by law or regulation to be retained as forest and may not be converted to other land use.

12.2 National data

12.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Internal Documents Drawing Office Forestry Division	Productive Forest and protective forests	1990	Area determined by planimeter based on a scale of 1:150000 map.
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

12.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

12.2.3 Original data

The area of the permanent forest estate is fixed at 143,000 ha. Due to agricultural encroachment and squatting for housing and illegal quarrying the forest area has been reduced but the area is still legally under the control of the state.

12.3 Analysis and processing of national data



12.3.1 Adjustment

12.3.2 Estimation and forecasting

12.3.3 Reclassification

12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	
	... of which permanent forest estate	143

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 2
Permanent forest estate	Tier 2

Tier Criteria

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other
Permanent forest estate	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other

12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	N/A
Permanent forest estate	The area of the permanent forest estate is fixed at 143,000 ha. Due to agricultural encroachment and squatting for housing and illegal quarrying the forest area has been reduced but the area is still legally under the control of the state.

Other general comments

--

13. How does your country measure and report progress towards SFM at the national level?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

13.1 Categories and definitions

Category	Definition
Forest area monitored under a national forest monitoring framework	Forest area monitored by a national monitoring framework or systems that provide measurement based periodic monitoring of forest extent and quality.
Forest reporting at national scale	National reporting of forest extent and characteristics that includes some measure of progress toward sustainable forest management.

13.2 National data

13.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

13.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

13.3 Data

Table 13a

Category	% of total forest area	Most recent year	Check all boxes that apply					
			Continuous	Periodic	Permanent ground plots	Temporary ground plots	Aerial/remote sensing sample based	Aerial/remote sensing full coverage
Forest inventory	N/A	N/A						
Other field assessments	N/A	N/A						yes
Updates to other sources	N/A	N/A						
Expert estimate	73	2011						

Table 13b

Type of forest reporting used at national scale	Check boxes that apply
1 Criteria and Indicators reporting	
2 Periodic national state of the forest report	
3 Other (please document)	yes
4 None	

Other type of forest reporting

Point 3; other, refers to the Annual Report of the Forestry Division

13.4 Comments

Category	Comments
N/A	N/A
N/A	N/A
N/A	N/A

Other general comments

Forest cover mapping exercise conducted by USDA

14. What is the area of forest under a forest management plan and how is this monitored?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

14.1 Categories and definitions

Category	Definition
Forest area with management plan	Forest area that has a long-term documented management plan, aiming at defined management goals which is periodically revised
...of which for production (<i>sub-category</i>)	Forest management plan mainly focused on production
...of which for conservation (<i>sub-category</i>)	Forest management plan mainly focused on conservation
Monitoring of forest management plans	Government monitoring of forest management plan implementation conducted through field visits or audits of forest management plan performance

14.2 National data

14.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Internal Documents Drawing Office Forestry Division	Productive Forest and protective forests	1990	Area determined by planimeter based on a scale of 1:150000 map.
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	143
... of which for production	N/A
... of which for conservation	N/A

Table 14b

Indicate which (if any) of the following are required in forest management plans in your country	
1 Soil and water management	

2 High conservation value forest delineation	
3 Social considerations community involvement	

Table 14c

Percent of area under forest management plan that is monitored annually	N/A
--	------------

Tiers

Category	Tier for status
Forest area with management plan	Tier 2
Percent of area under forest management plan that is monitored annually	N/A

Tier criteria

Category	Tier for status
Forest area with management plan	Tier 3 : Reports that describe national records 5 years old or less that contain long-term forest monitoring plans Tier 2 : Industry or other records indicating the presence of a long-term forest management plan Tier 1 : Other
Percent of area under forest management plan that is monitored annually	Tier 3 : Government documentation of monitoring extent Tier 2 : Reports from forest managers or other documental sources Tier 1 : Other

14.4 Comments

Category	Comments
Forest area with management plan	N/A
N/A	N/A
N/A	N/A

Other general comments

--

15. How are stakeholders involved in the management decision making for publicly owned forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

15.1 Categories and definitions

Category	Definition
Stakeholder involvement	Stakeholder involvement is defined as significant inputs into at least one aspect of forest management at the operational scale

Table 15

Please indicate the type of stakeholder involvement in forest management decision making required in your country	
1. Planning phase	yes
2. Operations phase	
3. Review of operations	

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 3

Tier criteria

Category	Tier for status
Type of stakeholder inputs	Tier 3 : Government (national or sub-national) documentation of stakeholder inputs Tier 2 : Government (national or subnational) requirement but stakeholder inputs not documented Tier 1 : Other

15.2 Comments

Category	Comments
N/A	N/A
N/A	N/A
N/A	N/A

Other general comments

--

16. What is the area of forest under an independently verified forest certification scheme?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

16.1 Categories and definitions

Category	Definition
FSC certification	Forest area certified under the Forest Stewardship Council certification scheme
PEFC certification	Forest area certified under the Programme for the Endorsement of Forest Certification scheme
Other international forest management certification	Forest area certified under an international forest management certification scheme with published standards and is independently verified by a third-party, excluding FSC and PEFC certification.
Certified forest area using a domestic forest management certification scheme	Area certified under a forest management certification scheme with published standards that are nationally recognized and independently verified by a thirdparty

16.2 Data

Table 16a













International forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	FSC	0	0	0	0	0	0	0
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	0	0	0	0	0	0	
	PEFC	0	0	0	0	0	0	
	Other	0	0	0	0	0	0	

Table 16b

Domestic forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
		0	0	0	0	0	0	
		0	0	0	0	0	0	
		0	0	0	0	0	0	

Tier criteria

Category	Tier for status
International forest management certification	Tier 3: International forest management scheme records maintained by the certifying organization for the reporting year Tier 2: International forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other
Domestic forest management certification	Tier 3: National registry reports for domestic forest management certification maintained by the certifying organization for the reporting year Tier 2: Domestic forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other

Tiers

Category	Tier for status
International forest management certification	N/A
Domestic forest management certification	N/A

16.3 Comments

Category	Comments related to data definitions etc
Certified forest area using an international forest management certification scheme	N/A
Domestic forest management certification	N/A

Other general comments

--

17. How much money do governments collect from and spend on forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

17.1 Categories and definitions

Category	Definition
Forest revenue	All government revenue collected from the domestic production and trade of forest products and services. For this purpose revenue include: <ul style="list-style-type: none"> • Goods : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products. • Services : including concession fees and royalties, stumpage payments, public timber sales revenue taxes and charges based on forest area or yield, taxes on domestic trade and export of forest products, special levies on forestry activities and payments into forest related funds, other miscellaneous inspection, licence and administrative fees levied by forest administrations, permit and licence fees for recreation and other forest related activities.
Public expenditure on forestry	All government expenditure on forest related activities.

17.2 National data

17.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Internal Records Forestry Division	Revenue, Expenditure, subsidy	1998 to 2007	Data from National Reforestation and Watershed Rehabilitation Programme are for 3 years only since project commenced in 2005.
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	7411	7419	N/A
Public expenditure on forestry	37685	88090	N/A
	2000	2005	2010

Name of Local Currency	Dollar (TT\$)	N/A	N/A
------------------------	---------------	-----	-----

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Revenue collected from sale of forest produce,
Public expenditure on forestry	Total sum expended in the recurrent and development programmes of the Forestry Division and the National Reforestation and watershed Rehabilitation Programme (NRWRP) Subsidies payable to private persons to establish forests on their private property; Funds payable to various groups to protect turtles during the nesting season
Other general comments	N/A

Other general comments

--

18. Who owns and manages the forests and how has this changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

18.1 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.
...of which owned by the state at national scale (<i>sub-category</i>)	Forest owned by the State at the national scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at the sub-national government scale (<i>sub-category</i>)	Forest owned by the State at the sub-national government scale 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 cooperatives corporations and other business entities, private, religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.
...of which individuals (<i>sub-category</i>)	Forest owned by individuals and families.
...of which private business entities and institutions (<i>sub-category</i>)	Forest owned by private corporations cooperatives companies and other business entities as well as private nonprofit organizations such as NGOs nature conservation associations, and private religious and educational institutions etc.
...of which local tribal and indigenous communities (<i>sub-category</i>)	Forest owned by a group of individuals belonging to the same community residing within or in the vicinity of a forest area or forest owned by communities of indigenous or tribal people The community members are coowners that share exclusive rights and duties and benefits contribute to the community development.
Unknown ownership	Forest area where ownership is unknown includes areas where ownership is unclear or disputed.
Categories related to management rights of public forests	Definition
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 companies	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities private cooperatives, private nonprofit 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.

18.2 National data

18.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Forest Resource Inventory and Management Section Inventory of the indigenous Forests of Trinidad and Tobago 1980. Government of Trinidad and Tobago	Forest cover, forest type classification, land use/cover change	1970	Inventory of all public forests using Aerial photography from 1969 and ground truth in 1979
2	Internal Records Drawing Office Forestry Division	Forest cover,	1994	Aerial photography of forest reserves.
3	Caribbean island terrestrial habitats scitec.uwichill.edu.bb/bcs/courses/ Ecology	Definitions	2005	N/A
4	National geographic society, and WWF. Terrestrial ecoregions in the world. http://www.worldwildlife.org/wildworld	Definitions	2005	Refers to dry forest description

18.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

18.2.3 Original data

<p>NOTE TO 18.2.2</p> <p>As presented in 1.2.2.</p> <hr/> <p>See 1.2.3.</p>

18.3 Analysis and processing of national data

18.3.1 Adjustment

18.3.2 Estimation and forecasting

The same rate of forest loss over the period 1970 to 1994 was used in forecasting for the relevant years. Please note that the total area under administration of the Forestry Division is still 255,688 ha of lands.









18.3.3 Reclassification

National classes	1970 ha_a	1994 ha_b	1990¹ ha_c	2000¹ ha_d	2005¹ ha_e	2010
Evergreen Seasonal Forest	98180	88718	90295	86352	84381	82410
Semi- evergreen seasonal forest	13928	12586	12810	12251	11971	11691
Deciduous Seasonal Forests	3617	3268	3326	3181	3108	3035
Dry evergreen forests	495	447	455	435	425	415
Seasonal montane forests	926	837	852	815	796	778
Montane forests	21619	19535	19882	19014	18580	18146
Swamp forests	16789	15171	15441	14767	14429	14092
Secondary forests	22650	20467	20831	19921	19466	19012
Teak and pine plantations	16308	15000	15000	15000	15000	15000
Other plantations	5306	5306	5306	5306	5306	5306

Bamboo	528	528	528	528	528	528
Public Forests (total above)	200346	181863	184726	177570	173989	170413
Private forests	56000	56000	56000	56000	56000	56000
Total forests	256346	237863	240726	233570	229989	226413

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	184.7	177.6	174	N/A
	... of which owned by the state at national scale	N/A	N/A	N/A	N/A
	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A
	Private ownership	56	56	56	N/A
	... of which owned by individuals	N/A	N/A	N/A	N/A
	... of which owned by private business entities and institutions	N/A	N/A	N/A	N/A
	... of which owned by local, tribal and indigenous communities	N/A	N/A	N/A	N/A
	Unknown ownership	0	0	0	N/A
TOTAL		240.70	233.60	230.00	.00

Tiers

Category	Tier for status	Tier for reported trend
----------	-----------------	-------------------------

Public ownership	Tier 2	Tier 2
Private ownership	Tier 2	Tier 2
Unknown ownership	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
Ownership	Tier 3: National forestry statistics registers of land titles or maps on land ownership or all forest area under one ownership category that is five years old or less. Tier 2: National forestry statistics registers of land titles or maps on land ownership or questionnaires that are more than five years old. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	184.7	177.6	174	N/A
Individuals	0	0	0	N/A
Private companies	0	0	0	N/A
Communities	0	0	0	N/A
Other	0	0	0	N/A
TOTAL	184.70	177.60	174.00	.00

Category	Tier for reported trend	Tier for status
Public Administration	N/A	N/A
Individuals	N/A	N/A
Private companies	N/A	N/A
Communities	N/A	N/A
Other	N/A	N/A

18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
----------	--	--------------------------------

Public ownership	All forests that are owned by the state which includes statelands and forest reserves	The total land area controlled by the State is fixed at 255,688 ha but due to squatting and illegal quarrying etc the area being reported is reduced.
Private ownership	Forest lands owned by private individuals and companies. Could not separate that owned by individuals and that owned by companies	N/A
Unknown ownership	N/A	N/A
Management rights	N/A	N/A

Other general comments to the table

N/A

19. How many people are directly employed in forestry?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

19.1 Categories and definitions

Category	Definition
Full-time equivalents (FTE)	A measurement equal to one person working full-time during a specified reference period.
Employment in forestry	Employment in activities related to production of goods derived from forests. This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

19.2 National data

19.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

19.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A



19.2.3 Original data

--

19.3 Data

Table 19

Category	Employment (000 years FTE)
----------	----------------------------

		1990	2000	2005	2010
	Employment in forestry	1.3	1.4	1.4	N/A
	... of which female	N/A	N/A	N/A	N/A

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	N/A	N/A

Other general comments to the table
N/A

20. What is the contribution of forestry to Gross Domestic Product (GDP)?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

20.1 Categories and definitions

Category	Definition
Gross value added from forestry (at basic prices)	This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

20.2 Data

Table 20 (Pre-filled data from UNdata/EUROSTAT)

Category	Million	Currency	Year for latest available information
Gross value added from forestry (at basic prices)	86	Trinidad and Tobago dollar	2009

20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices)	N/A

Other general comments

--

21. What is forest area likely to be in the future

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

21.1 Categories and definitions

Category	Definition
Government target/aspiration for forest area	Government target/aspiration for forest area for a specific year.
Forests earmarked for conversion	Forest area that is allocated/classified or scheduled to be converted into non-forest uses.

21.2 National data

21.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	N/A	N/A

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	N/A

21.4 Comments

Category	Comments
Government target/aspiration for forest area	N/A

Forests earmarked for conversion	N/A
----------------------------------	-----

Other general comments

--