Forestry Department
Food and Agriculture Organization of the United Nations

GLOBAL FOREST RESOURCES ASSESSMENT

COUNTRY REPORTS

SEYCHELLES

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The Forest Resources Assessment Programme

Sustainably managed forests have multiple environmental and socio-economic functions important at the global, national and local scales, and play a vital part in sustainable development. Reliable and up-to-date information on the state of forest resources - not only on area and area change, but also on such variables as growing stock, wood and non-wood products, carbon, protected areas, use of forests for recreation and other services, biological diversity and forests' contribution to national economies - is crucial to support decision-making for policies and programmes in forestry and sustainable development at all levels.

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Forest Resources Assessment Programme. This country report forms part of the Global Forest Resources Assessment 2005 (FRA 2005), which is the most comprehensive assessment to date. More than 800 people have been involved, including 172 national correspondents and their colleagues, an Advisory Group, international experts, FAO staff, consultants and volunteers. Information has been collated from 229 countries and territories for three points in time: 1990, 2000 and 2005.

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

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Contents

1 Table T1 – Extent of Forest and Other wooded land

1.1 FRA 2005 Categories and definitions

Category	Definition
Forest	Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent, or trees able to reach these thresholds *in situ*. It does not include land that is predominantly under agricultural or urban land use.
Other wooded land	Land not classified as "Forest", spanning more than 0.5 hectares; with trees higher than 5 meters and a canopy cover of 5-10 percent, or trees able to reach these thresholds *in situ*; or with a combined cover of shrubs, bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use.
Other land	All land that is not classified as "Forest" or "Other wooded land".
Other land with tree cover (Subordinated to "Other land")	Land classified as "Other land", spanning more than 0.5 hectares with a canopy cover of more than 10 percent of trees able to reach a height of 5 meters at maturity.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.

1.2 National data

1.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
INDUFOR Oy, (1993). *Seychelles Forest Management Plan/ Sector Study.* Department of Environment	M	Land use, forest cover	The reference year is 1992	Study based on aerial photo and field checking

1.2.2 Classification and definitions

National class	Definition
Albizia dominant forests	Mixture of various species, but dominated by *Albizia falcataria*. Can be found mostly in riverine forests in valleys
Mixed forests	Mixture of endemic and exotic species with a height predominantly over 10m.
Plantation forests	Forests established by planting for commercial or protective purposes
Coconut dominant forest	Natural forests mixed with coconut trees. Normally on lower elevations and close to agricultural lands.
Bush vegetation	Mixture of cinnamon, prune de France and various tree species, generally lower than 10m.
Deforested areas	Eroded and burnt areas.
Cultivated or built up areas	Areas under housing, agriculture or other non – forest uses.

1.2.3 Original data

LAND AREA BY VEGETATION TYPES (Hectares)

	Albizia	Mixed	Plantation	Coconut	Bush	Deforested	Other	Total
Mahé	960	3 570	410	2 310	4 450	40	3 730	15 470
Praslin	30	1 210	50	60	1 350	270	790	3 760
Curieuse	0	110	20	10	120	30	0	290
La Digue	10	390	0	90	270	0	250	1 010
Silhouette	410	400	0	430	600	0	160	2 000
Other	0	18 600	4 400	0	0	0	10	23 000
All Islands	1 410	24 280	4 880	2 900	6 790	340	4 940	45 540

1.3 Analysis and processing of national data

1.3.1 Calibration

Source	Total land Area
National data	45 540 hectares
FAOSTAT	45 000 hectares

There is a need to perform calibration since the national land area data does not match the FAOSTAT land area. There is a need to multiply by 0.988142292.

	Albizzia	Mixed	Plantation	Coconut	Bush	Deforested	Other	Total
Mahe	949	3 528	405	2 283	4 397	40	3 686	15 287
Praslin	30	1 196	49	59	1,334	267	781	3 715
Curieuse		109	20	10	119	30	-	287
La Digue	10	385	-	89	267	-	247	998
Silhouette	405	395	-	425	593		158	1 976
Other	-	18 379	4,348	-	-	-	10	22 737
All Islands	**1 393**	**23 992**	**4 822**	**2 866**	**6 709**	**336**	**4 881**	**45 000**

1.3.2 Estimation and forecasting

National classes	**1992**	**1990**	**2000**	**2005**
Albizia	1 393	1 393	1 393	1 393
Mixed	23 992	23 992	23 992	23 992
Plantation	4 822	4 822	4 822	4 822
Coconut	2 866	2 866	2 866	2 866
Bush	6 709	6 709	6 709	6 709
Deforested	337	337	337	337
Other	4 881	4 881	4 881	4 881
Total	45 000	45 000	45 000	45 000

Since data was only present for 1992, base on the high protection that Seychelles put on the environment then data was estimated to be the same for the year 2000 and 2005. Most or all the development is concentrated on the coast.

1.4 Reclassification into FRA 2005 classes

National classes	Forest	Other land
Albizia	100%	
Mixed	100%	
Plantation	100%	
Coconut	100%	
Bush	100%	
Deforested		100%
Other		100%

Coconut and bush lands can be classified as forest as they are not predominantly used as agriculture

FRA 2005 categories	Area (ha)
Forest	39 783
Other land	5 217
Total	45 000

1.5 Data for National reporting table T1

FRA 2005 Categories	**Area (1000 hectares)**		
	1990	**2000**	**2005**
Forest	40	40	40
Other wooded land			
Other land	5	5	5
...of which with tree cover [1)]			
Inland water bodies			
TOTAL	**45**	**45**	**45**

1.6 Comments to National reporting table T1

FRA 2000 gives a total forest area of 30 000, for 1990 and 2000. This differs from the results presented here due to the use of different source of information and different land classification system. The country has decided to consider the data coming from the INDUFOR 1993 as most reliable, since these are based on aerial photograph and field checking.

2 Table T2 – Ownership of Forest and Other wooded land

2.1 FRA 2005 Categories and definitions

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

2.2 National data

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
INDUFOR Oy (1993). *Seychelles Forest Management Plan/ Sector Study*. Department of Environment	L	Land Tenure	1992	

2.2.2 Classification and definitions

National class	Definition
Conservation forest	Forest areas used for the protection of biodiversity
Forest (non conservation areas)	Production forest and catchments forest
Agriculture	Land designated for agricultural purposes (6000 hectares are presently under coconut or mixed vegetation, 4000hectares are under vegetables or other annual crops)
Other	For other purpose other than the above

2.2.3 Original data

Year 1992	Private	Government	Total
Conservation areas	30	18 190	18 220
Forest (non-conservation areas)	1 640	6 400	8 040
Agriculture	9 000	1 000	10 000
Other	2 870	6 410	9 280
Total Area	**13 540**	**32 000**	**45 540**

2.3 Analysis and processing of national data

2.3.1 Calibration

Source	Total land Area
National data	45 540
FAOSTAT	45 000

There is a need to perform calibration since the national land area data does not match the FAOSTAT land area.
There is a need to multiplied by 0.988142292

National classes	**1992 calibrated (Hectares)**	
	Private	**Gov**
Conservation areas	30	17 974
Forest (non-conservation areas)	1 621	6 324
Agriculture	8 893	989
Other	2 835	6 334
Total Area	**13 379**	**31 621**

2.3.2 Estimation and forecasting

Due to a lack of information 1992 data has been used in order to estimate and forecast data for 1990, 2000 and 2005, assuming that the forest situation could be considered constant throughout the years.

2.4 Reclassification into FRA 2005 classes

As it was very difficult to get the exact amount for private and government ownership, these have been estimated and the estimated percentages are given below.

National Classes		**FRA 2005 Categories**			
Conservation areas		**Private forest**	**Public forest**	**Private Other land**	**Pub Other Land**
	Private	100			
	Government		100		
Forest (non-conservation areas)	Private	100			
	Government		100		
Agriculture	Private	60		40	
	Government		67		33
Other	Private	82		18	
	Government		91		9

National Classes	**Forest (hectares)**	
	Private	Government
Conservation areas	30	17 974
Forest (non-conservation areas)	1 621	6 324
Agriculture	5 336	662
Other land Use	2 312	5 741
Total	**9 299**	**30 701**

2.5 Data for National reporting table T2

FRA 2005 Categories	Area (1000 hectares)			
	Forest		Other wooded land	
	1990	2000	1990	2000
Private ownership	9	9		
Public ownership	31	31		
Other ownership				
TOTAL	**40**	**40**		

2.6 Comments to National reporting table T2

The Ministry of Land Use and Habitat is working on a GIS project to produce an updated cadastral layer. This is only an estimation of the ownership according to the Forestry Sector plan of 1993 and because we have only one data set, it is impossible to estimate for the year 2000. Not readily available information exists on the distribution of ownership, however table 2 provides estimates on land tenure.

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

3.1 FRA 2005 Categories and definitions

Types of designation

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

Designation categories

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

3.2 National data

3.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
INDUFOR Oy (1993). Seychelles Forest Management Plan/ Sector Study. Department of Environment.	M		1992	

3.2.2 Classification and definitions

National class	Definition
Biodiversity Zones	Primarily for conservation of biological and indigenous ecosystem
Catchments Zones	Primarily for conservation of water, soil and amenity
Production Zones	Primarily for production forestry
Catchment/ Biodiversity	Primarily for conservation of water and secondly for biodiversity
Catchment/ Production	Primarily for conservation of water and secondly for production forest
Non forest zones	Agricultural and housing areas where there are substantial amounts of trees which are grown for amenity purposes and for the production of non timber output.

3.2.3 Original data

	Biodiversity	Catchment/ Biodiversity	Catchment/ Production	Production	Non - Forest	Total
Mahé	860	4 050	4 320	520	5 720	15 470
Praslin	390	690	1180	0	1 500	3 760
Curieuse	290	0	0	0	0	290
La Digue	30	300	230	0	450	1 010
Silhouette	480	1 380	0	0	140	2 000
Total	**2 050**	**6 420**	**5 730**	**520**	**7 810**	**22 530**

3.3 Analysis and processing of national data

3.3.1 Calibration

Not needed.

3.3.2 Estimation and forecasting

Management Zone (forest)	Area (Hectares)
Biodiversity	2 025
Catchment/ Biodiversity	6 344
Catchment/ Production	5 662
Production	515
Non - Forest	7 718
Total	**22 264**

Due to a lacking of data the 1992 data were considered valid for 1990, 2000 and 2005.
Area of forest having the function of social service has been estimated.

3.4 Reclassification into FRA 2005 classes

	Biodiversity	Catchment/ Biodiversity	Catchment/ Production	Production	Non - Forest
Production				100%	
Protection of soil and water		100%			
Conservation of biodiversity	100%				
Social services					
Multiple purpose			100%		
No or unknown function					

Function	Area (ha)
Production	515
Protection of soil and water	6 344
Conservation of biodiversity	2 025
Social services	8
Multiple purpose	5 662

Total area having function of production and protection has been calculated considering that forest with multiple purposes is including the catchments-production management zone and adding the area having the function of production and protection as primary.

3.5 Data for National reporting table T3

FRA 2005 Categories / Designated function	Area (1000 hectares)					
	Primary function			Total area with function		
	1990	2000	2005	1990	2000	2005
Forest						
Production	1	1	1	7	7	7
Protection of soil and water	6	6	6	12	12	12
Conservation of biodiversity	2	2	2	2	2	2
Social services	8	8	8	8	8	8
Multiple purpose	6	6	6	not appl.	not appl.	not appl.
No or unknown function	17	17	17	not appl.	not appl.	not appl.
Total - Forest	**40**	**40**	**40**	**not appl.**	**not appl.**	**not appl.**
Other wooded land						
Production						
Protection of soil and water						
Conservation of biodiversity						
Social services						
Multiple purpose				not appl.	not appl.	not appl.
No or unknown function				not appl.	not appl.	not appl.
Total – Other wooded land				**not appl.**	**not appl.**	**not appl.**

3.6 Comments to National reporting table T3

4 Table T4 – Characteristics of Forest and Other wooded land

4.1 FRA 2005 Categories and definitions

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

4.2 National data

4.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
INDUFOR Oy (1993). Seychelles Forest Management Plan/ Sector Study. Department of Environment.	M	Primary forest	1992	
Lanier, L. 1996. *Les Seychelles: conditions naturelles et forestières, revue forestière française, April 1996,* Ecole nationale du genie rural, des eaux et des forets, Nancy, France, p. 382-390.	M	Type of Forests	1992	The data from Lanier 1996 was taken from INDUFOR, 1993.

4.2.2 Classification and definitions

National class	Definition
Albizia dominant forests	Mixture of various species, but dominated by *Albizia falcataria*.
Mixed forests	Mixture of endemic and exotic species with a height predominantly over 10m.
Plantation forests	Forests established by planting for commercial or protective purposes
Coconut dominant forest	Natural forests mixed with coconut trees. Normally on lower elevations and close to agricultural lands.
Bush vegetation	Mixture of cinnamon, prune de France and various tree species, generally lower than 10m.
Deforested areas	Eroded and burnt areas.
Cultivated or built up areas	Areas under housing, agriculture or other non – forest uses.

4.2.3 Original data

	Albizia	Mixed	Plantation	Coconut	Bush	Deforested	Other	Total
Mahe	960	3 570	410	2 310	4 450	40	3 730	15 470
Praslin	30	1 210	50	60	1 350	270	790	3 760
Curieuse	0	110	20	10	120	30	0	290
La Digue	10	390	0	90	270	0	250	1 010
Silhouette	410	400	0	430	600	0	160	2 000
Other	0	18 600	4 400	0	0	0	10	23 000
All Islands	1 410	24 280	4 880	2 900	6 790	340	4 940	45 540

Source: Indufor 1993

4.3 Analysis and processing of national data

4.3.1 Calibration

Source	Total land Area
National data	45 550
FAOSTAT	45 000

4.3.2 Estimation and forecasting

Due to a lack of data 1992 data were used to estimate 1990, 2000 and 2005.

National classes 1992	**Calibrated area (ha)**
Albizia	1 393
Mixed	23 992
Plantation	4 822
Coconut	2 866
Bush	6 709
Deforested	337
Other	4 881
Total	45 000

The table above has been used to estimate the forest plantations area. Due to difficulties in reclassify the other vegetation formations into the category of primary forest, modified natural and semi natural forest, it has been assumed that primary forest could be estimated throughout the area of conservation forest as given in table 3, and the rest has been considered as modified natural forest. As for the other tables the areas of primary forest, modified natural and forest plantations were considered constant within the period 1990-2005.
For what concern the forest plantations it was no possible to distinguish between productive and protective plantations.

4.4 Reclassification into FRA 2005 classes

4.5 Data for National reporting table T4

FRA 2005 Categories	Area (1000 hectares)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Primary	2	2	2			
Modified natural	33	33	33			
Semi-natural						
Productive plantation	5	5	5			
Protective plantation						
TOTAL	**40**	**40**	**40**			

4.6 Comments to National reporting table T4

As already mentioned, no further breakdown between productive and protective forest plantations was possible.

5 Table T5 – Growing stock

5.1 FRA 2005 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees more than X cm in diameter at breast height (or above buttress if these are higher). Includes the stem from ground level or stump height up to a top diameter of Y cm, and may also include branches to a minimum diameter of W cm.
Commercial growing stock	The part of the growing stock of species that are considered as commercial or potentially commercial under current market conditions, and with a diameter at breast height of Z cm or more.

5.2 National data

5.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
INDUFOR Oy, (1993). *Seychelles Forest Management Plan/ Sector Study*. Department of Environment, Government of Seychelles.	L	Growing stock	1992	Expert Estimation

5.2.2 Classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees more than 5 cm in diameter at breast height (or above buttress if these are higher). Includes the stem from ground level or stump height up to a top diameter of 5 cm, and may also include branches to a minimum diameter of 5 cm.
Commercial growing stock	The part of the growing stock of species that are considered as commercial or potentially commercial under current market conditions, and with a diameter at breast height of 20 cm or more.

5.2.3 Original data

Growing stock by vegetation (m^3)

	Albizia	Mixed	Plantation	Coconut	Bush	Total
Mahe	91 650	267 870	52 980	138 440	155 680	706 600
Praslin	3 050	91 090	6 150	3 660	47 250	151 200
Curieuse	0	8 430	2 000	540	4 080	15 050
La Digue	1 240	28 970	0	5 610	9 300	45 120
Silhouette	38 500	30 080	0	26 070	20 070	114 720
Other	0	1 395 000	572 000	0	0	1 967 000
All Islands	**134 440**	**1 821 440**	**633 130**	**174 320**	**236 380**	**2 999 710**

Commercial growing stock

	1992
Forest type	**Volumes (m3)**
Catchment/ Production	**319260**
Production	**39610**

5.3 Analysis and processing of national data

5.3.1 Calibration

5.3.2 Estimation and forecasting

As Seychelles put a lot of emphasis on the protection of the environment it is expected that the growing stock will remain the same for 2000 an 2005.

Growing stock by vegetation (m^3)

National classes	**1992**
Albizia	134 440
Mixed	1821440
Plantation	633130
Coconut	174320
Bush	236 380
Total	**2 999 710**

Commercial Growing stock

	1992
Forest type	**Volumes (m3)**
Catchment/ Production	**319 260**
Production	**39 610**
Total	**358 870**

5.4 Reclassification into FRA 2005 classes

5.5 Data for National reporting table T5

FRA 2005 Categories	**Volume (million cubic meters over bark)**					
	Forest			**Other wooded land**		
	1990	**2000**	**2005**	**1990**	**2000**	**2005**
Growing stock	3	3	3			
Commercial growing stock	0.359	0.359	0.359			

Specification of country threshold values	**Unit**	**Value**	**Complementary information**
1. Minimum diameter at breast height of trees included in Growing stock (X)	cm	5	
2. Minimum diameter at the top end of stem (Y) for calculation of Growing stock	cm	3	
3. Minimum diameter of branches included in Growing stock (W)	cm	3	
4. Minimum diameter at breast height of trees in Commercial growing stock (Z)	cm	20	
5. Volume refers to “Above ground” (AG) or “Above stump” (AS)	AG / AS	AS	

6. Have any of the above thresholds (points 1 to 4) changed since 1990	Yes/No	No	
7. If yes, then attach a separate note giving details of the change	Attachment		

5.6 Comments to National reporting table T5

As Seychelles put a lot of emphasis on the protection of the environment it is expected that the growing stock will remain the same for 2000 an 2005. It is estimated that the amount cut and the amount planted is of insignificant to make a change. As for the commercial growing stock this will be difficult to estimate and by using also the one million metres cubic this unit also might be too large. The commercial growing stock of timber is estimated only for production and Catchment/ Production Zones. Biodiversity and Catchment/ Biodiversity Zones are excluded, as commercial harvesting should not be allowed in them.

6 Table T6 – Biomass stock

6.1 FRA 2005 Categories and definitions

Category	Definition
Above-ground biomass	All living biomass above the soil including stem, stump, branches, bark, seeds, and foliage.
Below-ground biomass	All living biomass of live roots. Fine roots of less than 2mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead wood biomass	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.

6.2 National data

6.2.1 Data sources

There was no specific biomass so the IPPC Good Practice Guidance Formula was used.

6.2.2 Classification and definitions

6.2.3 Original data

Not available

6.3 Analysis and processing of national data

6.3.1 Calibration

6.3.2 Estimation and forecasting

Biomass was estimated from volume data given in table 5. The volume was then multiplied by the wood density of 0.6 and the BEF of 3.4 to obtain the aboveground biomass.
SD= 2 999 710 * 0.6 = 1 799 826 t
AGB= 1 799 826 * 3.4 = 6 119 408 t
Belowground biomass was calculated using the default value of 0.24 as recommended by the guidelines.
BGB= 6 119 408 * 0.24 = 1 468 658 t

Biomass was considered constant throughout the years.

6.4 Reclassification into FRA 2005 classes

6.5 Data for National reporting table T6

FRA 2005 Categories	Biomass (million metric tonnes oven-dry weight)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Above-ground biomass	6	6	6			
Below-ground biomass	1	1	1			
Dead wood biomass	ID	ID	ID			
TOTAL	**7**	**7**	**7**			

6.6 Comments to National reporting table T6

No national data on dead wood biomass are available

7 Table T7 – Carbon stock

7.1 FRA 2005 Categories and definitions

Category	Definition
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 living 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 biomass	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 a minimum diameter chose by the country for lying dead (for example 10 cm), in various states of decomposition above the mineral or organic soil. This includes the litter, fumic, and humic layers.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a specified depth chosen by the country and applied consistently through the time series.

7.2 National data

7.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Expert Estimates				

7.2.2 Classification and definitions

7.2.3 Original data

7.3 Analysis and processing of national data

7.3.1 Calibration

7.3.2 Estimation and forecasting

No national data were available so carbon has been estimated using the IPCC good practice guidance default factor of 0.5.

7.4 Reclassification into FRA 2005 classes

7.5 Data for National reporting table T7

7.6 Data for National reporting table T7

FRA 2005 Categories	Carbon (Million metric tonnes)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Carbon in above-ground biomass	3	3	3			
Carbon in below-ground biomass	0.734	0.734	0.734			
Sub-total: Carbon in living biomass						
Carbon in dead wood	ID	ID	ID			
Carbon in litter	ID	ID	ID			
Sub-total: Carbon in dead wood and litter						
Soil carbon to a depth of _____ cm						
TOTAL CARBON	**4**	**4**	**4**			

7.7 Comments to National reporting table T7

No data are available for the soil carbon content.

8 Table T8 – Disturbances affecting health and vitality

8.1 FRA 2005 Categories and definitions

Category	Definition
Disturbance by fire	Disturbance caused by wildfire, independently whether it broke out inside or outside the forest/OWL.
Disturbance by insects	Disturbance caused by insect pests that are detrimental to tree health.
Disturbance by diseases	Disturbance caused by diseases attributable to pathogens, such as a bacteria, fungi, phytoplasma or virus.
Other disturbance	Disturbance caused by other factors than fire, insects or diseases.

8.2 National data

8.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments

8.3 Data for National reporting table T8

FRA-2005 Categories	Average annual area affected (1000 hectares)			
	Forests		Other wooded land	
	1990	2000	1990	2000
Disturbance by fire	n.s.	n.s.		
Disturbance by insects	n.s.	n.s.		
Disturbance by diseases	n.s.	n.s.		
Other disturbance				

8.4 Comments to National reporting table T8

Fire does not occur annually in Seychelles. Fire only occurs accidentally with human activity and when it do occur the area burnt if use the unit of 1000 hectares affected the figure will be negligible.
In Seychelles there area two types of diseases affecting the Sandragon (*Pterocarpus Indicus*) trees and the Takamaka trees (*Calophylum inophyllum*). Although the two diseases are present the area affected of the forest is very much minimum as Seychelles has tropical forest. The diseases affect only the two species of tree thus the unit of 1000 hectares affected cannot be used for Seychelles instead the number of tree or species affected can be used. No data are available for 1990 and 2000.

9 Table T9 – Diversity of tree species

9.1 FRA 2005 Categories and definitions

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

9.2 National data

9.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Botanical Garden Section (not publish) *Native & Indigenous Plants Data Base*, Department of Environment, Government of Seychelles	H	Native plants	2002	Reference from Documentation: Annette Carlstrom, Friedman- Flore de Seychelles, Rosemary Wise- A Fragile Eden, Flora of Aldabra Atoll, Robertson- Flowering Plants of Seychelles
IUCN red list	H	Critically endangered, endangered, vulnerable tree specise		

9.2.2 Original data

9.3 Data for National reporting table T9

FRA 2005 Categories	Number of species (year 2000)
Native tree species	93
Critically endangered tree species	7
Endangered tree species	4
Vulnerable tree species	23

9.4 Comments to National reporting table T9

Note that the data on native species has been taken from the Botanical Garden Section of the Seychelles Department of Environment and they are still updating their data base so the information given might be modified in future.

10 Table T10 – Growing stock composition

10.1 FRA 2005 Categories and definitions

List of species names (scientific and common names) of the ten most common species.

10.2 National data

FRA 2005 Categories / Species name (Scientific name and common name)	Growing Stock in Forests (million cubic meters)	
	1990	2000
Name of 1st most common species		
Name of 2nd most common species		
Name of 3rd most common species		
Name of 4th most common species		
Name of 5th most common species		
Name of 6th most common species		
Name of 7th most common species		
Name of 8th most common species		
Name of 9th most common species		
Name of 10th most common species		
Remainder of species		
TOTAL		

10.3 Comments to National reporting table T10

No data was available for growing stock composition, as there was no inventory done base on the stock composition.

11 Table T11 – Wood removal

11.1 FRA 2005 Categories and definitions

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

11.2 National data

11.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
INDUFOR Oy (1993) *Seychelles Forest Management Plan/ Sector Study.* Department of Environment, Government of Seychelles	L	Wood Removal	1992	Expert Estimation

11.2.2 Original data

Potential Annual demand for Locally Produced Round Wood (m3)

	1992	2002*
Hardwood sawlogs	5 000	8 600
Fuel wood	5 500	3 700
Total	**10 500**	**12 300**

The two estimations were taken from INDUFOR Oy, (1993).

11.3 Analysis and processing of national data

The rate of change for sawlogs wood is 360 m3 per year, while the woodfuel production is decreasing of 180m3 per year.

11.3.1 Estimation and forecasting

Categories	Volume cubic meters of roundwood				
	Forest				
	1992	**2002**	**1990**	**2000**	**2005**
Industrial roundwood	5 000	8 600	4 280	7 880	9 680
Woodfuel	5 500	3 700	5 860	4 060	3 160
TOTAL for Country	**10 500**	**12 300**	**10 140**	**11 940**	**12 840**

Values were calculated for 1990 and 2000 by taking the difference between 1992 and 2002, which is for 10 years. Then the change per year was calculated.

11.4 Reclassification into FRA 2005 classes

11.5 Data for National reporting table T11

FRA 2005 Categories	Volume in 1000 cubic meters of roundwood over bark					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Industrial roundwood	4	8	10			
Woodfuel	6	4	3			
TOTAL for Country	**10**	**12**	**13**			

11.6 Comments to National reporting table T11

12 Table T12 – Value of wood removal

12.1 FRA 2005 Categories and definitions

Category	Definition
Value of industrial wood removal	Value of the wood removed for production of goods and services other than energy production (woodfuel).
Value of woodfuel removal	Value of the wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

12.2 National data

12.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
National Parks & Forestry (not publish) *Forestry Annual Report.* Department of Environment, Government of Seychelles.	H	Timber Value	2003	

12.2.2 Original data

Sale of Round wood timber for 2003 by Forestry Section

Forestry Station	Value in rupees
Grand Anse	128 365.28
Fond Boffay	30 776.14
Sans souci	50 327.82
Total	209 469.14

12.3 Analysis and processing of national data

12.3.1 Estimation and forecasting

12.4 Reclassification into FRA 2005 classes

12.5 Data for National reporting table T12

FRA 2005 Categories	Value of roundwood removal (1000 USD)					
	Forest			Other wooded land		
	1990	2000	2005	1990	2000	2005
Industrial roundwood	ID	ID	ID			

Woodfuel	ID	ID	ID			
TOTAL for Country	ID	ID	ID			

When compared with the amount of wood removals reported in table 11, this data give a mean value of 0.5 $ per cubic meter which is a too low value. For this reason the data was considered partial and insufficient to complete the table.

12.6 Comments to National reporting table T12

Data was not available for woodfuel and insufficient for industrial roundwood.

13 Table T13 – Non-wood forest product removal

13.1 FRA 2005 Categories and definitions

The following categories of non-wood forest products have been defined:

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 bee-wax
12. Bush meat
13. Raw material for medicine
14. Raw material for colorants
15. Other edible animal products
16. Other non-edible animal products

13.2 National data

13.2.1 Data sources

References to sources of information	**Quality (H/M/L)**	**Variable(s)**	**Year(s)**	**Additional comments**
Shah, N. J. (1997). *National Biodiversity Assessment.* Ministry of Environment, Government of Seychelles	H		2003	Report

13.2.2 Classification and definitions

Not available.

13.2.3 Original data

Cinnamon bark & Copra (tonnes)

Year	**2000**	**2001**	**2002**	**2003**
Cinnamon bark	25	187	116	148
Copra	377	421	262	296

13.3 Analysis and processing of national data

13.3.1 Estimation and forecasting

Data for 2000, were taken directly from the original data available, while for 2005, 2003 data were considered valid.

13.4 Reclassification into FRA 2005 classes

Items	Raw material, utensil & Handicraft	Ornamental	Food	Raw material for medicine and aromatic products
Copra				100%
Cinnamon				100%

13.5 Data for National reporting table T13

FRA 2005 Categories	Scale factor	Unit	NWFP removal		
			1990	2000	2005
Plant products / raw material					
1. Food					
2. Fodder					
3. Raw material for medicine and aromatic products		tonnes		402	444
4. Raw material for colorants and dyes					
5. Raw material for utensils, handicrafts & construction					
10. Hides, skins and trophies					
12. Bush meat					
13. Raw material for medicine					
14. Raw material for colorants					
15. Other edible animal products					
16. Other non-edible animal products					

13.6 Comments to National reporting table T13

Results from past studies on non wood forest products highlight that the most important products in Seychelles are the Cinnamon, the Lantier leaves and the Coco de Mer. Others are the *Sandoricum koetjape* (Santol), the *Artocarpus altilis* (Bread fruit), the Raffia, the bamboo and the Coco leaves. Despite the importance of these products, data are not available.

14 Table T14 – Value of non-wood forest product removal

14.1 FRA 2005 Categories and definitions

The following categories of non-wood forest products have been defined:

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 bee-wax
12. Bush meat
13. Raw material for medicine
14. Raw material for colorants
15. Other edible animal products
16. Other non-edible animal products

14.2 National data

14.2.1 Data sources

References to sources of information	**Quality (H/M/L)**	**Variable(s)**	**Year(s)**	**Additional comments**
Seychelles Forestry Annual Report 2003. Department of Environment, Government of Seychelles. (Not published)	M	Forest produce	2003	
Seychelles In Figures	H		2003	Statistics

14.2.2 Original data

Sales of other Forest Produce 2003 (National Park & Forestry Section, Department of Environment)			
Items	**Rate/Unit (SR)**	**Sold***	**Amount (SR)**
Coco de Mer Nuts	400	313.25	125 300
Latanier Leaves	.25cts	344,420	86,105
Coco de Mer Leaves	16	119	1,904
Small Bamboo	5	10	50
Vacoa Leaves	0.5	20	10
Breadfruit	0.75	150	112.5
Raffia	6	62	372

Value of cinnamon bark exported in RS per 1000

Year	2000	2001	2002	2003
Cinnamon bark	1.4	1.3	1.2	0.9

Data on value of NWFP has been considered insufficient to complete the table.

14.3 Analysis and processing of national data

14.3.1 Estimation and forecasting

14.4 Reclassification into FRA 2005 classes

14.5 Data for National reporting table T14

FRA 2005 Categories	**Value of the of NWFP removed (1000 USD)**		
	1990	**2000**	**2005**
Plant products / raw material 1. Food	ID	ID	ID
2. Fodder			
3. Raw material for medicine and aromatic products	ID	ID	ID
4. Raw material for colorants and dyes			
5. Raw material for utensils, handicrafts & construction			ID
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 bee-wax			
12. Bush meat			
13. Raw material for medicine			
14. Raw material for colorants			
15. Other edible animal products			
16. Other non-edible animal products			
TOTAL	ID	ID	ID

14.6 Comments to National reporting table T14

15 Table T15 – Employment in forestry

15.1 FRA 2005 Categories and definitions

Category	Definition
Primary production of goods	Employment in activities related to primary production of goods, like industrial roundwood, woodfuel and non-wood forest products.
Provision of services	Employment in activities directly related to services from forests and woodlands.
Unspecified forestry activities	Employment in unspecified forestry activities.

15.2 National data

15.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Action for Forest Management Plan Implementation	L	Employment	1994	
Forest Management Plan/Sector Study	M	Employment	1992	Report
Administration Section Ministry of Environment & Natural Resources	H		2000, 2004	

15.2.2 Original data

Division of Nature & Conservation

Years	Total Number of Employees
1994	208
1992	208
2004	165

15.3 Analysis and processing of national data

15.3.1 Estimation and forecasting

15.4 Reclassification into FRA 2005 classes

15.5 Data for National reporting table T15

FRA 2005 Categories	Employment (1000 person-years)	
	1990	2000
Primary production of goods	ID	ID
Provision of services		
Unspecified forestry activities		
TOTAL	ID	ID

15.6 Comments to National reporting table T15

The data is incomplete as there was no survey done. It could be said that the data related on employment which are given in 15.2.2 include the forestry sector but no breakdown among the different sectors was available.

16 Thematic reporting tables

If countries would like to submit additional reporting tables, these should be included here. (See the chapter on thematic reporting in the Guidelines for Country Reporting).