Forestry Department

Food and Agriculture Organization of the United Nations

GLOBAL FOREST RESOURCES
ASSESSMENT

COUNTRY REPORTS

TIMOR LESTE

The Forest Resources Assessment Programme

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

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

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

The Global Forest Resources Assessment process is coordinated by the Forestry Department at FAO headquarters in Rome. The contact person for matters related to FRA 2005 is:

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

E-mail: Mette.LoycheWilkie@fao.org

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

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The Global Forest Resources Assessment 2005 Country Report Series is designed to document and make available the information forming the basis for the FRA 2005 reports. The Country Reports have been compiled by officially nominated country correspondents in collaboration with FAO staff. Prior to finalisation, these reports were subject to validation by forestry authorities in the respective countries.

Report preparation and contact person

This report has been prepared by:

Name: **Mr. Manuel da Silva** (National Correspondent to FRA)
Title: Director, Forest Protection & Resource Management
Organization: Department of Forestry & Water Resources
                          Ministry of Agriculture, Forestry & Fisheries
                          Democratic Republic of Timor-Leste
Address: Dili, Democratic Republic of Timor-Leste
Tel/Fax: Mobile phone: +670 723 2948
Email: hakmatek@hotmail.com

The following professionals were also involved in the reporting process and have contributed to the development of this report.

Erwin Nacuray
United Nations Development Program, Timor-Leste
Natural Resource Management Advisor for DFWR, MAFF
Email: Erwin.nacuray@undp.org
Phone: +670 337 0052

Cathy Molnar
Protected Areas Liaison Officer & Advisor
DFWR, MAFF
Email: calactasia@yahoo.com.au
Mobile phone: +670 726 7684

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General information

The independent Democratic Republic of Timor-Leste was established in May 2002. Prior to this Timor-Leste was under the United Nations Transitional Administration in East Timor (UNTAET, October 1999-May 2002) and under the administration of the Republic of Indonesia (1975 to 1999) and Portugal (16th century-1975). The violent historical and political events associated with the establishment of independence resulted in the total destruction of the majority of infrastructure, the administration and associated resources within Timor-Leste. Thus, much historical information and data of the state of the forests was destroyed and is no longer reliably or consistently available.

Further, the current state of the forests of Timor-Leste is also unknown as there has been no recent national forest resource inventory and the establishment of forestry data collection process in Timor–Leste is still in its development stage. Various forest data have been collected by various groups since 2000 but the overall value of this data is limited due to the *ad hoc* nature of its collection (e.g. lack of coordination and collaboration).

The Government groups responsible for forest data collection are now established. Within the Ministry of Agriculture, Forestry and Fisheries (MAFF), there are two areas responsible for the collection of agriculture and forest data. These are the Agriculture and Land-use Geographic Information System (ALGIS) Unit, directly under the authority of the Minister for MAFF; and the Department of Forestry and Water Resources (DFWR). ALGIS is establishing a spatial information database for the storage and management of spatial data, the production of maps etc. Within DFWR various Divisions (principally the Forest Inventory, Policy and Planning Unit, FIPPU) collect technical field data. To date there is no established consistent methodology for data collection, no validation process and no information database for non-spatial data storage and management.

Preparation of a national inventory of forest resources is a major priority under the DFWR Sector Investment Program (SIP) in which the priorities for funding are outlined by the government of RDTL for donor investment. Activities undertaken to date by the ALGIS and DFWR FIPP Units include the preparation of a national land-use map, survey of sandalwood resources in specific areas and a compilation of data collected from various sources.

To date, there are no consistent and agreed land and vegetation classification systems in Timor-Leste. Terminologies in use are inconsistent and often borrowed from other sources. This limits the ability to accurately fulfil reporting requirements for the FRA. The data from JICA 2002 (i.e. Indonesia 1997 data) is inconsistent with sheet of "Luas Penyeberan". It is not clear how they extrapolated their figures from JICA report.

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)
GOTL. 2001. Rapid Rural Land Use Assessment and Model For Land Use Classification and Mapping. Agricultural Land Use and Geographical Information System unit. Timor-Leste.	H	Landuse	2000 and 2001
Bouma, George and Halina Kobrya. 2002. Assessing Vegetation Change in East Timor using Landsat Thematic Mapper Data. Murdoch University, School of Environmental Science. Technical Report No. 01/02. March 2002.	H	Change in Landuse	1989 and 1999

1.2.2 Classification and definitions

The ALGIS study classified and sub-classified forests as under.

I

Six Classes	Fourteen Sub-classes
Lowland forest < 1000m asl	Moist lowland forest – dense
	Moist lowland forest – sparse
	Dry lowland forest - mainly one species
	Dry lowland forest - mixed composition
Highland forest 1000 - 2000m asl	Moist mixed forest
	Single species forest
Montane forest > 2000m asl	
Wetland forest	Swamp forest
	Palm forest
Coastal forests	Mangrove forest
	Dune forests - mixed species
	Coastal forest - single species
Man-made Forest	Teak
	Other commercial plantings
	Woodlots

The ALGIS study has defined the forest as following

National class	Definition / Explanation
Forests	The land, where tree and shrubs are dominant woody vegetation with more than 30 percent tree canopy cover...
Low land Forests	The Lowland Forest is found below about 1000m asl. The class includes two subclasses which are moist lowland forest which is moist and dense or lowland forest which is moist and sparse. It also includes dry lowland forest either single species or mixed composition...
High land Forests	The Highland forests are found between 1000 - 2000m asl. Identification is possible for highland forest areas based on contour data but it is more difficult to distinguish between moist mixed and single species forest given the resolution factor of 25m available from the image.
Montane forests	The Montane forests are found at levels of greater than 2000m asl.
Wetland Forests	The Wetland forests are identified with drainage and slope. Normally flat poorly drained lowland areas or basin type features will contain wetland vegetation and/or related land uses
Coastal forests	The Coastal forests includes three subclasses Mangrove forest (ii) Dune forest and (ii) Coastal forest (single species)
Manmade Forests	The Manmade forest have been classified into (i) Teak forest, (ii) other Commercial plantings and (iii) Woodlots. In Timor Lorosa'e, these plantings cover such small areas. Teak has been planted along roadways (up to 100 metres on either side) to the southwest of Viqueque as well as in many other areas primarily in logged out areas.

1.2.3 Original data

A. For 2000

Land Use Class	Hectares	FRA 2005 Category
Coastal Forest	19,709	Forests
Coastal Forest - Mangrove	1,802	Forests
Highland Forest - Moist Mixed	65,103	Forests
Highland Forest - Single Species	2,356	Forests
Dry Lowland Forest - Single Species	135,720	Forests
Moist Lowland Forest - Sparse	174,992	Forests
Moist Lowland Forest - Dense	261,694	Forests
Dry Lowland Forest - Mixed	189,080	Forests
Montane Forest	2,611	Forests
Wetland forest - Swamp	269	Forests
Man-made Forest	918	Forests
Estate Crops	68,074	Other lands
Smallholder Estate Crops	6,504	Other lands
Lake	5,080	Inland water bodies
Cities and Large Towns	13,346	Other lands
Villages and Mixed Gardens	6,588	Other lands
Dry land Arable - Food Crops	284,300	Other lands
Wetland Arable	45,856	Other lands
Shifting Cultivation Areas	6,244	Other lands
Grassland	107,090	Other lands
Savanna	93,378	Other lands
Bare Land	2,279	Other lands
Shrubs, Grasses and Reeds	405	Other lands
Total Land Area	1,493,399	

The following table summarises the above information in FRA 2005 categories

FRA Category	Area in 000 ha
	2000
Forest	854
Other land	634
Inland water bodies	5
Total	1493

b. Change in Forest Cover

Bouma and Kobryn (2002) provide an estimate of change in forest cover between 1989 and 1999.

National Category	1989	1999	FRA 2005 Category
Dense Forest	41.05	26.5	Forest
Forest	83.33	75.88	Forest
Plantation	26.06	42.14	Forest
Forest/Coffee	46.71	57.51	Other land
Woodland	255.56	149.76	Forest
Woodland (poor)	56.85	174.9	Other land
Heath/Shrub	21.34	40.17	Other land
	530.9	566.86	

The following table summarises it in FRA categories

Category	Area in 000 ha		Annual Change
	1989	**1999**	(000 ha)
Forest	406.0	294.3	-11.172
Other land	124.9	272.6	
Total	530.9	566.9	

1.3   Analysis and processing of national data

1.3.1 Calibration

There is difference in area figures maintained by the national statistics and FAOSTAT in respect of total country area and the area of inland water bodies.

National classes	Total Land Area (000 ha.)	Inland water bodies (000 ha.)	Total Area (000 ha.)
National data (in '000 ha) 1997	1488	5	1493
FAOSTAT (in '000 ha) 1997 to 2002	1487	0	1487

This report has calibrated the area through remainder area method i.e. by adjusting all the differences in the area of "Other land" as presented in following table.

FRA Category	Area in 000 ha
	2000
Forest	854
Other wooded lands	n.a.
Other land	633
Inland water bodies	0
Total	1487

1.3.2 Estimation and forecasting

The estimates for 1989 and 1999 do not cover the entire country and differ substantially from the estimate for 2000 from the ALGIS study, so it is not possible to compare these. The results of the ALGIS study, which covered the whole country, have been used for reference year 2000.

The estimates for 1990 and forecast for 2005 area of forests have been made by using the change rate (-11.172 ha/year) between 1989 and 1999 indicated by Bouma and Kobryn.

FRA Categories	Area in 000 ha		
	1990	2000	2005
Forest	966	854	798
Other wooded lands	n.a.	n.a.	n.a.
Other land	521	633	689
Inland water bodies	0	0	0
Total	1487	1487	1487

1.4   Reclassification into FRA 2005 classes

This step is not needed as original data provided FRA 2005 matching classification.

1.5   Data for National reporting table T1

FRA 2005 Categories	Area (1000 hectares)		
	1990	2000	2005
Forest	966	854	798
Other wooded land	n.a.	n.a.	n.a.
Other land	521	633	689
...of which with tree cover 1)	n.a.	n.a.	n.a.
Inland water bodies	0	0	0
TOTAL	1487	1487	1487

Area of "Other land with tree cover" is included in the area reported under "Other land" and should
    therefore be excluded when calculating the total area for the country.

1.6   Comments to National reporting table T1

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
The study on Integrated Agricultural Development in East Timor by JICA	M	Inside Forest Areas	1997	This from Regional Forestry Office.

2.2.2 Classification and definitions

National class	Definition
Natural Forest	Includes Protected Natural Areas and watersheds. These are under Government Control
Plantation Forest	These are mixed Government and private ownership

2.2.3 Original data

After 500 years of colonial and foreign rule the situation regarding land ownership within Timor-Leste remains unresolved. The layers include pre-Portuguese ownership, Portuguese Administration, Japanese occupation (World War II), Indonesian occupation and post-1999 to present. According to the RDTL Constitution the government maintains the major authority to manage forest areas but in practice the majority is managed by communities.

FRA Category	Area in 000 ha 1997	Percentage 1997
Private ownership	745	67
Public ownership	368	33
Other ownership	nda	nda
TOTAL	1113	100

2.3   Analysis and processing of national data

2.3.1 Calibration

This step is not needed.

2.3.2 Estimation and forecasting

The area under different ownership in 1990, 2000 and 2000 has been calculated using percentage of different ownership of forests in 1997.

2.4   Reclassification into FRA 2005 classes

This step is not needed.

2.5   Data for National reporting table T2

FRA 2005 Categories	Area (1000 hectares)			
	Forest		Other wooded land	
	1990	2000	1990	2000
Private ownership	647	572		
Public ownership	319	282		
Other ownership				
TOTAL	966	854		

2.6   Comments to National reporting table T2

After 500 years of colonial and foreign rule the situation regarding land ownership within Timor-Leste remains unresolved. The layers include pre-Portuguese ownership, Portuguese Administration, Japanese occupation (World War II), Indonesian occupation and post-1999 to present. According to the RDTL Constitution the government maintains the major authority to manage forest areas but in practice the majority is managed by communities.

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)
The study on Integrated Agricultural Development in East Timor by JICA	H	Designation	2002
Bouma, George and Halina Kobrya. 2002. Assessing Vegetation Change in East Timor using Landsat Thematic Mapper Data. Murdoch University, School of Environmental Science. Technical Report No. 01/02. March 2002.	H	Change in Landuse	1989 and 1999

3.2.2 Classification and definitions

In past there was following classification of forests

National class	Definition
Production Forest	Production forest
Limited Production Forest	Limited use, steep slopes, selective harvesting
Converted Forest	Production forest, harvested and now converted to other function (e.g. Livestock grazing)
Forest Protection	Steep, harvesting not allowed
Conversation of Forest	Conservation of biodiversity

Currently, there are no land or vegetation classification systems. The current generally recognized forest uses are Protected Natural Areas, Watershed and Industrial Tree Plantation.

National class	Definition
Protected Natural Areas	UNTAET Regulation 2000/19 on Protected Places declares 15 Protected Wild Areas (commonly known as Protected Natural Areas, PNAs). They cover an area of 187.6 (000 ha) and provides protection to a range of threatened species. Sites were selected on preliminary information on the basis of ecological, historical, cultural and religious significance.
Watershed	Watershed areas are identified based on topographic conditions.
Industrial Tree Plantation	Identified based on species composition.

3.2.1 Original data

A. 1997 and before

National classification	Area (in '000 ha.)	Percentage
	1997	1997
Production forests	122	16.33
Limited Production	120	16.05
Converted Production Forests	7	0.91
Forest Protection	418	56.19
Conservation Forests	78	10.52
Total	**745**	100

B. 2002 and after

National classification	Area (in '000 ha.)
	2005
Protected Areas (15 No.)	187

3.3   Analysis and processing of national data

3.3.1 Calibration

This step is not needed.

3.3.2 Estimation and forecasting

A. Production Areas

The percentage of production areas is assumed same for 1990, 2000 and 2005.

B. Conservation Areas

The percentage of conservation areas to the total forest area in 1997 has been used to estimate area under conservation in 1990. This and this area has been kept constant for 2000. The figure of actual area under Protected area net work in 2005 has been used for 2005.

C. Protection Areas

All remaining areas have been apportioned to this primary function.

3.4 Reclassification into FRA 2005 classes

This step is not necessary.

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	322	284	138	322	284	138
Protection of soil and water	542	468	473	644	570	660
Conservation of biodiversity	102	102	187	644	570	660
Social services						
Multiple purpose				not appl.	not appl.	not appl.
No or unknown function				not appl.	not appl.	not appl.
Total - Forest	**966**	**854**	**798**	**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

The lack of detailed land classification and financial resources hampers the government to designate forest areas into various uses.

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)
The study on Integrated Agricultural Development in East Timor by JICA	H	Designation	2002
Bouma, George and Halina Kobrya. 2002. Assessing Vegetation Change in East Timor using Landsat Thematic Mapper Data. Murdoch University, School of Environmental Science. Technical Report No. 01/02. March 2002.	H	Change in Landuse	1989 and 1999

4.2.2 Classification and definitions

No national definitions and classifications relevant to this table are available.

4.2.3 Original data

Bouma and Kobryn (2002) indicate that percentage of forest areas in plantation in 1989 and 1999 is about 3 and 5 percent respectively.

4.3 Analysis and processing of national data

4.3.1 Calibration

This step is not needed

4.3.2 Estimation and forecasting

A. Primary Forests

It is assumed that there are no primary forests.

B. Plantation areas

Bouma and Kobryn (2002) indicate that percentage of forest areas in plantation in 1989 and 1999 is about 3 and 5 percent respectively. The percentage for 1989 is being assumed for 1990 and that of 1999 for 2000. The figure for 2000 is being assumed for 2005. it leads to following area of plantations. All these plantations are being assumed to be productive.

Category	Area in 000 ha		
	1990	**2000**	**2005**
Plantation	29	43	43

C. Modified forests

All forest areas excluding plantations are being assumed to be modified forests.

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	nda	nda	nda	nda	nda	Nda
Modified natural	937	811	755			
Semi-natural						
Productive plantation	29	43	43			
Protective plantation						
TOTAL	966	854	798			

4.6   Comments to National reporting table T4

5   Table T5   Growing stock

No data is available.

6   Table T6   Biomass stock

No data is available.

7   Table T7   Carbon stock

No data is available.

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)
Data compiled from various territorial (13 Districts)	M	Areas affected by fire	1994

8.2.2 Classification and definitions

National class	Definition
Forest fire	There is no agreed definition and no distinction between controlled and fire and wild fire. The two categories are human induced (farming, for grazing, indiscriminate burning, accidental, etc) and natural causes (eg. Lightning).
Disturbances by diseases / pathogen	Main threat is Gall Rust which primarily affects *Paraserianthes falcataria* which is a non-indigenous species planted as shade tree over coffee plantations.

8.2.3 Original data

Data on areas damaged by fire is incomplete but based on 1994 data, a total of 60,301 hectares have been damaged by fire within this year alone.

8.3   Analysis and processing of national data

This step is not needed.

8.4   Reclassification into FRA 2005 classes

This step is not needed.

8.5   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	ID	ID	ID	ID
Disturbance by insects	nda	nda	ID	ID
Disturbance by diseases	nda	nda	ID	ID
Other disturbance	nda	nda	ID	ID

8.6   Comments to National reporting table T8

Two identified disturbances affecting health and vitality of forest in Timor – Leste includes forest fire and disease. Forest fire occurs mainly due to causes such as farming, livestock grazing, fuelwood gathering and hunting. Forest fire normally happens in dry forest areas dominated by grasses, *Eucalyptus alba,* bamboo, *Casuarina equisitefolia,* and *Tectona grandis*.

Data on areas damaged by fire is incomplete but based on 1994 data, a total of 60,301 hectares have been damaged by fire within this year alone. Likewise, disease (identified as gall rust) mostly affects *Paraserianthes falcaltaria* planted as shade tree for coffee.

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
Department of Forestry and Water Resources	M	Preliminary survey on Flora and Fauna in Timor-Leste	2003	This survey conducted in collaboration with Bird Life International. This document is not finished yet (Draft only).

9.2.2 Classification and definitions

No information on national definitions or classifications relevant to his table is available.

9.2.3 Original data

Based on ocular observations, there are 3 dominant native species available such as Eucalyptus *alba, Eucalyptus urophylla and Pterocarpus indicus* and the most valuable among the native species includes *Santalum album* and *Pterocarpus indicus.*

Preliminary survey on Flora and Fauna in Timor-Leste was conducted in collaboration with Bird Life International and its report is under finalization by the Forestry Department. During this survey, more than 251 species have been identified as native tree species.

Nationally Sandal wood (*Santalum album)* is a critically endangered species. The IUCN Red List does not have list Timor Leste in its list of countries

9.3   Data for National reporting table T9

FRA 2005 Categories	Number of species (year 2000)
Native tree species	251
Critically endangered tree species	NDA
Endangered tree species	NDA
Vulnerable tree species	NDA

9.4   Comments to National reporting table T9

The IUCN Red List does not list Timor Leste in its list of countries.

Based on ocular observations, there are 3 dominant native species available such as *Eucalyptus alba, Eucalyptus urophylla and Pterocarpus indicus* and the most valuable among the native species includes *Santalum album* and *Pterocarpus indicus.*

Preliminary survey on Flora and Fauna in Timor-Leste was conducted in collaboration with Bird Life International and its report is under finalization by the Forestry Department. During this survey, more than 251 species have been identified as native tree species.

Nationally Sandal wood (*Santalum album)* is a critically endangered species.

10 Table T10   Growing stock composition

No data available.

11 Table T11   Wood removal

Removal of wood for industrial purposes is currently banned. Cutting of big diameter trees is permitted only for domestic use. From 2000 to the present, approximately a total of 3,750 m^3 have been permitted by government for cutting. Cutting of trees for industrial purposes happens illegally and this mostly happens to sandalwood. From March 2002 to November 2003, a total of 572,290 tons of illegally cut sandalwood have been reported by the Police Authority.

Aside from cutting of big diameter trees, another form of wood removal is fuelwood gathering. JICA (2002) estimated that about 93% of household energy requirements for cooking are supplied through fuelwood. This makes the average annual fuelwood consumption estimated to about 1.3 million m^3.

12 Table T12   Value of wood removal

No Data is available.

13 Table T13   Non-wood forest product removal

There is no national quantitative data available of non wood forest products removal and use etc. A number of localised studies have been undertaken by various agencies but it is not possible or advisable to extrapolate from these to the national level.

However, it can be judged that the life of Timorese people is also dependent on non wood forest products. Among the commonly harvested non wood products includes bamboo (house construction, furniture making and traditional ceremony), rattan (furniture), honey (food and medicine), palm (house construction, wine and starch), medicinal plants and grasses (for traditional house roofing).

JICA (2002) study indicated that during 1992 to 1998 annually about 0.760 tonne of sandal wood , 640 tons of Honey and 6867 tons of Candle nut were removed form forest areas.

14 Table T14   Value of non-wood forest product removal

No data available.

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

15.2.2 Classification and definitions

There are no national definitions and classifications relevant to this table.

15.2.3 Original data

There is no quantitative data on the percentage of the population that obtains employment in forestry except in government services, which at present employs 57 permanent staff. In rural areas however, forestry activities that provides cash income where the community members are mostly engaged includes fuel wood gathering, hunting, collection of palm wine, production of palm stem panel for house walling, collection of palm leaves for house roofing, harvesting of rattan, harvesting of bamboo, thinning, nursery and gathering of honey.

15.3 Analysis and processing of national data

This step is not needed.

15.4 Reclassification into FRA 2005 classes

This step is not needed.

15.5 Data for National reporting table T15

FRA 2005 Categories	Employment (1000 person-years)	
	1990	**2000**
Primary production of goods	0.057	0.057
Provision of services		
Unspecified forestry activities		
TOTAL	0.057	0.057

15.6 Comments to National reporting table T15

There is no quantitative data on the percentage of the population that obtains employment in forestry except in government services, which at present employs 57 permanent staff. In rural areas however, forestry activities that provides cash income where the community members are mostly engaged includes fuel wood gathering, hunting, collection of palm wine, production of palm stem panel for house walling, collection of palm leaves for house roofing, harvesting of rattan, harvesting of bamboo, thinning, nursery and gathering of honey.