

# GLOBAL FOREST RESOURCES ASSESSMENT 2015

## COUNTRY REPORT

# **Sri Lanka**

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.

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

### Introductory Text

Place an introductory text on the content of this report

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### 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
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1	Legg and Jewell. 1995. A 1:50.000 scale Forest Map of Sri Lanka: The basis for National Geographic System. Christopher Legg and Nicholas Jewell. The Sri Lanka Forester. Special Issue 1995.	Vegetation types & canopy cover	1992	Satellite imageries and aerial photos taken in 1992 and field checking
2	GOSL. 2000. Forest Cover Mapping 2000. Forest Inventory Division. Forest Department. Sri Lanka	Vegetation types & canopy cover	1996	Satellite imageries and aerial photos taken in 1996 and field checking
3	GOSL. 2010. Forest Cover Mapping 2010. Forest Inventory Division. Forest Department. Sri Lanka	Vegetation types & canopy cover	2010	Satellite imageries and aerial photos taken in 2008/2009 and field checking
4	FAO. 1996. Sri Lanka Profile, In Asia Pacific Agroforestry Profiles: Second Edition. RAP Publication 1996/20. Asia – Pacific Agroforestry Network. FAO. Bangkok.	Land use type & extent	1994	N/A
5	CBSL.2004. Sri Lanka Socio-Economic Data 2004, Vol Xxvii, Central Bank Of Sri Lanka, June 2004	Rubber Plantation	1978-2003	N/A
6	GOSL. 1999. Biodiversity Conservation in Sri Lanka – A framework for Action, Ministry of Forestry & Environment Sri Lanka	Definitions	N/A	N/A

### 1.2.2 Classification and definitions

National class	Definition
Closed Canopy Forests	All lands, with a forest cover with canopy density of 70 percent or above
Montane Forest	Altitude 1500 – 2500 m. Annual rainfall 2500 – 5000 mm. No dry months
Sub-Montane Forest	Altitude 1000 – 1500 m. Annual rainfall 2500 – 5000 mm. No dry months
Lowland Forest(Tropical Wet Evergreen Forest)	Altitude 0 – 1000 m. Annual rainfall 2500 – 5000 mm. No dry months
Moist Monsoon Forest(Moist Evergreen Forest)	Altitude 0 – 1000 m. Annual rainfall 1900 – 2500mm. Less than 3 dry months
Dry Monsoon Forest(Dry Mixed Evergreen Forest)	Altitude 0 – 500 m. Annual rainfall 1250 – 1900 mm. 4-5 dry months
Riverine Forest	Forests found along the rivers and streams

Mangrove Forest	Area covered by Mangrove Vegetation
Open Canopy Forests Sparse Forests	All lands, with a forest cover with canopy density less than 70 percent

## 1.2.3 Original data

<b>Forest area</b>		
<b>(1994)</b>		
<b>Land category</b>	<b>Specific land use</b>	<b>Ha</b>
<b>Urban Land</b>		
	Built-up land	22,640
	Associated non-agricultural land	7,319
<b>Agricultural land</b>		
	Homesteads	781,280
	Tree & Other Perennial Crops	
	Tea	201,630
	Rubber	166,500
	Coconut	332,140
	Cinnamon	8,880
	Cashew	580
	Oil-palm	1,070
	Other perennial crops	54,740
<b>Crop land</b>		
	Paddy	494,460
	Sparsely used cropland	1,069,990
	Other crop land	599,110
<b>Forestland</b>		
	Natural Forest	

		Dense forest	1,582,700
		Open forest	463,800
	ForestPlantations		72,300
<b>Range land</b>			
	Scrub land		205,630
	Grass land		91,190
<b>Wet land</b>			
	Forested		
		Mangroves	20,150
	Non- forested		
		Marsh	42,400
<b>Water</b>			290,520
<b>Barren land</b>			77,480
<b>Total</b>			<b>6,586,509</b>

( Source: Asia – Pacific Agroforestry Profiles: Second Edition, Sri Lanka Profile, Asia – Pacific Agroforestry network )

#### Area of Natural Forest by National Classes, 1992 , 1996& 2008

ForestClass	1992 (ha)	1996 (ha)	2010 (ha)
Montane Forest	3,108	3,099	44,758
Sub-montane Forest	68,838	65,792	28,513
Lowland Rain Forest	141,549	124,340	123,302
Moist Monsoon Forest	243,877	221977	117,885
Dry Monsoon Forest	1,094,287	1,027,544	1,121,392
Riverine Dry Forest	22,411	18,352	2,425
Mangroves	8,687	9,530	15,669



Sparse Forest	463,842	471,583	445,485
Forest Plantations Excluding Rubber	72,340	79,940	78,488
<b>Total Forest Area</b>	<b>2,118,940</b>	<b>2,022,160</b>	<b>1,977,916</b>
<b>Total Land Area</b>	<b>6,586,509</b>	<b>6,616,628</b>	<b>6,561,000</b>

### Area of Rubber Plantations

Category	2002	2003	2004	2005	2006
Main Agricultural Crops	114	114	114	116	116
Rubber Plantations (000 ha)					

(  
statistical hand book ,2007. Department of census and statistics . Sri Lanka)

## 1.3 Analysis and processing of national data

### 1.3.1 Adjustment

#### Forest area

The calibration step was implemented as country land area figures did not match with the FAOSTAT. The forests figures were kept intact and all necessary adjustments were made in the area of “Other lands”. Further, the area of inland water bodies was taken as maintained by FAOSTAT. All the forest classes listed in 1992 and 1996 were classified as “forests”. Other wooded land category was separated as it is classified in 2010 estimates. However to match country definition the rubber plantation areas were not included in the area under forests.

FRA Categories	Area (1000 hectares)		
	1992	1996	2010
Forest excluding rubber	2119	2022	1978
Other Wooded Land	0	0	52
Other Land	4152	4249	4241

.....of which with tree cover	n.a	n.a.	n.a.
Inland water bodies	290	290	290
<b>TOTAL</b>	<b>6,561</b>	<b>6,561</b>	<b>6,561</b>

### 1.3.2 Estimation and forecasting

#### Forest area

##### A. Excluding Rubber Plantations

The available data provides information for 1992 , 1996 and 2010. Therefore, figures for 1990 , 2000,2005 were estimated using linear-interpolation. To match national definitions the area of rubber plantation was included.

FRA Categories	Area (1000 hectares)				
	1990	2000	2005	2010	
Forest excluding rubber	2101	2035	2002	1978	
Other wooded Lands	0	0	0	52	
Other Land	4170	4136	4269	4241	
Inland water bodies	290	290	290	290	
<b>TOTAL</b>	<b>6,561</b>	<b>6,561</b>	<b>6,561</b>	<b>6,561</b>	

##### B. Rubber Plantations

The estimate of area in 1990 and 2000 under rubber trees was used from FRA 2010. . The information for 2005 and 2010 was directly available in the original data.

Category	Area in 000 ha
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	1990	2000	2005	2010
Rubber Plantations	183	157	116	125

### C. Including Rubber Plantations

The area of rubber plantation was added to area of forest to match FRA definition of forests.

	Area (1000 hectares)			
FRA Categories	1990	2000	2005	2010
Forests including rubber	2284	2192	2118	2103
Other Wooded Land	0	0	0	52
Other Land	3987	4079	4153	4116
.....of which with tree cover	n.a.	n.a.	n.a.	n a
Inland water bodies	290	290	290	290
<b>TOTAL</b>	<b>6,561</b>	<b>6,561</b>	<b>6,561</b>	<b>6561</b>

### 1.3.3 Reclassification

Forest area					
	Percentage allocation of a national category to FRA categories				
FRA Categories	Forests	Other Wooded land	Other Land	... of which with tree cover	Inland water bodies
Forests including rubber	100	0	0	0	0

Other Wooded Land		100			
Other Land			100		
.....of which with tree cover				100	
Inland water bodies					100
<b>TOTAL</b>					

**Data for 2015 were estimated using linear extrapolation. The area of other wooded lands of 2010 was taken good for 2015 and the FAOSTAT figure 2013 considered( 2009 official area ) as the inland water bodies of the country.**

Accordingly following extents were estimated.

FRA Categories	Area (1000 hectares)					
	1990	2000	2005	2010	2015	
Forest excluding rubber	2101	2035	2002	<b>1978</b>	<b>1936</b>	
Other wooded Lands	0	0	0	<b>52</b>	<b>52</b>	
Other Land	4170	4236	4269	<b>4241</b>	<b>4283</b>	
Inland water bodies	290	290	290	<b>290</b>	<b>290</b>	
<b>TOTAL</b>	<b>6,561</b>	<b>6,561</b>	<b>6,561</b>	<b>6,561</b>	<b>6561</b>	

As per the statistical information on plantation crops 2010 by ministry of plantation industries, Sri Lanka, the extent of Rubber plantations in Sri Lanka as follows:

Year	2005	2006	2007	2008	2009	2010
Extent (ha)	116,050	119,500	119,543	122,200	124,300	125,645

Using the linear extrapolation method, estimate of Rubber plantation for 2015 was calculated.

Accordingly figures for Table 1a were estimated.

## 1.4 Data

Table 1a












Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	2284	2192	2118	2103	2070
	Other wooded land	0	0	0	52	52
	Other land	3987	4079	4153	4116	4149
	... of which with tree cover	N/A	N/A	N/A	N/A	N/A
	Inland water bodies	290	290	290	290	290
	TOTAL	6561.00	6561.00	6561.00	6561.00	6561.00

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	0	0	0	0	0	0	0	0
	... of which afforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which natural expansion of forest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	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	0	0	0	N/A	N/A	N/A	N/A
	... of which artificial	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

### Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 3	Tier 1
Other wooded land	Tier 3	Tier 1
Forest expansion	Tier 1	Tier 1
Deforestation	N/A	N/A

Reforestation	Tier 3	Tier 3
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## Tier criteria

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

## 1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	In 2010 estimates Dense forest classified as land extent more than 5 ha, tree height higher than 5 meters and the canopy cover more than 40 percent, open forest canopy cover between 10-40 percent	N/A
Other wooded land	Areas of other wooded land estimated in 2010 as a category of savanna lands with crown density 4-10 % treated as this category	N/A
Other land	N/A	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	FAOSTAT 2013 figure for inland waters was used	N/A
Forest expansion	N/A	N/A
Deforestation	N/A	N/A
Reforestation	N/A	N/A

## Other general comments to the table

1. The country does not consider rubber as part of forests. The above table has been developed for the purposes of FRA only.2. Coconut timber plays an important role in wood industry in Sri Lanka. It is considered as a multipurpose tree and grown in home gardens as well as large plantations.

## 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 <b>outside</b> 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	GOSL. 2010. Forest Cover Mapping 2010. Forest Inventory Division. Forest Department. Sri Lanka	Vegetation types & canopy cover	2010	Satellite imageries and aerial photos taken in 2008/2009 and field checking
2	FAO.2007. Mangroves of Asia, working paper 137	Mangroves	N/A	Secondary source
3	FAO. 2005. Thematic study on bamboo, Country report of Sri Lanka Working paper 137	Bamboo	N/A	Secondary source

4	N/A	N/A	N/A	N/A
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## 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

National Data on the following	1992	1996
Primary	245	221

Data for mangroves of 1992 and 1996 come from the FAO Atlas of Mangroves which reports the followings:

Mangroves area ha	1992	1996	2010	2015
	8,688	9,530	15,699	15,699

## 2.3 Analysis and processing of national data

### 2.3.1 Adjustment

The linear interpolation and extrapolation method was used to estimate and forecast the area of primary forests using the original data for 1992 and 1996.

Variable	Area in 000 ha				
	1990	2000	2005	2010	2015
Primary Forest	257	197	167	167	167



## 2.3.2 Estimation and forecasting

The linear interpolation and extrapolation method was used to estimate and forecast the area of primary forests using the original data for 1992 and 1996.

Variable	Area in 000 ha				
	1990	2000	2005	2010	2015
Primary Forest	257	197	167	167	167

## 2.3.3 Reclassification

## 2.4 Data

Table 2a







Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	257	197	167	167	167
	Other naturally regenerated forest	1769	1761	1756	1731	1688
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	258	234	195	205	215
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
TOTAL		2284.00	2192.00	2118.00	2103.00	2070.00

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)	9.109	11.214	12.267	15.669	15.669
... 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 2	Tier 2
Other naturally regenerated forest	Tier 2	Tier 2
Planted forest	Tier 3	Tier 3
Mangroves	Tier 3	Tier 3

## Tier Criteria

Category	Tier for status	Tier for reported trend
Primary forest/Other naturally regenerated forest/Planted forest	<p><b>Tier 3</b> : 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><b>Tier 2</b> : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years)</p> <p><b>Tier 1</b> : Other</p>	<p><b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status)</p> <p><b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status)</p> <p><b>Tier 1</b> : Other</p>

## 2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	N/A	Primary forests are totally conserved.
Other naturally regenerating forest	N/A	N/A
Planted forest	N/A	N/A
Mangroves	N/A	N/A

**Other general comments to the table**

N/A
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### 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	FSMP. 1995. Forestry Sector Mater Plan. Sri Lanka.	Volume	1992	N/A
2	National Forestry Inventory - 1986	Volume	1982-85	N/A
3	FSMP. 1995. Forestry Sector Mater Plan. Sri Lanka.	Volume	1992	N/A

4	GOSL. 1995. A summary of the Methodology and results of the Indicative Inventory, 1993. J.H. Sandom. Forest Management and Plantation Project (GOSL/ODA).Forest Department, GOSL, Colombo.	Volume	N/A	N/A
5	Legg and Jewell. 1995. A 1:50.000 scale Forest Map of Sri Lanka: The basis for National Geographic System. Christopher Legg and Nicholas Jewell. The Sri Lanka Forester. Special Issue 1995.	Volume	1992	N/A
6	GOSL. 2000. Forest Cover Mapping 2000. Forest Inventory Division. Forest Department. Sri Lanka	Volume	1996	N/A
7	GOSL. 2010. Forest Cover Mapping 2010. Forest Inventory Division. Forest Department. Sri Lanka	Volume	2010	N/A
8	FAO. 2012. Guidelines for Country Reporting to FRA 2015. Global Forest Resources Assessment 2015	N/A	N/A	Biomass conversion and expansion factor (BCEF) and root-shoot ratio from appendix 5 FRA 2015 guidelinesCarbon conversion factor of 0.47

### 3.2.2 Classification and definitions

National class	Definition
Not available	N/A
N/A	N/A
N/A	N/A
N/A	N/A

### 3.2.3 Original data

<b>Growing stock</b>
----------------------

<b>ForestType</b>	<b>1992 (Legg and Jwell, 1995)  (Area in ha)</b>	<b>1996 (GOSL, 2000)  (Area in ha)</b>	<b>2008 (GOSL 2010)  (Area in ha)</b>	<b>1984 and 1993 (NFI, 1986) and (GOSL, 1995)  (cubic meter/ha)</b>
Montane Forest	3,108	3,099	44,758	9
Sub-montane Forest	68,838	65,792	28,512	9
Lowland Rain Forest	141,549	124,340	123,302	126
Moist Monsoon Forest	243,877	221,977	117,885	29
Dry Monsoon Forest	1,094,287	1,027,544	1,121,392	15
Riverine Dry Forest	22,411	18,352	2,425	15
Mangroves	8,687	9,530	15,669	10
Sparse Forest	463,842	471,583	445,485	5
Forest Plantations Excluding Rubber	72,340	79,940	78,448	40
Other wooded Lands	0	0	52,000	3*

\* For other wooded lands experts and field estimates were applied.

### **Biomass stock**

No national data on biomass were available so IPCC default values were applied to the growing stock as in table 6.

### **Carbon stock**

No original data on carbon were available, so the carbon conversion factor of 0.47 recommended in the FRA guidelines has been applied to the biomass data.

Carbon in litter has been estimated using table 5.9 of Appendix 5 of the FRA 2015 Guidelines considering a default value of 2.1t/ha.

### 3.3 Analysis and processing of national data

#### 3.3.1 Adjustment

#### 3.3.2 Estimation and forecasting

##### **Biomass stock** Above ground biomass:

Following recommendations from FRA 2015 guidelines the following assumptions and calculations have been made:

From appendix 5, table 5.4 page 6 of the FRA guidelines and considering an ecological zone corresponding to the humid tropical the biomass conversion and expansion factor (BCEF) of 2.8 have been applied to the growing stock:

##### Below ground biomass :

From appendix 5, table 5.3 page 5 of the FRA guidelines, considering an above ground biomass >20t/ha and a tropical dry forest biome, the root-shoot ratio of 0.20 has been chosen.

	1990	2000	2005	2010	2015
Growing stock (million m <sup>3</sup> )	54.32	50.58	47.64	47.05	45.81
BCEF	2.80	2.80	2.80	2.80	2.80
Aboveground biomass (million tonnes)	152.09	141.62	132.39	131.74	128.27
Root-shoot ratio	0.20	0.20	0.20	0.20	0.20
Belowground biomass	30.42	28.32	26.68	26.35	25.65

## 3.3.3 Reclassification

**Growing stock****A. Growing stock per hectare in Forests without Rubber Plantations**

Following estimation of growing stock have been made assuming that the growing stock density of 1986 of different forest types also to hold good for 1992, 1996 and 2010.

	<b>Volume 1992</b>	<b>Volume 1996</b>	<b>Volume 2010</b>
Total Growing Stock in forests (excluding rubber)	47,605	44,063	41,982
Total Forest Area (000 ha) excluding rubber	2,119	2,022	1978
<b>Growing Stock/ha in forests</b>	<b>22.47</b>	<b>21.79</b>	<b>21.22</b>

This leads to following estimates( using extrapolation and interpolation) of growing stock per hectare in forests (excluding rubber plantations) in 1990, 2000 , 2005 , 2010 and 2015.

<b>Variables</b>	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>
Growing Stock ( m <sup>3</sup> /ha) in Forests Excluding Rubber	22.44	21.78	21.47	21.22	20.85

**B. Growing Stock per ha in Rubber Plantations**

It has been assumed that growing stock per hectare in Rubber plantations in 1990, 2000 and 2005 is similar to that (40 m<sup>3</sup> / ha) in Forest plantations in 1986 .



**C. Total Growing Stock in 1990, 2000 , 2005 and 2010 and 2015**

Variable	Growing Stock in million m <sup>3</sup>				
	1990	2000	2005	2010	2015
Forest Excluding Rubber	47.00	44.30	43.00	41.90	40.30
Rubber Plantations	7.32	6.28	4.64	5.00	5.36
Total Forests	54.32	50.58	47.64	46.9	45.66
Other wooded Lands	0	0	0	0.15	0.15

**3.4 Data**

Table 3a




Category		Growing stock volume (million m <sup>3</sup> over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	54.32	50.58	47.64	46.9	45.66	N/A	N/A	N/A	0.15	0.15
	... of which coniferous	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	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	Drypetes sepiaria	Weera	N/A	N/A	N/A	N/A
2 nd	Vitex alticima	Milla	N/A	N/A	N/A	N/A
3 rd	Chloroxylon switinia	Burutha	N/A	N/A	N/A	N/A



4 th	Berria Cordifolia	Halmilla	N/A	N/A	N/A	N/A
5 th	Dimocarpus longan	Mora	N/A	N/A	N/A	N/A
6 th	Bauhinia racimosa	Maila	N/A	N/A	N/A	N/A
7 th	Prerospermum canscens	Welan	N/A	N/A	N/A	N/A
8 th	Schleichera oleosa	Kon	N/A	N/A	N/A	N/A
9 th	Syzybium cumini	Madan	N/A	N/A	N/A	N/A
10 th	Myristica dactiloydes	Malaboda	N/A	N/A	N/A	N/A
Remaining			N/A	N/A	N/A	N/A
TOTAL			.00	.00	.00	.00

**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)	10cm	
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	10cm	
Minimum diameter (cm) of branches included in growing stock (W)	10cm	
Volume refers to above ground (AG) or above stump (AS)	AS	

**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 <sup>3</sup> 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

CFRQ	... of which broadleaved	N/A	N/A	N/A	N/A	N/A
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Table 3d

Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
CFRQ	Above ground biomass	152.09	141.62	133.39	131.32	127.84	N/A	N/A	N/A	0.42	0.42
CFRQ	Below ground biomass	30.41	28.32	26.67	26.35	25.65	N/A	N/A	N/A	0.084	0.084
CFRQ	Dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		182.50	169.94	160.06	157.67	153.49	.00	.00	.00	.50	.50

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
CFRQ	Carbon in above ground biomass	71.48	66.55	62.69	61.72	60.08	N/A	N/A	N/A	0.19	0.19
CFRQ	Carbon in below ground biomass	14.28	13.31	12.53	12.34	12.01	N/A	N/A	N/A	0.04	0.04
CFRQ	<i>Subtotal Living biomass</i>	85.76	79.86	75.22	74.06	72.09	N/A	N/A	N/A	N/A	N/A
CFRQ	Carbon in dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CFRQ	Carbon in litter	N/A	N/A	N/A	N/A	4.34	N/A	N/A	N/A	N/A	N/A
CFRQ	<i>Subtotal Dead wood and litter</i>	4.8	4.6	4.44	4.41	4.34	N/A	N/A	N/A	N/A	N/A
CFRQ	Soil carbon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

TOTAL	85.76	79.86	75.22	74.06	76.43	.00	.00	.00	.23	.23
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## 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	Tier 1	Tier 1
Dead wood	N/A	N/A
Carbon in above-ground biomass	Tier 1	Tier 1
Carbon in below ground biomass	Tier 1	Tier 1
Carbon in dead wood and litter	Tier 1	Tier 1
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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

<ul style="list-style-type: none"> <li>• Carbon in above ground biomass</li> <li>• Carbon in below ground biomass</li> <li>• Carbon in dead wood and litter</li> <li>• Soil carbon</li> </ul>	<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><b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other</p>
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### 3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	Since there were no new updated national forestry inventory to provide information on growing stock, the data of national forestry inventory – 1986 has been used. These estimates have been updated with the help of the indicative inventory of 1993 and the management plans of forest plantations.	N/A
Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	N/A	N/A
Net annual increment	N/A	N/A
Above-ground biomass	N/A	N/A
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	Using IPCC values carbon in dead wood and litter calcualtes.	N/A
Carbon in litter	IPCC has provided combined value for litter and dead wood	N/A
Soil carbon	We have used IPCC values of LAC soils which gave much higher value than above ground carbon stocks. Therefore, soil carbon stocks were not stated.	N/A

**Other general comments to the table**

**Growing stock** There has been only one complete National Forest Inventory in 1986. It was spread over four years period from 1982 to 1985. Its data on volume in forest has been assumed to be from 1984 (one of the two mid years -1983 and 1984). The 1986 figures for Low land Rain Forests, Monsoon Forests and Dry Monsoon Forests have been upgraded with the help of information from indicative inventory of 1993. The indicative inventory figures were conservative to the extent that it estimates volume from trees above 30 cm diameter only. Similarly figures for growing stock of various species in plantations has been updated with the help of information coming from their respective management plans.

## 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	FSMP. 1995. Forestry Sector Mater Plan. Sri Lanka	Plantation Areas	1992	N/A
2	GOSL. 2003. Forest Department Annual Report – 2003	Plantation Areas	2003	N/A
3	UNEP_WCMC. 2005. The World Database on Protected Areas (WDPA).	Protected Areas	2004	N/A
4	Legg and Jewell. 1995. A 1:50.000 scale Forest Map of Sri Lanka: The basis for National Geographic System. Christopher Legg and Nicholas Jewell. The Sri Lanka Forester. Special Issue 1995.	Vegetation types & canopy cover	1992	N/A

5	GOSL. 2010. Forest Cover Mapping 2010. Forest Inventory Division. Forest Department. Sri Lanka	Vegetation types & canopy cover	2010	Satellite imageries and aerial photos taken in 2008/2009 and field checking
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#### 4.2.2 Classification and definitions

National class	Definition
Area with Forest Department Conservation Forests Forest Reserve Proposed Reserve National Heritage Wilderness Area	Forest areas administered by the Forest Department Natural Forest areas which, have been gazetted as Conservation forests Natural Forest areas which, have been gazetted as Forest Reserves & Forest Plantations Natural Forest areas pending to be gazetted as Forest Reserves or Conservation forests Forest Lands declared under National Heritage Wilderness Area Act
Area with Department of Wildlife Conservation Jungle Corridors National Parks Nature Reserves Sanctuaries Strict Nature reserves	Areas declared under the Flora & Fauna Protection Ordinance and administered by the Department of Wildlife Conservation Area that has been used to combine two or more areas administered by the Department of Wildlife Conservation Area open for general public and used for ecotourism development activities Restricted visitor activities and mainly focus on Biodiversity Conservation Both private and public land where development activities are controlled Areas strictly reserved for Biodiversity conservation and only research works are allowed
N/A	N/A
N/A	N/A

#### 4.2.3 Original data

National statistics are not maintained by designation of forests as given in FRA categories and definitions. However, areas administered by the Department of Wildlife Conservation could be further classified according to the objectives of management. Areas under Forest Department can also be broadly categorised into four categories based on management objectives.

##### A. Forest Plantations Excluding Rubber

The main production activity in forest areas in Sri Lanka is confined to plantation areas. The following table provides the area under plantations in 1995 based on FSMP (1995) and Legg and Jwell (1995).

Species	Extent in 000 ha
Conifers	16.8
Eucalyptus and Acacias	16.2



Teak	35.3
Mahogany	4.0
<b>Total</b>	<b>72.3</b>

The above figures of area under plantations are being regularly updated by successive plantation inventories. The country information for FRA 2000 provides the following information by purpose of plantations in 1998 based on Plantation Management Plans of Pines, Eucalyptus, Teak and Mahogany.

Species	Area in 1998			
	Productive	Protective	Conservation	Total
Conifers	12.1	2.5	1.0	15.6
Eucalyptus	5.1	3.3		8.4
Teak	18.4	10.7	3.9	33.0
Mahogany	3.0	0.1		3.1
<b>Total</b>	<b>38.6</b>	<b>16.6</b>	<b>4.9</b>	<b>60.1</b>
<b>Percentage</b>	<b>64</b>	<b>28</b>	<b>8</b>	<b>100</b>

The forest statistics provides following information on plantations in for 2003 and 2010

Species	2003(Area in 000 ha)	2010(Area in 000 ha)
Conifers	16.4	15.7
Eucalyptus and Acacias	27.5	26.2
Teak	31.7	26
Mahogany	2.8	4.9
Miscellaneous	14.5	5.6
<b>Total Including Misc.</b>	<b>93.0</b>	<b>78.4</b>
<b>Total Excluding Misc.</b>	<b>78.5</b>	<b>72.8</b>

## B. Area of Rubber plantations

The information from Table 1 has been used.

## C. Conservation of Biodiversity

The protected area details at the website of UNEP-WCMC provides following information on PAs in Sri Lanka till 2000. The protected areas declared by DWC and FD after 2000 are also given in the table below. Land cover of some of the protected areas are not forests. There are scrub forests, grasslands that are as protected areas but not as forests according to the FAO classification.

Year	Area in ha.	Year	Area in ha.	Year	Area in ha.
1875	6,283	1931	493	1992	3,125
1888	150	1932	7,030	1998	-45
1890	5,455	1933	379	Till 2000	551,571
1892	6,163	1935	7,536	Till 2007	1,208,522
1893	1,747	1936	5,540	2007	35,600
1894	861	1937	506	2008	16,806
1895	24	1938	1,528	2009	50,361
1896	16,781	1939	21,165	2010	49,680
1897	196	1940	24,234	Till 2010	1,360,969
1898	0	1941	4,367	2011	2,324
1899	86	1942	26,580	2012	291,303
1901	458	1943	539	Till 2012	1,654,596
1902	47,259	1944	5,664		
1903	636	1946	2,746		
1912	8,730	1948	103		
1918	145	1949	73		
1921	122,500	1950	2,520		
1922	285	1970	10,360		

1924	3,313	1978	1,372		
1927	82,225	1979	45		
1929	110,881	1980	3,416		
1930	8,117	Till 1990	548,491		

### 4.3 Analysis and processing of national data

#### 4.3.1 Adjustment

#### 4.3.2 Estimation and forecasting

##### A. Forest Plantation Excluding Rubber

The net plantation area has been calculated using the ratio (0.83) between the areas of plantations contained in management plans for plantations and reported in FSMP. Further, the ratio of production, protective and conservation plantations from management plans has been used to break down the net plantation figure into these categories. Lastly linear interpolation and extrapolation method has been used to estimate following figures for 1990, 2000, 2005, and 2015.

Variable	1992	1996	2003	2010	1990	2000	2005	2010	2015	
Gross Total Plantation Area (000 ha)	72.3	79.9	78.5	78.4	75.3	77.5	78.6	78.4	80.80	
Ratio Net/ Total	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	0.83	

Net Total Plantation Area (000 ha)	60.0	66.1	65.2	65.2	62.5	64.3	65.2	65.1	67.10	
Productive Plantation (000 ha)	38.4	42.3	41.7	41.7	40.0	41.1	41.7	41.6	42.90	
Protective Plantation (000 ha)	16.8	18.5	18.2	18.2	17.5	18.5	17.9	18.2	18.70	
Conservation Plantation (000 ha)	4.8	5.3	5.2	5.3	5.0	4.7	5.6	5.2	5.50	

### B. Rubber Plantation

These plantation has been treated as productive plantation.

Variable	Area in 000 ha				
	1990	2000	2005	2010	2015
Rubber Plantations	183	157	116	125	134

### C. Protected Area

The 2005 forecast has been developed through linear extra-polation method. It has been assumed that all the area is forested with more than 10 percent cover. It was assume that protected area figure 2012 holds good for 2015.

Variable	Area in 000 ha				
	1990	2000	2005	2010	2015
Protected Areas	548.5	551.6	1023.4	1360.9	1654.5

#### D. Forests for Protection of Soil and Water

The area of protective plantations and all natural forests identified for soil and water protection has been used for this purpose regardless its designated primarily or not..

#### D. Remaining forest

The total forest area except that under plantations and natural forests primarily designated for soil and water and biological diversity has been assumed to serve multiple purpose function.

#### 4.3.3 Reclassification

##### A. Primary Function

National Category	Percentage allocation of a National Class to FRA Categories- Primary Function					
	Production	Protection	Conservation	Social Service	Multipurpose	No or Unknown
Production Plantation	100					
Protective Plantation		100				
Conservation Plantations			100			
Protected Areas		2.4*	37.4*		60.2	
Rubber Plantations	100					

RemainderForestAreas				100	
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\*primary function of biodiversity conservation and soil and water protection

#### 4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	223	198	158	167	177
	Multiple use forest	1465.9	1405	1337.8	1289	1211.1

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	Resin	Pinuscaribeae	7725.52	4
2 nd	Rattan	CalamusSpp	N/A	5
3 rd	Bamboo	BambooSpp	N/A	5
4 th	Wildfruit&edibleplants	N/A	N/A	1
5 th	MedicinalPlants	N/A	N/A	3
6 th	TreacleandJuggery	Carriotaurens	N/A	1
7 th	BeeHoney	N/A	N/A	11
8 th	Bushmeat	N/A	N/A	12
9 th	OrnamentalPlants	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			7725.52	

2010	
Name of local currency	Sri Lankan Rupee

Category
<b>Plant products / raw material</b>
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
<b>Animal products / raw material</b>
9 Living animals
10 Hides skins and trophies
11 Wild honey and beewax
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 <sup>3</sup> u.b.)	
	Total wood removals	...of which woodfuel
1990	7007.05	6349.35
1991	9862.7	9226
1992	9657.7	9002
1993	9895.7	9235
1994	10248.7	9580

1995	10412.7	9726
1996	10401.7	9708
1997	6759.66	6059.96
1998	6635.55	6004.55
1999	6591.17	5955.17
2000	6582.56	5906.56
2001	6533.93	5839.93
2002	6468.37	5774.37
2003	6403.86	5709.86
2004	6340.39	5646.39
2005	6277.92	5583.92
2006	6277.92	5583.92
2007	6125	5431
2008	5968.6	5356.6
2009	5894.45	5283.45
2010	5822.59	5211.59
2011	5822.59	5211.59

## Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 3	Tier 2
Multiple use forest	Tier 3	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 4.5 Comments



<b>Category</b>	<b>Comments related to data definitions etc</b>	<b>Comments on the reported trend</b>
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**

N/A

## 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	Forestry Sector Master Plan 1995	Plantations	1992	N/A

2	Legg and Jewell. 1995. A 1:50.000 scale Forest Map of Sri Lanka: The basis for National Geographic System. Christopher Legg and Nicholas Jewell. The Sri Lanka Forester. Special Issue 1995.	Vegetation types & canopy cover	1992	N/A
3	GOSL. 2010. Forest Cover Mapping 2010. Forest Inventory Division. Forest Department. Sri Lanka	Vegetation types & canopy cover	2010	Satellite imageries and aerial photos taken in 2008/2009 and field checking
4	UNEP_WCMC. 2005. The World Database on Protected Areas (WDPA).	Protected Areas	2004	N/A
5	Information from Forest Department and Department of wild life conservation	Information on protected areas	2007-2012	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

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## 5.3 Analysis and processing of national data

### 5.3.1 Adjustment

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### 5.3.2 Estimation and forecasting

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### 5.3.3 Reclassification

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## 5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
CRQ	Protection of soil and water	156.8	168.4	173.1	246.2	257.1
CRQ	... of which production of clean water	N/A	N/A	N/A	N/A	N/A
CRQ	... of which coastal stabilization	N/A	N/A	N/A	N/A	N/A
CRQ	... of which desertification control	N/A	N/A	N/A	N/A	N/A
CRQ	... of which avalanche control	N/A	N/A	N/A	N/A	N/A
CRQ	... of which erosion, flood protection or reducing flood risk	N/A	N/A	N/A	N/A	N/A
CRQ	... 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	502.5	541	554.8	569.7	572.6
...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	Tier 3	Tier 2
Ecosystem services, cultural or spiritual values	Tier 3	Tier 2

## 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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other
<ul style="list-style-type: none"> <li>• Cultural or spiritual values</li> <li>• Public recreation</li> <li>• Spiritual or cultural services</li> <li>• Other</li> </ul>	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : 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**

The national parks under the department of wildlife conservation and few natural forests under Forest department are allowed for public to see and study wildlife

## 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	FSMP. 1995. Forestry Sector Mater Plan. Sri Lanka	Plantation Areas	1992	N/A
2	GOSL. 2003. Forest Department Annual Report – 2003	Plantation Areas	2003	N/A
3	UNEP_WCMC. 2005. The World Database on Protected Areas (WDPA).	Protected Areas	2004	N/A
4	Biodiversity Secretariat, Ministry of Environment and Removable Resources	Protected areas	2010	N/A
5	Legg and Jewell. 1995. A 1:50,000 scale Forest Map of Sri Lanka: The basis for National Geographic System. Christopher Legg and Nicholas Jewell. The Sri Lanka Forester. Special Issue 1995.	Vegetation types & canopy cover	1992	N/A

#### 6.2.2 Classification and definitions

National class	Definition
Area with Forest Department Forest Reserve Conservation Forests Proposed Reserve National Heritage Wilderness Area	Forest areas administered by the Forest Department Natural Forest areas which, have been gazetted as Forest Reserves & Forest Plantations Natural Forest areas which, have been gazetted as Conservation forests Natural Forest areas pending to be gazetted as Forest Reserves Forest Lands declared under National Heritage Wilderness Area Act

Area with Department of Wildlife Conservation Jungle Corridors National Parks Nature Reserves Sanctuaries Strict Natural reserves	Areas declared under the Flora & Fauna Protection Ordinance and administered by the Department of Wildlife Conservation Area that has been used to combine two or more areas administered by the Department of Wildlife Conservation Area open for general public and used for ecotourism development activities Restricted visitor activities and mainly focus on Biodiversity Conservation Both private and public land where development activities are controlled Areas strictly reserved for Biodiversity conservation and only research works are allowed
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	553.5	556.3	590.4	594.4	623.5
	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 3	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"> <li>Conservation of biodiversity</li> <li>Forests within protected areas</li> </ul>	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	Total protected area is not primarily designated for bio diversity conservation. Conservation forests declared up to 2012 in wet zone of the country was taken for the category	N/A
Forest area within protected areas	N/A	N/A

## Other general comments to the table

The forest areas in the hill country primarily designated for biodiversity conservation are included for soil and water conservation as per the guidelines given in FRA 2015.

## 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	Reports from Field Staff & Annual Administration reports	Forest area affected	2010-2012	N/A
2	Reports from forest Department research staff	New invasive species	2007-2012	Published information
3	Reports from Universities	Do	2005-2012	Published information
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

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### 7.3 Analysis and processing of national data

#### 7.3.1 Adjustment

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## 7.3.2 Estimation and forecasting

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## 7.3.3 Reclassification

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## 7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
1. <i>Alstonia macrophylla</i>	N/A	N/A
2. <i>Lantana camara</i>	N/A	N/A
3. <i>Ulex uropaens</i>	N/A	N/A
4. <i>Ageratum riparia</i>	N/A	N/A
5. <i>Annona glabra</i>	N/A	N/A
6. <i>Ochlandra stridula</i>	N/A	N/A
7. <i>Clusia rosia</i>	N/A	N/A
8. <i>Miconia calvescens</i>	N/A	N/A
9. <i>Clidemia hirta</i>	N/A	N/A
10. <i>Myroxylon balsamum</i>	N/A	N/A
Total	N/A	N/A

## Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 1	Tier 1

## 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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	There are number of invasive species appearing in the forest edges and in degraded forests.	Invasive species are gradually spreading in to forest areas particularly to disturbed forests , increasing trend is observed

## 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	Forest Department field staff reports	Extent damage by fire	2003-2012	All forest fires are human originated. Fire not used as a management tool.
2	Annual Administration reports	Extent damage by fire	2003-2012	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
Forest Fire	Fire recorded in the boundary of lands administered by the Forest Department
Out Break of Insects	Insects damage detected in forest plantations administered by the Forest Department
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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which forest area burned	0.0055	2	0.172	11	0.927	57	0.231	18	0.092	13
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which forest area burned	0.107	16	1.072	112	0.853	62	0.435	62	0.899	80

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	EucalyptusGallWasp	2011	0.08
2	Na	N/A	N/A
3	Na	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 3	Tier 2
<ul style="list-style-type: none"> <li>• Insects</li> <li>• Diseases</li> <li>• Severe weather events</li> </ul>	Tier 2	N/A

## Tier criteria

Category	Tier for status	Tier for reported trend
Burned area	<b>Tier 3</b> : National fire monitoring routines <b>Tier 2</b> : Remote sensing surveys <b>Tier 1</b> : Other	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

<ul style="list-style-type: none"> <li>• Insects</li> <li>• Diseases</li> <li>• Severe weather events</li> </ul>	<p><b>Tier 3</b> : Systematic survey (e.g. via inventory or aerial damage assessment)  <b>Tier 2</b> : Management records <b>Tier 1</b> : Other</p>	<p><b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other</p>
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### 8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	Figures for forest area burnt given are national data.	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	981.32

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

Tier criteria

Category	Tier for reported trend
Reduction in canopy cover	<b>Tier 3</b> : Remote sensing with ground truthing and/or Landsat imagery <b>Tier 2</b> : Remote sensing using Modis (using pre-filled data provided by FAO) <b>Tier 1</b> : 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	Forest Policy Forest Department 1995	N/A	1995	N/A
2	Plantation Species Management plans Forest Department	N/A	1996	N/A
3	Forest Ordinance No 16 of 1907 and subsequent amendments	N/A	2009	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

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## 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	yes			
Legislation and regulations supporting sustainable forest management	yes			
... of which, in <u>publicly</u> owned forests	yes			
... of which, in <u>privately</u> owned forests	yes			

## 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	N/A

Other general comments

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## 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	Forestry Sector Master plan	1995	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
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### 11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	Forest policy working group represented by various stakeholders including NGO, etc. during the process of workshops and formal and informal discussions they could provide opinions recommendations and other inputs. Draft policy document was submitted for public comments too..

Other general comments

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## 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	GOSL. 2010. Forest Cover Mapping 2010. Forest Inventory Division. Forest Department. Sri Lanka	Forest areaVegetation types & canopy cover	2010	Satellite imageries and aerial photos taken in 2008/2009 and field checking
2	Information from forest Inventory and Management division of the , Forest Department and department of wildlife conservation	Forest area	2010	N/A
3	UNEP_WCMC. 2005. The World Database on Protected Areas (WDPA).	Protected Areas	2004	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

## 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	1899.4
	... of which permanent forest estate	1654.5

## 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	<b>Tier 3</b> : National or sub-national land use plans strategy documents or other reports within the past 10 years <b>Tier 2</b> : National or sub-national land use plans strategy documents or other reports within the past 20 years <b>Tier 1</b> : Other
Permanent forest estate	<b>Tier 3</b> : National or sub-national land use plans strategy documents or other reports within the past 10 years <b>Tier 2</b> : National or sub-national land use plans strategy documents or other reports within the past 20 years <b>Tier 1</b> : Other

## 12.5 Comments

Category	Comments related to data definitions etc
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Forest area intended to be in permanent forest land use	Forest area intended to be in permanent forest land use
Permanent forest estate	Permanent forest estate

Other general comments

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### 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	GOSL. 2010. Forest Cover Mapping 2010. Forest Inventory Division. Forest Department. Sri Lanka	Vegetation types & canopy cover	2010	Satellite imageries and aerial photos taken in 2008/2009 and field checking
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	1	2010	no	yes	yes	yes	yes	no
Other field assessments	N/A	N/A	no	yes	no	no	no	no
Updates to other sources	N/A	N/A	no	no	no	no	no	no
Expert estimate	N/A	N/A						

Table 13b

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

Other type of forest reporting
N/A

## 13.4 Comments

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

## Other general comments

--

## 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	Plantation species management plans , Forest department,	Plantation area	1996,1998,2003	N/A
2	Natural forest management plans, forest department	Forest area	1998,2009,2011	N/A
3	Protected area management plans, Dept of Wildlife conservation,	Forest area	2005	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	559.5
... of which for production	72.8
... of which for conservation	486.7

Table 14b

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

1 Soil and water management	yes
2 High conservation value forest delineation	yes
3 Social considerations community involvement	yes

Table 14c

<b>Percent of area under forest management plan that is monitored annually</b>	<b>55</b>
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## Tiers

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

## Tier criteria

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

## 14.4 Comments

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

## Other general comments

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## 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	yes
3. Review of operations	yes

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 3

Tier criteria

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

### 15.2 Comments

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

Other general comments

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## 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	9.37	12.3	17.8	17.8	17.8
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	16.25	17.948	23.17	23.17	22.58	39.26	
	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
	1.Name	0	0	0	0	0	0	0
	2.Name	0	0	0	0	0	0	0
	3.Name	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
	1.Name	0	0	0	0	0	0	
	2.Name	0	0	0	0	0	0	
	3.Name	0	0	0	0	0	0	

## Tier criteria

Category	Tier for status
<b>International</b> 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
<b>Domestic</b> 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
<b>International</b> forest management certification	Tier 3
<b>Domestic</b> 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

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## 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"> <li>• <u>Goods</u> : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products.</li> <li>• <u>Services</u> : 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.</li> </ul>
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	Annual Budgets	I. CategoryII. Allocation (SL Rupees)	2000 20052010	Allocation indicated under each budget category considered
2	1.Administration Reports2.Reports to the Treasury	I. CategoryII. Revenue(SL Rupees)	200020052010	Revenue collected under each category considered
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	238499	312897	894000
Public expenditure on forestry	336000	784834	1004854
	2000	2005	2010

Name of Local Currency	Sri Lankan Rupees	N/A	N/A
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### 17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Forest revenue(As defined in the Forest Ordinance)Revenue collected from issuing permits for timber depots, sale of planting material, sale of leaflets and other forest extension material, visitor charges to protected areas, stumpage paid on plantation harvesting, maintenance of quarries etc within the forest boundary Revenue to the state is reported. The total income earned by private sector (eg. Tourism activities etc) is not reflected here.
Public expenditure on forestry	Operational expenditureInclude expenditure on supporting staff (salaries and wages) employed in Forestry institutionsTransfer paymentsIncentives paid to the communities and community organizations for involvement of Forestry related activities
Other general comments	N/A

#### Other general comments

Timber harvesting from forest planatation was increased. Income from ecotourism was increased.



## 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	Legg and Jewell. 1995. A 1:50.000 scale Forest Map of Sri Lanka: The basis for National Geographic System. Christopher Legg and Nicholas Jewell. The Sri Lanka Forester. Special Issue 1995.	Vegetation types & canopy cover	1992	Satellite imageries and aerial photos taken in 1992 and field checking
2	GOSL. 2000. Forest Cover Mapping 2000. Forest Inventory Division. Forest Department. Sri Lanka	Vegetation types & canopy cover	1996	Satellite imageries and aerial photos taken in 1996 and field checking
3	GOSL. 2010. Forest Cover Mapping 2010. Forest Inventory Division. Forest Department. Sri Lanka	Vegetation types & canopy cover	2010	Satellite imageries and aerial photos taken in 2008/2009 and field checking
4	Administrative Reports	Different Land ownerships and extents	N/A	Reports issued by the Ministry of Lands

## 18.2.2 Classification and definitions

National class	Definition
Forest Department Conservation Forests Forest Reserves Proposed Forest Reserves Other State Forests	Areas gazetted under the provisions given in the Forest ordinance Forests allocated strictly for biodiversity conservation Conservation and non-destructive uses Forests to be gazetted as Reserved Forests Allocated for multiple purposes
Department of Wildlife Conservation Strict Nature Reserves National Parks Nature reserves Jungle Corridors Sanctuaries	Areas gazetted under the provisions given in the Fauna and flora protection ordinance Forests allocated strictly for biodiversity conservation Area open for public and used for ecotourism activities Restricted visitor activities and focussed on Conservation Area that has been used to combine two or more areas administered by the Department of Wildlife Conservation Both public and privately owned lands where development activities controlled under Fauna & Flora protection Ordinance (Wildlife Ordinance)
N/A	N/A
N/A	N/A

## 18.2.3 Original data

The data recorded in Question 1 was used as the original data source

## 18.3 Analysis and processing of national data









## 18.3.1 Adjustment

## 18.3.2 Estimation and forecasting

## 18.3.3 Reclassification

## 18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	2101	2035	2002	1978
	... 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	183	157	116	125
	... 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	0
TOTAL		2284.00	2192.00	2118.00	2103.00

## Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 3	Tier 2

Private ownership	Tier 2	Tier 2
Unknown ownership	Tier 1	Tier 1

## 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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	2101	2035	2002	1978
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	2101.00	2035.00	2002.00	1978.00

Category	Tier for reported trend	Tier for status
Public Administration	Tier 3	Tier 3
Individuals	Tier 3	Tier 3
Private companies	Tier 3	Tier 3
Communities	Tier 3	Tier 3
Other	Tier 3	Tier 3

## 18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	N/A	N/A

Private ownership	N/A	N/A
Unknown ownership	N/A	N/A
Management rights	N/A	N/A

**Other general comments to the table**

Although official data are not available, there are very small extents of private forest lands managed by private individuals and companies.

## 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	Annual Records – Forest Department	No of employees	1990 & 2010	Includes staff categories belonging to all three categories defined above
2	Annual Records – Department of Wild Life Conservation	No of employees	1990 & 2010	Includes staff categories belonging to two categories (2 & 3) defined above
3	Annual Records – State Timber Corporation	No of employees	1990 & 2010	Includes staff categories belonging to two categories (1 & 3) defined above
4	N/A	N/A	N/A	N/A

#### 19.2.2 Classification and definitions

National class	Definition
Forestry Field Staff	Forest Department field staff involved in establishment, maintenance and management of forest plantations and protection of natural forests
Wild Life Field Staff	Staff of the Department of Wild Life Conservation assigned to the duties at Protected areas administered by the Department of Wild Life Conservation
Field Staff of the State Timber Corporation	Staff of the State Timber Corporation assigned to the duties at felling areas of forest plantations
N/A	N/A

## 19.2.3 Original data

Organization	1990	2000
Forest Department	1280	2400
State Timber Corporation	1200	2432

No calibration is needed as direct information is available



Organization	1990	2000	2005	2010
Forest Department	1280	2400	2319	2523
State Timber Corporation	1200	2432	2386	2346
Department of Wildlife Conservation	480	564	792	1200

Reclassification into FRA 2010

Organization	Primary production of goods
Forest Department	100
State Timber Corporation	100

## 19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	2.48	4.83	4.7	4.87
	... of which female	N/A	N/A	N/A	0.865

## 19.4 Comments

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

**Other general comments to the table**

There are records only on government employees. Even though there are people employ in forestry, there are no records,



## 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)	29587.5	LankanRupees	2012

### 20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices)	Forestry contribution in 2012 is 0.4% of GDP

Other general comments

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## 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	Mahinda Chintana vision for the future, The Development Policy Framework, Government of Sri Lanka, Department of National Planning. Ministry of Finance and Planning	Forest Cover of the country	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	2296	2296

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	According to Mahindachintana vision for the Future the development policy framework , The government target is to increase the forest cover of the country up to 35% of the total land area.
Forests earmarked for conversion	N/A

**Other general comments**

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