



Food and Agriculture  
Organization of the  
United Nations

# Global Forest Resources Assessment 2020

Report

**Fiji**

Rome, 2020



FAO has been monitoring the world's forests at 5 to 10 year intervals since 1946. The Global Forest Resources Assessments (FRA) are now produced every five years in an attempt to provide a consistent approach to describing the world's forests and how they are changing. The FRA is a country-driven process and the assessments are based on reports prepared by officially nominated National Correspondents. If a report is not available, the FRA Secretariat prepares a desk study using earlier reports, existing information and/or remote sensing based analysis.

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# Introduction

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### Introductory text

The Fiji Islands Forestry department has been involved with the provision of forest related information via the FAO Global FRA since 2010, and has deemed it to be important thus indicating this as one of its main obligations. Over the years, the department with its knowledge from the FRA has implemented projects to enable it to bridge the gap in its data collection. It has boost its GIS and Remote Sensing capabilities to enable satellite image analysis and forest cover mapping within the department. In highlighting these, the government has been widely involved with supporting these such projects "Million Tree-campaign" for which one million trees to be planted over a span of a year with promotions to the public to be involved in planting trees and its importance in the society.

Since 2007, the Forestry Department has amended its Forest Policy to include Sustainable Forest Management and its other contributing aspects which is related to Socio-economic, Cultural and Environmental. With the increase on knowledge and aspects related to Carbon inventory and Climate Change, the department has also need to adapt. The formulation of the REDD+ Policy which was in late 2007 has paved the way for the establishment of pilots sites and getting a carbon inventory with results from the Permanent sample plots established in 2010.

The government has also been involved in reforestation in its committment to Reforestation of Degraded forest areas since 2015.

# 1 Forest extent, characteristics and changes

## 1a Extent of forest and other wooded land

### National data

#### Data sources

1991	References	Forestry department Fiji. Natural Forest Plantations+Coconut Mangroves National Forest Inventory Report
	Methods used	National Forest Inventory
	Additional comments	

2007	References	2008 NFI Statistics Report
	Methods used	National Forest Inventory
	Additional comments	The NFI was first analysed using LandSat data and images which the sample plots are distributed. There were altogether 1005 plots measured over a span of seven main islands. It is titled Seven Main islands due to their forest coverage is more than other outer lying islands.

### Classifications and definitions

1991	National class	Definition
	Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
	Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
	Pine Plantations	Man made forests with planted Pinus Carribea species
	Hardwood Plantations	Man made forests with planted Macrophyllum Switenia tree species
	Coconut Plantation	Areas under coconut plantations

2007	National class	Definition
	Closed Forest	

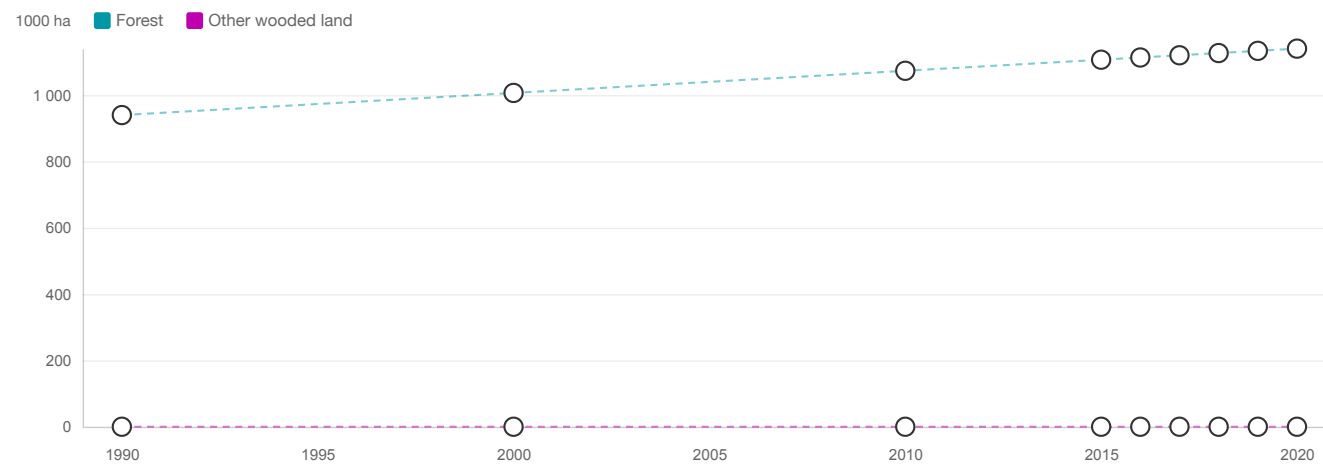
		Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
	Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
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	Hardwood Plantations	Man made forests with planted Macrophyllum Switenia tree species
	Coconut Plantation	Areas under coconut plantations

### Original data and reclassification

1991	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Closed Forest	704.86	100.00 %	0.00 %	0.00 %
	Open Forest	152.67	100.00 %	0.00 %	0.00 %
	Pine Plantations	49.62	100.00 %	0.00 %	0.00 %
	Hardwood Plantations	39.22	100.00 %	0.00 %	0.00 %
	Coconut Plantation	34.56	0.00 %	0.00 %	100.00 %
	<b>Total</b>	<b>980.93</b>	<b>946.37</b>	<b>0.00</b>	<b>34.56</b>

2007	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Closed Forest	556.39	100.00 %	0.00 %	0.00 %
	Open Forest	342.85	100.00 %	0.00 %	0.00 %
	Pine Plantations	93.52	100.00 %	0.00 %	0.00 %
	Hardwood Plantations	60.45	100.00 %	0.00 %	0.00 %
	Coconut Plantation	27.14	0.00 %	0.00 %	100.00 %
	<b>Total</b>	<b>1 080.35</b>	<b>1 053.21</b>	<b>0.00</b>	<b>27.14</b>







FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	939.69	1 006.47	1 073.24	1 106.62	1 113.30	1 119.98	1 126.66	1 133.34	1 140.02
Other wooded land (a)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other land (c-a-b)	887.31	820.53	753.76	720.38	713.70	707.02	700.34	693.66	686.98
Total land area (c)	1 827.00	1 827.00	1 827.00	1 827.00	1 827.00	1 827.00	1 827.00	1 827.00	1 827.00

The FAOSTAT land area figure for the year 2015 is used for all reference years

Climatic domain	% of forest area 2015	Override value
Boreal	0.00	
Temperate	0.00	
Sub-tropical	0.00	
Tropical	100.00	

Comments

An area of approximately 50 000 hectares of mangroves is not included in the total forest area. The reason for exclusion is that the area of mangroves is not included in the total land area.

Areas of unknown other wooded land area could be included in the forest and other land area.

1b Forest characteristics

National data

Data sources

1991	References	Forestry department Fiji. Natural Forest Plantations+Coconut Mangroves National Forest Inventory Report
	Methods used	National Forest Inventory
	Additional comments	

2007	References	2008 NFI Statistics Report
	Methods used	National Forest Inventory
	Additional comments	The NFI was first analysed using LandSat data and images which the sample plots are distributed. There were altogether 1005 plots measured over a span of seven main islands. It is titled Seven Main islands due to their forest coverage is more than other outer lying islands.

Classifications and definitions

1991	National class	Definition
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	Coconut Plantation	Areas under coconut plantations

2007	National class	Definition
	Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
	Open Forest	

		Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
	Pine Plantations	Man made forests with planted Pinus Carribea species
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	Coconut Plantation	Areas under coconut plantations

### Original data and reclassification

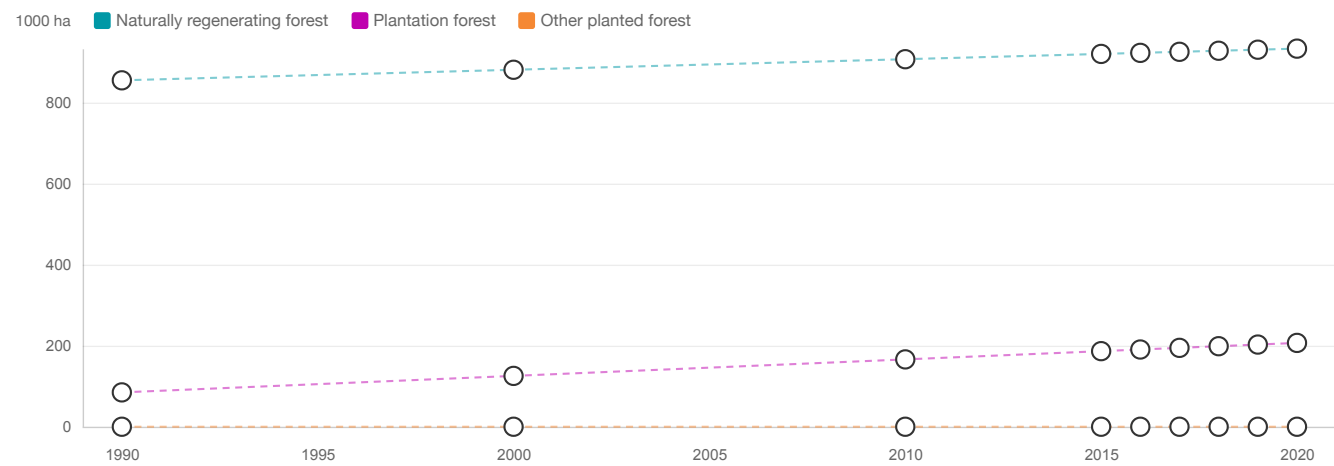
1991	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Closed Forest	704.86	100.00 %	0.00 %	0.00 %
	Open Forest	152.67	100.00 %	0.00 %	0.00 %
	Pine Plantations	49.62	0.00 %	100.00 %	0.00 %
	Hardwood Plantations	39.22	0.00 %	100.00 %	0.00 %
	<b>Total</b>	<b>946.37</b>	<b>857.53</b>	<b>88.84</b>	<b>0.00</b>

Plantation forest	Area (1000 ha)	...of which introduced
Pine Plantations	49.62	100.00 %
Hardwood Plantations	39.22	100.00 %
<b>Total</b>	<b>88.84</b>	<b>88.84</b>

2007	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Closed Forest	556.39	100.00 %	0.00 %	0.00 %
	Open Forest	342.85	100.00 %	0.00 %	0.00 %
	Pine Plantations	93.52	0.00 %	100.00 %	0.00 %
	Hardwood Plantations	60.45	0.00 %	100.00 %	0.00 %

	Total	1 053.21	899.24	153.97	0.00
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Plantation forest	Area (1000 ha)	...of which introduced
Pine Plantations	93.52	100.00 %
Hardwood Plantations	60.45	100.00 %
Total	153.97	153.97



FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	854.92	880.99	907.06	920.09	922.70	925.31	927.92	930.53	933.14
<b>Planted forest (b)</b>	<b>84.77</b>	<b>125.48</b>	<b>166.18</b>	<b>186.53</b>	<b>190.60</b>	<b>194.67</b>	<b>198.74</b>	<b>202.81</b>	<b>206.88</b>
Plantation forest	84.77	125.48	166.18	186.53	190.60	194.67	198.74	202.81	206.88
...of which introduced species	84.77	125.48	166.18	186.53	190.60	194.67	198.74	202.81	206.88
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Total (a+b)</b>	<b>939.69</b>	<b>1 006.47</b>	<b>1 073.24</b>	<b>1 106.62</b>	<b>1 113.30</b>	<b>1 119.98</b>	<b>1 126.66</b>	<b>1 133.34</b>	<b>1 140.02</b>
<b>Total forest area</b>	<b>939.69</b>	<b>1 006.47</b>	<b>1 073.24</b>	<b>1 106.62</b>	<b>1 113.30</b>	<b>1 119.98</b>	<b>1 126.66</b>	<b>1 133.34</b>	<b>1 140.02</b>

## Comments

# 1c Primary forest and special forest categories

## National Data

### Data sources + type of data source eg NFI, etc

This information recorded on this report is from the National Forest Inventory which was conducted in 2006 to 2008. The measurements were undertaken in seven (7) main islands; these islands were identified due to its forest resource availability. The landmass for the seven islands account for more than 90% of the total land mass in Fiji.

### National classification and definitions

National Classifications	Definitions
Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
Pine Plantations	Man made forests with planted <i>Pinus Carribea</i> species
Hardwood Plantations	Man made forests with planted <i>Macrophyllum Switenia</i> tree species
Mangrove	Forest occurring below the high tide water mark with high occurrence of mangrove species
Coconut Plantation	Areas under coconut plantations
Non forest	All other land that does not qualify under any of the forest classifications
Inland Water bodies	Land areas covered under major rivers, lakes, and water dams
Afforestation	Establishment of forest through planting programme on land that, until then, was not classified as forest.
Reforestation	Re establishment of forests through planting programme and or deliberate seedling on land classified as forest.

### Original data

The mangrove area information is derived from the National Forest Inventory 2006-2009.

Forest Type	Area (1000)
Mangrove	48.15

## Analysis and processing of national data

### Estimation and forecasting

-

### Reclassification into FRA 2020 categories

-

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Primary forest	0.00	0.00	0.00	0.00	0.00
Temporarily unstocked and/or recently regenerated					
Bamboos					
Mangroves	48.15	48.15	48.15	48.15	48.15
Rubber wood	0.00	0.00	0.00	0.00	0.00

Comments

The mangrove area information is derived from the National Forest Inventory 2006-2009



# 1d Annual forest expansion, deforestation and net change

## National Data

### Data sources + type of data source eg NFI, etc

This information recorded on this report is from the National Forest Inventory which was conducted in 2006 to 2008. The measurements were undertaken in seven (7) main islands; these islands were identified due to its forest resource availability. The landmass for the seven islands account for more than 90% of the total land mass in Fiji.

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National Classifications	Definitions
Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
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Coconut Plantation	Areas under coconut plantations
Non forest	All other land that does not qualify under any of the forest classifications
Inland Water bodies	Land areas covered under major rivers, lakes, and water dams
Afforestation	Establishment of forest through planting programme on land that, until then, was not classified as forest.
Reforestation	Re establishment of forests through planting programme and or deliberate seedling on land classified as forest.

### Original data

The data is acquired from the Conservation International afforestation work activities.

## Analysis and processing of national data

### Estimation and forecasting

-

### Reclassification into FRA 2020 categories

-

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Forest expansion (a)				
...of which afforestation				
...of which natural expansion				
Deforestation (b)				
Forest area net change (a-b)	6.68	6.68	6.68	6.68

Comments

# 1e Annual reforestation

## National Data

Data sources + type of data source eg NFI, etc

-

### National classification and definitions

National Classifications	Definitions
Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
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Afforestation	Establishment of forest through planting programme on land that, until then, was not classified as forest.
Reforestation	Re establishment of forests through planting programme and or deliberate seedling on land classified as forest.

### Original data

-

## Analysis and processing of national data

### Estimation and forecasting

-

### Reclassification into FRA 2020 categories

-

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Reforestation				

Comments

# 1f Other land with tree cover

## National Data

Data sources + type of data source eg NFI, etc

Forest Type	1991	2006
Coconut Plantation	34.56	48.15

The Coconut plantation data is derived from the respective National Forest Inventory as depicted on the years it was measured.

### National classification and definitions

National Classifications	Definitions
Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
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Mangrove	Forest occurring below the high tide water mark with high occurrence of mangrove species
Coconut Plantation	Areas under coconut plantations

### Original data

Forest Type	1991	2006
Coconut Plantation	34.56	48.15

## Analysis and processing of national data

### Estimation and forecasting

Forest Type	1990	2000	2010	2015	2020
Coconut	34.56	48.15	48.15	48.15	48.15

### Reclassification into FRA 2020 categories

Forest Type	1990	2000	2010	2015	2020
Coconut	34.56	48.15	48.15	48.15	48.15

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Palms (a)	34.56	48.15	48.15	48.15	48.15
Tree orchards (b)					
Agroforestry (c)					
Trees in urban settings (d)					
Other (specify in comments) (e)					
<b>Total (a+b+c+d+e)</b>	<b>34.56</b>	<b>48.15</b>	<b>48.15</b>	<b>48.15</b>	<b>48.15</b>
Other land area	<b>887.31</b>	<b>820.53</b>	<b>753.76</b>	<b>720.38</b>	<b>686.98</b>

## Comments

The Palms on the FRA categories is captured as Coconut Plantations. The analysis from the satellite images does not show major contrast in the classification; however, the layers for Coconut was submitted by the Ministry of Agriculture. The Ministry of Agriculture which was responsible for the thriving Copra industry in the early 1900s had mapped its copra farms and estates.

The information captured are mainly from the National Forest Inventory of 1991 and National Forest Inventory of 2006. There was no data and information collected since then the area recorded is static from 2000 as depicted on the FRA Categories and tables above.

## 2 Forest growing stock, biomass and carbon

### 2a Growing stock

#### National Data

**Data sources + type of data source eg NFI, etc**

The Fiji Forest Inventory was undertaken in 1992 and 2007 respectively. There was no other Forest Inventory in between for which data and information will be extrapolated to portrat forest cover in the upcoming years.

**National classification and definitions**

National Classifications	Definitions
Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
Forest Plantations	Man made forests with planted tree species
Mangrove	Forest occurring below the high tide water mark with high occurrence of mangrove species
Coconut Plantation	Areas under coconut plantations
Non forest	All other land that does not qualify under any of the forest classifications
Inland Water bodies	Land areas covered under major rivers, lakes, and water dams
Afforestation	Establishment of forest through planting programme on land that, until then, was not classified as forest.
Reforestation	Re establishment of forests through planting programme and or deliberate seedling on land classified as forest.

**Original data**

2015

Forest Type	Average Vol/Ha
Native	220
Pine	300
Mahogany	135

#### Analysis and processing of national data

**Estimation and forecasting**

There was no relevant data related to the previous years on the growing stock cubic metre per hectare over bark. The data is derived from the 2015 Annual Report for the plantations namely Hardwood (mahogany) and Softwood (pine). The data for the native is derived from the report on the National Forest Inventory statistics; it is in fact the average for the seven islands assessed.

Forest Type	Average Vol/Ha			
Native	220			
Pine	300		19638	
Mahogany	135		5711.85	
			25349.85	1000 m3

			25.34985	million m3
Classifications and definitions		FRA classes		
Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
Closed Forest	556.38	100		
			%	%
		%		
Open Forest	274.27	100		
			%	%
		%		
Pine Plantations	65.46		80	20
		%		
			%	%
Hardwood Plantations	42.31		100	
		%		%
			%	
Mangrove	38.52			
		%	%	%
Coconut Plantation	24.42			
		%	%	%
<b>Total</b>	<b>1 001.36</b>	<b>830.65</b>	<b>94.68</b>	<b>13.09</b>

220 is enter directly into the Naturally regenerating forest whilst the plantation forest areas is added and extrapolated to million cubic metre. The

### Reclassification into FRA 2020 categories

Forest Type	Average m <sup>3</sup> /ha
Naturally generating foreset	220
Planted forest	223.15
....of which plantation forest	223.15
....of other planted forest	0

These areas are being re-catergorised to reflect the forest type as listed for Forest Resource Assessment 2020.



FRA categories	Growing stock m³/ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	220.00	220.00	220.00	220.00	220.00	220.00	220.00	220.00	220.00
Planted forest	223.15	223.15	223.15	223.15	223.15	223.15	223.15	223.15	223.15
...of which plantation forest	223.15	223.15	223.15	223.15	223.15	223.15	223.15	223.15	223.15
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	220.29	220.39	220.48	220.53	220.53	220.55	220.55	220.57	220.58
Other wooded land									

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	188.08	193.82	199.55	202.42	202.99	203.57	204.14	204.72	205.29
Planted forest	18.92	28.00	37.08	41.62	42.53	43.44	44.35	45.26	46.17
...of which plantation forest	18.92	28.00	37.08	41.62	42.53	43.44	44.35	45.26	46.17
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	207.00	221.82	236.63	244.04	245.52	247.01	248.48	249.98	251.46
Other wooded land									

## Comments

The native growing stock is extrapolated from the NFI Statistics report 2006-2009. The statistics is calculating these growing stock for the average from the seven islands inventoried.

## 2b Growing stock composition

### National Data

#### Data sources + type of data source eg NFI, etc

The information derived is captured on the National Forest Inventory Statistics report of 2006-2009. The National forest inventory had three main phases; whereby the satellite image analysis was conducted to determine the forest cover for the location of random sample plots. The NFI was undertaken in seven main islands namely; Viti Levu, Vanua Levu, Taveuni, Kadavu, Koro, Gau and Ovalau. These seven islands covered landmass of nearly 90% of the total landmass for Fiji. Most of the islands did not have much forest cover and is malinly coastal forest species which was less than the area marked to be Forest (as in FAO definition.)

#### National classification and definitions

National Classifications	Definitions
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Afforestation	Establishment of forest through planting programme on land that, until then, was not classified as forest.
Reforestation	Re establishment of forests through planting programme and or deliberate seedling on land classified as forest.

#### Original data

Native Forests - 2006 (Source: National Forest Inventory)

		LocalName	SampleVol	VolPerha	NationalVol	RG	
	1	Kauvula	1709.947	1.673	1,538,290	2	1.54
	2	Kaudamu	1540.777	1.508	1,386,102	2	1.39
	3	Dakua makadre	1169.499	1.144	1,052,096	1	1.05
	4	Damanu	1096.980	1.073	986,857	2	0.99
	5	Sa	1040.911	1.019	936,417	4	0.94
	6	Yasiyasi A	659.768	0.646	593,536	3	0.59
	7	Sasawira	474.610	0.464	426,965	3	0.43
	8	Koka	447.009	0.437	402,135	4	0.40
	9	Bauvudi	377.607	0.369	339,700	2	0.34
	10	Vesi	364.887	0.357	328,257	1	0.33

Fiji Pine Limited

YEAR	TOTAL STOCK (ha)

1990	
2000	41,414.00
2010	45,880.00
2015	29,527.00
2016	23,960.00
2017	23,866.67
2018	
Total	164,647.67

Analysis and processing of national data

Estimation and forecasting

Reclassification into FRA 2020 categories

FRA categories	Scientific name	Common name	Growing stock in forest (million m³ over bark)				
			1990	2000	2010	2015	2020
Native tree species							
#1 Ranked in terms of volume		Kauvula		1.54			
#2 Ranked in terms of volume		Kaudamu		1.39			
#3 Ranked in terms of volume		Dakua makadre		1.05			
#4 Ranked in terms of volume		Damanu		0.99			
#5 Ranked in terms of volume		Sa		0.94			
#6 Ranked in terms of volume		Yasiyasi A		0.59			
#7 Ranked in terms of volume		Sasawira		0.43			
#8 Ranked in terms of volume		Koka		0.40			
#9 Ranked in terms of volume		Bauvudi		0.34			
#10 Ranked in terms of volume		Vesi		0.33			
Remaining native tree species				213.82			
Total volume of native tree species			–	221.82	–	–	–
Introduced tree species							
#1 Ranked in terms of volume	Pinus Caribbea	Pine					
#2 Ranked in terms of volume	Swietenia Macrophylla	Mahogany					
#3 Ranked in terms of volume							
#4 Ranked in terms of volume							
#5 Ranked in terms of volume							
Remaining introduced tree species							
Total volume of introduced tree species			–	–	–	–	–
Total growing stock			–	221.82	–	–	–

Comments

Volume of Pinus Caribbea and Swietenia Macrophylla is not available and it is included in the volume of remaining native tree species to add up to the total volume of table 2a.

## 2c Biomass stock

### National Data

#### Data sources + type of data source eg NFI, etc

The information derived is captured on the National Forest Inventory Statistics report of 2006-2009. The National forest inventory had three main phases; whereby the satellite image analysis was conducted to determine the forest cover for the location of random sample plots. The NFI was undertaken in seven main islands namely; Viti Levu, Vanua Levu, Taveuni, Kadavu, Koro, Gau and Ovalau. These seven islands covered landmass of nearly 90% of the total landmass for Fiji. Most of the islands did not have much forest cover and is malinly coastal forest species which was less than the area marked to be Forest (as in FAO definition.)

#### National classification and definitions

National Classifications	Definitions
Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
Forest Plantations	Man made forests with planted tree species
Mangrove	Forest occurring below the high tide water mark with high occurrence of mangrove species
Coconut Plantation	Areas under coconut plantations
Non forest	All other land that does not qualify under any of the forest classifications
Inland Water bodies	Land areas covered under major rivers, lakes, and water dams
Afforestation	Establishment of forest through planting programme on land that, until then, was not classified as forest.
Reforestation	Re establishment of forests through planting programme and or deliberate seedling on land classified as forest.

#### Original data

-

### Analysis and processing of national data

#### Estimation and forecasting

Insert the percentages of Growing stock by IPCC forest type for each of the FRA forest categories									
IPCC forest types	FRA forest categories								
	Naturally regenerating forest	Plantation forest	Other planted forest						
	% of Growing stock								
Broadleaved humid	100%	33%							
Broadleaved dry									
Coniferous		67%							
	100%	100%	0%	Must add up to 100%					

Insert Carbon fraction used by country (IPCC default = 0.47)									
Carbon Fraction	47%								
Biomass conversion and expansion factors (BCEF)									
Naturally regenerating forest	1990	2000	2010	2015	2016	2017	2018	2019	2020
Broadleaved humid	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Broadleaved dry	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Coniferous	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Plantation forest									
Broadleaved humid	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Broadleaved dry	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Coniferous	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Other planted forest									
Broadleaved humid	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Broadleaved dry	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00	4.00
Coniferous	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75	1.75
Weighted BCEF									
Naturally regenerating forest	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Plantation forest	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78	0.78
Other planted forest									
Root-shoot ratios									
Naturally regenerating forest	1990	2000	2010	2015	2016	2017	2018	2019	2020
Broadleaved humid	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Broadleaved dry	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Coniferous	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Plantation forest									

Broadleaved humid	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Broadleaved dry	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Coniferous	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Other planted forest									
Broadleaved humid	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Broadleaved dry	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56	0.56
Coniferous	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40	0.40
Weighted RS ratio									
Naturally regenerating forest	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Plantation forest	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21	0.21
Other planted forest									
Above-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	209.00	209.00	209.00	209.00	209.00	209.00	209.00	209.00	209.00
Plantation forest	174.78	174.78	174.78	174.78	174.78	174.78	174.78	174.78	174.78
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	205.91	204.73	203.70	203.23	203.14	203.05	202.96	202.88	202.79
Below-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	50.16	50.16	50.16	50.16	50.16	50.16	50.16	50.16	50.16
Plantation forest	37.28	37.28	37.28	37.28	37.28	37.28	37.28	37.28	37.28
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	49.00	48.55	48.17	47.99	47.96	47.92	47.89	47.86	47.82

Reclassification into FRA 2020 categories

-



FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	205.91	204.73	203.70	203.23	203.14	203.05	202.96	202.88	202.79
Below-ground biomass	49.00	48.55	48.17	47.99	47.96	47.92	47.89	47.86	47.82
Dead wood									

Comments

## 2d Carbon stock

### National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

National Classifications	Definitions
Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
Forest Plantations	Man made forests with planted tree species
Mangrove	Forest occurring below the high tide water mark with high occurrence of mangrove species
Coconut Plantation	Areas under coconut plantations
Non forest	All other land that does not qualify under any of the forest classifications
Inland Water bodies	Land areas covered under major rivers, lakes, and water dams
Afforestation	Establishment of forest through planting programme on land that, until then, was not classified as forest.
Reforestation	Re establishment of forests through planting programme and or deliberate seedling on land classified as forest.

Original data

-

### Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Forest carbon (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Carbon in above-ground biomass	96.78	96.22	95.74	95.52	95.48	95.43	95.39	95.35	95.31
Carbon in below-ground biomass	23.03	22.82	22.64	22.56	22.54	22.52	22.51	22.49	22.48
Carbon in dead wood									
Carbon in litter									
Soil carbon									

Soil depth (cm) used for soil carbon estimates	
--	--

Comments

### 3 Forest designation and management

#### 3a Designated management objective

##### National Data

Data sources + type of data source eg NFI, etc

-

##### National classification and definitions

National class	Definition
Native Land	Land communally owned by indigenous land owners.
State Land	Land owned by the Government.
Freehold Land	Land owned (bought outright) by individuals
Leased Land	The land on which the two large plantations (mahogany & pine) are leased by the company from indigenous owners.

##### Original data

National Classes (1000ha.)	Freehold	Native	State	Total
Closed	31.958	523.938	27.737	583.631
Open	23.172	182.664	12.756	218.59
Plantation	10.531	100.813	16.510	127.853
Coconut	4.537	8.517	0.228	13.281
Non Forest	108.684	489.362	43.582	641.627
Inland Water	0	0	0	0
Total	<u>178.882</u>	<u>1,305.293</u>	<u>100.814</u>	1,584.988

#### Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

Primary designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production (a)					
Protection of soil and water (b)					
Conservation of biodiversity (c)					
Social Services (d)					
Multiple use (e)					
Other (specify in comments) (f)					
None/unknown (g)	939.69	1 006.47	1 073.24	1 106.62	1 140.02
Total forest area	939.69	1 006.47	1 073.24	1 106.62	1 140.02

Total area with designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production					
Protection of soil and water					
Conservation of biodiversity					
Social Services					
Other (specify in comments)					

Comments

### 3b Forest area within protected areas and forest area with long-term management plans

#### National Data

Data sources + type of data source eg NFI, etc

-

#### National classification and definitions

National Classifications	Definitions
Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
Forest Plantations	Man made forests with planted tree species
Mangrove	Forest occurring below the high tide water mark with high occurrence of mangrove species
Coconut Plantation	Areas under coconut plantations
Non forest	All other land that does not qualify under any of the forest classifications
Inland Water bodies	Land areas covered under major rivers, lakes, and water dams
Afforestation	Establishment of forest through planting programme on land that, until then, was not classified as forest.
Reforestation	Re establishment of forests through planting programme and or deliberate seedling on land classified as forest.

#### Original data

-

#### Analysis and processing of national data

#### Estimation and forecasting

-

#### Reclassification into FRA 2020 categories

-

FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest area within protected areas									
Forest area with long-term forest management plan									
...of which in protected areas									

Comments

## 4 Forest ownership and management rights

### 4a Forest ownership

#### National Data

##### Data sources + type of data source eg NFI, etc

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Lands Department Fiji	H		2009	Land tenure definitions
Native Lands Trust Board	H		2009	Land tenure definitions

##### National classification and definitions

National class	Definition
Native Land	Land communally owned by indigenous land owners.
State Land	Land owned by the Government.
Freehold Land	Land owned (bought outright) by individuals
Leased Land	The land on which the two large plantations (mahogany & pine) are leased by the company from indigenous owners.

##### Original data

National Classes (1000ha.)	Freehold	Native	State	Total
Natural	55.13	706.602	40.493	802.221
Plantation	10.531	100.813	16.51	127.853
Total	65.661	807.415	57.003	930.074

### Analysis and processing of national data

##### Estimation and forecasting

RA categories	Area (1000 ha)									
	1990	1991	2000	2006	2010	2015				
Forest (a)	931.61	932.04	935.87	938.42	940.13	942.26				
Freehold	65.76944	65.79979	66.07018	66.25021	66.37093	66.5213				
Native	808.7484	809.1217	812.4466	814.6603	816.1448	817.9939				
State	57.09714	57.12349	57.35823	57.51452	57.61932	57.74986				

##### Reclassification into FRA 2020 categories

FRA categories	Forest area (1000 ha)				
	1990	2000	2010	2015	
Private ownership (a)					



...of which owned by individuals	65.77	66.07	66.37	66.52	
...of which owned by private business entities and institutions					
...of which owned by local, tribal and indigenous communities	808.75	812.45	816.14	817.99	
Public ownership (b)	57.10	57.36	57.62	57.75	
Unknown/other (specify in comments) (c)					
<a href="#">Total forest area</a>	<b>931.61</b>	<b>935.87</b>	<b>940.13</b>	<b>942.26</b>	

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Private ownership (a)	874.52	878.52	882.52	884.52
...of which owned by individuals	65.77	66.07	66.37	66.52
...of which owned by private business entities and institutions	0.00	0.00	0.00	0.00
...of which owned by local, tribal and indigenous communities	808.75	812.45	816.14	817.99
Public ownership (b)	57.10	57.36	57.61	57.75
Unknown/other (specify in comments) (c)	8.07	70.59	133.11	164.35
Total forest area	939.69	1 006.47	1 073.24	1 106.62

## Comments

There are three main ownership types in Fiji. The private ownership by the itakei which comprises of more than 87% of the total ownership, The itaukei are the indigenous land owners of Fiji whilst some are sold and owned by individuals.

4b Holder of management rights of public forests

National Data

Data sources + type of data source eg NFI, etc

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Lands Department Fiji	H		2009	Land tenure definitions
Native Lands Trust Board	H		2009	Land tenure definitions

National classification and definitions

National class	Definition
Native Land	Land communally owned by indigenous land owners.
State Land	Land owned by the Government.
Freehold Land	Land owned (bought outright) by individuals

Original data

RA categories	Area (1000 ha)										
	1990	<a href="#">1991</a>	2000	<a href="#">2006</a>	2010	2015	2016	2017	2018	2019	2020
State	57.10	57.12	57.36	57.51	57.62	57.75	57.78	57.80	57.83	57.86	57.88

Analysis and processing of national data

Estimation and forecasting

RA categories	Area (1000 ha)										
	1990	<a href="#">1991</a>	2000	<a href="#">2006</a>	2010	2015	2016	2017	2018	2019	2020
State	57.10	57.12	57.36	57.51	57.62	57.75	57.78	57.80	57.83	57.86	57.88

Reclassification into FRA 2020 categories

FRA categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Public ownership	57.10	57.36	57.61	57.75	57.88

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Public Administration (a)	57.10	57.36	57.61	57.75
Individuals (b)	0.00	0.00	0.00	0.00
Private business entities and institutions (c)	0.00	0.00	0.00	0.00
Local, tribal and indigenous communities (d)	0.00	0.00	0.00	0.00
Unknown/other (specify in comments) (e)	0.00	0.00	0.00	0.00
Total public ownership	57.10	57.36	57.61	57.75

Comments

5 Forest disturbances

5a Disturbances

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Area (1000 ha)																	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Insects (a)																		
Diseases (b)																		
Severe weather events (c)																		
Other (specify in comments) (d)																		
Total (a+b+c+d)	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–	–
Total forest area	1 006.47	–	–	–	–	–	–	1 053.21	–	–	1 073.24	–	–	–	–	1 106.62	1 113.30	1 119.98

Comments

There is no national data referenced to this table.

5b Area affected by fire

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Area (1000 ha)																	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total land area affected by fire																		
...of which on forest																		

Comments

There is no relevant data to report on the above.



5c Degraded forest

Does your country monitor area of degraded forest		Yes
If "yes"	What is the national definition of "Degraded forest"?	Forest degradation is broadly defined as a reduction in the capacity of a forest to produce ecosystem services such as carbon storage and wood products as a result of anthropogenic and environmental changes.
	Describe the monitoring process and results	Forest degradation is mostly determined and measured from harvested areas or removal of tree stands that affects the forest cover and reduces the forest ecosystem services.

Comments

## 6 Forest policy and legislation

### 6a Policies, Legislation and national platform for stakeholder participation in forest policy

#### National Data

Data sources + type of data source eg NFI, etc

-

#### National classification and definitions

National Classifications	Definitions
Closed Forest	Natural forest with crown cover by trees and / or ferns 40-100% and ground coverage by, palm and / or bamboo over 20%
Open Forest	Natural forest with crown cover by trees and / or ferns 10-40% and ground coverage by, palm and / or bamboo 50-80%
Pine Plantations	Man made forests with planted <i>Pinus Carribea</i> species
Hardwood Plantations	Man made forests with planted <i>Macrophyllum Switenia</i> tree species
Mangrove	Forest occurring below the high tide water mark with high occurrence of mangrove species
Coconut Plantation	Areas under coconut plantations
Non forest	All other land that does not qualify under any of the forest classifications
Inland Water bodies	Land areas covered under major rivers, lakes, and water dams
Afforestation	Establishment of forest through planting programme on land that, until then, was not classified as forest.
Reforestation	Re establishment of forests through planting programme and or deliberate seedling on land classified as forest.

Original data

-

Indicate the existence of	Boolean (Yes/No)	
	National	Sub-national
Policies supporting SFM	Yes	No
Legislations and regulations supporting SFM	Yes	No
Platform that promotes or allows for stakeholder participation in forest policy development	Yes	No
Traceability system(s) for wood products	No	No

## Comments

Fiji's 2007 Forest Policy is the current policy that guides the Forest sector in Fiji.

Current legislation in Fiji for the sector is the 1992 Forest Decree. The Ministry of Forestry with the support from its stakeholders had reviewed this legislation and tabled the draft 2016 Forestry Bill in Parliament. The Bill is yet to be endorsed; but has undergone 2 readings in parliament. The 2016 Forestry Bill will enable the full implementation of the 2007 Fiji Forest Policy with the inclusion of Sustainable Forest Management (SFM), Climate Change, Biodiversity Conservation etc.

6b Area of permanent forest estate

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-

FRA 2020 categories	Forest area (1000 ha)					
	Applicable?	1990	2000	2010	2015	2020
Area of permanent forest estate	No					

Comments

## 7 Employment, education and NWFP

### 7a Employment in forestry and logging

#### National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

#### Original data

Employment Figures from FBOS				
Category	2009	2010	2011	2014
Native	0	2	2	96
Pine	90	173	148	0
Mahogany	66	399	349	348
Logging	127	184	165	166
Support services	0	52	59	63

FRA 2020 categories	Full-time equivalents (1000 FTE)											
	1990			2000			2010			2015		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Employment in forestry and logging												
...of which silviculture and other forestry activities							0.52					
...of which logging							0.18					
...of which gathering of non wood forest products												
...of which support services to forestry							0.05					

Comments

Data is sourced from the National Statistics office which is Fiji Bureau of Statistics (FBOS)

## 7b Graduation of students in forest-related education

### National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-



FRA 2020 categories	Number of graduated students											
	1990			2000			2010			2015		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Doctoral degree												
Master's degree												
Bachelor's degree												
Technician certificate / diploma												
Total												

Comments

## 7c Non wood forest products removals and value 2015

### National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

-

Original data

-

	Name of NWFP product	Key species	Quantity	Unit	Value (1000 local currency)	NWFP category
#1						
#2						
#3						
#4						
#5						
#6						
#7						
#8						
#9						
#10						
All other plant products						
All other animal products						
Total					-	

Name of currency	
------------------	--

Comments

8 Sustainable Development Goal 15

8a Sustainable Development Goal 15

SDG Indicator 15.1.1 Forest area as proportion of total land area 2015

Indicator	Percent							
	2000	2010	2015	2016	2017	2018	2019	2020
Forest area as proportion of total land area 2015	55.09	58.74	60.57	60.94	61.30	61.67	62.03	62.40

Name of agency responsible	Ministry of Forestry
----------------------------	----------------------

SDG Indicator 15.2.1 Progress towards sustainable forest management

Sub-Indicator 1	Percent						
	2000-2010	2010-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Forest area annual net change rate	0.64	0.61	0.60	0.60	0.59	0.59	0.59

Name of agency responsible	Ministry of Forestry
----------------------------	----------------------

Sub-Indicator 2	Forest biomass (tonnes/ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass stock in forest	204.73	203.70	203.23	203.14	203.05	202.96	202.88	202.79

Name of agency responsible	
----------------------------	--

Sub-Indicator 3	Percent (2015 forest area baseline)							
	2000	2010	2015	2016	2017	2018	2019	2020
Proportion of forest area located within legally established protected areas	–	–	–	–	–	–	–	–

Name of agency responsible	Ministry of Forestry
----------------------------	----------------------

Sub-Indicator 4	Percent (2015 forest area baseline)							
	2000	2010	2015	2016	2017	2018	2019	2020
Proportion of forest area under long-term forest management plan	–	–	–	–	–	–	–	–

Name of agency responsible	Ministry of Forestry
----------------------------	----------------------

Sub-Indicator 5	Forest area (1000 ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Forest area under independently verified forest management certification schemes	0.00	0.00	85.39	85.39	85.39	85.39	–	–