



Food and Agriculture  
Organization of the  
United Nations

# Global Forest Resources Assessment 2020

Desk Study

**Libya**

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

## Introductory text

**No official report has been received from Libya. This report is the result of a desk study prepared by the FRA secretariat in Rome, which summarizes existing available information using the established format for FRA 2020 country reports.**

Libya lies in northern Africa, bordered by the Mediterranean Sea to the north. About 90 percent of Libya is made up of the barren, rock-strewn plains and sand dunes of the Sahara, with two small areas of hills rising to about 900 m in the northwest/northeast and until 2 286 m Bette Peak, Libya's highest point, in the south/south-east.

The climate is extremely hot and dry, with little precipitation in the desert areas. Daytime temperatures in the desert reach an average high of 38 °C, but nights are cool, averaging 10 °C. The temperature in Tripoli, the capital city, averages 11 °C in January and 27 °C in July. The coast receives an average annual rainfall of 400 mm.

The country has only patchy areas of natural forest in the Jabal al-Akhdar mountains, east of Benghazi; these forests are characterized by *Juniperus* spp. and *Pistacia* spp. species. Otherwise inland vegetation is mainly confined to oases, where date palms predominate. Libya has larger areas of planted forest than natural forest. Much of this has been planted in sand dune stabilization projects. Principal species include *Acacia saligna* and *Eucalyptus camaldulensis*.

Objectives are mainly focused on the management of dry-zone forests and woodlands in the region.<sup>[1]</sup>

[1] Country Profiles – Department of Forest <http://www.fao.org/forestry/country/en/> . FAO, May 12, 2010. Retrieved March 27, 2017.

# 1 Forest extent, characteristics and changes

## 1a Extent of forest and other wooded land

### National data

#### Data sources

1990	References	Department of Agriculture and range development
	Methods used	Registers/questionnaires
	Additional comments	A set of tables prepared for FRA 2005 project based on good estimates.

2000	References	Department of Agriculture and range development
	Methods used	Registers/questionnaires
	Additional comments	A set of tables prepared for FRA 2005 project based on good estimates.

2005	References	Department of Agriculture and range development
	Methods used	Registers/questionnaires
	Additional comments	A set of tables prepared for FRA 2005 project based on good estimates.

#### Classifications and definitions

1990	National class	Definition
	Man-made Forest	
	Natural woodland	

2000	National class	Definition
	Man-made Forest	
	Natural woodland	

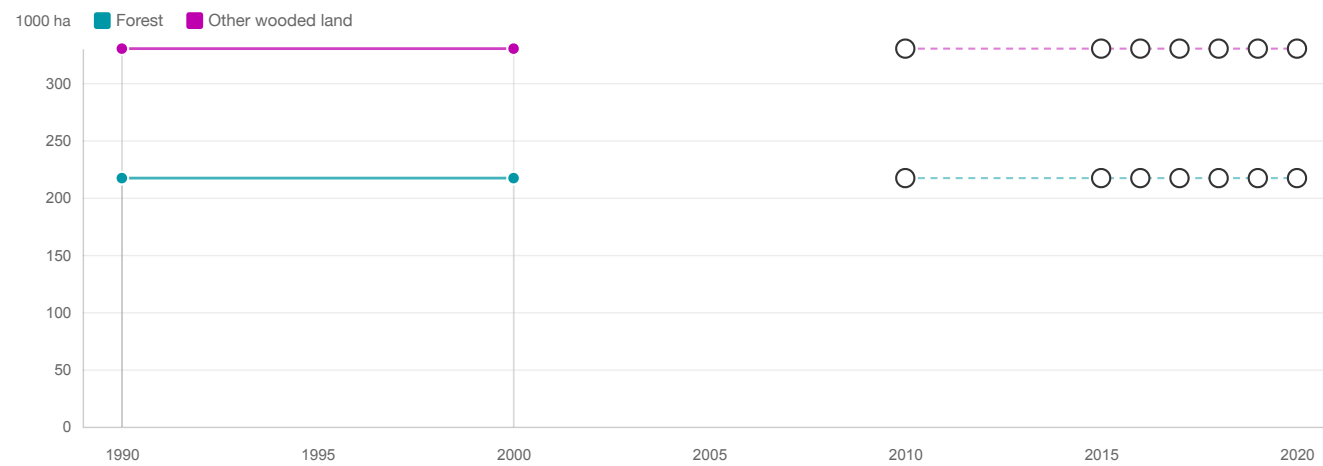
2005	National class	Definition
	Man-made Forest	
	Natural woodland	

#### Original data and reclassification

1990	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Man-made Forest	217.00	100.00 %	0.00 %	0.00 %
	Natural woodland	330.00	0.00 %	100.00 %	0.00 %
	Total	547.00	217.00	330.00	0.00

2000	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Man-made Forest	217.00	100.00 %	0.00 %	0.00 %
	Natural woodland	330.00	0.00 %	100.00 %	0.00 %
	Total	547.00	217.00	330.00	0.00

2005	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Man-made Forest	217.00	100.00 %	0.00 %	0.00 %
	Natural woodland	330.00	0.00 %	100.00 %	0.00 %
	Total	547.00	217.00	330.00	0.00



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	217.00	217.00	217.00	217.00	217.00	217.00	217.00	217.00	217.00
Other wooded land (a)	330.00	330.00	330.00	330.00	330.00	330.00	330.00	330.00	330.00
Other land (c-a-b)	175 407.00	175 407.00	175 407.00	175 407.00	175 407.00	175 407.00	175 407.00	175 407.00	175 407.00
Total land area (c)	175 954.00	175 954.00	175 954.00	175 954.00	175 954.00	175 954.00	175 954.00	175 954.00	175 954.00

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	100.00	
Tropical	0.00	

Comments



# 1b Forest characteristics

## National data

### Data sources

1990	References	Department of Agriculture and range development
	Methods used	Registers/questionnaires
	Additional comments	A set of tables prepared for FRA 2005 project based on good estimates.

2000	References	Department of Agriculture and range development
	Methods used	Registers/questionnaires
	Additional comments	A set of tables prepared for FRA 2005 project based on good estimates.

2005	References	Department of Agriculture and range development
	Methods used	Registers/questionnaires
	Additional comments	A set of tables prepared for FRA 2005 project based on good estimates.

### Classifications and definitions

1990	National class	Definition
	Man-made Forest	
	Natural woodland	

2000	National class	Definition
	Man-made Forest	
	Natural woodland	

2005	National class	Definition
	Man-made Forest	
	Natural woodland	

### Original data and reclassification

1990	Classifications and definitions	FRA classes
------	---------------------------------	-------------

	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Man-made Forest	217.00	0.00 %	100.00 %	0.00 %
	Total	217.00	0.00	217.00	0.00

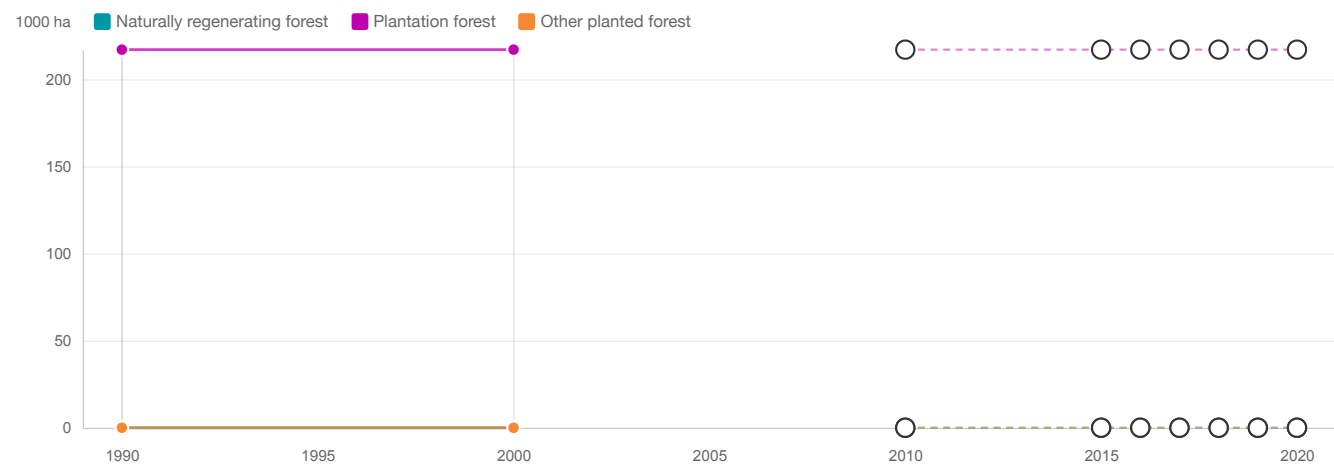
Plantation forest	Area (1000 ha)	...of which introduced
Man-made Forest	217.00	%
Total	217.00	—

2000	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Man-made Forest	217.00	0.00 %	100.00 %	0.00 %
	Total	217.00	0.00	217.00	0.00

Plantation forest	Area (1000 ha)	...of which introduced
Man-made Forest	217.00	%
Total	217.00	—

2005	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Man-made Forest	217.00	0.00 %	100.00 %	0.00 %
	Total	217.00	0.00	217.00	0.00

Plantation forest	Area (1000 ha)	...of which introduced
Man-made Forest	217.00	%
Total	217.00	—



FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
<b>Planted forest (b)</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>
Plantation forest	217.00	217.00	217.00	217.00	217.00	217.00	217.00	217.00	217.00
...of which introduced species									
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>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>
<b>Total forest area</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>	<b>217.00</b>

## Comments

## 1c Primary forest and special forest categories

### National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

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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	2020
Primary forest					
Temporarily unstocked and/or recently regenerated					
Bamboos	0.00	0.00	0.00	0.00	0.00
Mangroves	0.00	0.00	0.00	0.00	0.00
Rubber wood	0.00	0.00	0.00	0.00	0.00

Comments

## **1d Annual forest expansion, deforestation and net change**

### **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/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)	0.00	0.00	0.00	0.00

Comments



## **1e Annual reforestation**

### **National Data**

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

-

**National classification and definitions**

-

**Original data**

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### **Analysis and processing of national data**

**Estimation and forecasting**

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**Reclassification into FRA 2020 categories**

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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

-

National classification and definitions

-

Original data

-

### Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Palms (a)					
Tree orchards (b)					
Agroforestry (c)					
Trees in urban settings (d)					
Other (specify in comments) (e)					
Total (a+b+c+d+e)	–	–	–	–	–
Other land area	175 407.00	175 407.00	175 407.00	175 407.00	175 407.00

Comments

## **2 Forest growing stock, biomass and carbon**

### **2a Growing stock**

#### **National Data**

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

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**National classification and definitions**

-

**Original data**

-

#### **Analysis and processing of national data**

**Estimation and forecasting**

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**Reclassification into FRA 2020 categories**

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FRA categories	Growing stock m³/ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest									
Planted forest									
...of which plantation forest									
...of which other planted forest									
Forest	36.27	36.27	36.27	36.27	36.27	36.27	36.27	36.27	36.27
Other wooded land									

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest									
Planted forest									
...of which plantation forest									
...of which other planted forest									
Forest	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87	7.87
Other wooded land									

Comments

## 2b Growing stock composition

### National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

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Original data

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### Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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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	Eucalyptus spp.		5.04	5.04	5.04	5.04	5.04
#2 Ranked in terms of volume	Acacia spp.		2.40	2.40	2.40	2.40	2.40
#3 Ranked in terms of volume	Pinus spp.		0.43	0.43	0.43	0.43	0.43
#4 Ranked in terms of volume							
#5 Ranked in terms of volume							
#6 Ranked in terms of volume							
#7 Ranked in terms of volume							
#8 Ranked in terms of volume							
#9 Ranked in terms of volume							
#10 Ranked in terms of volume							
Remaining native tree species							
Total volume of native tree species			7.87	7.87	7.87	7.87	7.87
Introduced tree species							
#1 Ranked in terms of volume							
#2 Ranked in terms of volume							
#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			7.87	7.87	7.87	7.87	7.87



## Comments

**2c Biomass stock**

**National Data**

Data sources + type of data source eg NFI, etc

-

National classification and definitions

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Original data

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**Analysis and processing of national data**

Estimation and forecasting

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Reclassification into FRA 2020 categories

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FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	49.26	49.26	49.26	49.26	49.26	49.26	49.26	49.26	49.26
Below-ground biomass	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Dead wood	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39	8.39

Comments

## 2d Carbon stock

### 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	Forest carbon (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Carbon in above-ground biomass	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18	23.18
Carbon in below-ground biomass	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70	4.70
Carbon in dead wood	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96	3.96
Carbon in litter	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12	2.12
Soil carbon									

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

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**Original data**

-

##### **Analysis and processing of national data**

**Estimation and forecasting**

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**Reclassification into FRA 2020 categories**

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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)	217.00	217.00	217.00	217.00	217.00
Total forest area	217.00	217.00	217.00	217.00	217.00

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

-

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**

-

**National classification and definitions**

-

**Original data**

-

#### **Analysis and processing of national data**

**Estimation and forecasting**

-

**Reclassification into FRA 2020 categories**

-

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Private ownership (a)				
...of which owned by individuals				
...of which owned by private business entities and institutions				
...of which owned by local, tribal and indigenous communities				
Public ownership (b)				
Unknown/other (specify in comments) (c)	–	–	–	–
Total forest area	217.00	217.00	217.00	217.00

Comments

## 4b Holder of management rights of public forests

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

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	217.00	-	-	-	-	217.00	-	-	-	-	217.00	-	-	-	-	217.00	217.00	217.00

Comments

**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

5c Degraded forest

Does your country monitor area of degraded forest		
If "yes"	What is the national definition of "Degraded forest"?	
	Describe the monitoring process and results	

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

-

Original data

-

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

Comments

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						

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

-

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												
...of which logging												
...of which gathering of non wood forest products												
...of which support services to forestry												

Comments



## 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	
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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	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12

Name of agency responsible	
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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	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Name of agency responsible	
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Sub-Indicator 2	Forest biomass (tonnes/ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass stock in forest	49.26	49.26	49.26	49.26	49.26	49.26	49.26	49.26

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

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	0.00	0.00	0.00	0.00	–	–