



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Report

Timor-Leste

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

Report preparation and contact persons

The present report was prepared by the following person(s)

Name	Role	Email	Tables
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Introductory text

Place an introductory text on the content of this report

1 Forest extent, characteristics and changes

1a Extent of forest and other wooded land

National data

Data sources

2012	References	Land Cover and Forest Classification Derived from ALOS AVNIR-2 Imagery in 2010, 2009, 2008. Includes material @Yaxa
	Methods used	Sample-based remote sensing assessment
	Additional comments	

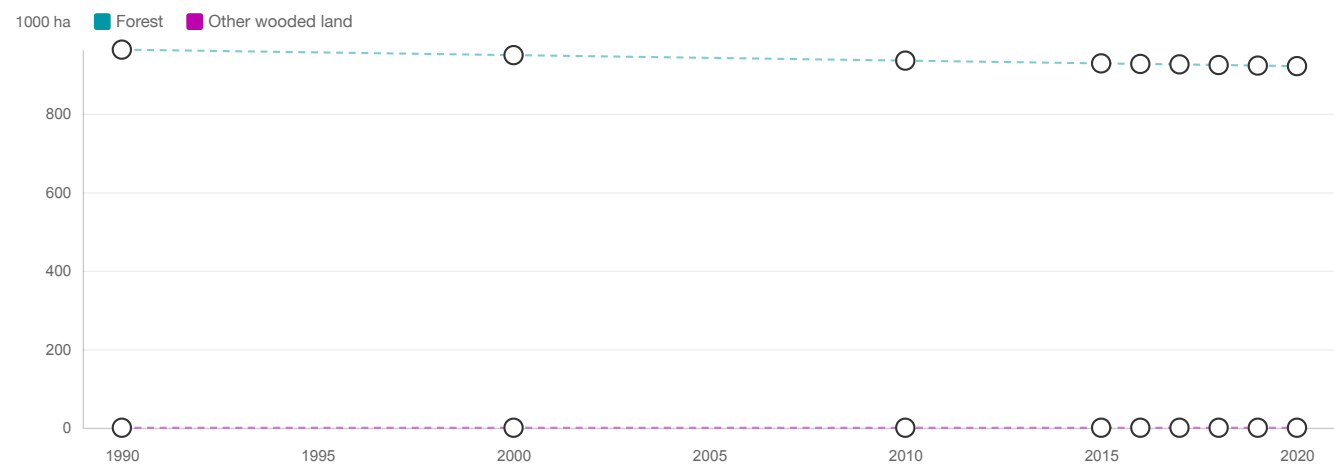
Classifications and definitions

2012	National class	Definition
	Dense Forest	Dense forests with crown cover of 60%–70%
	Sparse Forest	Sparse forest: forest with canopy density between 20-60%;
	Very Sparse Forest	very sparse forest: forest with canopy about 5-20%
	Grass Lands	
	Dry Farms	
	Paddy Fields	
	Bare Land	
	Water Bodies	
	No Data	

Original data and reclassification

2012	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Dense Forest	312.93	100.00 %	0.00 %	0.00 %
	Sparse Forest	556.20	100.00 %	0.00 %	0.00 %
	Very Sparse Forest	63.17	100.00 %	0.00 %	0.00 %
	Grass Lands	403.24	0.00 %	0.00 %	100.00 %
	Dry Farms	22.15	0.00 %	0.00 %	100.00 %
	Paddy Fields	41.38	0.00 %	0.00 %	100.00 %

	Bare Land	48.71	0.00 %	0.00 %	100.00 %
	Water Bodies	22.87	0.00 %	0.00 %	100.00 %
	No Data	18.21	0.00 %	0.00 %	100.00 %
	Total	1 488.86	932.30	0.00	556.56



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	963.10	949.10	935.10	928.10	926.70	925.60	923.90	922.50	921.10
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)	523.90	537.90	551.90	558.90	560.30	561.40	563.10	564.50	565.90
Total land area (c)	1 487.00	1 487.00	1 487.00	1 487.00	1 487.00	1 487.00	1 487.00	1 487.00	1 487.00

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

Based on the report which estimated an annual loss rate of 1,7% equivalent to 1 400ha per year. Coffee plantations also part of forest and could not be separated. No other change estimates are available so this rate of change has been used for all years. Since 2017, Department of Forestry has established plantations of sandallwood and commercial trees of 300ha -----,

1b Forest characteristics

National data

Data sources

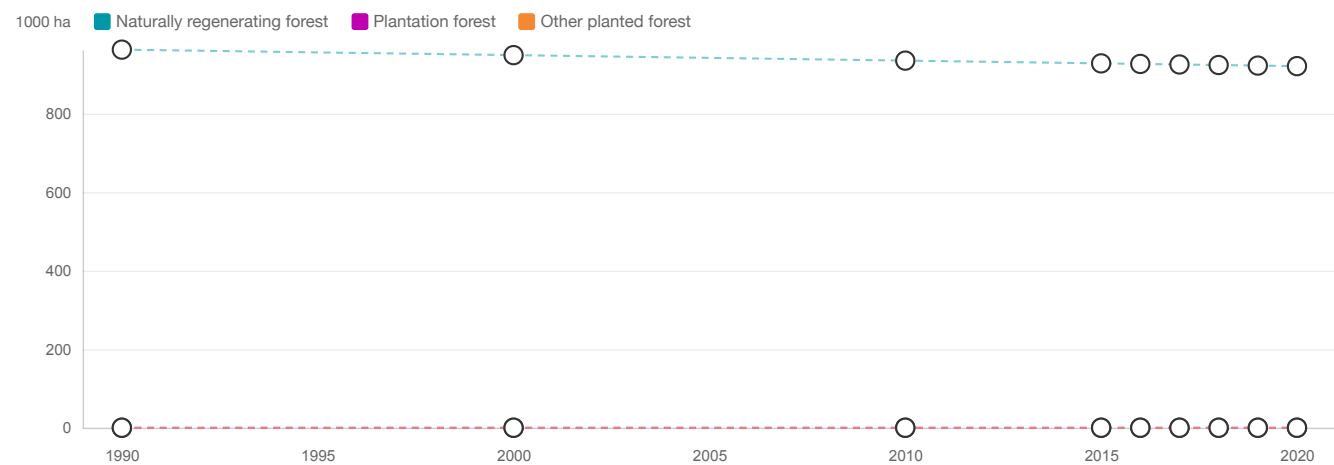
2012	References	Land Cover and Forest Classification Derived from ALOS AVNIR-2 Imagery in 2010, 2009, 2008. Includes material @Yaxa
	Methods used	Sample-based remote sensing assessment
	Additional comments	

Classifications and definitions

2012	National class	Definition
	Dense Forest	Dense forests with crown cover of 60%–70%
	Sparse Forest	Sparse forest: forest with canopy density between 20-60%;
	Very Sparse Forest	very sparse forest: forest with canopy about 5-20%
	Grass Lands	
	Dry Farms	
	Paddy Fields	
	Bare Land	
	Water Bodies	
	No Data	

Original data and reclassification

2012	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Naturally regenerating forest	Plantation forest	Other planted forest
	Dense Forest	312.93	100.00 %	0.00 %	0.00 %
	Sparse Forest	556.20	100.00 %	0.00 %	0.00 %
	Very Sparse Forest	63.17	100.00 %	0.00 %	0.00 %
	Total	932.30	932.30	0.00	0.00



FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	963.10	949.10	935.10	928.10	926.70	925.30	923.90	922.50	921.10
Planted forest (b)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which introduced species	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (a+b)	963.10	949.10	935.10	928.10	926.70	925.30	923.90	922.50	921.10
Total forest area	963.10	949.10	935.10	928.10	926.70	925.60	923.90	922.50	921.10

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

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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)				
	1990	2000	2010	2015	2020
Primary forest					
Temporarily unstocked and/or recently regenerated	0.00	0.00	0.00	0.00	0.00
Bamboos					
Mangroves				1.00	1.40
Rubber wood	0.00	0.00	0.00	0.00	0.00

Comments

@Primary forest need to add the Conis Santana NP; bambbos; mangroves should obtain from UNDP Coastal resilience project.....; agroforestry

1d Annual forest expansion, deforestation and net change

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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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)	-1.40	-1.40	-1.40	-1.40

Comments

1e Annual reforestation

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

Comments

Shall completed with DPs and Dept. of Reforestation

1f Other land with tree cover

National Data

Data sources + type of data source eg NFI, etc

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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	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	523.90	537.90	551.90	558.90	565.90

Comments

Coffee plantation should go to the other (specify) if its can be sperated from forest area.....

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

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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	Growing stock m³/ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
Other wooded land									

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	96.31	94.91	93.51	92.81	92.67	92.53	92.39	92.25	92.11
Planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	96.31	94.91	93.51	92.81	92.67	92.56	92.39	92.25	92.11
Other wooded land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Comments

2b Growing stock composition

National Data

Data sources + type of data source eg NFI, etc

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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							
#2 Ranked in terms of volume							
#3 Ranked in terms of volume							
#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			–	–	–	–	–
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			–	–	–	–	–

Comments

2c Biomass stock

National Data

Data sources + type of data source eg NFI, etc

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National classification and definitions

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Original data

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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									
Broadleaved dry	100%								
Coniferous									
	100%	0%	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	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Broadleaved dry	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Coniferous	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76	0.76

Plantation 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
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	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50	1.50
Plantation forest									
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	0.20	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
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	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Plantation forest									
Other planted forest									

Above-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00
Plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00
Below-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00
Plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00

Reclassification into FRA 2020 categories

-

FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00
Below-ground biomass	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00	42.00
Dead wood									

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	70.50	70.50	70.50	70.50	70.50	70.50	70.50	70.50	70.50
Carbon in below-ground biomass	19.74	19.74	19.74	19.74	19.74	19.74	19.74	19.74	19.74
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

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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

-

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)	963.10	949.10	935.10	928.10	921.10
Total forest area	963.10	949.10	935.10	928.10	921.10

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

vshall add from 40 protected area

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	963.10	949.10	935.10	928.10

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	949.10	–	–	–	–	–	–	–	–	–	935.10	–	932.30	–	–	928.10	926.70	925.60

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	
------------------	--

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	63.83	62.89	62.41	62.32	62.25	62.13	62.04	61.94

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	-0.15	-0.15	-0.15	-0.12	-0.18	-0.15	-0.15

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

Sub-Indicator 2	Forest biomass (tonnes/ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass stock in forest	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00

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	
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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	–	–