



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Report

Armenia

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)

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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

1993	References	State Land Account/Balance 1997 of the Republic of Armenia, Yerevan 1997; National Statistical Service Yearbook, Yerevan 2002;
	Methods used	Registers/questionnaires
	Additional comments	

2005	References	Forest Code of the Republic of Armenia
	Methods used	Registers/questionnaires
	Additional comments	

Classifications and definitions

1993	National class	Definition
	Stocked forest lands	Stoked (closed) forest lands, occupied by young stands of trees species with the stand density of 0.4 and higher, and stands of other age groups with the stand density of 0.3 and higher, as well as land areas occupied by the bushy vegetation, where stands of trees species can be established without special forestamelioration work.
	Unstocked forest lands	Open (un-stocked) forest lands are not designated for forest re-establishing (clear-cut areas, burned forest areas, vanished stands, sparse stands, bare land, openings, nurseries, non-closed plantations and other).
	Non-forest lands	

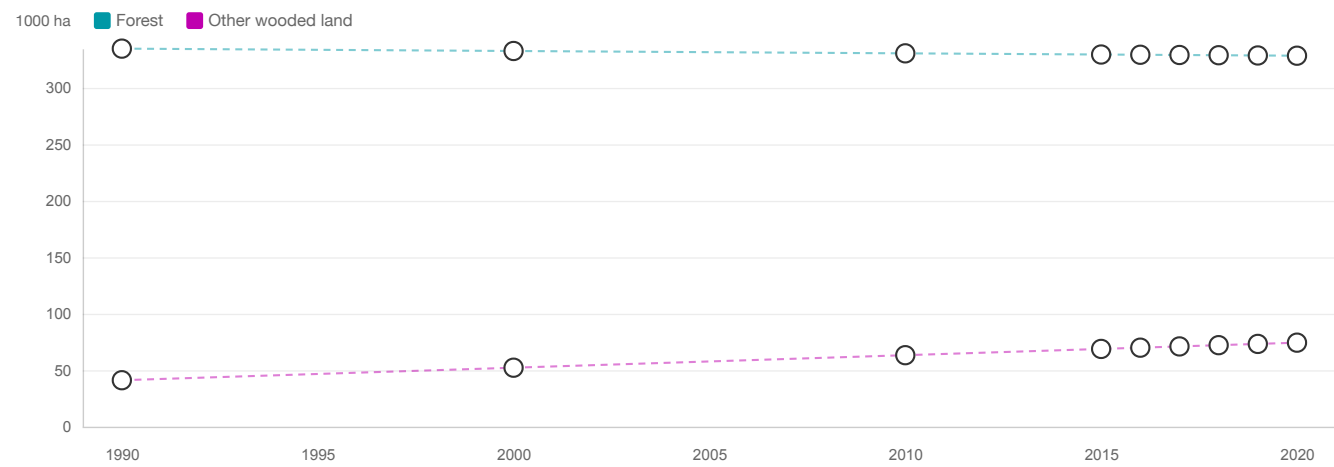
2005	National class	Definition
	Stocked forest lands	Stoked (closed) forest lands, occupied by young stands of trees species with the stand density of 0.4 and higher, and stands of other age groups with the stand density of 0.3 and higher, as well as land areas occupied by the bushy vegetation, where stands of trees species can be established without special forestamelioration work.
	Unstocked forest lands	Open (un-stocked) forest lands are not designated for forest re-establishing (clear-cut areas, burned forest areas, vanished stands, sparse stands, bare land, openings, nurseries, non-closed plantations and other).
	Non-forest lands	

Original data and reclassification

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1993	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Stocked forest lands	334.10	100.00 %	0.00 %	0.00 %
	Unstocked forest lands	44.50	0.00 %	100.00 %	0.00 %
	Non-forest lands	67.60	0.00 %	0.00 %	100.00 %
	Total	446.20	334.10	44.50	67.60

2005	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Stocked forest lands	331.60	100.00 %	0.00 %	0.00 %
	Unstocked forest lands	57.80	0.00 %	100.00 %	0.00 %
	Non-forest lands	60.60	0.00 %	0.00 %	100.00 %
	Total	450.00	331.60	57.80	60.60



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	334.73	332.64	330.56	329.52	329.31	329.10	328.89	328.68	328.47
Other wooded land (a)	41.18	52.26	63.34	68.88	69.99	71.10	72.21	73.32	74.43
Other land (c-a-b)	2 471.09	2 462.10	2 453.10	2 448.60	2 447.70	2 446.80	2 445.90	2 445.00	2 444.10
Total land area (c)	2 847.00	2 847.00	2 847.00	2 847.00	2 847.00	2 847.00	2 847.00	2 847.00	2 847.00

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	39.00	
Sub-tropical	61.00	
Tropical	0.00	

Comments

The data for 2005 correspond to the inventory and assessment of 85% of the forest lands during 2005-2008 and the remaining 15% are old data.

Non-forest lands, mainly of agricultural usage (fodder production, pastures, arable lands, rock outcrops, rocks, larg areas of bare lands with high inclination, non-usable lands and other) are not designated for forest reestablishing in Armenia.

Correction of forest land areas of forest enterprises within the administrative borders of communities close to forests was implemented during 2000-2005 in Armenia. Consequently, agricultural lands in the former land balance of the forest enterprises within administrative borders were transferred to the ownership of communities. The decrease of non-forest lands between 1993 and 2005 is a result of this correction.All stocked forest lands are reclassified as forests, while all un-stocked forest lands are reclassified as other wooded land.

Forest area for 2015 doesn't FRA 2015 area due to recalculated extrapolation.

1b Forest characteristics

National Data

Data sources + type of data source eg NFI, etc

Forest Code; Ownership classification; 2005 Forests and forest lands can be under state, community and private ownership and shall not be subject to alienation to communities, legal persons and citizens.

By-laws Ownership 2005- 2013 N/A

National classification and definitions

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Original data

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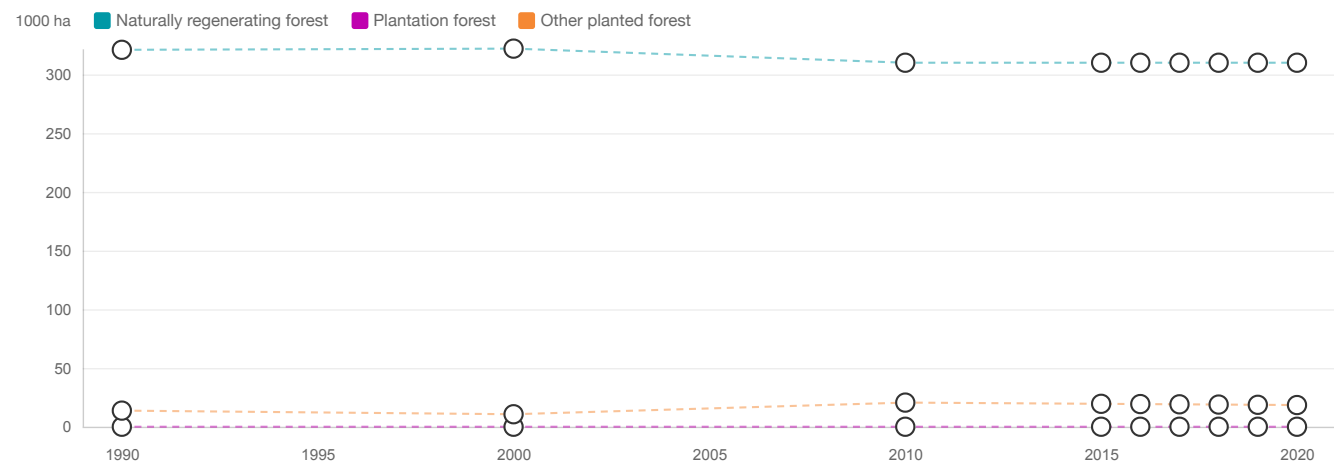
Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	321.00	322.00	310.00	310.00	310.00	310.00	310.00	310.00	310.00
Planted forest (b)	13.73	10.64	20.56	19.52	19.31	19.10	18.89	18.68	18.47
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	0.00	0.00
Other planted forest	13.73	10.64	20.56	19.52	19.31	19.10	18.89	18.68	18.47
Total (a+b)	334.73	332.64	330.56	329.52	329.31	329.10	328.89	328.68	328.47
Total forest area	334.73	332.64	330.56	329.52	329.31	329.10	328.89	328.68	328.47

Comments

Planted forest figures for 2010 and 2015 are adjusted according to the updated total forest area.

1c Primary forest and special forest categories

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
Primary forest	17.00	17.00	17.00	17.00	17.00
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

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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/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)	-0.21	-0.21	-0.21	-0.21

Comments

1e Annual reforestation

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/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

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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	2 471.09	2 462.10	2 453.10	2 448.60	2 444.10

Comments

2 Forest growing stock, biomass and carbon

2a Growing stock

National Data

Data sources + type of data source eg NFI, etc

Simultaneous State Forest Account 1993 of the Republic of Armenia, Yerevan 1993 (1983, 1988) - Information about State Forest Fund

Forestry Management Planning Project 2004-2008

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
Naturally regenerating forest				
Planted forest				
...of which plantation forest				
...of which other planted forest				
Forest	125.50	126.62	121.67	123.42
Other wooded land	19.43	15.31	12.63	11.61

FRA categories	Total growing stock (million m³ over bark)			
	1990	2000	2010	2015
Naturally regenerating forest				
Planted forest				
...of which plantation forest				
...of which other planted forest				
Forest	42.01	42.12	40.22	40.67
Other wooded land	0.80	0.80	0.80	0.80

Comments

Total growing stock on forest: 41 740 000 m3 (data for 1993) and 40 670 000 m3 for 2005.

For other wooded land, an expert estimate of 800 000 m3 has been used for all reporting years.

2b Growing stock composition

National Data

Data sources + type of data source eg NFI, etc

Simultaneous State Forest Account 1993 of the Republic of Armenia, Yerevan 1993 (1983, 1988) - Information about State Forest Fund

Forestry Management Planning Project 2004-2008

National classification and definitions

-

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

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	Fagus orientalis	Oriental Beech	20.81	20.62	20.52	20.52	
#2 Ranked in terms of volume	Quercus macranthera	Caucasian Oak	12.62	11.74	11.30	11.30	
#3 Ranked in terms of volume	Carpinus caucasica	European hornbeam	6.04	6.28	6.40	6.40	
#4 Ranked in terms of volume	Pinus silvestris	Scots pine	0.61	0.60	0.60	0.60	
#5 Ranked in terms of volume	Carpinus orientalis	Oriental Hornbeam	0.45	0.45	0.45	0.45	
#6 Ranked in terms of volume	Juniperus oblonga	Common Juniper	0.16	0.17	0.17	0.17	
#7 Ranked in terms of volume	Populus	Aspen	0.31	0.29	0.28	0.28	
#8 Ranked in terms of volume	Tilia cordata	Small-leaved Lime	0.24	0.18	0.15	0.15	
#9 Ranked in terms of volume	Fraxinus excelsior	Ash	0.10	0.23	0.30	0.30	
#10 Ranked in terms of volume	Acer tataricum	Tatarian Maple	0.14	0.18	0.20	0.20	
Remaining native tree species			0.51	0.37	0.30	0.30	
Total volume of native tree species			41.99	41.11	40.67	40.67	–
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							

FRA categories	Scientific name	Common name	Growing stock in forest (million m³ over bark)				
			1990	2000	2010	2015	2020
Native tree species							
Remaining introduced tree species							
Total volume of introduced tree species		–	–	–	–	–	
Total growing stock		41.99	41.11	40.67	40.67	–	

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

-

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	82.69	81.38	80.06	80.72					
Below-ground biomass	19.04	18.74	18.46	18.58					
Dead wood									

Comments

2d Carbon 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	Forest carbon (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Carbon in above-ground biomass	38.90	38.29	37.70	38.01					
Carbon in below-ground biomass	8.96	8.80	8.67	8.83					
Carbon in dead wood									
Carbon in litter	28.18	28.17	28.16	28.16					
Soil carbon	36.84	36.82	36.80	36.81					

Soil depth (cm) used for soil carbon estimates	30.00
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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

	References to sources of information	Variables	Years	Additional comments
1	Simultaneous State Forest Account 1993 of the Republic of Armenia, Yerevan 1993	Forest and OWL areas	1983, 1988	Information about State Forest Fund
2	Forest Code of RA	Forest and OWL areas	2005	N/A
3	Forest Management Plans for Forest Enterprises and National Parks	Forest cover, forest indices	2004-2008	Information about State Forest Lands

National classification and definitions

National class	Definition
Forests of special significance	Forests of special significance include: a) forests included in the specially protected areas of nature; b) municipal forests and forests located close to cities; c) forests of recreational and health protection significance; d) border forests and forests of military significance; e) forests having historical and scientific value; f) forests protecting sanitary zones.
Forests of production significance	Forests of production significance are the forests ensuring continuous wood production and those not classified as forests of special and protection significance.

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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Primary designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production (a)	0.00	0.00	0.00		
Protection of soil and water (b)	205.70	205.00	133.00		
Conservation of biodiversity (c)	0.00	0.00	0.00		
Social Services (d)	71.60	70.40	0.00		
Multiple use (e)	0.00	0.00	0.00		
Other (specify in comments) (f)	57.40	57.20	130.40		
None/unknown (g)	0.03	0.04	67.16	329.52	328.47
Total forest area	334.73	332.64	330.56	329.52	328.47

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

The special functions contain a number of different functions, but the available data do not allow for separate them into the different FRA categories. They are therefore reported as Multiple use, although they in part may have clearly defined specific functions.

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

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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

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FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Private ownership (a)	0.00	0.00	0.00	0.00
...of which owned by individuals	0.00	0.00	0.00	0.00
...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	0.00	0.00	0.00	0.00
Public ownership (b)	334.73	332.64	330.56	329.52
Unknown/other (specify in comments) (c)	0.00	0.00	0.00	0.00
Total forest area	334.73	332.64	330.56	329.52

Comments

4b Holder of management rights of public forests

National Data

Data sources + type of data source eg NFI, etc

Forest Code Ownership classification 2005 Forests and forest lands can be under state, community and private ownership and shall not be subject to alienation to communities, legal persons and citizens.

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	Forest area (1000 ha)			
	1990	2000	2010	2015
Public Administration (a)	334.73	332.64	330.56	329.52
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	334.73	332.64	330.56	329.52

Comments

5 Forest disturbances

5a Disturbances

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)																	
	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	332.64	-	-	-	-	331.60	-	-	-	-	330.56	-	-	-	-	329.52	329.31	329.10

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				3.90	0.01	0.05	0.33	0.01	0.02	18.70	0.81	0.47	0.22					
...of which on forest				0.40	0.00	0.02	0.30	0.01	0.01	0.01	0.78	0.42	0.17					

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	Yes	No
Legislations and regulations supporting SFM	Yes	No
Platform that promotes or allows for stakeholder participation in forest policy development	No	No
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

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Original data

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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

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National classification and definitions

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Original data

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	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	11.68	11.61	11.57	11.57	11.56	11.55	11.54	11.54

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	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06	-0.06

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	81.38	80.06	80.72	—	—	—	—	—

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	–	–