



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Report

Iraq

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

Forests are one of the most important natural resources in Iraq. There are different types of forests area distributed in the north, middle , and south of Iraq. Iraq witnessed rapid events through the number of wars that took place, resulting in a deterioration of vegetation, especially forests. Due to the latest war with ISIS, thousands of hectares were lost. So, the deterioration of forests in Iraq was due to:

- Mismanagement for natural resources
- Climate change impacts including water scarcity, drought; and frequent appearance of sand and dust storms.
- Lack of qualified and trained staffs who specialists in forest management.

According to the table of this platform, there are incomplete tables due to the lack of forest specialists trained to evaluate forests status.

Although the above challenges, we still ongoing process through using GIS and RS to collect data to fill all gaps and enhance our data in required platform tables.

1 Forest extent, characteristics and changes

1a Extent of forest and other wooded land

National Data

Data sources + type of data source eg NFI, etc

Sabah Saleim Al-Kawaz.	Forest area, ownership and Characteristics	2005	A set of tables prepared for FRA 2005 based on good estimates.
Ministry of forestry. 1999. Country submission to FRA 2000.	Forest area	1990	A set of tables prepared for FRA 2000.
Jafar Mohammed Jafar.	Forest area, ownership and Characteristics	2008	A set of tables prepared for FRA 2010 based on good estimates.

National classification and definitions

There is one class only, Forest, obtained as areas with Tree canopy cover > 10%

Original data

See FRA 2015 report

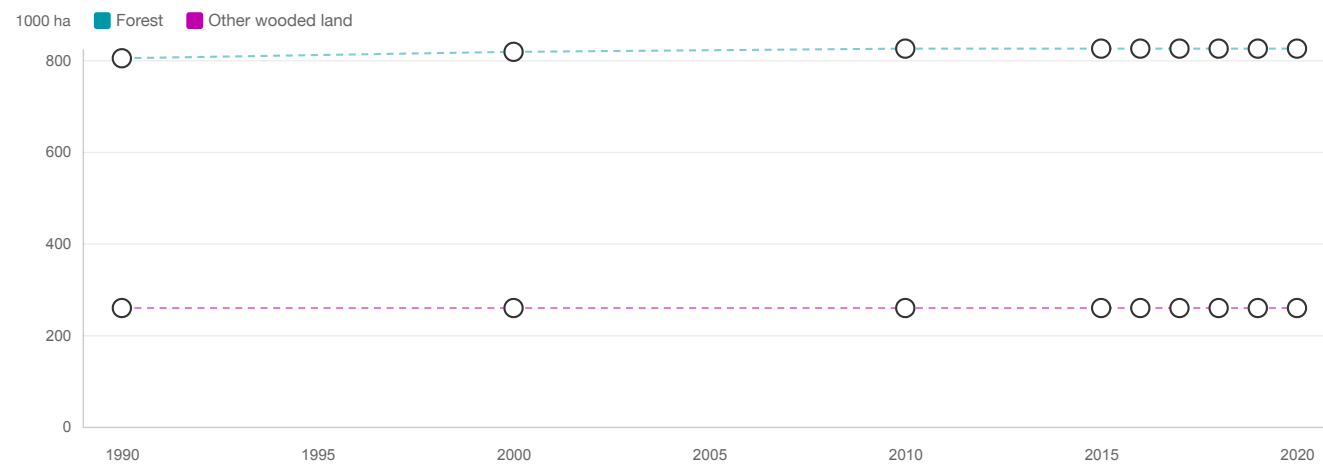
Analysis and processing of national data

Estimation and forecasting

Estimation and forecasting was done as linear extrapolation

Reclassification into FRA 2020 categories

No reclassification was necessary



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	804.00	818.00	825.00	825.00	825.00	825.00	825.00	825.00	825.00
Other wooded land (a)	259.00	259.00	259.00	259.00	259.00	259.00	259.00	259.00	259.00
Other land (c-a-b)	42 349.80	42 335.80	42 328.80	42 328.80	42 328.80	42 328.80	42 328.80	42 328.80	42 328.80
Total land area (c)	43 412.80	43 412.80	43 412.80	43 412.80	43 412.80	43 412.80	43 412.80	43 412.80	43 412.80

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

The same data as from the previous FRA has been used in absence of new data updates in Iraq

However, a study of vegetation cover in Iraq Kurdistan gives consistent numbers for that province (2015 report, University of Zakho, ARS&GIS centre)

New data is needed to update the forest assessment in Iraq

1b Forest characteristics

National Data

Data sources + type of data source eg NFI, etc

Sabah Saleim Al-Kawaz.	Forest area, ownership and Characteristics	2005	A set of tables prepared for FRA 2005 based on good estimates.
Ministry of forestry. 1999. Country submission to FRA 2000.	Forest area	1990	A set of tables prepared for FRA 2000.
Jafar Mohammed Jafar.	Forest area, ownership and Characteristics	2008	A set of tables prepared for FRA 2010 based on good estimates.

National classification and definitions

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Original data

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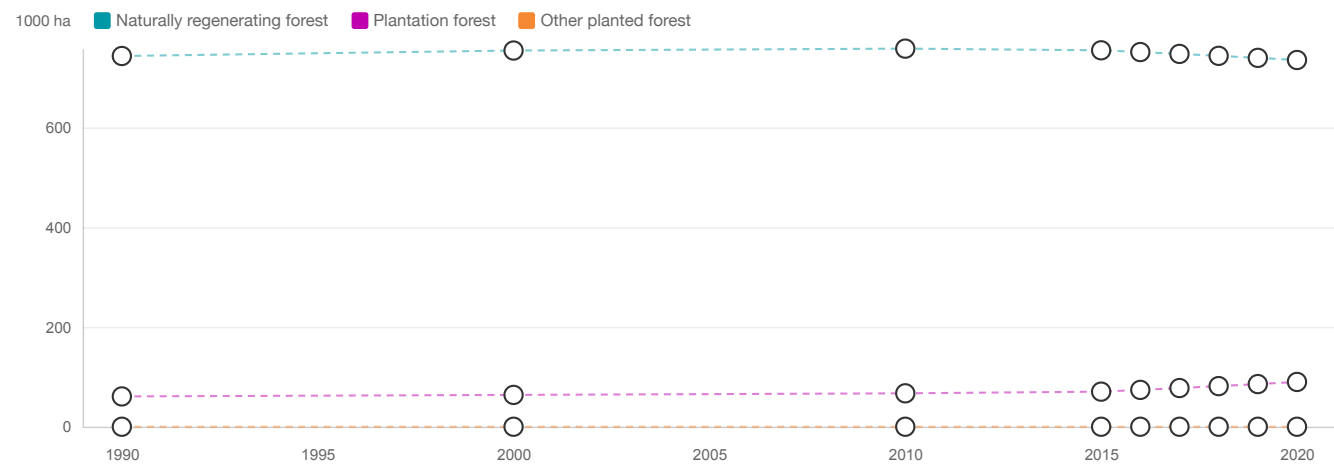
Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-



FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	743.23	754.19	758.00	754.65	751.13	747.44	743.56	739.49	735.21
Planted forest (b)	60.77	63.81	67.00	70.35	73.87	77.56	81.44	85.51	89.79
Plantation forest	60.77	63.81	67.00	70.35	73.87	77.56	81.44	85.51	89.79
...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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (a+b)	804.00	818.00	825.00	825.00	825.00	825.00	825.00	825.00	825.00
Total forest area	804.00	818.00	825.00	825.00	825.00	825.00	825.00	825.00	825.00

Comments

1c Primary forest and special forest categories

National Data

Data sources + type of data source eg NFI, etc

See 1a

National classification and definitions

See 1a

Original data

See 1a

Analysis and processing of national data

Estimation and forecasting

See 1a

Reclassification into FRA 2020 categories

See 1a

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	0.00	0.00	0.00	0.00	0.00
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

See 1a

National classification and definitions

See 1a

Original data

See 1a

Analysis and processing of national data

Estimation and forecasting

See 1a

Reclassification into FRA 2020 categories

See 1a

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Forest expansion (a)	1.40	0.70	0.00	0.00
...of which afforestation	0.00	0.00	0.00	0.00
...of which natural expansion	1.40	0.70	0.00	0.00
Deforestation (b)	0.00	0.00	0.00	0.00
Forest area net change (a-b)	1.40	0.70	0.00	0.00

Comments

1e Annual reforestation

National Data

Data sources + type of data source eg NFI, etc

See 1a

National classification and definitions

See 1a

Original data

See 1a

Analysis and processing of national data

Estimation and forecasting

See 1a

Reclassification into FRA 2020 categories

See 1a

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Reforestation	0.00	0.00	0.00	0.00

Comments

1f Other land with tree cover

National Data

Data sources + type of data source eg NFI, etc

See 1a

National classification and definitions

See 1a

Original data

See 1a

Analysis and processing of national data

Estimation and forecasting

See 1a

Reclassification into FRA 2020 categories

See 1a

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Palms (a)		105.41	132.00	180.00	200.00
Tree orchards (b)		52.52	56.93	61.37	65.81
Agroforestry (c)					
Trees in urban settings (d)					
Other (specify in comments) (e)					
Total (a+b+c+d+e)	–	157.93	188.93	241.37	265.81
Other land area	42 349.80	42 335.80	42 328.80	42 328.80	42 328.80

Comments

2 Forest growing stock, biomass and carbon

2a Growing stock

National Data

Data sources + type of data source eg NFI, etc

The average value reported in 2015 by neighbouring country Iran has been used

National classification and definitions

NA

Original data

NA

Analysis and processing of national data

Estimation and forecasting

NA

Reclassification into FRA 2020 categories

NA

FRA categories	Growing stock m³/ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00
Planted forest	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00
...of which plantation forest									
...of which other planted forest									
Forest	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00	37.00
Other wooded land									

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	27.50	27.91	28.05	27.92	27.79	27.66	27.51	27.36	27.20
Planted forest	2.25	2.36	2.48	2.60	2.73	2.87	3.01	3.16	3.32
...of which plantation forest									
...of which other planted forest									
Forest	29.75	30.27	30.53	30.53	30.53	30.53	30.53	30.53	30.53
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

-

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

Default IPCC biomass calculator

National classification and definitions

-

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	0%	0%	0%						
Broadleaved dry	50%	50%	0%						
Coniferous	50%	50%	100%						
	100%	100%	100%	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	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
Broadleaved dry	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90	1.90
Coniferous	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20

Plantation forest										
Broadleaved humid										
Broadleaved dry										
Coniferous										
Other planted forest										
Broadleaved humid										
Broadleaved dry										
Coniferous										
Weighted BCEF										
Naturally regenerating forest	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55	1.55
Plantation forest										
Other planted forest										
Root-shoot ratios										
Naturally regenerating forest	1990	2000	2010	2015	2016	2017	2018	2019	2020	
Broadleaved humid	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Broadleaved dry	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28	0.28
Coniferous	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Plantation forest										
Broadleaved humid										
Broadleaved dry										
Coniferous										
Other planted forest										
Broadleaved humid										
Broadleaved dry										
Coniferous										
Weighted RS ratio										
Naturally regenerating forest	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Plantation forest										
Other planted forest										

Above-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	57.35	57.35	57.35	57.35	57.35	57.35	57.35	57.35	57.35
Plantation forest									
Other planted forest									
Total	53.02	52.88	52.69	52.46	52.21	51.96	51.69	51.41	51.11
Below-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	16.34	16.34	16.34	16.34	16.34	16.34	16.34	16.34	16.34
Plantation forest									
Other planted forest									
Total	15.11	15.07	15.02	14.95	14.88	14.81	14.73	14.65	14.57

Reclassification into FRA 2020 categories

-

FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	53.02	52.88	52.69	52.46	52.21	51.96	51.69	51.41	51.11
Below-ground biomass	15.11	15.07	15.02	14.95	14.88	14.81	14.73	14.65	14.57
Dead wood									

Comments

In absence of assessment of forest types, it has been assumed that forests in Iraq are 50% coniferous and 50% broadleave dry

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	24.92	24.85	24.77	24.66	24.54	24.42	24.29	24.16	24.02
Carbon in below-ground biomass	7.10	7.08	7.06	7.03	6.99	6.96	6.92	6.89	6.85
Carbon in dead wood									
Carbon in litter									
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

-

Original data

-

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)	804.00	818.00	825.00	825.00	825.00
Total forest area	804.00	818.00	825.00	825.00	825.00

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest area with long-term forest management plan	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which in protected areas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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)	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)	804.00	818.00	825.00	825.00
Unknown/other (specify in comments) (c)	0.00	0.00	0.00	0.00
Total forest area	804.00	818.00	825.00	825.00

Comments

All forests are considered public domain in Iraq

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)	804.00	818.00	825.00	825.00
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	804.00	818.00	825.00	825.00

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	818.00	-	-	-	-	-	-	-	-	-	825.00	-	-	-	-	825.00	825.00	825.00

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		No
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	No	No
Legislations and regulations supporting SFM	No	No
Platform that promotes or allows for stakeholder participation in forest policy development	No	No
Traceability system(s) for wood products	No	No

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	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

-

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										0.33	0.13	0.20
...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	1.00	0.00	1.00	1.00	0.00	1.00	3.00	1.00	2.00	4.00	1.00	3.00
Master's degree										4.00	1.00	3.00
Bachelor's degree	26.00	7.00	19.00	10.00	1.00	9.00	17.00	5.00	12.00	8.00	2.00	6.00
Technician certificate / diploma												
Total	27.00	7.00	20.00	11.00	1.00	10.00	20.00	6.00	14.00	16.00	4.00	12.00

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	1.88	1.90	1.90	1.90	1.90	1.90	1.90	1.90

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

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	0.09	0.00	0.00	0.00	0.00	0.00	0.00

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	52.88	52.69	52.46	52.21	51.96	51.69	51.41	51.11

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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	–	–