



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Desk Study

Western Sahara

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

Aucun rapport officiel n'a été reçu du Sahara occidentale. Ce rapport a fait l'objet d'une étude sur documents par le Secrétariat de FRA qui résume les informations existantes selon le format indiqué pour les rapports nationaux de FRA 2020.

Le Sahara occidental, situé au nord de l'Afrique, est bordé à l'ouest par l'océan Atlantique Nord, au sud et à l'est par la Mauritanie, au nord par le Maroc et par l'Algérie au nord-est. Le long de la côte, les terres sont basses et plates et forment un désert plat qui culmine à 600 m d'altitude, en particulier dans le nord. Alors que le Sahara occidental peut connaître des crues soudaines au printemps, il n'ya pas de cours d'eau permanents. Parfois, un courant off-shore froid peut produire du brouillard et une forte rosée.

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

Référence des sources d'information	variables	Années de référence	commentaires supplémentaires
1. Estimation d'expert	Forêt		Le superficie des forêts proviennent du Rapport national FRA pour le Maroc
2. Service des Etudes et de l'Inventaire Forestier National, Direction de la Planification, du Système d'Information et de la Coopération, Haut Commissariat aux Eaux et Forêts et à la Lutte Contre la Désertification. Département des Eaux et Forêts/Ministère de l'Agriculture, de la Pêche Maritime, du Développement Rural et des Eaux et Forêts.	Superficie forestière	1990 - 2005 2005 - 2015 2017	<p>Les superficies forestières mentionnées sont fournis par le service en charge de l'inventaire forestier national. les données sont issues de deux cycles de cartographies forestières dont:</p> <ul style="list-style-type: none"> le premier cycle est réalisé en 1990-1994 sur la base i) d'interprétation des photographies aériennes, à échelle nominale au 1/20.000, prises durant la période 1980-1992 et ii) d'images satellites à très haute résolution spatiale. le second cycle est réalisé par interprétation visuelle d'images satellite à résolution spatiale sub-métrique ou de photographie aérienne panchromatique à échelle de 1/20.000, prise durant la période 2003-2013.

National classification and definitions

-

Original data

Les informations concernant le Sahara Occidental pour la référence 2020 proviennent des différents rapports du Maroc sur les inventaires forestiers cités dans les sources.

En particulier, il a été déduit que autour de 655 hectares (avec quelques petites changements nettes) de formations forestières appartiennent à ce territoire. La différence entre la superficie totale du Maroc officiellement enregistrée par l'ONU et la superficie totale présentée dans le rapport national (à savoir 26 455 000 hectares) correspond au Sahara Occidental.

Pour le Sahara Occidental, la FAOSTAT a enregistré une superficie officielle de 26 600 000 hectares tandis que, d'après ce qui a été dit auparavant, la superficie tirée du Rapport pour le Maroc correspond à 26 455 000 hectares. La différence entre la superficie officielle indiquée par la FAOSTAT et la superficie de forêt a donc été enregistrée sous la catégorie Autres terres.

Analysis and processing of national data

Estimation and forecasting

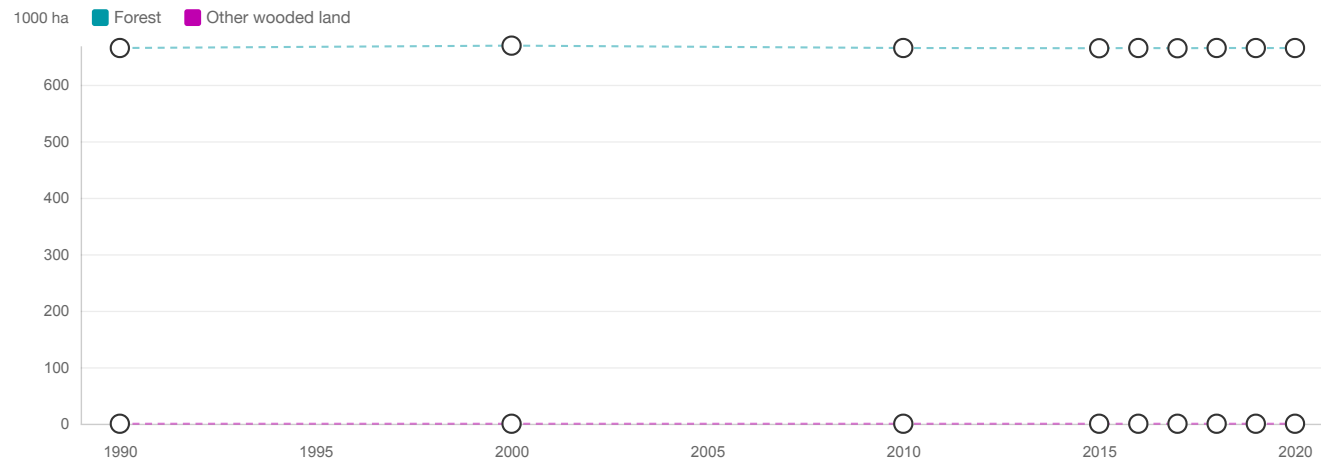
La superficie forestière de Sahara occidental a été mise à jour à la suite des données actualisées des inventaires forestiers au Maroc (voir le rapport national FRA 2020 du Maroc pour plus de détails).

L'estimation de la superficie de la forêt est la suivante:

Catégories de FRA	Superficie (1000 hectares)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forêt	665.1	669.31	665.11	664.7	665.11	664.7	665.14	665.05	665.07

Reclassification into FRA 2020 categories

-



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	665.10	669.31	665.11	664.70	665.11	664.70	665.14	665.05	665.07
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)	25 934.90	25 930.69	25 934.89	25 935.30	25 934.89	25 935.30	25 934.86	25 934.95	25 934.93
Total land area (c)	26 600.00	26 600.00	26 600.00	26 600.00	26 600.00	26 600.00	26 600.00	26 600.00	26 600.00

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

1b Forest characteristics

National Data

Data sources + type of data source eg NFI, etc

Référence des sources d'information	variables	Années de référence	commentaires supplémentaires
1. Estimation d'expert	Forêt		Le superficie des forêts proviennent du Rapport national FRA pour le Maroc
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National classification and definitions

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Original data

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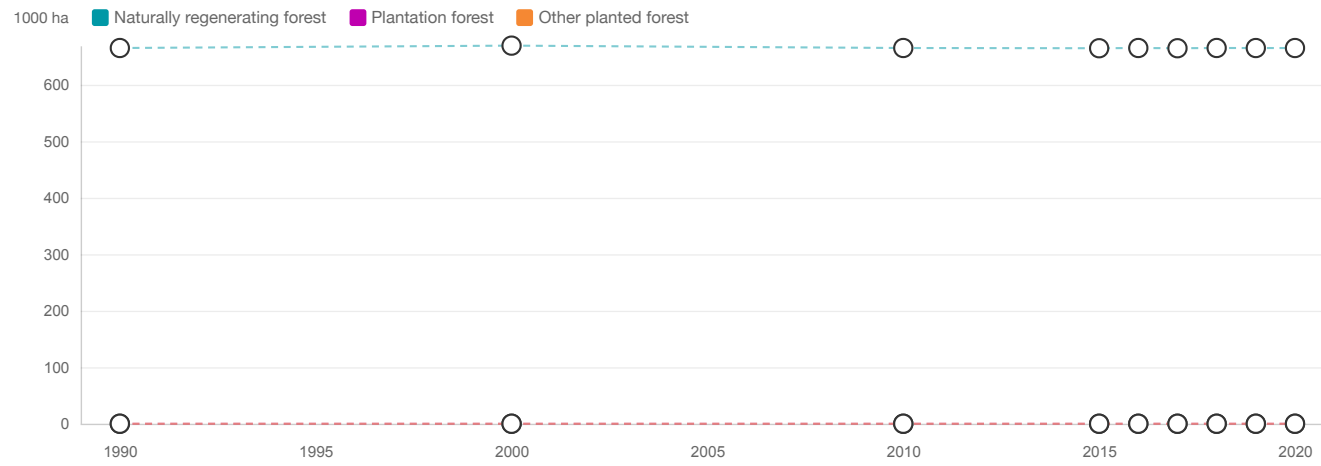
Analysis and processing of national data

Estimation and forecasting

-

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)	665.10	669.31	665.11	664.70	665.11	664.70	665.14	665.05	665.07
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	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)	665.10	669.31	665.11	664.70	665.11	664.70	665.14	665.05	665.07
Total forest area	665.10	669.31	665.11	664.70	665.11	664.70	665.14	665.05	665.07

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

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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					
Bamboos					
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

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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

-

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)	0.42	-0.42	-0.08	0.07

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

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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

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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)				
	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	25 934.90	25 930.69	25 934.89	25 935.30	25 934.93

Comments

2 Forest growing stock, biomass and carbon

2a Growing stock

National Data

Data sources + type of data source eg NFI, etc

Le volume moyen est tiré du rapport du Maroc.

National classification and definitions

-

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Growing stock m ³ /ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	24.30	26.46	27.07	27.12	27.11	27.11	27.11	27.11	27.10
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	24.30	26.46	27.07	27.12	27.11	27.11	27.11	27.11	27.10
Other wooded land									

FRA categories	Total growing stock (million m ³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	16.16	17.71	18.00	18.03	18.03	18.02	18.03	18.03	18.02
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	16.16	17.71	18.00	18.03	18.03	18.02	18.03	18.03	18.02
Other wooded land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Comments

Le volume moyen est tiré du rapport du Maroc.

2b Growing stock composition

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	Scientific name	Common name	Growing stock in forest (million m ³ 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

La biomasse moyen est tiré du rapport du Maroc.

National classification and definitions

-

Original data

-

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

-

FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	33.52	37.07	39.23	39.63	39.65	39.72	39.77	39.83	39.89
Below-ground biomass	10.03	11.17	11.94	12.12	12.15	12.17	12.20	12.22	12.25
Dead wood	0.21	0.21	0.21	0.20	0.20	0.20	0.20	0.20	0.21

Comments

La biomasse moyen est tiré du rapport du Maroc.

2d Carbon stock

National Data

Data sources + type of data source eg NFI, etc

Le carbone moyen est tiré du rapport du Maroc.

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	16.76	18.53	19.61	19.82	19.83	19.86	19.89	19.92	19.95	
Carbon in below-ground biomass	5.02	5.59	5.97	6.06	6.07	6.08	6.10	6.11	6.13	
Carbon in dead wood	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	
Carbon in litter	2.61	2.63	2.68	2.69	2.70	2.70	2.71	2.71	2.72	
Soil carbon	21.73	21.73	21.73	21.72	21.72	21.72	21.72	21.72	21.72	

Soil depth (cm) used for soil carbon estimates	30.00
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Comments

Le carbone moyen est tiré du rapport du Maroc.

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)	665.10	669.31	665.11	664.70	665.07
Total forest area	665.10	669.31	665.11	664.70	665.07

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	665.10	669.31	665.11	664.70

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	669.31	-	-	-	-	-	-	-	-	-	665.11	-	-	-	-	664.70	665.11	664.70

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								0.06			0.04							
...of which on forest																		

Comments

Données copiées de FRA 2015.

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	2.52	2.50	2.50	2.50	2.50	2.50	2.50	2.50

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	-0.01	0.06	-0.06	0.07	-0.01	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	37.07	39.23	39.63	39.65	39.72	39.77	39.83	39.89

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

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	-	-