

# STATISTICAL DATA REPORT

## Introduction

1. Forest extent, characteristics and changes
2. Forest growing stock, biomass and carbon
3. Forest disturbances
4. Emissions and Removals from Forests
5. Timber and Fuelwood supply
6. Forest designation, management and ownerships
7. Forest policy, legislation and SDG
8. Forestry Students and Employees

## 1. Forest extent, characteristics and changes

### 1a. Extent of forest and other wooded land

Categories	Forest Cover Area (000 ha)				
	2004	2008	2012	2016	2020
Forest (a)	5116.623	4854.949	4786.347	3955.199	4062.631
Non-forest land (b=c-a)	82793.977	83055.651	83124.253	83955.401	83847.969

Categories	Forest Cover Area (000 ha)				
	2004	2008	2012	2016	2020
Total Land area (c)	87910.6	87910.6	87910.6	87910.6	87910.6

## Data Sources

Year 2004	References	FREL (2020), National REDD+ Office
	Methods Used	Pixel based classification of Landsat Imageries
	Additional comments	

## 1b. Annual forest expansion, deforestation and net change

Categories	Area (000 ha/year)		
	2004 - 2008	2008 - 2012	2016 - 2020
Forest Expansion (a)	0	0	131.4942425
...Afforestation	0	0	29.0592425
...Natural regeneration	0	0	102.435
Deforestation (b)	5.524	17.362	11.0082
Forest area net change (a-b)	-5.524	-17.362	120.4860425

## Data Sources

Year 2012 - 2016	<b>References</b>	a. State of Forest (2016), Pakistan Forest Institute, b. FREL (2020), National REDD+ Office
	<b>Methods Used</b>	a. Official Records of Chief Conservator of Forests, b. Time Series Analysis
	<b>Additional comments</b>	
Year 2016 - 2020	<b>References</b>	a. State of Forest (2016), Pakistan Forest Institute, b. FREL (2020), National REDD+ Office
	<b>Methods Used</b>	a. Official Records of Chief Conservator of Forests, b. Time Series Analysis
	<b>Additional comments</b>	

## 1c. Annual reforestation

Categories	Area (000 ha/year)	
	2004 - 2008	2008 - 2012
Reforestation	0	0

## Data Sources

Year 2004 - 2008	<b>References</b>	N/A
	<b>Methods Used</b>	N/A
	<b>Additional comments</b>	Data of annual reforestation was missing for reference years
Year 2008 - 2012	<b>References</b>	N/A

<b>Methods Used</b>	N/A
<b>Additional comments</b>	Data of annual reforestation was missing for reference years

### 1d. Other land with tree cover

<b>Categories</b>	<b>Area (000 ha)</b>
Fruit Orchards (a)	
Agroforestry (b)	
Trees in urban settings (c)	
Other (specify in comments) (d)	
Total a+b+c+d	

### Data Sources

<b>Year</b>	<b>References</b>	
	<b>Methods Used</b>	
	<b>Additional comments</b>	

## 1e. Degradation

Categories	Area (ha/year)
	2016 - 2020
Degradation	3966.5

## Data Sources

Year	References	
	Methods Used	
	Additional comments	

## 2. Forest growing stock, biomass and carbon

### 2a. Growing stock

Categories	Growing stock m <sup>3</sup> /ha (over bark)
	2017
Natural Forests	59.9

Categories	Growing stock m <sup>3</sup> /ha (over bark)
	2017
Irrigated Plantations / Man-made forest	16.39
Other land with tree cover (1f)	0

Categories	Growing stock million m <sup>3</sup> (over bark)
	2017
Natural Forests	215.4
Irrigated Plantations / Man-made forest	4.16
Other land with tree cover (1f)	0

### Data Sources

Year	References	
	Methods Used	
	Additional comments	

### 2b. Growing stock composition by Tree

Categories	Scientific name	Common name	Growing stock in forest (million m <sup>3</sup> over bark)

<b>Natural Forests</b>			
#1 Ranked in terms of volume	Pinus roxburghii Sargent	Chandan	
#2 Ranked in terms of volume	Prunus fasciculata	Ber	
#3 Ranked in terms of volume	0	0	
#4 Ranked in terms of volume	0	0	
#5 Ranked in terms of volume	0	0	
<b>Total volume of native tree species</b>			<b>N.A</b>
<b>Irrigated Plantations / Man-made forest</b>			
#1 Ranked in terms of volume	0	0	
#2 Ranked in terms of volume	0	0	
#3 Ranked in terms of volume	0	0	
#4 Ranked in terms of volume	0	0	
#5 Ranked in terms of volume	0	0	
<b>Total volume of introduced tree species</b>			<b>N.A</b>
<b>Other Land with Tree Cover</b>			
#1 Ranked in terms of volume	0	0	
#2 Ranked in terms of volume	0	0	
#3 Ranked in terms of volume	0	0	

<b>Natural Forests</b>	
<b>Total volume of introduced tree species</b>	<b>N.A</b>

### Data Sources

Year	References	
	Methods Used	
	Additional comments	

### 2c. Biomass stock

Categories	Natural Forest Biomass (tonnes/ha)
Above-ground biomass	
Below-ground biomass	
Carbon in dead wood	
Soil Carbon	
Litter	
Total	

### Data Sources



<b>Year</b>	<b>References</b>	
	<b>Methods Used</b>	
	<b>Additional comments</b>	

## 2d. Carbon stock

<b>Categories</b>	<b>Forest Carbon (tonnes/ha)</b>
	<b>2017</b>
Carbon in above-ground biomass	47.7
Carbon in below-ground biomass	14.5
Carbon in dead wood	0
Soil Carbon	0
Litter	0
Total	62.2

## Data Sources

<b>Year</b>	<b>References</b>	
	<b>Methods Used</b>	
	<b>Additional comments</b>	

## 2e. Forest Volume

Categories	Volume (cu ft.)
Above-ground Volume	

### Data Sources

Year	References	
	Methods Used	
	Additional comments	

## 3. Forest designation, management and ownerships

### 3a. Forest area with management plans

Categories	Area (000 ha)
	2020
Forest area within protected areas	0
Forest area with long-term forest management plan	2264
...of which in protected areas	2264

### Data Sources

<b>Year 2020</b>	<b>References</b>	State of Forest (2016), Pakistan Forest Institute
	<b>Methods Used</b>	Official Records of Chief Conservator of Forests
	<b>Additional comments</b>	Data of Forest are within Protected Area is missing for reference years

### 3b. Forest ownership and management rights

<b>Categories</b>	<b>Forest area (000 ha)</b>
	<b>2016</b>
<b>A. Government Owned</b>	3508
<b>State</b>	706
<b>Demarcated</b>	0
<b>Undemarcated</b>	0
<b>Reserved</b>	822
<b>Protected</b>	1600
<b>Unclassed</b>	231
<b>Resumed</b>	149
<b>B. Private / Community</b>	2423
<b>Guzara</b>	347
<b>Communal</b>	329
<b>Section 38</b>	22
<b>Section 14b</b>	0
<b>Chos Act</b>	3

Categories	Forest area (000 ha)
	2016
Misc	1722
C. Private / Individual	0
Misc	0
<b>Total A + B + C</b>	<b>5931</b>

## Data Sources

Year 2016	References	State of Forestry in Pakistan (2016), Pakistan Forest Institute Peshawar
	Methods Used	Official Records of Chief Conservator of Forests
	Additional comments	Data on records of Private Forests is missing

## 4. Forest disturbances

### 4a. Disturbances

Categories	Area (000 ha)
Forest Fire (a)	

Categories	Area (000 ha)
Insects (b)	
Diseases (c)	
Natural disasters (d)	
Other (specify in comments) (e)	
Total (a+b+c+d+e)	

### Data Sources

Year	References	
	Methods Used	
	Additional comments	

### 4b. Degraded forests

Categories	Area (000 ha/year)
<b>Forest Degradation</b>	
..10-30% Canopy Cover	
..31-50% Canopy Cover	
..51-70% Canopy Cover	
..>70% Canopy Cover	

## Data Sources

Year	References	
	Methods Used	
	Additional comments	

## 5. Emissions and Removals from Forests

### 5a. Emissions

Categories	Average Annual Emissions (tco2e/year)		
	2004 - 2008	2008 - 2012	2016 - 2020
Deforestation	579998	1313307	3775
Forest Degradation	0	0	16250
Disturbances	0	0	0
<b>Total A+ B + C</b>	579998	1313307	20025

## Data Sources

Year 2004 - 2008	References	FREL (2020), National REDD+ Office
	Methods Used	Pixel based classification of Landsat Imageries

<b>Additional comments</b>	Data of Removals was not calculated for reference years	
<b>Year 2008 - 2012</b>	<b>References</b>	FREL (2020), National REDD+ Office
	<b>Methods Used</b>	Pixel based classification of Landsat Imageries
	<b>Additional comments</b>	Data of Removals was not calculated for reference years

## 5b. Removals

<b>Categories</b>	<b>Average Annual Removals (tco2e/year)</b>		
	<b>2004 - 2008</b>	<b>2008 - 2012</b>	<b>2016 - 2020</b>
<b>Enhancement</b>	0	0	18275
<b>SFM</b>	0	0	0
<b>Conservation</b>	0	0	0
<b>Total A+ B + C</b>	0	0	18275

## Data Sources

<b>Year 2004 - 2008</b>	<b>References</b>	N/A
	<b>Methods Used</b>	N/A
	<b>Additional comments</b>	Data of Removals was not calculated for reference years
<b>Year 2008 - 2012</b>	<b>References</b>	N/A
	<b>Methods Used</b>	N/A

<b>Additional comments</b>	Data of Removals was not calculated for reference years
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### 5c. Net Emissions/Removals

Categories	Net average annual emissions /removals (tco2e/year)		
	2004 - 2008	2008 - 2012	2016 - 2020
<b>A. Total Emissions</b>	579998	1313307	12787435.5
<b>B. Total Removals</b>	0	0	8074282.5
<b>Net A-B</b>	579998	1313307	4713153

## 6. Timber Fuelwood Consumption

### 6a. Timber and Fuelwood Consumption

Categories	Million (m3)	
	2004	2020
<b>Share of State Forests</b>	6.225	6.225



Categories	Million (m3)	
	2004	2020
...Industrial Wood Timber	0.289	0.289
...Fuel Wood (domestic + commercial + industrial)	5.936	5.936
<b>Share of Farmlands</b>		
...Industrial Wood Timber	14.34	14.34
...Fuel Wood (domestic + commercial + industrial)	31.08	31.08
<b>Imports</b>		
...Industrial Wood Timber	0	0
...Fuel Wood (domestic + commercial + industrial)	0	0
<b>Total A+B+C</b>	51.645	51.645

## Data Sources

Year	References	
	Methods Used	
	Additional comments	

## 6b. Forest products and value

Year	Name of Non Woody Forest Product	Key species	Quantity	Unit	Rate	Total Value (PKR)
	All other plant products					
	All other animal products					
	<b>Total</b>					

## Data Sources

Year	References	
	Methods Used	
	Additional comments	

## 7. Forest policy, legislation and SDG

### 7a. Sustainable Development Goal 15

#### SDG Indicator 15.1.1 Forest area as proportion of total land area

Indicator	Percent		
	2012	2016	2020
Forest area as proportion of total land area	5.45	4.552	4.676
Per Capita Forest	0.022	0.019	0.019

#### SDG Indicator 15.2.1 Progress towards sustainable forest management

Sub-Indicator 1	Percent
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<b>Forest area annual net change rate</b>	

<b>Sub-Indicator 2</b>	<b>Forest biomass (tonnes/ha)</b>
<b>Above-ground biomass stock in forest</b>	

<b>Sub-Indicator 3</b>	<b>Percent (forest area baseline)</b>
<b>Proportion of forest area located within legally established protected areas</b>	

<b>Sub-Indicator 4</b>	<b>Percent (forest area baseline)</b>
	<b>2012</b>
<b>Proportion of forest area under long-term forest management plan</b>	50.23

<b>Sub-Indicator 5</b>	<b>Forest area (000 ha)</b>
<b>Forest area under independently verified forest management certification schemes</b>	

## Data Sources

<b>Year</b>	<b>References</b>	
	<b>Methods Used</b>	
	<b>Additional comments</b>	

## 8. Forestry Students and Employees

### 8a. Employment in forestry and logging

Categories	Number		
	Total	Female	Male
	<b>A. Permanent employees of forestry department</b>		
<b>B. Employment in forest operations</b>			
...Nursery raising			
...afforestation / reforestation			
...protection (negehban)			
...Timber Harvesting			
...Fuelwood collection			
...NTFP collection (medicinal plants, honey etc.)			
<b>C. Total (A + B)</b>			

### Data Sources

Year	References	
	Methods Used	
	Additional comments	

### 8b. Graduation of students in forest-related education

Categories	Number		
	Total	Female	Male
Doctoral degree			
Master's degree			
Bachelor's degree			
Technician certificate / diploma			
Total			

### Data Sources

Year	References	
	Methods Used	
	Additional comments	