



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Report

Papua New Guinea

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

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Introductory text

FAO, at the request of its member countries, regularly monitors the world’s forests and their management and uses through the Global Forest Resources Assessment (FRA). This country report is prepared as a contribution to the FAO publication, the Global Forest Resources Assessment 2020 (FRA 2020).

The content and the structure are in accordance with the recommendations and guidelines given by FAO in the document Guide for country reporting for FRA 2020. These reports were submitted to FAO as official government documents.

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1 Forest extent, characteristics and changes

1a Extent of forest and other wooded land

National data

Data sources

2000	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	Assessment conducuted in 2016
2001	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	Assessment conducted in 2016
2002	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	Assessment conducted in 2016
2003	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2004	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2005	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	

2006	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2007	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2008	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2009	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2010	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2011	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2012	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment

	Additional comments	
2013	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2014	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	
2015	References	PNG Forest Authority (2018). Collect Earth Assessment
	Methods used	Sample-based remote sensing assessment
	Additional comments	

Classifications and definitions

2000	National class	Definition
	Natural forest	Forest that is established through natural natural regeneration and does not fall below the thresholds of the national forest definition. The national forest definition is land spanning more than one (1) hectare, with trees higher than three (3) meters and the canopy cover of more than ten (10) percent'. This excludes land that is predominantly under agriculture or urban land use.
	Plantation forest	Forest established through planting and deliberate seeding. Includes all species of Eucalyptus Plantation, Araucaria Plantation (Araucaria cumminghamii (Hoop Pine) and Araucaria hunstanii (Klinkii Pine), Pinus Plantation, Acacia Plantation, Terminalia Plantation.
	Other land	Vegetation and other land use not classified as forest.This include rubber plantation
2001	National class	Definition
	Natural forest	See 2000 definition
	Plantation forest	See 2000 definition
	Other	See 2000 definition
2002	National class	Definition

	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2003	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2004	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2005	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2006	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2007	National class	Definition
	Natural forest	See 2000

	Plantation forest	See 2000
	Other	See 2000

2008	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2009	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2010	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2011	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2012	National class	Definition
	Natural forest	See 2000
	Plantation forest	

		See 2000
	Other	See 2000

2013	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2014	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

2015	National class	Definition
	Natural forest	See 2000
	Plantation forest	See 2000
	Other	See 2000

Original data and reclassification

2000	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 217.12	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other land	9 871.88	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 277.97	0.00	9 860.03

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2001	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 204.84	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 884.16	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 265.70	0.00	9 872.30

2002	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 196.81	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 892.19	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 257.68	0.00	9 880.32

2003	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 187.00	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 902.00	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 247.88	0.00	9 890.12

2004	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 180.05	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 908.95	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 240.94	0.00	9 897.06

2005	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 169.69	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 919.31	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 230.59	0.00	9 907.41

2006	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 165.68	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 923.32	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 226.59	0.00	9 911.41

2007	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 155.82	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 933.18	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 216.74	0.00	9 921.26

2008	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 145.98	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 943.02	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 206.91	0.00	9 931.09

2009	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 131.77	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 957.23	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 192.72	0.00	9 945.28

2010	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 117.92	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 971.08	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 178.89	0.00	9 959.11

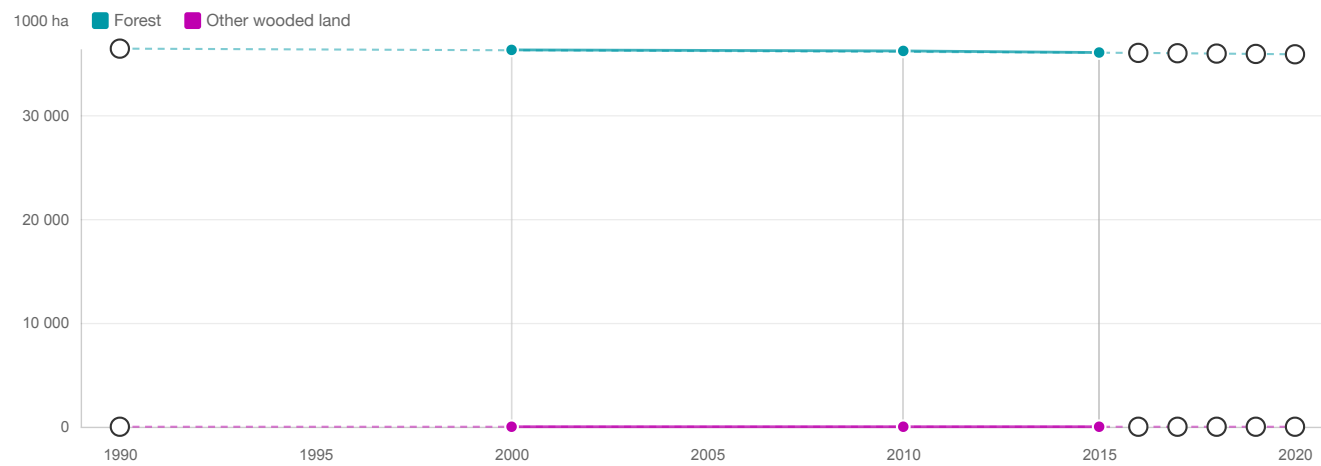
2011	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 094.48	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	9 994.52	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 155.47	0.00	9 982.53

2012	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 064.73	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	10 024.27	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 125.76	0.00	10 012.24

2013	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	36 025.06	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	10 063.94	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 086.14	0.00	10 051.86

2014	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	35 996.84	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	10 092.16	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 057.95	0.00	10 080.05

2015	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Natural forest	35 963.27	100.00 %	0.00 %	0.00 %
	Plantation forest	49.00	100.00 %	0.00 %	0.00 %
	Other	10 125.73	0.12 %	0.00 %	99.88 %
	Total	46 138.00	36 024.42	0.00	10 113.58



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	36 399.68	36 277.97	36 178.89	36 024.42	35 989.88	35 956.35	35 922.82	35 889.29	35 855.76
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)	8 886.32	9 008.03	9 107.11	9 261.58	9 296.12	9 329.65	9 363.18	9 396.71	9 430.24
Total land area (c)	45 286.00	45 286.00	45 286.00	45 286.00	45 286.00	45 286.00	45 286.00	45 286.00	45 286.00

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	0.00
Temperate	0.00	0.00
Sub-tropical	0.00	0.00
Tropical	100.00	100.00

Comments

- 1. The remote sensing sampling based assesement of PNG's land use and land use change conducted in 2016 override all previous data used in previous FRA reporting.
- 2. 1990 figure estimated using 2000 and 2001 values.

1b Forest characteristics

National Data

Data sources + type of data source eg NFI, etc

References to sources of information	Variables	Years	Additional Comments
PNG Forest Authority (2015). Collect Earth Assessment	Forest, Cropland, Settlement, Grassland, Wetland, Other land	2000 -2015	PNG Collect Earth Forest Land Use Assessment results
The Government of Papua New Guinea. (2014). Papua New Guinea (PNG) National Forest Definition. Port Moresby, PNG: National Exercutive Council.	PNG National Forest Definition	2014	The National Executives Council Decision No. 256/2014
IPCC Land Use Categories	Forest, Cropland, Settlement, Grassland, Wetland, Other land	N/A	
Hammermaster, E., & Saunders, J. (1995). Forest resources and vegetation mapping of Papua New Guinea. PNGRIS Publication No. 4. CSIRO.	Forest classifications and descriptions	1995	

National classification and definitions

See national data points.

Original data

See national data points

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)	36 339.49	36 217.12	36 117.92	35 963.27	35 929.69	35 896.16	35 862.63	35 829.10	35 795.57
Planted forest (b)	60.75	60.75	60.75	60.75	60.75	60.75	60.75	60.75	60.75
Plantation forest	60.75	60.75	60.75	60.75	60.75	60.75	60.75	60.75	60.75
...of which introduced species	23.55	23.55	23.55	23.55	23.55	23.55	23.55	23.55	23.55
Other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Total (a+b)	36 400.24	36 277.87	36 178.67	36 024.02	35 990.44	35 956.91	35 923.38	35 889.85	35 856.32
Total forest area	36 399.68	36 277.97	36 178.89	36 024.42	35 989.88	35 956.35	35 922.82	35 889.29	35 855.76

Comments

1. There is an anticipated increase in Plantation forest of 22,000 ha in 2019 and 2020. This however is not added in the forecasted values.

2. Rubber is an introduced species

1c Primary forest and special forest categories

National Data

Data sources + type of data source eg NFI, etc

PNG Collect Earth Forest and Land Use Assessment 2000-2015	Forest types	2000 -2015	PNG Collect Earth Forest Land Use Assessment results
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National classification and definitions

See 1c

Original data

Refer to table 1b

Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

National Class		FRA 2020 Categories			
Primary forest		Mangrove	Temporary unstock	Primary forest	Rubber wood
	Low altitude forest on plains and fans			100%	
	Low altitude forest on uplands			100%	
	Lower montane forest			100%	
	Montane forest			100%	
	Dry seasonal forest			100%	
	Littoral forest			100%	
	Seral forest			100%	
	Swamp forest			100%	
	Savanna			100%	
	Woodland			100%	
	Scrub			100%	
	Mangrove	100%			
Cropland					
	Rubber				100%

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Primary forest				27 200.90	
Temporarily unstocked and/or recently regenerated					
Bamboos					
Mangroves		281.00	281.00	281.00	281.00
Rubber wood	11.69	11.69	11.69	11.69	11.69

Comments

The Mangrove area includes both disturbed (by human activities) and intact. UPNG “State of Forests of PNG” included nipa palms. We excluded the nipa palms and included only the mangrove trees as per our forest definition. There is an extensive stretch of pure nipa stands co-existing with the mangrove trees in a particular area of the country. They appear as dark orange in Land 7 and 8 false colour images. The mangrove trees also reflect the similar dark orange colours. This is due to the presence of water. We however used high resolution images in Google Earth and Bing maps to detect the differences whereas the UPNG report used only landsat images.

1d Annual forest expansion, deforestation and net change

National Data

Data sources + type of data source eg NFI, etc

References to sources of information	Variables	Years	Additional Comments
PNG Forest Authority (2018). Collect Earth Assessment	Forest and land use change areas	2000 -2015	PNG Collect Earth Forest Land Use Assessment results

National classification and definitions

Classs	Definition
Forest	Land spanning more than one (1) hectare, with trees higher than three (3) meters and the canopy cover of more than ten (10) percent’. This excludes land that is predominantly under agriculture or urban land use.
Deforestation	Conversion of forest land to non-forest land
Afforestation	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not defined as forest.

Original data

See National data points

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)	0.00	0.00	0.00	0.00
...of which afforestation	0.00	0.00	0.00	0.00
...of which natural expansion	0.00	0.00	0.00	0.00
Deforestation (b)	12.17	9.91	30.90	33.53
Forest area net change (a-b)	-12.17	-9.91	-30.89	-33.73

Comments

1e Annual reforestation

National Data

Data sources + type of data source eg NFI, etc

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National classification and definitions

Category	Definition
Reforestation	Natural regeneration or re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.
...of which artificial reforestation (<i>subcategory</i>)	Re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.

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	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

PNG Collect Earth Forest land use change assessment 2000-2015

National classification and definitions

Cropland	Adopted IPCC Definition. Arable and tillage land, and agro-forestry systems where vegetation falls below the threshold used for the forest land category, consistent with the selection of national definitions. The cropland category in PNG is categorized into Subsistence Agriculture, Palm Oil, Coconut, Coffee, Cocoa, Tea and Rubber.
Settlement	Adopted IPCC Definition. All developed land, including transportation infrastructure and human settlements of any size, unless they are already included under other categories and should be consistent with the selection of national definitions. In the PNG context the settlement is divided into villages, large urban centers and infrastructure (permanent roads, schools).
Grassland	Adopted IPCC Definition. Grassland includes rangelands and pasture land that is not considered as cropland. It also includes systems with vegetation that fall below the threshold used in the forest land category and is not expected to exceed, without human intervention, the thresholds used in the forest land category. This category also includes all grassland from wild lands to recreational areas as well as agricultural and silvo-pastoral systems. The grassland is divided into Herb land, Rangeland and others
Wetland	Adopted IPCC Definition. PNG does not have a national definition but the Wetland include rivers, lake, dams, swamps, Nipa swamps and other swamps
Other land	Adopted IPCC Definition. Includes bare soil, rock, sand, rocky outcrop, etc.

Original data

		Vegatation Cover (000 ha)	
Cropland		Trees	Palms
	Trees	3,363.4	
	Palm Oil		325.8
	Coconut		143.7
Grassland - trees		472.7	
Wetlands - tress		589.5	
Settlements - trees		215.1	
Other Land - trees		9.8	
	Sub-total	1,287.1	
Total		4,650.5	469.5

Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

Tree cover in other land	
National Category	FRA Category (000 ha)

	Others	Palm	Tree Orchards	Agroforestry	Tree in urban settings
Cropland	2,303.0	469.5			
Grassland	469.5				
Wetlands	472.7				
Settlements	589.5				215.1
Other Land	9.8				
Total	3,844.5	469.5	0.0	0.0	215.1

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Palms (a)				469.50	
Tree orchards (b)				0.00	
Agroforestry (c)				0.00	
Trees in urban settings (d)				215.10	
Other (specify in comments) (e)				2 291.40	
Total (a+b+c+d+e)	–	–	–	2 976.00	–
Other land area	8 886.32	9 008.03	9 107.11	9 261.58	9 430.24

Comments

1. Trees in cropland (fallow land).
2. Palms (a) here refers to coconut and oil palm plantations.

2 Forest growing stock, biomass and carbon

2a Growing stock

National Data

Data sources + type of data source eg NFI, etc

McAlpine, J. & Quigley, J. (Coffey MPW Pty. Ltd for AusAid: Canberra & Papua New Guinea National Forest Service. 1998. Forest Resources of Papua New Guinea. Summary Statistics from the Forest Inventory Mapping (FIM) System.)

National classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees with a minimum diameter of 10 cm at breast height (or above buttress if these are higher). Includes the stem from ground level up to a top diameter of 0 cm, excluding branches.

Original data

National forest inventory currently being conducted therefore no 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	Growing stock m³/ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00	95.00
Planted forest	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00
...of which plantation forest	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00	150.00
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	95.09	95.09	95.09	95.09	95.09	95.09	95.09	95.09	95.09
Other wooded land									

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	3 452.25	3 440.63	3 431.20	3 416.51	3 413.32	3 410.14	3 406.95	3 403.76	3 400.58
Planted forest	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11
...of which plantation forest	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11	9.11
...of which other planted forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Forest	3 461.42	3 449.74	3 440.31	3 425.62	3 422.43	3 419.25	3 416.06	3 412.87	3 409.69
Other wooded land									

Comments

No reliable data to estimate the growing stock.

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

National forest inventory currently being conducted therefore no data.

2c Biomass stock

National Data

Data sources + type of data source eg NFI, etc

References to sources of information	Variables	Years	Additional Comments
PNG Forest Authority . Collect Earth Assessment	Forest (disturbed, primary) area	2000 -2015	Assessment condcuted in 2016
IPCC 2006 Guideline	Ecological zones, Aboveground & belowground Biomass (t/h)	2006	
Fox et al	Aboveground Biomass (t/h)-Tropical rainforest	2010	Study from the PSP plots in PNG

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	100%	84%	100%						
Broadleaved dry									
Coniferous		16%							
	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	1.50	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	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Broadleaved dry	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Coniferous	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
Other planted forest									
Broadleaved humid	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Broadleaved dry	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
Coniferous	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70	0.70
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	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20	1.20
Other planted forest	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30	1.30
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	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29	0.29
Plantation forest									
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
Other planted forest									
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
Weighted RS ratio									

Naturally regenerating forest	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Plantation forest	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23	0.23
Other planted forest	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24	0.24
Above-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	142.50	142.50	142.50	142.50	142.50	142.50	142.50	142.50	142.50
Plantation forest	180.60	180.60	180.60	180.60	180.60	180.60	180.60	180.60	180.60
Other planted forest	195.00	195.00	195.00	195.00	195.00	195.00	195.00	195.00	195.00
Total	142.57	142.57	142.57	142.57	142.57	142.57	142.57	142.57	142.57
Below-ground biomass (t/ha)									
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	34.20	34.20	34.20	34.20	34.20	34.20	34.20	34.20	34.20
Plantation forest	42.19	42.19	42.19	42.19	42.19	42.19	42.19	42.19	42.19
Other planted forest	46.80	46.80	46.80	46.80	46.80	46.80	46.80	46.80	46.80
Total	34.22	34.22	34.22	34.22	34.22	34.22	34.22	34.22	34.22

Reclassification into FRA 2020 categories

-

FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	176.00	176.00	176.00	176.00	176.00	176.00	176.00	176.00	176.00
Below-ground biomass	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00	22.00
Dead wood									

Comments

2d Carbon stock

National Data

Data sources + type of data source eg NFI, etc

See 2c

National classification and definitions

-

Original data

See 2c

Analysis and processing of national data

Estimation and forecasting

See table 2c

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	82.60	82.60	82.60	82.60	82.60	82.60	82.60	82.60	82.60
Carbon in below-ground biomass	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10	10.10
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

	References to sources of information	Variables	Years	Additional Comments
1	PNG Forest Authority (2018). Collect Earth Assessment	Forest, Cropland, Settlement, Grassland, Wetland, Other land	2000 -2015	Assessment conducted in 2016
2	PNG Forest Authority Forest Basemap 2011	Timber concessions		
3	Conservation and Environment Protection Authority (CEPA) internal reports	Protected/conservation areas	N/A	
4	Forest Resource Information Management System (FRIMS)	Logging constraints, production forest,		

National classification and definitions

National class	Definition
Extreme constraint to logging	Includes: Land with over 30 degrees dominant slope; or Land over 2400m altitude; or Land with polygonal karst landform; or Land permanently or near permanently inundated extending over more than 80% of the area of that land; or Land covered by mangroves
Concession area	Includes areas for which the acquisition of timber rights has been approved under the current and previous Forestry Acts. Thus includes Timber Rights Purchase agreements(TRP), Forest Management Areas (FMA) and Local Forest Areas(LFA). Areas do not cover logging arrangements on land acquired under Lands Act provisions or informal logging in local areas such as by portable sawmills
Production Forests	Areas that have legally been acquired by the State for timber production. Includes all the Timber Rights Purchase (TRP), Local Forest Areas (LFA) and Forest Management Agreement (FMA) areas
Future Productions Forests	Areas identified as potential for timber harvesting in the long term under legal concession arrangements such as a Forest Management Agreement (FMA)
Multiple use	Based on the 10 % from FMA projects assumed for multiple use purposes. Also projects expired thru TRP and are reverted back to resource owners.
Salvage Forests	Forest Areas to be cleared for other land uses.
Afforestation	Land that is identified for afforestation and includes most of the grasslands in the country.
Non Wood Forest Products (NWFP)	Products derived from forests that are tangible and physical objects of biological origin other than wood.
Conservation Areas	Include forest areas under Conservation and Environment Protection Authority (CEPA) legislation.

Original data

National Categories	000 ha
10% multi-use in FMAs	501
15% buffer	1,091
Logging Constraints	518
Production forest	5,170
Protection forest by CEPA	1,360
Unknown	27,323

NB: 2015 Collect Earth Assessment data.

Analysis and processing of national data

Estimation and forecasting

	%				
FRA categories	1990	2000	2010	2015	2020
Production	14.37	14.37	14.37	14.37	14.37
Protection of soil and water	2.84	2.84	2.84	2.84	2.84
Conservation of biodiversity	3.78	3.78	3.78	3.78	3.78
Social Services					
Multiple use	3.03	3.03	3.03	3.03	3.03
Other (specify in comments)					
None/ unknown	75.98	75.98	75.98	75.98	75.98
	100.00	100.00	100.00	100.00	100.00

Reclassification into FRA 2020 categories

ational class	FRA categories						
	Production	Protection of soil and water	Conservation of biodiversity	Social Services	Multiple use	Other (specify in comments)	None/ unknown
10% multi use in FMAs					100%		
15% buffer		32%					
Logging Constraints		68%					
Production forest	100%						
Protection forest by CEPA			100%				

Primary designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production (a)	5 231.13	5 213.64	5 199.40	5 177.20	5 152.96
Protection of soil and water (b)	1 032.49	1 029.03	1 026.22	1 021.84	1 017.06
Conservation of biodiversity (c)	1 376.08	1 371.48	1 367.73	1 361.89	1 355.52
Social Services (d)					
Multiple use (e)	1 103.90	1 100.21	1 097.20	1 092.52	1 087.40
Other (specify in comments) (f)					
None/unknown (g)	27 656.08	27 563.61	27 488.34	27 370.97	27 242.82
Total forest area	36 399.68	36 277.97	36 178.89	36 024.42	35 855.76

Total area with designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production	5 231.13	5 213.64	5 199.40	5 177.20	5 152.96
Protection of soil and water	1 610.82	1 605.44	1 601.05	1 594.22	1 586.75
Conservation of biodiversity	2 479.98	2 471.69	2 464.94	2 454.41	2 442.92
Social Services					
Other (specify in comments)					

Comments

Values for 1990, 2000 and 2020 reporting years based on the 2015 estimates.

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

	References to sources of information	Variables	Years	Additional Comments
1	PNG Forest Authority (2018). Collect Earth Assessment	Forest, Cropland, Settlement, Grassland, Wetland, Other land	2000 -2015	Assessment condcuted in 2016
2	PNG Forest Authority Forest Basemap 2011	Timber concessions		
3	Conservation and Environment Protection Authority (CEPA) internal reports	Protected/conservation areas	N/A	

National classification and definitions

Forest with long term forest management plans	Includes Forest Management Agreement areas (FMAs) where the acquisition of timber rights has been approved under the current Forestry Act and the State owned forest plantations
Protected forest Areas	Includes areas legally established under the Consevation Environment Protection Authority (CEPA) Act

Original data

Permanent forest estate	000 ha
State forest Plantations	25.4
Forest Management Agreement Area (FMA)	5,010.5
Protected forest areas	1360

Analysis and processing of national data

Estimation and forecasting

National Class	FRA class	
	Forest area within protected areas	Forest area with long-term forest management plan
State forest Plantations		100%
Forest Management Agreement Area (FMA)		100%
Protected forest	100%	

Reclassification into FRA 2020 categories

FRA Categories	Area 000 ha
Forest area within protected areas	1360.00
Forest area with long-term forest management plan	5035.90

FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest area within protected areas		1 360.00	1 360.00	1 360.00	1 360.00	1 360.00	1 360.00	1 360.00	1 360.00
Forest area with long-term forest management plan		5 035.90	5 035.90	5 035.90	5 035.90	5 035.90	5 035.90	5 035.90	5 035.90
...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

	References to sources of information	Variables	Years	Additional Comments
1	PNG Forest Authority (2018). Collect Earth Assessment	Forest,	2000 -2015	Assessment conducted in 2016
2	PNG Forest Authority Forest Basemap 2011	Timber concessions		
3	Internal PNG Forest Authority reports	Timber concessions		

National classification and definitions

National class	Definition
Tribal land	Land and forest communually owned by tribes and clans that have both user and ownership rights.
State land	Land and forest owned by by the Government or State.This include lease and lease back areas.
Private land	Land and forest owned by individuals.

Original data

Refer to table 1a and 2b

Analysis and processing of national data

Estimation and forecasting

-

Reclassification into FRA 2020 categories

National Class	FRA 2010 Categories		
	Private Ownership	Public Ownership	Unknown
State land		100%	
Tribal land	100 %		
Private land			100%

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Private ownership (a)	36 365.32	36 228.12	36 058.92	35 974.32
...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	36 365.32	36 228.12	36 058.92	35 974.32
Public ownership (b)	32.00	32.00	32.00	32.00
Unknown/other (specify in comments) (c)	2.36	17.85	87.97	18.10
Total forest area	36 399.68	36 277.97	36 178.89	36 024.42

Comments

The forest in the Stateland is mostly forest plantations.

4b Holder of management rights of public forests

National Data

Data sources + type of data source eg NFI, etc

	References to sources of information	Variables	Years	Additional Comments
1	PNG Forest Authority (2018). Collect Earth Assessment	Forest,	2000 -2015	Assessment condcuted in 2016
2	PNG Forest Authority Forest Basemap 2011	Timber concessions		
3	Internal PNG Forest Authority reports	Timber concessions/forest plantations		

National classification and definitions

Category	Definitions	Remarks
Public Administration	All timber concessions where the management of timber rights had been transferred from the indigenous people to the State (Government) and onto the timber companies. In areas where the concession term have expired, the rights have reverted back to the indigenous owners.	These areas include forest management agreement (FMA) areas, timber right purchase (TRP) areas and State owned forest plantations.
Local, tribe and indigeneous	These are land owned by tribal/clan groups under customary ownership rights. These include Local Forest Areas (LFAs) that have been declared as such under the repealed Forestry (Private) Dealings Act, Chapter 147 including the forest plantations owned by tribal/clan groups under customary ownership rights.	A trend is emerging in PNG where individuals are buying land from the tribal/clan groups for their individual use, however there is no specific data to show the percentage or actual area sizes.
Unknown ownership	Areas outside of public adminstration. Refers to forest areas under customary land where the forest management rights have not been acquired from the indigenous owners including timber concessions that have their terms expired and the rights been reverted back to the indigenous owners. This also include areas under the Forest Clearance Authority (FCA) for Special Agriculture Business Leases (SABL), roadline timber authorities or small forest timber areas.	N/A
Private business entities and institutions	Include forest areas owned and managed by intitutions and companies	N/A

Original data

National Class	Area (1000 ha)
State plantations	25.40
Private plantations	23.50
Forest Management Agreement(FMA)	5,010.50
Timber Rights Purchase (TRP)	1,524.10
Local Forest Areas (LFAs)	809.40
Unknown	28,570.10

Analysis and processing of national data

Estimation and forecasting

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Reclassification into FRA 2020 categories

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National Class	FRA reclassification				
	Public Administration	Individuals	Private business entities and institutions (c)	Local, tribal and indigenous communities	Unknown/other (specify in comments)
State plantations	0.39%				
Private plantations				2.83%	
Forest Management Agreement(FMA)	76.38%				
Timber Rights Purchase (TRP)	23.23%				
Local Forest Areas (LFAs)				97.17%	
Unknown					100.00%

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Public Administration (a)	32.00	32.00	32.00	32.00
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	32.00	32.00	32.00	32.00

Comments

Areas outside of public adminstration. Refer to the national definitions above.

5 Forest disturbances

5a Disturbances

National Data

Data sources + type of data source eg NFI, etc

-

National classification and definitions

Classs	Definition
Forest	Land spanning more than one (1) hectare, with trees higher than three (3) meters and the canopy cover of more than ten (10) percent'. This excludes land that is predominantly under agriculture or urban land use.
Primary forest	Naturally regenerated forest of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.
Disturbed forest	Naturally regenerated forest where there are clearly visible indications of human activities

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)																	
	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	36 277.97	36 265.70	36 257.68	36 247.88	36 240.94	36 230.59	36 226.59	36 216.74	36 206.91	36 192.72	36 178.89	36 155.47	36 125.76	36 086.14	36 057.95	36 024.42	35 989.88	35 956.35

Comments

5b Area affected by fire

National Data

Data sources + type of data source eg NFI, etc

References to sources of information	Variables	Years	Additional Comments
PNG Forest Authority (2018). Collect Earth Assessment	Forest burned by fire	2000 -2015	Point sampling remote sensing Assessment condcuted in 2016

National classification and definitions

National class	Definition
Burned areas	Include burned forest, cropland and grassland,
Burned forest areas	Only includes burned forest areas

Original data

	Area (000 ha)		
	Burned forest area	Burned areas	Total
2000	1.95	2.01	3.95
2001	1.95	1.95	3.91
2002	-	0.49	0.49
2003	-	-	-
2004	-	-	-
2005	1.95	-	1.95
2006	-	-	-
2007	1.94	-	1.94
2008	-	2.01	2.01
2009	-	-	-
2010	-	1.94	1.94
2011	3.92	-	3.92
2012	3.94	1.96	5.90
2013	-	-	-
2014	1.99	1.95	3.94
2015	3.92	-	3.92

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)																	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total land area affected by fire	3.95	3.91	0.49			1.95		1.94	2.01		1.94	3.92	3.94		1.95	3.92		
...of which on forest	1.95	1.95	0.00			1.95		1.94			1.94	3.92	1.96		1.99	3.92		

Comments

The assessment of fire is challenging due to extent of the area that is burnt and also the assessment is mostly optical. Furthermore the cloud cover remains a challenge despite the use of Landsat greenest pixel hence no data in some years.

5c Degraded forest

Does your country monitor area of degraded forest		No
If "yes"	What is the national definition of "Degraded forest"?	There is no national definition as yet but for the purpose of assessing the forest land use and land use change between the years 2000 and 2015 this definition was used: Degradation forest is the conversion from primary forest to disturbed (by humans) forest.
	Describe the monitoring process and results	<p>1. The Collect Earth (CE) is used to monitor both deforestation and forest degradation in PNG between 2000 and 2015. CE is a user-friendly Free Open Source Software (FOSS) developed by the FAO. It uses a Google Earth interface and facilitates a point-based data collection and visual interpretation of freely available high and medium spatial resolution satellite imagery in Google Earth, Bing Maps, Here Maps and Google Earth Engine Playground.</p> <p>2. The data collection form in the CE is used to record land information. This form is customized to gather information based on the IPCC land use categories and the country specific land sub categories. The form contains a series of multiple-choice prompts and text entry fields that cover all the land categories and sub categories including their characteristics. The form guides the CE operator (land use assessor) to record information on the land characteristics and elements in a systematic and structured approach as they are visualized on the satellite imageries.</p> <p>3. The assessment of the land use is done systematically at every 0.04 x 0.04 degrees and 0.02 x 0.02 degrees for smaller provinces (Point based sampling) having less than 500,000 hectares of landmass overlaid on the PNG map creating a total of 25,279 square sampling plots (points). The size of each sample plot is 100m x 100m (1ha) which is consistent with the minimum mapping area required to apply PNG's national forest definition. Within each sampling square plots, there are 25 sampling points equivalent to about 4% of the plot. These sampling points help quantify and characterize land use within the sample plot. These sampling plots are automatically organized by the PNG CE in sub-national units arranged along a 4° grid (WGS 1984 datum).</p> <p>4. The land class (category/sub category) is evaluated and visually interpreted by recognizing the land key elements, the assessment of their socio-economic functions and the adoption of the 'predominant land use' criteria in the classification scheme settled by rules. The notion is that the land use function of land can be expressed through hierarchical relationships among key land elements, and that these functional relationships are based on thresholds reflecting the relevance and predominance of key land elements in the observed area.</p> <p>5. The single land class or land use is simple to assess but becomes difficult when there are combination of two or three classes. In this situation the hierarchical sequence of settlement > cropland > forestland > grassland > wetland > other land are applied with the thresholds being: settlement >10%; cropland >20%; forestland >30%; grassland >30%; wetland >30%; other land >30% to express their pre-dominance. This means that if there is 6% of settlement, 15% of cropland, 56% of forestland, 16% grassland, and 7% of wetland, then the predominant land use of the observed area is forestland. However if the settlement area is more than 10%, the predominant land use of the observed area is considered as settlement because settlement is the first preference in the hierarchical sequence. The objective is to provides a systematic approach for the representation of land use that is consistent with the concepts and methodologies developed by the IPCC.</p> <p>6. The next steps is to determine the land use function of the land based on the spatial distribution of the key land elements and classify the land use. If the land class is complex (less than one land class in the area of interest) the hierarchical threshold criteria as described above (5) is used.</p> <p>7. Once the land use is determined the next step is to determine the cause of the change. This is done by using landsat 7 and 8 using Google Engine. Landsat 7 and 8 are automatically enabled or activated in Google Engine once the sample plot is activated in Collect Earth . There are three tabs within the Google Earth Engine window i.e. home, data catalogue and workspace. The long list of available satellite images is located on the data catalogue tab. Upon selecting Landsat 7 and 8 Annual Greenest Pixel TOA reflectance composite, the images are displayed on the workspace. To enhance the vegetation colour or a natural colour in both Landsat 7 and 8 images, three band colour combinations (RGB) are used to provide false colour (orange) - Landsat 7: B4, B5, B3 and Landsat 8: B5, B6, B4. Landsat 7 provided historical land use images from 1999 to 2015 while Landsat 8 provided historical land use images from 2013 to 2015.</p> <p>8. If the land use is classified as forestland, the next step is to determine whether this particular forestland is disturbed and the cause of it. The types of human impacts and the key features or elements are shown below;</p> <p>Disturbed forestland Key features</p> <ul style="list-style-type: none"> o Logged forest : Logging roads o Gardening : Isolated patches of temporary clearings at the edge of cropland areas o Fire : Burnt forest o Workabaut sawmill : Based on local knowledge o Others : Mining clearings & those not identified <p>9. Step 7 is used to determine the year the change or disturbance occurred.</p> <p>The following are the results:</p> <ul style="list-style-type: none"> o Total forest in 2015: 35,963,273 ha o Forest disturbed by before 2000: 6,133,974 ha o Forest disturbed or degraded between 2000-2015: 2,389,665 ha o Intact or primary forest in 2015: 27,439,635 ha o % disturbed in 15 years: 6.6% o Annual Rate of disturbance: 0.44%

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

	References to sources of information	Variables		Years	Additional comments
1	Government of Papua New Guinea (GoPNG). National Forest Policy, Ministry of Forests.	Forest Policy	1991		The PNG National Forest Policy was endorsed by Parliament in 1991
4	Papua New Guinea Forest Authority. Papua New Guinea Logging Code of Practice, First Edition. Paupua New Guinea Forest Authority.	N/A	1996		N/A
5	National Forestry Development Guidelines. Papua New Guinea Forest Authority	N/A	2009		N/A

National classification and definitions

National class	Definition
National Forest Policy	Policies for management, use and conservation of forest and tree resources for the benefit of Papua New Guinea society.
Forestry Act (as amended)	A set of rules enacted by the legislative authority of a Papua New Guinea to regulate the access, management, conservation and use of forest resources.
Papua New Guinea Logging Code of Practice	The Papua New Guinea Logging Code of Practice was endorsed by NEC in April 1996.
National Forestry Development Guidelines. Papua New Guinea Forest Authority	Is a legislation which gives significant direction to the National Forest Plan, which underpins all forest based activity in PNG. It states how the forestry sub-sector is expected to contribute to the economy and how social, cultural and environmental needs are to be satisfied.

Original data

-

Indicate the existence of	Boolean (Yes/No)	
	National	Sub-national
Policies supporting SFM	Yes	Yes
Legislations and regulations supporting SFM	Yes	Yes
Platform that promotes or allows for stakeholder participation in forest policy development	Yes	Yes
Traceability system(s) for wood products	No	No

Comments

Currently working on the traceability system (Decisions Support System/ Timber Legality Standard).

6b Area of permanent forest estate

National Data

Data sources + type of data source eg NFI, etc

References to sources of information	Variables	Years	Additional Comments
PNG Forest Authority (2018). Collect Earth Assessment	Forest plantions and FMA areas	2000 -2015	Assessment condcuted in 2016
Internal PNG Forest Authority Report	Forest plantions		

National classification and definitions

National class	Definition
Permanent Forest Estate	Forest areas on state land that are under a 99 year lease mainly as ‘State plantations’ and forest areas under Forest Management Agreement rights under 40 year term with the landowners.

Original data

Permanent forest estate	Area (000 ha)
State forest Plantations	25.4
Forest Management Agreement Area (FMA)	5,010.5
	5,035.9

FRA 2020 categories	Forest area (1000 ha)					
	Applicable?	1990	2000	2010	2015	2020
Area of permanent forest estate	Yes				5 035.90	

Comments

7 Employment, education and NWFP

7a Employment in forestry and logging

National Data

Data sources + type of data source eg NFI, etc

data not available for 1990, 2000 and 2015

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	Eagle wood oil	Gyrinops ledermanii				3 Raw material for medicine and aromatic products
#2	Massoi bark oil	Cryptocarya massoi				3 Raw material for medicine and aromatic products
#3	Sandalwood oil	Santallum macgregorii				3 Raw material for medicine and aromatic products
#4	Rattan Furnitures	Calamus spp.				5 Raw material for utensils handicrafts construction
#5	Bamboo Furnitures	Bambusa spp.				5 Raw material for utensils handicrafts construction
#6	Baskets	Flagelleria sp.,Calamus spp.				5 Raw material for utensils handicrafts construction
#7	Trays	Flagellaria sp.,Calamus spp.				5 Raw material for utensils handicrafts construction
#8	Medicinal plants	Various Plant species				13 Raw material for medicine
#9	Mushroom	Dead suitable trees				1 Food
#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	80.11	79.89	79.55	79.47	79.40	79.32	79.25	79.18

Name of agency responsible	PNG Forest Authority
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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	-0.03	-0.09	-0.10	-0.09	-0.09	-0.09	-0.09

Name of agency responsible	PNG Forest Authority
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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	176.00	176.00	176.00	176.00	176.00	176.00	176.00	176.00

Name of agency responsible	PNG Forest Authority
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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	3.78	3.78	3.78	3.78	3.78	3.78	3.78	3.78

Name of agency responsible	Conservation and Environment Protection Authority
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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	13.98	13.98	13.98	13.98	13.98	13.98	13.98	13.98

Name of agency responsible	PNG Forest Authority
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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	4.31	2.71	38.10	36.49	37.58	37.58	—	—