Food and Agriculture Organization of the United Nations

# Global Forest Resources Assessment 2020

## Report

## Uganda

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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| Edward Senyonjo | Collaborator | senyonjo.edward@gmail.com | All |

### Introductory text

Place an introductory text on the content of this report

# 1 Forest extent, characteristics and changes

# 1a Extent of forest and other wooded land

## National Data

### Data sources + type of data source eg NFI, etc

1. Proposed Forest Reference Emission Level for Uganda. February 2018. (including data used for the preparation of the document). This source has data for 2000 and 2015 and was used for estimating the forest area time series.
2. Vegetation maps for 1990, 2000, 2005, 2010, 2015 and 2017, which were used for estimating the time series for Other wooded land.

### National classification and definitions

-

### Original data

*From Source 1 – for estimating forest area time series:*

| Management type | Forest/LULC type | Area in year 2000 (ha) | Area in year 2015 (ha) | Annual rate of change (%) | Annual change rate (ha/year) |
|---|---|---|---|---|---|
| **all land** | **Plantations** | **268,363** | **415,958** | **2.96** | 9,840 |
| **(private + NFA + UWA)** | Tropical High Forest | 633,864 | 505,617 | -1.50 | |
| | Woodland | 2,260,718 | 1,622,588 | -2.19 | |
| | **Natural Forest (THF + WL)** | **2,894,582** | **2,128,205** | **-2.03** | -51,092 |
| | **All Forest (Plantation + THF + WL)** | **3,162,945** | **2,544,163** | **-1.44** | -41,252 |
| | Nonforest | 17,251,421 | 17,870,203 | 0.24 | |
| | **Total land area *** | **20,414,366** | **20,414,366** | **0.00** | |

*From source 2 – for estimating other wooded land time series (areas in hectares)*

| | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 |
|---|---|---|---|---|---|---|
| Bushland | 5,276,178 | 2,793,894 | 4,286,593 | 5,068,125 | 5,097,234 | 1,677,549 |
| Grassland | 1,511,573 | 4,007,747 | 3,035,058 | 2,371,688 | 1,967,122 | 5,082,446 |
| Bushland + Grassland | 6,787,751 | 6,801,641 | 7,321,651 | 7,439,812 | 7,064,356 | 6,759,995 |

## Analysis and processing of national data

### Estimation and forecasting

To establish the forest area time series, linear interpolation and extrapolation was applied to the data from 2000 and 2015, resulting in the following time series:

| | 1990 | 2000 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|
| Natural forest | 3,405,500 | 2,894,582 | 2,383,664 | 2,128,205 | 2,077,113 | 2,026,021 | 1,974,930 | 1,923,838 | 1,872,746 |
| Plantations | 169,966 | 268,363 | 366,760 | 415,958 | 425,798 | 435,637 | 445,477 | 455,317 | 465,156 |
| TOTAL forest | 3,575,466 | 3,162,945 | 2,750,424 | 2,544,163 | 2,502,911 | 2,461,659 | 2,420,407 | 2,379,154 | 2,337,902 |

To establish the time series for the extent of other wooded land, it is clear from the data that there are difficulties to interpret and distinguish these two classes. Therefore, the original data for bushland and grassland combined was used and it was assumed that 50% of the combined class is other wooded land.

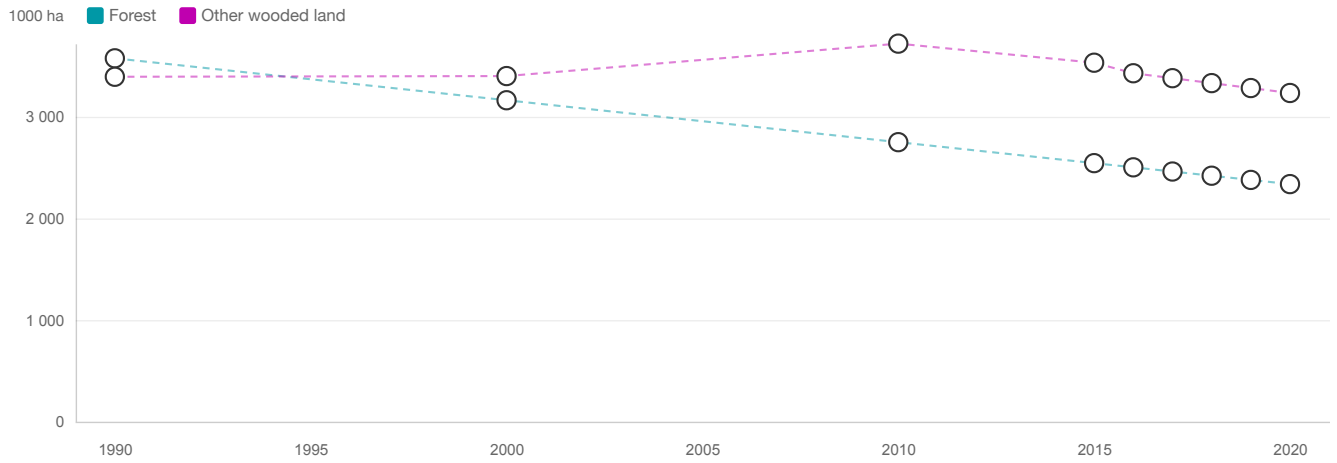
| | 1990 | 2000 | 2005 | 2010 | 2015 | 2017 |
|---|---|---|---|---|---|---|
| Bushland | 5,276,178 | 2,793,894 | 4,286,593 | 5,068,125 | 5,097,234 | 1,677,549 |
| Grassland | 1,511,573 | 4,007,747 | 3,035,058 | 2,371,688 | 1,967,122 | 5,082,446 |
| Bushland + Grassland | 6,787,751 | 6,801,641 | 7,321,651 | 7,439,812 | 7,064,356 | 6,759,995 |
| Percent OWL | 50% | 50% | 50% | 50% | 50% | 50% |
| Other wooded land | 3,393,876 | 3,400,821 | 3,660,826 | 3,719,906 | 3,532,178 | 3,379,997 |

The data on other wooded land was then interpolated for 2016 and extrapolated for the years 2018-2020

| 2016 | 2018 | 2019 | 2020 |
|---|---|---|---|
| *OWL estimated / forecasted values* | | | |
| 3,428,556 | 3,331,439 | 3,282,880 | 3,234,322 |

### Reclassification into FRA 2020 categories

-


1000 ha
Forest
Other wooded land
3 000
2 000
1 000
0
1990
1995
2000
2005
2010
2015
2020

| FRA categories | Area (1000 ha) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1990 | 2000 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Forest (a) | 3 575.47 | 3 162.95 | 2 750.42 | 2 544.16 | 2 502.91 | 2 461.66 | 2 420.41 | 2 379.15 | 2 337.90 |
| Other wooded land (a) | 3 393.88 | 3 400.82 | 3 719.91 | 3 532.18 | 3 428.56 | 3 380.00 | 3 331.44 | 3 282.88 | 3 234.32 |
| **Other land (c-a-b)** | **13 082.65** | **13 488.23** | **13 581.67** | **13 975.66** | **14 120.53** | **14 210.34** | **14 300.15** | **14 389.97** | **14 479.78** |
| **Total land area (c)** | **20 052.00** | **20 052.00** | **20 052.00** | **20 052.00** | **20 052.00** | **20 052.00** | **20 052.00** | **20 052.00** | **20 052.00** |

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

Forest area for the period 1990-2015 have changed and new data have become available and the whole time series has been recalculated.

As for the other wooded land, original data show a big variation for both bushland and grassland while the sum of the two is more stable, which indicates that are issues related to the interpretation of these two categories. To reclassify to other wooded land, 50% was applied to both classes in order to get a less variable time series.

# 1b Forest characteristics

## National Data

### Data sources + type of data source eg NFI, etc

Proposed Forest Reference Emission Level for Uganda. February 2018.  (including data used for the preparation of the document). This source has data for 2000 and 2015 and was used for estimating the time series for natural forests and plantations.

### National classification and definitions

-

### Original data

| Management type | Forest/LULC type | Area in year 2000 (ha) | Area in year 2015 (ha) | Annual rate of change (%) | Annual change rate (ha/year) |
|---|---|---|---|---|---|
| **all land** | **Plantations** | **268,363** | **415,958** | **2.96** | 9,840 |
| **(private + NFA + UWA)** | Tropical High Forest | 633,864 | 505,617 | -1.50 | |
| | Woodland | 2,260,718 | 1,622,588 | -2.19 | |
| | **Natural Forest (THF + WL)** | **2,894,582** | **2,128,205** | **-2.03** | -51,092 |
| | **All Forest (Plantation + THF + WL)** | **3,162,945** | **2,544,163** | **-1.44** | -41,252 |
| | Nonforest | 17,251,421 | 17,870,203 | 0.24 | |
| | **Total land area *** | **20,414,366** | **20,414,366** | **0.00** | |

## Analysis and processing of national data

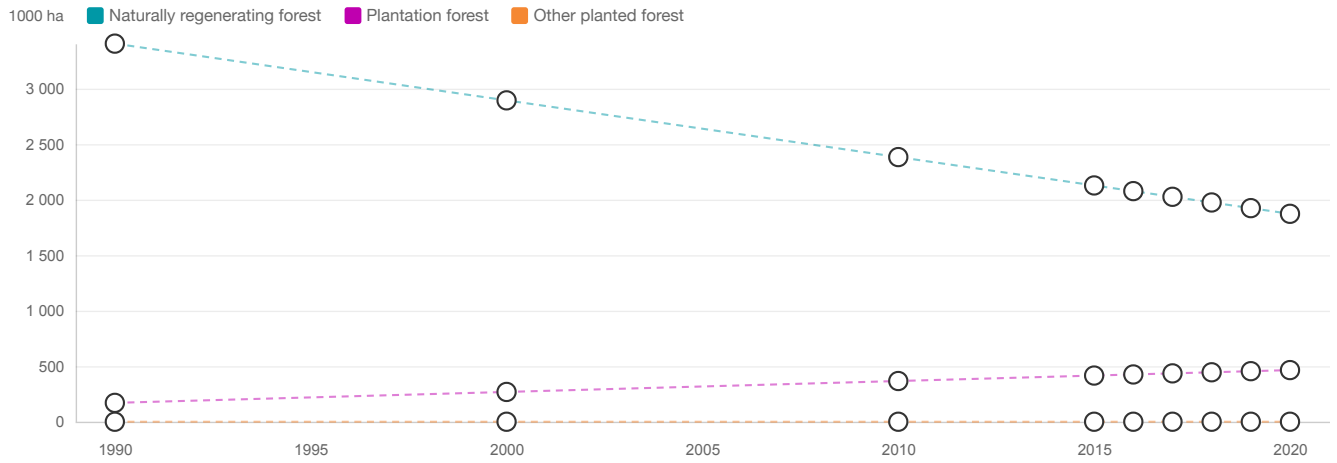
### Estimation and forecasting

To establish the time series of natural forest and plantations, linear interpolation and extrapolation was applied to the data from 2000 and 2015, resulting in the following time series:

| | 1990 | 2000 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
|---|---|---|---|---|---|---|---|---|---|
| Natural forest | 3,405,500 | 2,894,582 | 2,383,664 | 2,128,205 | 2,077,113 | 2,026,021 | 1,974,930 | 1,923,838 | 1,872,746 |
| Plantations | 169,966 | 268,363 | 366,760 | 415,958 | 425,798 | 435,637 | 445,477 | 455,317 | 465,156 |

### Reclassification into FRA 2020 categories

-


1000 ha
Naturally regenerating forest
Plantation forest
Other planted forest
3 000
2 500
2 000
1 500
1 000
500
0
1990
1995
2000
2005
2010
2015
2020

| FRA categories | Forest area (1000 ha) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1990 | 2000 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Naturally regenerating forest (a) | 3 405.50 | 2 894.58 | 2 383.66 | 2 128.21 | 2 077.11 | 2 026.02 | 1 974.93 | 1 923.84 | 1 872.75 |
| **Planted forest (b)** | **169.97** | **268.36** | **366.76** | **415.96** | **425.80** | **435.64** | **445.48** | **455.32** | **465.16** |
| Plantation forest | 169.97 | 268.36 | 366.76 | 415.96 | 425.80 | 435.64 | 445.48 | 455.32 | 465.16 |
| …of which introduced species | | | | | | | | | |
| Other planted forest | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| **Total (a+b)** | **3 575.47** | **3 162.94** | **2 750.42** | **2 544.17** | **2 502.91** | **2 461.66** | **2 420.41** | **2 379.16** | **2 337.91** |
| **Total forest area** | **3 575.47** | **3 162.95** | **2 750.42** | **2 544.16** | **2 502.91** | **2 461.66** | **2 420.41** | **2 379.15** | **2 337.90** |

## Comments

# 1c Primary forest and special forest categories

## 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 | 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

Proposed Forest Reference Emission Level for Uganda. February 2018.  (including data used for the preparation of the document).

### National classification and definitions

-

### Original data

| Forest/LULC type | Area in year 2000 (ha) | Area in year 2015 (ha) | Annual rate of change (%) | Annual change rate (ha/year) |
|---|---|---|---|---|
| **Plantations** | **268,363** | **415,958** | **2.96** | 9,840 |
| Tropical High Forest | 633,864 | 505,617 | -1.50 | |
| Woodland | 2,260,718 | 1,622,588 | -2.19 | |
| **Natural Forest (THF + WL)** | **2,894,582** | **2,128,205** | **-2.03** | -51,092 |
| **All Forest (Plantation + THF + WL)** | **3,162,945** | **2,544,163** | **-1.44** | -41,252 |

## Analysis and processing of national data

### Estimation and forecasting

Fixed change rates were used for the whole reporting period 1990-2020, so the annual net loss of 41,252 hectares is composed of deforestation (51092 hectares) and expansion/afforestation of 9840 hectares.

### Reclassification into FRA 2020 categories

-

| FRA categories | Area (1000 ha/year) | | | |
|---|---|---|---|---|
| | 1990-2000 | 2000-2010 | 2010-2015 | 2015-2020 |
| Forest expansion (a) | 9.84 | 9.84 | 9.84 | 9.84 |
| …of which afforestation | 9.84 | 9.84 | 9.84 | 9.84 |
| …of which natural expansion | | | | |
| Deforestation (b) | 51.09 | 51.09 | 51.09 | 51.09 |
| Forest area net change (a-b) | **-41.25** | **-41.25** | **-41.25** | **-41.25** |

## Comments

# 1e Annual reforestation

## 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/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

-

### 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 | 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 | **13 082.65** | **13 488.23** | **13 581.67** | **13 975.66** | **14 479.78** |

## Comments

# 2 Forest growing stock, biomass and carbon

## 2a Growing stock

### National Data

#### Data sources + type of data source eg NFI, etc

Proposed Forest Reference Level for Uganda, January 2017

#### National classification and definitions

-

#### Original data

The forest reference level report gives the following data on carbon stocks in biomass.

| **Carbon stocks (t/ha)** | Plantation | Tropical Hight Forest | Woodland | Forest (weighted average) |
|---|---|---|---|---|
| C-AGB | 57.2 | 115.7 | 20 | 45.1 |
| C-BGB | 13.7 | 27.8 | 4.8 | 10.8 |

Applying a carbon fraction of 0.47, gives the following biomass stocks:

| **Biomass stocks (t/ha)** | Plantation | Tropical High Forest | Woodland | Forest (Weighted average) |
|---|---|---|---|---|
| AGB | 121.7 | 246.2 | 42.6 | 96.0 |
| BGB | 29.1 | 59.1 | 10.2 | 23.0 |

Further, applying the following BCEF to the above-ground biomass, gives the following estimate of growing stock

| | Plantation | Tropical High Forest | Woodland | Natural Forest (weighted average) |
|---|---|---|---|---|
| BCEF | 1.5 | 0.95 | 2.8 | |
| **Growing stock** | **81.1** | 259.1 | 15.2 | **73.1** |

Areas for the forest classes used for weighting are those given in table 1b:

| | Plantation | Tropical High Forest | Woodland | Forest |
|---|---|---|---|---|
| **Area 2015 (ha)** | 415,958 | 505,617 | 1,622,588 | 2,544,163 |

### Analysis and processing of national data

#### Estimation and forecasting

-

#### Reclassification into FRA 2020 categories

-

| FRA categories | Growing stock m³/ha (over bark) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1990 | 2000 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Naturally regenerating forest | 73.10 | 73.10 | 73.10 | 73.10 | 73.10 | 73.10 | 73.10 | 73.10 | 73.10 |
| Planted forest | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 |
| …of which plantation forest | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 | 81.10 |
| …of which other planted forest | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 73.48 | 73.78 | 74.17 | 74.41 | 74.46 | 74.51 | 74.57 | 74.63 | 74.69 |
| Other wooded land | | | | | | | | | |

| FRA categories | Total growing stock (million m³ over bark) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| | 1990 | 2000 | 2010 | 2015 | 2016 | 2017 | 2018 | 2019 | 2020 |
| Naturally regenerating forest | 248.94 | 211.59 | 174.25 | 155.57 | 151.84 | 148.10 | 144.37 | 140.63 | 136.90 |
| Planted forest | 13.78 | 21.76 | 29.74 | 33.73 | 34.53 | 35.33 | 36.13 | 36.93 | 37.72 |
| …of which plantation forest | 13.78 | 21.76 | 29.74 | 33.73 | 34.53 | 35.33 | 36.13 | 36.93 | 37.72 |
| …of which other planted forest | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Forest | 262.72 | 233.35 | 203.99 | 189.30 | 186.37 | 183.43 | 180.50 | 177.56 | 174.62 |
| Other wooded land | | | | | | | | | |

## Comments

# 2b Growing stock composition

## 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 | 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

There are no data available for this table.

# 2c Biomass stock

## National Data

### Data sources + type of data source eg NFI, etc

Proposed Forest Reference Level for Uganda, January 2017

### National classification and definitions

-

### Original data

The forest reference level report gives the following data on carbon stocks in biomass

| **Carbon stocks (t/ha)** | Plantation | Tropical Hight Forest | Woodland | Forest (weighted average) |
|---|---|---|---|---|
| C-AGB | 57.2 | 115.7 | 20.0 | 45.1 |
| C-BGB | 13.7 | 27.8 | 4.8 | 10.8 |

Applying a carbon fraction of 0.47, gives the following biomass stocks:

| **Biomass stocks (t/ha)** | Plantation | Tropical High Forest | Woodland | Forest (Weighted average) |
|---|---|---|---|---|
| AGB | 121.7 | 246.2 | 42.6 | 96.0 |
| BGB | 29.1 | 59.1 | 10.2 | 23.0 |

## 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 | 96.00 | 96.00 | 96.00 | 96.00 | 96.00 | 96.00 | 96.00 | 96.00 | 96.00 |
| Below-ground biomass | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 | 23.00 |
| Dead wood | | | | | | | | | |

## Comments

# 2d Carbon stock

## National Data

### Data sources + type of data source eg NFI, etc

Proposed Forest Reference Level for Uganda, January 2017

### National classification and definitions

-

### Original data

| **Carbon stocks (t/ha)** | Plantation | Tropical Hight Forest | Woodland | Forest (weighted average) |
|---|---|---|---|---|
| C-AGB | 57.2 | 115.7 | 20 | 45.1 |
| C-BGB | 13.7 | 27.8 | 4.8 | 10.8 |

## 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 | 45.10 | 45.10 | 45.10 | 45.10 | 45.10 | 45.10 | 45.10 | 45.10 | 45.10 |
| Carbon in below-ground biomass | 10.80 | 10.80 | 10.80 | 10.80 | 10.80 | 10.80 | 10.80 | 10.80 | 10.80 |
| Carbon in dead wood | | | | | | | | | |
| Carbon in litter | | | | | | | | | |
| Soil carbon | | | | | | | | | |

| | |
|---|---|
| **Soil depth (cm) used for soil carbon estimates** | |

## 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) | **3 575.47** | **3 162.95** | **2 750.42** | **2 544.16** | **2 337.90** |
| Total forest area | **3 575.47** | **3 162.95** | **2 750.42** | **2 544.16** | **2 337.90** |

### 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

No data available

# 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

No data available.

# 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 | **3 575.47** | **3 162.95** | **2 750.42** | **2 544.16** |

### Comments

No data available.

# 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

No data available.

# 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 | **3 162.95** | – | – | – | – | – | – | – | – | – | **2 750.42** | – | – | – | – | **2 544.16** | **2 502.91** | **2 461.66** |

### Comments

No data available.

# 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

No data available.

# 5c Degraded forest

| | | |
|---|---|---|
| **Does your country monitor area of degraded forest** | | Yes |
| If "yes" | What is the national definition of "Degraded forest"? | |
| | Describe the monitoring process and results | The intention is to monitor forest degradation, and different methodological approaches are currently being evaluated. |

### Comments

# 6 Forest policy and legislation

## 6a Policies, Legislation and national platform for stakeholder participation in forest policy

### National Data

**Data sources + type of data source eg NFI, etc**

-

**National classification and definitions**

-

**Original data**

-

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

### 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

No data available.

# 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

No data available.

# 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

No data available.

# 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 | 15.77 | 13.72 | 12.69 | 12.48 | 12.28 | 12.07 | 11.86 | 11.66 |

| 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 | -1.39 | -1.55 | -1.65 | -1.68 | -1.70 | -1.73 | -1.76 |

| 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 | 96.00 | 96.00 | 96.00 | 96.00 | 96.00 | 96.00 | 96.00 | 96.00 |

| 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 | – | – | – | – | – | – | – | – |

| 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** | **222.85** | **38.97** | **38.98** | **40.88** | **41.32** | – | – |