

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

South Africa

Rome, 2014

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 2015 (FRA 2015).

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 2015 (<http://www.fao.org/3/a-au190e.pdf>). These reports were submitted to FAO as official government documents.

The content and the views expressed in this report are the responsibility of the entity submitting the report to FAO. FAO may not be held responsible for the use which may be made of the information contained in this report.

TABLE OF CONTENTS

Report preparation and contact persons.....	4
1. What is the area of forest and other wooded land and how has it changed over time?	5
2. What is the area of natural and planted forest and how has it changed over time?	10
3. What are the stocks and growth rates of the forests and how have they changed?	15
4. What is the status of forest production and how has it changed over time?	24
5. How much forest area is managed for protection of soil and water and ecosystem services?	32
6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?	38
7. What is the area of forest affected by woody invasive species?	41
8. How much forest area is damaged each year?	45
9. What is the forest area with reduced canopy cover?	49
10. What forest policy and regulatory framework exists to support implementation of sustainable forest management SFM?	50
11. Is there a national platform that promotes stakeholder participation in forest policy development?	52
12. What is the forest area intended to be in permanent forest land use and how has it changed over time?	53
13. How does your country measure and report progress towards SFM at the national level?	56
14. What is the area of forest under a forest management plan and how is this monitored?	58
15. How are stakeholders involved in the management decision making for publicly owned forests?	61
16. What is the area of forest under an independently verified forest certification scheme?	62
17. How much money do governments collect from and spend on forests?	64
18. Who owns and manages the forests and how has this changed?	66
19. How many people are directly employed in forestry?	75
20. What is the contribution of forestry to Gross Domestic Product (GDP)?	80
21. What is forest area likely to be in the future	81

Report preparation and contact persons

Contact persons

The present report was prepared by the following person(s)

Name (FAMILY NAME, first name)	Institution/address	Email	Tables
Boqo Sindy	Department of Agriculture, Forestry and Fisheries P/Bag x 93 Pretoria 001	SindyB@daff.gov.za	N/A
Matshate Joel	Department of Agriculture, Forestry and Fisheries P/Bag x 93 Pretoria 001	JoelMa@daff.gov.za	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Introductory Text

Place an introductory text on the content of this report

--

Desk Study?

Check "yes" if this survey is a Desk Study, "no" otherwise	
Desk Study?	no

1. What is the area of forest and other wooded land and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

1.1 Categories and definitions

Category	Definition
Forest	Land spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of more than 10 percent or trees able to reach these thresholds in situ. It does not include land that is predominantly under agricultural or urban land use.
Other wooded land	Land not classified as "Forest" spanning more than 0.5 hectares with trees higher than 5 meters and a canopy cover of 5-10 percent or trees able to reach these thresholds ; or with a combined cover of shrubs bushes and trees above 10 percent. It does not include land that is predominantly under agricultural or urban land use.
Other land	All land that is not classified as "Forest" or "Other wooded land".
...of which with tree cover (<i>sub-category</i>)	Land considered as "Other land", that is predominantly agricultural or urban lands use and has patches of tree cover that span more than 0.5 hectares with a canopy cover of more than 10 percent of trees able to reach a height of 5 meters at maturity. It includes bothe forest and non-forest tree species.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.
Forest expansion	Expansion of forest on land that, until then, was not defined as forest.
...of which afforestation (<i>sub-category</i>)	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not defined as forest.
...of which natural expansion of forest (<i>sub-category</i>)	Expansion of forests through natural succession on land that, until then, was under another land use (e.g. forest succession on land previously used for agriculture).
Deforestation	The conversion of forest to other land use or the longterm reduction of the tree canopy cover below the minimum 10 percent threshold.
...of which human induced (<i>sub-category</i>)	Human induced conversion of forest to other land use or the permanent reduction of the tree canopy cover below the minimum 10 percent threshold.
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>sub-category</i>)	Re-establishment of forest through planting and/or deliberate seeding on land already in forest land use.

1.2 National data

1.2.1 Data sources

References to sources of information	Variables	Years	Additional comments
--------------------------------------	-----------	-------	---------------------

1	CSIR & ARC (2005). National Land-Cover Database 2000. Council for Scientific and Industrial Research and the Agricultural Research Council	National Land Cover 2000	2000	Best available data source for national land cover classification in South Africa based on remote sensing and field sample plots. Good compatibility with FRA categories and definitions
2	Forestry SA-“Abstract of South African Forestry Facts.	Afforestation	2007/2008-2010/2011	Covers plantations only
3	Department of agriculture, Forestry and Fisheries. Commercial timber resources and primary roundwood processing in South Africa	Afforestation and Reforestation	2007/2008-2010/2011	Covers plantations only
4	N/A	N/A	N/A	N/A

1.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

1.2.3 Original data

The same as FRA 2010 report

1.3 Analysis and processing of national data

1.3.1 Adjustment

As in FRA 2010 report

1.3.2 Estimation and forecasting

As in FRA 2010

1.3.3 Reclassification

As in FRA 2010 report

1.4 Data

Table 1a













Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	9241	9241	9241	9241	9241
	Other wooded land	24558	24558	24558	24558	24558
	Other land	87648	87648	87648	87648	87648
	... of which with tree cover	30	30	30	30	30
	Inland water bodies	462	462	462	462	462
	TOTAL	121909.00	121909.00	121909.00	121909.00	121909.00

Table 1b

Categories		Annual forest establishment / loss (000 hectares per year)				...of which of introduced species (000 hectares per year)			
		1990	2000	2005	2010	1990	2000	2005	2010
	Forest expansion	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which afforestation	30.2528	5.3592	2.72475	2.22625	30.2528	5.3592	2.72475	2.22625
	... of which natural expansion of forest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Deforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which human induced	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Reforestation	N/A	60.9006	87.673	50.591	N/A	N/A	N/A	N/A
	... of which artificial	N/A	60.9006	87.673	50.591	N/A	60.9006	87.673	50.591

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 2	Tier 1
Other wooded land	Tier 2	Tier 1

Forest expansion	Tier 2	Tier 1
Deforestation	Tier 1	Tier 1
Reforestation	Tier 3	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> • Forest • Other wooded land • Afforestation • Reforestation • Natural expansion of forest • Deforestation 	<p>Tier 3 : Data sources: Either recent (less than 10 years ago) National Forest Inventory or remote sensing, with ground truthing, or programme for repeated compatible NFIs Tier 2 : Data sources: Full cover mapping / remote sensing or old NFI (more than 10 years ago) Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	N/A	In Plantations, from a national perspective, there is an insignificant decrease according to experts and as depicted by the national land cover data sets. This may be attributed to the fact that there has been very little new afforestation over past decade Hence the data could remain stable. However, expansion is expected to be significant due to afforestation plans in the next ten years. On the other hand, according to data sets, natural forests are stable but evidence on the ground shows that they are declining for various reasons in some areas, but in many other areas they are expanding. However, there is no concrete data to back these claims on a national level or to quantify the loss or gain.
Other wooded land	N/A	According to expert opinion, woodlands are increasing in some areas at the expense of grasslands and in other areas they are decreasing. It is however not known whether the increase equals the decrease. No significant change based on two country National land cover data sets
Other land	N/A	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	The area for inland waterbodies is taken from the FAOSTAT, However, according to NLC 2000 the Waterbodies for the country is 599 331.7670 ha.	N/A

Forest expansion	N/A	Afforestation and reforestation occurs in Plantations only in the country at the moment. No information on woodlots/windbreaks. There is no available data for natural expansion for the country
Deforestation	N/A	There are three forest types in South Africa, namely, natural forests (forest biome), savannah woodlands and the industrial (commercial) plantations. The latter is excluded from the context of deforestation. Deforestation in natural forests is said to be insignificant in South Africa but the country cannot afford to ignore this because of the size and the fragmented nature of the resource. It is estimated that in the savannah woodland biome (covering just over 40 million hectares), an area of between 50 000ha and 100 000ha is lost (deforested) every year. The envisaged national forest resources assessment, once completed, should provide a baseline from which to monitor and evaluate forest deforestation in the country.
Reforestation	N/A	Covers plantations

Other general comments to the table

There hasnt been any comprehensive assement since the NLC 2000 data. The 2000 data used is the only source that could provide comprehensive data compatible with the FRA classifications.

2. What is the area of natural and planted forest and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

2.1 Categories and definitions

Term	Definition
Naturally regenerated forest	Forest predominantly composed of trees established through natural regeneration.
Naturalized introduced species	Other naturally regenerated forest where the tree species are predominantly non-native and do not need human help to reproduce/maintain populations over time.
Introduced species	A species, subspecies or lower taxon occurring <i>outside</i> its natural range (past or present) and dispersal potential (i.e. outside the range it occupies naturally or could occupy without direct or indirect introduction or care by humans).
Category	Definition
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.
Other naturally regenerated forest	Naturally regenerated forest where there are clearly visible indications of human activities.
...of which of introduced species (<i>sub-category</i>)	Other naturally regenerated forest where the trees are predominantly of introduced species.
...of which naturalized (<i>sub-sub category</i>)	Other naturally regenerated forest where the trees are predominantly of naturalized introduced species.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
...of which of introduced species (<i>sub-category</i>)	Planted forest where the planted/seeded trees are predominantly of introduced species.
Mangroves	Area of forest and other wooded land with mangrove vegetation.
...of which planted (<i>sub-category</i>)	Mangroves predominantly composed of trees established through planting.

2.2 National data

2.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Act 84 of 1998 as amended	Classification & definitions	1998	Definition of a plantation
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

2.2.2 Classification and definitions

National class	Definition
Plantation	Plantation means a group of trees cultivated for exploitation of the wood, bark, leaves or essential oils in the trees.
N/A	N/A
N/A	N/A
N/A	N/A

2.2.3 Original data

1.1.1

National Classes	1990	2000	2005	2010
Plantations	1 626 362	1 724 246	1 749 466	1 762 474
Wilderness Areas	947 100	947 100	947 100	947 100
Other forests	6 667 529	6 569 645	6 544 425	6 531 417
TOTAL Forest	9 240 991	9 240 991	9 240 991	9 240 991

Mangroves according to the NFI are 2 392 hectares. The extent will be the same for 1990 to 2005. In 2010 there will be 5 hectares less that we know will be destroyed by an approved harbour development (thus 2 387 hectares in 2010).

2.3 Analysis and processing of national data

2.3.1 Adjustment

--

2.3.2 Estimation and forecasting

--

2.3.3 Reclassification



National Categories	Primary Forests	Other naturally regenerated forest	Planted Forests
Wilderness areas	100%		
Plantations			100%
Other Forests		100%	

Results after reclassification

FRA Categories	Area in hectares			
	1990	2000	2005	2010
Primary Forests	947 100	947 100	947 100	947 100
Other naturally regenerated forest	6 667 529	6 569 645	6 544 425	6 531 417
Planted Forests	1 626 362	1 724 246	1 749 466	1 762 474
Total Forest	9 240 991	9 240 991	9 240 991	9 240 991

2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	947	947	947	947	947
	Other naturally regenerated forest	6668	6570	6544	6531	6531





	... of which of introduced species	0	0	0	0	0
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	1626	1724	1750	1763	1763
	... of which of introduced species	1626	1724	1750	1763	1763
TOTAL		9241.00	9241.00	9241.00	9241.00	9241.00

Table 2b

Primary forest converted to (000 ha)								
1990-2000			2000-2010			2010-2015		
Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land
0	0	0	0	0	0	0	0	0

Table 2c

Categories	Area (000 hectares)				
	1990	2000	2005	2010	2015
Mangroves (forest and OWL)	2.4	2.4	2.4	2.4	2.4
... of which planted	0	0	0	0	0

Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 1	Tier 1
Other naturally regenerated forest	Tier 1	Tier 1
Planted forest	Tier 1	Tier 1
Mangroves	Tier 1	Tier 1

Tier Criteria

Category	Tier for status	Tier for reported trend
----------	-----------------	-------------------------

Primary forest/Other naturally regenerated forest/Planted forest	<p>Tier 3 : Data sources: Recent (less than 10 years) National Forest Inventory or remote sensing with ground truthing or data provided by official agencies or programme for repeated compatible NFIs</p> <p>Tier 2 : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years) Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other</p>
--	---	--

2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	N/A	N/A
Other naturally regenerating forest	N/A	N/A
Planted forest	All plantations are of introduced species in the country	N/A
Mangroves	N/A	Mangroves according to the NFI are 2 392 hectares. The extent will be the same for 1990 to 2005. In 2010, 5 hectares were destroyed due to an approved harbour development (thus 2 387 hectares in 2010).

Other general comments to the table

Mangroves are indigenous in the country and are strictly protected in the country because they are threatened by developments

3. What are the stocks and growth rates of the forests and how have they changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

3.1 Categories and definitions

Category	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.
Net Annual Increment (NAI)	Average annual volume of gross increment over the given reference period less that of natural losses on all trees, measured to minimum diameters as defined for "Growing stock".
Above-ground biomass	All living biomass above the soil including stem stump branches bark seeds and foliage.
Below-ground biomass	All biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead wood	All non-living woody biomass not contained in the litter either standing lying on the ground or in the soil. Dead wood includes wood lying on the surface dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in above-ground biomass	Carbon in all living biomass above the soil including stem stump branches bark seeds and foliage.
Carbon in below-ground biomass	Carbon in all biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Carbon in dead wood	Carbon in all non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in litter	Carbon in all non-living biomass with a diameter less than the minimum diameter for dead wood (e.g. 10 cm) lying dead in various states of decomposition above the mineral or organic soil.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a soil depth of 30 cm.

3.2 National data

3.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Bailey, C.L., Shackleton, C.M., Geldenhuys, C.J., Moshe, D., Fleming, G., Vink, E.R., Rathogwa, N.R. and Cawe, S.G 1999. Guide to and summary of the meta-database pertaining to selected attributes of south African indigenous forests and woodlands: ENV –P-C 99027	Basal area for woodland and natural forest	1999	N/A

2	Expert Opinion	Vol/ha plantations, Woodlands & Natural forests	2008	N/A
3	Expert Opinion	Vol/ha Pines, Poplars, wattle and Eucalyptus	2009	N/A
4	Department of Water Affairs and Forestry. Commercial timber resources and primary roundwood processing in South Africa	Area of softwood and hardwood	2000 and 2005	N/A
5	Forestry South Africa Calculation of total annual increment of softwood log categories, 1991/92 areas	Annual increment of plantations	1992	The only study done for plantation at time of writing the report
6	Department of Agriculture, Forestry and Fisheries. Commercial timber resources and primary roundwood processing in South Africa	Area of softwood and hardwood	2010	N/A

3.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

3.2.3 Original data

Growing data

Growing Stock , Notes:

- No growing stock data exist at country level. The growing stock has therefore been estimated by multiplying the area of different forest types (CSIR/ARC, 2005, calibrated areas from Table T1) with an estimated volume per hectare. The volume per hectare was also derived by using average basal area obtained from data source 1 multiplied by estimated relevant tree height for each forest type and by a form factor. Volume per hectare of plantations was calculated by using data source 4. Reference year is 2000 .
- Woodlands are those dense woodlands that are classified as “Forests” according to FRA categories and the rest fall other the FRA category “ OWL”

National Classes	Area in ha	Volume (m ³ /ha)	Growing Stock in m ³
------------------	------------	-----------------------------	---------------------------------

Eucalyptus Plantations	526 248	150	78 937 200
Pine Plantations	705 227	135	95 205 645
Wattle Plantations	107 944	145	15 651 880
Poplar Plantations	2 234	135	301 590
Others	10 107	135	1 364 445
Unaccounted	372 486	135	50 285 610
Total Plantations	1 724 246		241 746 370
Total'Natural Forest	516 107	315	162 573 705
Total Woodland (corresponding to FRA definition of forest)	7 000 638 (6 920 080 + 80 557)	38	266 024 244
TOTAL'FOREST	9 240 991		670 344 319
OWL	24 558 159	20	491 163 180

Growing Stock of the 10 most common species , Notes:

1. Reliable and existing data is that of officially recorded areas of plantations (**1 351 760 ha for 2000 and 1 281 519 for 2005**). The area in ha of common commercial species is therefore based on the official data.
2. The growing stock of the 10 most common species has been estimated by multiplying the area covered by the species by estimated plantation volume per hectare as in table 6a.

Commercial Species	Area in ha			Volume (m ³ /ha)	Growing Stock in m ³		
	1990	2000	2005		1990	2000	2005
Eucalyptus, of which		526 248	478 191	150		78 937 200	71 728 650
<i>Eucalyptus Grandis</i>	n/a	287 774	301 931	150	n/a	43 166 100	45 289 650
Other Eucalyptus	n/a	238 474	176 260	150	n/a	35 771 100	26 439 000

Pine spp, of which	n/a	705 227	688 313	135	n/a	95 205 645	92 922 255
<i>Pinus Patula</i>	n/a			135	n/a		
<i>Pinus Elliotti</i>	n/a			135	n/a		
<i>Pinus Radiata</i>	n/a			135	n/a		
<i>Pinus Taeda</i>	n/a			135	n/a		
<i>Pinus Pinaster</i>	n/a			135	n/a		
<i>Other Pinus</i>	n/a			135	n/a		
Wattle (<i>Acacia mearnsii</i>)	n/a	107 944	104 821	145	n/a	15 651 880	15 199 045
Poplars (<i>Populus x canescens</i>)	n/a	2 234	2 725	135	n/a	301 590	367 875
Total	n/a	1 351 760	1 281 519		n/a	191 460 760	181 226 140

3.3 Analysis and processing of national data

3.3.1 Adjustment

--

3.3.2 Estimation and forecasting

--

3.3.3 Reclassification

Growing stock
Reclassified data

National data	Growing stock (2000) in m³	Growing stock (2000) in m³
	Forest	OWL
Growing stock	670 344 319	491 163 180

3.4 Data

Table 3a




Category		Growing stock volume (million m ³ over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	670	670	670	670	670	491	491	491	491	491
	... of which coniferous	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	Eucalyptus Grandis	Rose gum; Saligna gum	N/A	43	45	46
2 nd	Pinus Patula	Patula pine	N/A	47	47	45
3 rd	Other Eucalyptus	Other gums	N/A	36	27	31
4 th	Pinus Elliotti	Slash pine	N/A	25	26	24
5 th	Acacia mearnsii	Black Wattle	N/A	16	15	15
6 th	Pinus Radiata	Monterey pine, Radiata pine	N/A	9	8	8
7 th	Other Pinus	Other Pines	N/A	6	6	6

8 th	Pinus Taeda	Loblolly pine	N/A	5	4	3
9 th	Pinus Pinaster	Cluster pine	N/A	3	2	1
10 th	Populus x canescens	Matchwood poplar, Grey Poplar	N/A	0.3	0.3	0.3
Remaining			N/A	479.7	489.7	490.7
TOTAL			.00	670.00	670.00	670.00

THE PRE-FILLED VALUES FOR GROWING STOCK REFER TO THE FOLLOWING THRESHOLD VALUES (SEE TABLE BELOW)

Item	Value	Complementary information
Minimum diameter (cm) at breast height of trees included in growing stock (X)	N/A	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	N/A	N/A
Minimum diameter (cm) of branches included in growing stock (W)	N/A	N/A
Volume refers to above ground (AG) or above stump (AS)	N/A	N/A

PLEASE NOTE THAT THE DEFINITION OF GROWING STOCK HAS CHANGED AND SHOULD BE REPORTED AS GROWING STOCK DBH 10 CM INCLUDING THE STEM FROM GROUND LEVEL UP TO A DIAMETER OF 0 CM, EXCLUDING BRANCHES.

Table 3c




Category		Net annual increment (m ³ per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A

Table 3d

Category		Biomass (million metric tonnes oven-dry weight)								
		Forest					Other wooded land			
		1990	2000	2005	2010	2015	1990	2000	2005	2010











	Above ground biomass	1358	1358	1358	1358	1358	1424	1424	1424	1424	1424
	Below ground biomass	359	359	359	359	359	684	684	684	684	684
	Dead wood	240	240	240	240	240	295	295	295	295	295
TOTAL		1957.00	1957.00	1957.00	1957.00	1957.00	2403.00	2403.00	2403.00	2403.00	2403.00

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Carbon in above ground biomass	638.2	638.2	638.2	638.2	638.2	669.3	669.3	669.3	669.3	669.3
	Carbon in below ground biomass	168.7	168.7	168.7	168.7	168.7	321.5	321.5	321.5	321.5	321.5
	<i>Subtotal Living biomass</i>	806.9	806.9	806.9	806.9	806.9	990.8	990.8	990.8	990.8	990.8
	Carbon in dead wood	112.8	112.8	112.8	112.8	112.8	138.7	138.7	138.7	138.7	138.7
	Carbon in litter	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Dead wood and litter</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Soil carbon	582.2	582.2	582.2	582.2	582.2	1547.2	1547.2	1547.2	1547.2	1547.2
TOTAL		1501.90	1501.90	1501.90	1501.90	1501.90	2676.70	2676.70	2676.70	2676.70	2676.70

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 1	Tier 1
Net annual increment	Tier 1	Tier 1
Above ground biomass	Tier 1	Tier 1

Below ground biomass	Tier 1	Tier 1
Dead wood	Tier 1	Tier 1
Carbon in above-ground biomass	Tier 1	Tier 1
Carbon in below ground biomass	Tier 1	Tier 1
Carbon in dead wood and litter	Tier 1	Tier 1
Soil carbon	Tier 1	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
Total growing stock	Tier 3: Data sources Recent 10 years National Forest Inventory or remote sensing with ground truthing or programme for repeated compatible NFI 10 years Domestic volume functions Tier 2: Data sources/registers and statistics modelling or old NFI 10 years or partial field inventory Tier 1: Other data sources	Tier 3: Estimate based on repeated compatible tiers 3 (tier for status) Domestic growth functions Tier 2: Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 tier for status Tier 1: Other
Net annual increment	Tier 3: Scientifically tested national volume and growth functions Tier 2: Selection of volume and growth functions as relevant as possible Tier 1: Other	Tier 3: Confirmation/adjustment of functions used through scientific work Tier 2: Review work done to seek alternative functions Tier: 1 Other
Biomass	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied or other domestic or otherwise nationally relevant biomass studies Tier 2: Application of country specific national or sub-national biomass conversion factors from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Carbon in above ground biomass • Carbon in below ground biomass • Carbon in dead wood and litter • Soil carbon 	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied Tier 2: Application of country specific national or sub-national biomass conversion factors form from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	N/A	N/A

Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	N/A	N/A
Net annual increment	N/A	N/A
Above-ground biomass	N/A	N/A
Below-ground biomass	N/A	N/A
Dead wood	N/A	N/A
Carbon in above-ground biomass	N/A	N/A
Carbon in below-ground biomass	N/A	N/A
Carbon in dead wood	N/A	N/A
Carbon in litter	N/A	N/A
Soil carbon	In calculating soil carbon, LAC soil is assumed for warm temperate moist (63 t C/ha)	N/A

Other general comments to the table

No inventory has been done to complete Table 3c. Legally, all natural forests are protected. They are not used for commercial purposes. Conversion factor for hardwood in a subtropical climatic zone has been used to calculate the biomass stock for Natural forests and OWL. It was difficult to calculate soil carbon based on climatic region in Table 5.10. However, the default values for Warm temperate, moist-climatic region were used.

4. What is the status of forest production and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

4.1 Categories and definitions

Term	Definition
Primary designated function	The primary function or management objective assigned to a management unit either by legal prescription documented decision of the landowner/manager or evidence provided by documented studies of forest management practices and customary use.
Non wood forest product (NWFP)	Goods derived from forests that are tangible and physical objects of biological origin other than wood.
Commercial value of NWFP	For the purpose of this table, value is defined as the commercial market value at the forest gate.
Category	Definition
Production forest	Forest area designated primarily for production of wood, fibre, bio-energy and/or non-wood forest products.
Multiple use forest	Forest area designated for more than one purpose and where none of these alone is considered as the predominant designated function.
Total wood removals	The total of industrial round wood removals and woodfuel removals.
...of which woodfuel	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

4.2 National data

4.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	White paper on the conservation and sustainable use of South Africa's biological diversity	South African legal or other equivalent IUCN category	1997	Notice 1095 of 1997
2	Forestry South Africa: Forest Facts	Plantation Area	N/A	1987, 1990, 2000 and 2005
3	Elliot W., 1996 Wilderness in the new South Africa. International journal of Wilderness/Volume 2, Number 2, August 1996	Wilderness areas	1990	N/A
4	N/A	N/A	N/A	N/A

4.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

4.2.3 Original data

Wilderness areas of South Africa , Legally declared under Forest Act	
Wilderness areas in Natural Forests	Area in hectares
	1990
Mdedelelo	27 000
Mkhomazi	48 000
Ntendeka	5 200
Mlambonja	14 000
Mzinkulu	28 300
Wolkberg	17 400
Cedarberg	64 400
Groendal	21 800
Boosmansbos	14 200
Grootwinterhoek	23 600
Doringrivier	11 000
Total wilderness areas in Natural Forests	274 900
Wilderness areas in Kruger National park	672 200
Total wilderness areas	947 100

Source: Elliot, 1996

From Question 1, Increase of afforestation areas

Year	Afforestation in ha
1990/91	45 423
1991/92	28 241
1992/93	16 578
1998/99	4 891
1999/00	2 751
Total increase from 1990 to 2000	97 884
2000/01	5 529
2001/02	6 207
2002/03	7 418
2003/04	1 995
2004/05	4 071
Total increase from 2000 to 2005	25 220
2005/06	2 635
2006/07	2 198
2007/2008	2 725
2008/2009	2 725
2009/2010	2 725
Total increase from 2005 to 2010	13 008

From 2007 to 2010, the assumption made is that the annual increase of afforestation (established) is **2 725ha** (the average of 2005).

4.3 Analysis and processing of national data

4.3.1 Adjustment

4.3.2 Estimation and forecasting

From Question 1, plantation area in 2000 (data from NLC 2000 / CSIR & ARC (2005) is: 1 724 246 ha.

Considering the above information about plantation, it is possible to estimate the plantation in 1990, 2005 and 2010

	1990	2000	2005	2010
Plantations in ha	1 724 246 – 97 884 = 1 626 362	1 724 246	1 724 246 + 25 220 = 1 749 466	1 749 466 + 13 008 = 1 762 474

National Classes	1990	2000	2005	2010
Plantations	1 626 362	1 724 246	1 749 466	1 762 474
Wilderness Areas	947 100	947 100	947 100	947 100
Other forests	6 667 529	6 569 645	6 544 425	6 531 417
TOTAL Forest	9 240 991	9 240 991	9 240 991	9 240 991

Notes:

1. It is assumed that the wilderness areas are the same for the years 1990, 2000, 2005 and 2010.
2. The class “Other forests” has been estimated by subtracting Plantations and Wilderness areas from the total forest area.

4.3.3 Reclassification

All the Other Wooded Land are regarded as modified forests

National Categories	Production	Protection of soil and water	Conservation of biodiversity	Social services	Multiple purpose
Wilderness areas			100%		
Plantations	100%				
Other Forests					100%

Results after reclassification

FRA Categories	Area in hectares			
	1990	2000	2005	2010
Production	1 626 362	1 724 246	1 749 466	1 762 474
Conservation	947 100	947 100	947 100	947 100
Multiple purpose	6 667 529	6 569 645	6 544 425	6 531 417
Total Forest	9 240 991	9 240 991	9 240 991	9 240 991

4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	1626	1724	1750	1763	1763
	Multiple use forest	6668	6570	6544	6531	6531

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	N/A	N/A	N/A	N/A

2 nd	N/A	N/A	N/A	N/A
3 rd	N/A	N/A	N/A	N/A
4 th	N/A	N/A	N/A	N/A
5 th	N/A	N/A	N/A	N/A
6 th	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			.00	

2010	
Name of local currency	Rand

Category
Plant products / raw material
1 Food
2 Fodder
3 Raw material for medicine and aromatic products
4 Raw material for colorants and dyes
5 Raw material for utensils handicrafts construction
6 Ornamental plants
7 Exudates
8 Other plant products
Animal products / raw material
9 Living animals
10 Hides skins and trophies
11 Wild honey and beeswax

12 Wild meat
13 Raw material for medicine
14 Raw material for colorants
15 Other edible animal products
16 Other non-edible animal products

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m ³ u.b.)	
	Total wood removals	...of which woodfuel
1990	28182	11800
1991	28492	12200
1992	27873	12600
1993	28154	13000
1994	30518	13400
1995	31023.9	13800
1996	32129.9	14200
1997	32966.9	14600
1998	30616	12000
1999	29515.3	12000
2000	30959.2	12000
2001	30553.5	12000
2002	30566.5	12000
2003	33159.4	12000
2004	33776.9	12000
2005	34564.1	12000
2006	34764.1	12000
2007	31511.8	12000
2008	31867.3	12000

2009	30887.6	12000
2010	30887.6	12000
2011	30887.6	12000

Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 2	Tier 1
Multiple use forest	Tier 2	Tier 1

Tier Criteria

Category	Tier for status	Tier for reported trend
Production forest Multiple use forest	Tier 3: Updated including field verifications national forest maps including functions Tier 2: Forest maps older than 6 years including forest functions Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	N/A	N/A
Multiple use forest	N/A	N/A
Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

Other general comments to the table

There is no country wide data on commercial value of NTFPS. This has made it difficult to respond to question 4b

5. How much forest area is managed for protection of soil and water and ecosystem services?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

5.1 Categories and definitions

Category	Definition
Protection of soil and water	Forest area designated or managed for protection of soil and water
...of which production of clean water (<i>sub-category</i>)	Forest area primarily designated or managed for water production, where most human uses are excluded or heavily modified to protect water quality.
...of which coastal stabilization (<i>sub-category</i>)	Forest area primarily designated or managed for coastal stabilization.
...of which desertification control (<i>sub-category</i>)	Forest area primarily designated or managed for desertification control.
...of which avalanche control (<i>sub-category</i>)	Forest area primarily designated or managed to prevent the development or impact of avalanches on human life assets or infrastructure.
...of which erosion, flood protection or reducing flood risk (<i>sub-category</i>)	Forest area primarily designated or managed for protecting communities or assets from the impacts of erosion riparian floods and landslides or for providing flood plain services.
...of which other (<i>sub-category</i>)	Forest area primarily designated or managed for other protective functions.
Ecosystem services, cultural or spiritual values	Forest area primarily designated or managed for selected ecosystem services or cultural or spiritual values.
...of which public recreation (<i>sub-category</i>)	Forest area designated or managed for public recreation.
...of which carbon storage or sequestration (<i>sub-category</i>)	Forest area designated or managed for carbon storage or sequestration.
...of which spiritual or cultural services (<i>sub-category</i>)	Forest area designated or managed for spiritual or cultural services.
...of which other (<i>sub-category</i>)	Forest area designated or managed for other ecosystem services.

5.2 National data

5.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	White paper on the conservation and sustainable use of South Africa's biological diversity	South African legal or other equivalent IUCN category	1997	Notice 1095 of 1997

2	Elliot W., 1996 Wilderness in the new South Africa. International journal of Wilderness/Volume 2, Number 2, August 1996	Wilderness areas	1990	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

5.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

5.2.3 Original data

IUCN Category	Name	Management Objective	South African or other equivalent Category
Category 1a	Scientific Reserves	Managed mainly for scientific research and monitoring	- Special nature reserves - Wilderness areas
Category 1b	Wilderness Areas	Managed mainly for wilderness protection, subsistence, and recreation	- Special nature reserves - Wilderness areas
Category II	National Parks and Equivalent reserves	Managed mainly for ecosystem protection and recreation	- National parks

Wilderness areas of South Africa , Legally declared under Forest Act

Wilderness areas in Natural Forests	Area in hectares
-------------------------------------	------------------

	1990
Mdedelelo	27 000
Mkhomazi	48 000
Ntendeka	5 200
Mlambonja	14 000
Mzinkulu	28 300
Wolkberg	17 400
Cedarberg	64 400
Groendal	21 800
Boosmansbos	14 200
Grootwinterhoek	23 600
Doringrivier	11 000
Total wilderness areas in Natural Forests	274 900
Wilderness areas in Kruger National park	672 200
Total wilderness areas	947 100

5.3 Analysis and processing of national data

5.3.1 Adjustment

5.3.2 Estimation and forecasting

5.3.3 Reclassification

5.4 Data

Table 5a

Categories	Forest area (1000 hectares)
------------	-----------------------------

		1990	2000	2005	2010	2015
CRQ	Protection of soil and water	0	0	0	0	0
CRQ	... of which production of clean water	0	0	0	0	0
CRQ	... of which coastal stabilization	0	0	0	0	0
CRQ	... of which desertification control	0	0	0	0	0
CRQ	... of which avalanche control	0	0	0	0	0
CRQ	... of which erosion, flood protection or reducing flood risk	0	0	0	0	0
CRQ	... of which other (please specify in comments below the table)	0	0	0	0	0

Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	6667.52	6569.64	6544.42	6531.41	6531.41
...of which public recreation	N/A	N/A	N/A	N/A	N/A
...of which carbon storage or sequestration	N/A	N/A	N/A	N/A	N/A
...of which spiritual or cultural services	N/A	N/A	N/A	N/A	N/A
...of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

Tiers

Category	Tier for reported trend	Tier for status
Protection of soil and water	Tier 1	Tier 1
Ecosystem services, cultural or spiritual values	Tier 1	Tier 1

Tier criteria

Category	Tier for status	Tier for reported trend
Protection of soil and water	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations or legislation relating to soil and water protection. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Cultural or spiritual values • Public recreation • Spiritual or cultural services • Other 	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

5.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	N/A	N/A
Production of clean water	N/A	N/A
Coastal stabilization	N/A	N/A
Desertification control	N/A	N/A
Avalanche control	N/A	N/A
Erosion, flood protection or reducing flood risk	N/A	N/A
Other protective functions	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A
Public recreation	N/A	N/A

Carbon storage or sequestration	N/A	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	N/A	N/A

Other general comments to the table

Wilderness areas and natural forests allow for spiritual or cultural activities in the country. It is assumed that the area of multipurpose forests can be reported in this category. However, it is difficult to subcategories the data. Natural Forests in protected areas are mainly protected for the protection of biodiversity in the country and not explicitly designated for other functions. However, they inherently contribute to other functions. For example, Mangroves and dune forests contribute to coastal stabilisation and afro-montane, scarp forests and OWL in the catchments areas contribute to production of clean water. There are currently 176000 ha of forests in protected areas in the country.

6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

6.1 Categories and definitions

Category	Definition
Conservation of biodiversity	Forest area designated primarily for conservation of biological diversity. Includes but is not limited to areas designated for biodiversity conservation within the protected areas.
Forest area within protected areas	Forest area within formally established protected areas independently of the purpose for which the protected areas were established.

6.2 National data

6.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Elliot W., 1996 Wilderness in the new South Africa. International journal of Wilderness/Volume 2, Number 2, August 1996	Wilderness areas	1990	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

6.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

6.2.3 Original data

See 4.2.3.

6.3 Analysis and processing of national data

6.3.1 Adjustment

--

6.3.2 Estimation and forecasting



See 4.3.1.

6.3.3 Reclassification

See 4.3.3.

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	947	947	947	947	947
	Forest area within protected areas	947	947	947	947	947

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 3	Tier 3
Forest area within protected areas	Tier 3	Tier 3

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> Conservation of biodiversity Forests within protected areas 	Tier 3: Data obtained from national or state agencies responsible for conservation and protected area or legislation relating to area protection. Tier 2: Studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates Tier 1 Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend

Conservation of biodiversity	N/A	N/A
Forest area within protected areas	N/A	N/A

Other general comments to the table

The Kathu forest in the Northern Cape became the first woodland type of forest to be declared as protected forest in July 2009, under the National Forests Act. The Kathu forest covers an area of about 4 000ha and, the buffer areas around the property are in the process of been declared protected. Eight State forests in the Province of Mpumalanga, covering an area of about 15 000ha have been gazetted (April 2013) for public comment to be declared as forest nature reserves. These are mainly grasslands and mountain catchment areas. There is still some substantial part of OWL, unknown right now, which is designated for protection of soils and water and for the conservation of biodiversity.

7. What is the area of forest affected by woody invasive species?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

7.1 Categories and definitions

Category	Definition
Invasive species	Species that are non-native to a particular ecosystem and whose introduction and spread cause, or are likely to cause, socio-cultural, economic or environmental harm or harm to human health.

7.2 National data

7.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Department of Water Affairs and Forestry, Working for Water programme	Invasive plants	2005	Statistics received from the planning manager
2	Department of Environmental Affairs, Working for Water programme	Invasive plants	2010	Statistics received from the planning manager
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

7.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

7.2.3 Original data

	ALIEN INVASIVE SPECIES 2010		

NO	SPECIES	HECTARES AFFECTED	
1	Acacia mearnsii/dealbata/ decurrens	17,250	
2	Acacia cyclops	88	
3	Acacia melanoxylon	7,775	
4	Acacia saligna	3,294	
5	Caesalpinia decapetala	2,375	
6	Chromolaena odorata	2,538	
7	Eucalyptus spp.	15,988	
8	Hakea spp.	2,431	
9	Lantana camara	519	
10	Opuntia spp.	969	
11	Pinus spp.	30,481	
12	Populus spp.	31	
13	Prosopis spp.	644	
14	Salix babylonica	44	
15	Senna didymobotrya	750	
16	Solanum mauritianum	2,550	

7.3 Analysis and processing of national data

7.3.1 Adjustment

7.3.2 Estimation and forecasting

7.3.3 Reclassification

7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
Acacia spp.	7.034	28.407
Lantana camara	1.33	0.519
Hakea spp.	0.523	2.431
Eucalyptus spp.	1.905	15.988
Caesalpinia decapetala	1.047	2.375
Chromolaena odorata	N/A	2.538
Opuntia spp.	N/A	0.969
Pinus spp.	N/A	30.481
Solanum mauritianum	N/A	2.555
Prosopis spp. (644 ha) • Salix babylonica (44 ha) • Senna didymobotrya (750 ha) •	N/A	N/A
Total	11.839	86.263

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 2	Tier 2

Tier Criteria

Category	Tier for status	Tier for reported trend
Invasive species	Tier 3: Systematic assessment in forest inventory or other survey (e.g. by conservation department) within the last 5 years) Tier 2: Systematic assessment in forest inventory or other survey (e.g. by conservation department conducted more than 5 years ago) Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	N/A	The area invaded by the species increased in 2010

Other general comments to the table

N/A

8. How much forest area is damaged each year?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

8.1 Categories and definitions

Category	Definition
Number of fires	Number of fires per year
Burned area	Area burned per year
Outbreaks of insects	A detectable reduction in forest health caused by a sudden increase in numbers of harmful insects.
Outbreaks of diseases	A detectable reduction in forest health caused by a sudden increase in numbers of harmful pathogens, such as bacteria, fungi, phytoplasma or virus.
Severe weather events	Damage caused severe weather events, such as snow, storm, drought, etc.

8.2 National data

8.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	FAO	Burned Areas	2003 to 2012	Data provided by FAO
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

8.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

8.2.3 Original data

--

8.3 Analysis and processing of national data

8.3.1 Adjustment

8.3.2 Estimation and forecasting

8.3.3 Reclassification

8.4 Data

Table 8a

Category		000 ha, number of fires									
		2003		2004		2005		2006		2007	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	3733.68	N/A	3539.57	N/A	5697.82	N/A	5041.33	N/A	4366.71	N/A
	... of which forest area burned	87.87	N/A	53.8	N/A	70.84	N/A	47.39	N/A	90.91	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	4612.64	N/A	4293.65	N/A	5445.25	N/A	5050.5	N/A	3948.73	N/A
	... of which forest area burned	87.82	N/A	58.15	N/A	85.78	N/A	74.08	N/A	77.23	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	Sirex noctilio (Sirex wood wasp)	2006	27
1	Thaumastocoris australicus	2005	0.48

2	Fusarium circinatum	2007	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

Outbreak category
1 Insects
2 Diseases
3 Severe weather events

Tiers

Category	Tier for status	Tier for trend
Area affected by fire	Tier 2	Tier 2
<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	Tier 2	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
Burned area	Tier 3 : National fire monitoring routines Tier 2 : Remote sensing surveys Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
<ul style="list-style-type: none"> • Insects • Diseases • Severe weather events 	Tier 3 : Systematic survey (e.g. via inventory or aerial damage assessment) Tier 2 : Management records Tier 1 : Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend

Burned area	N/A	N/A
Insects	N/A	N/A
Diseases	N/A	N/A
Severe weather events	N/A	N/A

Other general comments to the table

Data from remote sensing provided by FAO was used to report on burnt areas . There have not been major outbreaks of insects, diseases and severe weather events during reporting period. However, a new invasive insect, the red gum lerp psyllid, *Glycaspis brimblecombei* on Eucalyptus was recently detected in the Pretoria area by Prof. Stefan Naser. This insect was first detected in South Africa in 2010 on street trees, but has only recently (earlier in 2013) been detected in Eucalyptus plantations. Currently, *G. brimblecombei* has been detected in plantations in the Mpumalanga, Limpopo and KwaZulu-Natal provinces, although its exact distribution within these regions is not known.

9. What is the forest area with reduced canopy cover?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

Category	Definition
Reduction in canopy cover	Forest that has undergone a reduction of canopy cover of more than 20% between the years 2000 and 2010 within the forest canopy cover range of 30-80% as detected by the MODIS VCF sensor.

Table 9

Category	Area of forest with reduced canopy cover (000 ha)
Reduction in canopy cover	1266.95

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

Tier criteria

Category	Tier for reported trend
Reduction in canopy cover	Tier 3 : Remote sensing with ground truthing and/or Landsat imagery Tier 2 : Remote sensing using Modis (using pre-filled data provided by FAO) Tier 1 : Expert opinion

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	N/A

Other general comments

--

10. What forest policy and regulatory framework exists to support implementation of sustainable forest management SFM?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

10.1 Categories and definitions

Category	Definition
Policies supporting sustainable forest management	Policies or strategies that explicitly encourage sustainable forest management.
Legislation and regulations supporting sustainable forest management	Legislation and regulations that govern and guide sustainable forest management, operations and use.

10.2 National data

10.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	White Paper on Sustainable Forest Development in South Africa, 1996	Policy	1996	N/A
2	National Forest Act, No 84 of 1998	Legislation	1998	N/A
3	National Veld and Forest Fire Act, No 101 of 1998	Legislation	1998	N/A
4	Forestry Laws Amendment Act, No 35 of 2005	Legislation	2005	N/A
5	National Forest and Fire Laws Amendment Act, No 12 of 2001	Legislation	2001	N/A
6	Regulations on the National Forests Act, 1998 Act No. 84 of 1998	Regulations	1998	N/A
7	Regulations on the National Veld and Forest Fire Act, No 101 of 1998	Regulations	N/A	N/A

10.2.2 Classification and definitions

National class	Definition
N/A	N/A

N/A	N/A
N/A	N/A
N/A	N/A

10.2.3 Original data

--

10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management	yes			
... of which, in <u>publicly</u> owned forests	yes			
... of which, in <u>privately</u> owned forests	yes			
Legislation and regulations supporting sustainable forest management	yes			
... of which, in <u>publicly</u> owned forests	yes			
... of which, in <u>privately</u> owned forests	yes			

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	N/A
Legislation and regulations supporting sustainable forest management	N/A

Other general comments

--

11. Is there a national platform that promotes stakeholder participation in forest policy development?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

11.1 Categories and definitions

Category	Definition
National stakeholder platform	A recognized procedure that a broad range of stakeholders can use to provide opinions, suggestions, analysis, recommendations and other input into the development of national forest policy.

11.2 National data

11.2.1 Data sources

	References to sources of information	Years	Additional comments
1	National Forest Act, 1998 (No 84 of 1998)	N/A	The establishment of the National Forests Advisory Council is provided for in the
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	N/A	N/A	N/A

Table 11

Is there a national platform that promotes or allows for stakeholder participation in forest policy development?	yes
---	-----

11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	N/A

Other general comments

--

12. What is the forest area intended to be in permanent forest land use and how has it changed over time?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

12.1 Categories and definitions

Category	Definition
Forest area intended to be in permanent forest land use	Forest area that is designated or expected to be retained as forest and is highly unlikely to be converted to other land use.
...of which permanent forest estate (<i>sub-category</i>)	Forest area that is designated by law or regulation to be retained as forest and may not be converted to other land use.

12.2 National data

12.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	White paper on the conservation and sustainable use of South Africa's biological diversity	South African legal or other equivalent IUCN category	1997	Notice 1095 of 1997
2	Forestry South Africa: Forest Facts	Plantation Area	N/A	1987, 1990, 2000 and 2005
3	Elliot W., 1996 Wilderness in the new South Africa. International journal of Wilderness/Volume 2, Number 2, August 1996	Wilderness areas	1990	N/A
4	Department of Water Affairs and Forestry. 2007. Unpublished state of the forest report for South Africa	Sustainable forest management; Natural Forests Plantations and Woodlands	2004 -2006	Based on Principles; Criteria Indicators and standards.
5	Forest Act 122 of 1984	List of Wilderness areas	N/A	N/A

12.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A

N/A	N/A
-----	-----

12.2.3 Original data

See 4.2.3

12.3 Analysis and processing of national data

12.3.1 Adjustment

--

12.3.2 Estimation and forecasting



See 4.3.2.

12.3.3 Reclassification

See 4.3.3.

12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	
	... of which permanent forest estate	1463

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 2
Permanent forest estate	Tier 2

Tier Criteria

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other

Permanent forest estate	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other
-------------------------	---

12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	N/A
Permanent forest estate	In South Africa, Natural forests and Wilderness areas are protected under the law (National Forest Act). The figure for PFE is therefore estimated by adding up wilderness area and natural forests area.

Other general comments

--

13. How does your country measure and report progress towards SFM at the national level?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

13.1 Categories and definitions

Category	Definition
Forest area monitored under a national forest monitoring framework	Forest area monitored by a national monitoring framework or systems that provide measurement based periodic monitoring of forest extent and quality.
Forest reporting at national scale	National reporting of forest extent and characteristics that includes some measure of progress toward sustainable forest management.

13.2 National data

13.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

13.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

13.3 Data

Table 13a

Category	% of total forest area	Most recent year	Check all boxes that apply					
			Continuous	Periodic	Permanent ground plots	Temporary ground plots	Aerial/remote sensing sample based	Aerial/remote sensing full coverage
Forest inventory	5	2002		yes	yes		yes	no
Other field assessments	100	2000		yes				yes
Updates to other sources	31	2008	no	yes	no	no	yes	
Expert estimate	N/A	N/A						

Table 13b

Type of forest reporting used at national scale	Check boxes that apply
1 Criteria and Indicators reporting	yes
2 Periodic national state of the forest report	yes
3 Other (please document)	
4 None	

Other type of forest reporting
N/A

13.4 Comments

Category	Comments
N/A	N/A
N/A	N/A
N/A	N/A

Other general comments

--

14. What is the area of forest under a forest management plan and how is this monitored?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

14.1 Categories and definitions

Category	Definition
Forest area with management plan	Forest area that has a long-term documented management plan, aiming at defined management goals which is periodically revised
...of which for production (<i>sub-category</i>)	Forest management plan mainly focused on production
...of which for conservation (<i>sub-category</i>)	Forest management plan mainly focused on conservation
Monitoring of forest management plans	Government monitoring of forest management plan implementation conducted through field visits or audits of forest management plan performance

14.2 National data

14.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	White paper on the conservation and sustainable use of South Africa's biological diversity	South African legal or other equivalent IUCN category	1997	Notice 1095 of 1997
2	Forestry South Africa: Forest Facts	Plantation Area	N/A	1987, 1990, 2000 and 2005
3	Elliot W., 1996 Wilderness in the new South Africa. International journal of Wilderness/Volume 2, Number 2, August 1996	Wilderness areas	1990	N/A
4	Department of Water Affairs and Forestry. 2007. Unpublished state of the forest report for South Africa	Sustainable forest management; Natural Forests Plantations and Woodlands	2004 -2006	Based on Principles; Criteria Indicators and standards.
5	Forest Act 122 of 1984	List of Wilderness areas	N/A	N/A
6	N/A	FSC certified plantation areas	2010	N/A

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	3982

... of which for production	1572
... of which for conservation	2410

Table 14b

Indicate which (if any) of the following are required in forest management plans in your country	
1 Soil and water management	yes
2 High conservation value forest delineation	yes
3 Social considerations community involvement	yes

Table 14c

Percent of area under forest management plan that is monitored annually	82
---	----

Tiers

Category	Tier for status
Forest area with management plan	Tier 2
Percent of area under forest management plan that is monitored annually	Tier 2

Tier criteria

Category	Tier for status
Forest area with management plan	Tier 3 : Reports that describe national records 5 years old or less that contain long-term forest monitoring plans Tier 2 : Industry or other records indicating the presence of a long-term forest management plan Tier 1 : Other
Percent of area under forest management plan that is monitored annually	Tier 3 : Government documentation of monitoring extent Tier 2 : Reports from forest managers or other documental sources Tier 1 : Other

14.4 Comments

Category	Comments
Forest area with management plan	South African plantations with FSC certification do have management plans and that these plans are in daily application. In the category “forest area with management plan” certified forests plus the uncertified forests but with management plans as revealed by audits are included.
N/A	N/A
N/A	N/A

Other general comments

--

15. How are stakeholders involved in the management decision making for publicly owned forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

15.1 Categories and definitions

Category	Definition
Stakeholder involvement	Stakeholder involvement is defined as significant inputs into at least one aspect of forest management at the operational scale

Table 15

Please indicate the type of stakeholder involvement in forest management decision making required in your country	
1. Planning phase	no
2. Operations phase	no
3. Review of operations	yes

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 3

Tier criteria

Category	Tier for status
Type of stakeholder inputs	Tier 3 : Government (national or sub-national) documentation of stakeholder inputs Tier 2 : Government (national or subnational) requirement but stakeholder inputs not documented Tier 1 : Other

15.2 Comments

Category	Comments
N/A	N/A
N/A	N/A
N/A	N/A

Other general comments

--

16. What is the area of forest under an independently verified forest certification scheme?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

16.1 Categories and definitions

Category	Definition
FSC certification	Forest area certified under the Forest Stewardship Council certification scheme
PEFC certification	Forest area certified under the Programme for the Endorsement of Forest Certification scheme
Other international forest management certification	Forest area certified under an international forest management certification scheme with published standards and is independently verified by a third-party, excluding FSC and PEFC certification.
Certified forest area using a domestic forest management certification scheme	Area certified under a forest management certification scheme with published standards that are nationally recognized and independently verified by a thirdparty

16.2 Data

Table 16a













International forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	FSC	1006.5	1006.5	1134.04	1637.39	1760.63	1720.73	1721.05
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	1551.47	1075.49	1678.54	2151.65	1744.4	1539.75	
	PEFC	0	0	0	0	0	0	
	Other	0	0	0	0	0	0	

Table 16b

Domestic forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
		0	0	0	0	0	0	
		0	0	0	0	0	0	
		0	0	0	0	0	0	

Tier criteria

Category	Tier for status
International forest management certification	Tier 3: International forest management scheme records maintained by the certifying organization for the reporting year Tier 2: International forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other
Domestic forest management certification	Tier 3: National registry reports for domestic forest management certification maintained by the certifying organization for the reporting year Tier 2: Domestic forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other

Tiers

Category	Tier for status
International forest management certification	Tier 3
Domestic forest management certification	N/A

16.3 Comments

Category	Comments related to data definitions etc
Certified forest area using an international forest management certification scheme	N/A
Domestic forest management certification	N/A

Other general comments

--

17. How much money do governments collect from and spend on forests?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

17.1 Categories and definitions

Category	Definition
Forest revenue	All government revenue collected from the domestic production and trade of forest products and services. For this purpose revenue include: <ul style="list-style-type: none"> • <u>Goods</u> : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products. • <u>Services</u> : including concession fees and royalties, stumpage payments, public timber sales revenue taxes and charges based on forest area or yield, taxes on domestic trade and export of forest products, special levies on forestry activities and payments into forest related funds, other miscellaneous inspection, licence and administrative fees levied by forest administrations, permit and licence fees for recreation and other forest related activities.
Public expenditure on forestry	All government expenditure on forest related activities.

17.2 National data

17.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Department of Water Affairs and Forestry; Budget	Expenditure	2000,2005	N/A
2	Department of Water Affairs and Forestry; Annual report 2000-2001	External Funding	2000	N/A
3	Expert Estimate	External Funding	2000,2005	This is an estimate made by project managers who managed projects funded by donors.
4	Department of Agriculture Forestry and Fisheries; Budget	Expenditure	2010/2011	N/A

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	N/A	46735	N/A
Public expenditure on forestry	N/A	N/A	524465

	2000	2005	2010
Name of Local Currency	South African Rand	N/A	N/A

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Data is reliable
Public expenditure on forestry	Data is reliable Data is reliable
Other general comments	N/A

Other general comments

--

18. Who owns and manages the forests and how has this changed?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

18.1 Categories and definitions

Category	Definition
Public ownership	Forest owned by the State or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at national scale (<i>sub-category</i>)	Forest owned by the State at the national scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at the sub-national government scale (<i>sub-category</i>)	Forest owned by the State at the sub-national government scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
Private ownership	Forest owned by individuals, families, communities, private cooperatives corporations and other business entities, private, religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.
...of which individuals (<i>sub-category</i>)	Forest owned by individuals and families.
...of which private business entities and institutions (<i>sub-category</i>)	Forest owned by private corporations cooperatives companies and other business entities as well as private nonprofit organizations such as NGOs nature conservation associations, and private religious and educational institutions etc.
...of which local tribal and indigenous communities (<i>sub-category</i>)	Forest owned by a group of individuals belonging to the same community residing within or in the vicinity of a forest area or forest owned by communities of indigenous or tribal people The community members are coowners that share exclusive rights and duties and benefits contribute to the community development.
Unknown ownership	Forest area where ownership is unknown includes areas where ownership is unclear or disputed.
Categories related to management rights of public forests	Definition
Public Administration	The Public Administration (or institutions or corporations owned by the Public Administration) retains management rights and responsibilities within the limits specified by the legislation.
Individuals households	Forest management rights and responsibilities are transferred from the Public Administration to individuals or households through long-term leases or management agreements.
Private companies	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities private cooperatives, private nonprofit institutions and associations, etc., through long-term leases or management agreements.
Communities	Forest management rights and responsibilities are transferred from the Public Administration to local communities (including indigenous and tribal communities) through long-term leases or management agreements.
Other form of management rights	Forests for which the transfer of management rights does not belong to any of the categories mentioned above.

18.2 National data

18.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Forest Act 84 of 1998 as amended	Classification & definitions	1998	N/A
2	Department of Water Affairs and Forestry. Commercial timber resources and primary round wood processing in South Africa	Ownership Pattern	2000 and 2005	Covers plantations only
3	Department of Water Affairs and Forestry. National Forest Inventory	Ownership Pattern	1990, 2000 and 2005	Used to determine natural forest ownership
4	Expert Opinion	Ownership pattern	1990, 2000 and 2005	Forest (woodland) ownership
5	CSIR & ARC (2005). National Land-Cover Database 2000. Council for Scientific and Industrial Research and the Agricultural Research Council	National Land Cover 2000	2000	Natural forests original figure for 2000
6	Department of Agriculture, Forestry and Fisheries. Commercial timber resources and primary round wood processing in South Africa	Ownership Pattern	2010	Covers plantations only

18.2.2 Classification and definitions

National class	Definition
State Forests	(i) State land, other than trust forests, acquired or reserved for forestry in terms of this Act or any previous forest legislation, unless it has been released under section 50 (3); (ii) State land, other than trust forests designated as demarcated State forest or a similar designation in terms of any previous forest legislation, unless it was withdrawn from demarcation and is no longer used for forestry; and (iii) trust forests; and includes (i) State plantations, State sawmills and State timber preservation plants; (ii) land controlled and managed by the Department for research purposes or as a tree nursery; (iii) areas protected in terms of sections 8(1)(a) and (b) and 9; (iv) an area of State land which has been set aside in terms of previous forest legislation for the prevention of soil erosion or sand drift; (v) an area referred to in paragraph (a) or paragraph (b) (i) to (iv), the ownership or control of which is transferred to a person or organ of State contemplated in section 53 (2)(g)(i); (xxxiii).
N/A	N/A
N/A	N/A

N/A	N/A
-----	-----

18.2.3 Original data

Management rights of public forests

According to the Department in 2005, a total of 25 314.3230 ha was leased to Amathole Forests (Proprietary) Limited and 111 899.4500 ha leased to Mountain to Ocean (MTO) Forestry (Proprietary) Limited. In 2000, a total of 76 567.000 ha was leased to Singisi (Pty) Ltd and 35 520. 6 ha was leased to Siyaqhubeka (Pty) Ltd

This means that

- 2000, 112 087 ha of public forests were managed by private corporations
- 2005, 137 213 ha of public forests were managed by private corporations

18.3 Analysis and processing of national data

18.3.1 Adjustment

18.3.2 Estimation and forecasting

Forestownership situation

	Area in hectares					
	Public		Private		Total	
	2000	2005	2000	2005	2000	2005
Plantations	380663	303219	971098	978302	1351761	1281521
%	28.16	23.66	71.84	76.34	100	100

The source of figures for plantation ownership is **Department of Water Affairs and Forestry**. Commercial timber resources and primary round wood processing in South Africa 2000/01 and 2005/06.

The above data is assumed not to report planted woodlots/windbreaks and some abandoned (i.e. not managed) plantations, and therefore are different from the information provided by CSIR & ARC (2005), which is considered to be the best available data at national level. But we could assume that the ratio public/private (of the above table) could be used to estimate the forest ownership.

Forest plantation areas known

Applying the above ratio public/private, and considering that the ratio public/private remains similar in 1990 and 2000, the following result is obtained :

	Area in hectares								
	Total			Public			Private		
	1990	2000	2005	1990	2000	2005	1990	2000	2005
Plantations	1626362	1724246	1749466	457984	485548	413924	1168378	1238698	1335542

It is assumed that 70% of forest (woodlands) is in state lands and 30% in private land.

	Area in hectares								
	Total			Public			Private		
	1990	2000	2005	1990	2000	2005	1990	2000	2005
Forest (woodlands)	7000638	7000638	7000638	4900447	4900447	4900447	2100191	2100191	2100191

Therefore, the following table could be established:

	Area in hectares								
	Total			Public			Private		
	1990	2000	2005	1990	2000	2005	1990	2000	2005
Natural Forests									
Forest (woodlands)	7000638	7000638	7000638	4900447	4900447	4900447	2100191	2100191	2100191
Total Natural forest									
Plantations	1626362	1724246	1749466	457984	485548	413924	1168378	1238698	1335542
Total	9240991	9240991	9240991						

And total natural forest estimates

	Area in hectares								
	Total			Public			Private		
	1990	2000	2005	1990	2000	2005	1990	2000	2005
Natural Forests	613991	516107	490887						
Forest (woodlands)	7000638	7000638	7000638	4900447	4900447	4900447	2100191	2100191	2100191
Total Natural forest	7614629	7516745	7491525						
Plantations	1626362	1724246	1749466	457984	485548	413924	1168378	1238698	1335542
Total	9240991	9240991	9240991						

--	--	--	--	--	--	--	--	--	--

Based on the National Forest Inventory (Department of Water Affairs and Forestry), the public ownership accounts for 219 922 ha. It is assumed that this figure remains constant for the different reporting years.

Consequently, the following table is obtained:

	Area in hectares								
	Total			Public			Private		
	1990	2000	2005	1990	2000	2005	1990	2000	2005
Natural Forests	613991	516107	490887	219922	219922	219922	394069	296185	270965
Forest (woodlands)	7000638	7000638	7000638	4900447	4900447	4900447	2100191	2100191	2100191
Total Natural forest	7614629	7516745	7491525	5120369	5120369	5120369	2494260	2396376	2371156
Plantations	1626362	1724246	1749466	457984	485548	413924	1168378	1238698	1335542
Total	9240991	9240991	9240991	5578353	5605917	5534293	3662638	3635074	3706698

18.3.3 Reclassification

--

18.4 Data

Table 18a

Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010

CFRQ	Public ownership	5578	5606	5534	5534
CFRQ	... of which owned by the state at national scale	N/A	N/A	N/A	N/A
CFRQ	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A
CFRQ	Private ownership	3663	3635	3707	3707
CFRQ	... of which owned by individuals	N/A	N/A	N/A	N/A
CFRQ	... of which owned by private business entities and institutions	N/A	N/A	N/A	N/A
CFRQ	... of which owned by local, tribal and indigenous communities	N/A	N/A	N/A	N/A
CFRQ	Unknown ownership	0	0	0	0
TOTAL		9241.00	9241.00	9241.00	9241.00

Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 2	Tier 2
Private ownership	Tier 2	Tier 2
Unknown ownership	Tier 2	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
Ownership	Tier 3: National forestry statistics registers of land titles or maps on land ownership or all forest area under one ownership category that is five years old or less. Tier 2: National forestry statistics registers of land titles or maps on land ownership or questionnaires that are more than five years old. Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010

Public Administration	N/A	5494	5285	5285
Individuals	0	0	0	0
Private companies	0	112	249	249
Communities	0	0	0	0
Other	N/A	0	0	0
TOTAL	.00	5606.00	5534.00	5534.00

Category	Tier for reported trend	Tier for status
Public Administration	Tier 2	Tier 3
Individuals	Tier 2	Tier 3
Private companies	Tier 2	Tier 3
Communities	Tier 2	Tier 3
Other	Tier 2	Tier 3

18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	N/A	There is slight decrease in public ownership during the reporting period due to the transfer of plantations to private companies.
Private ownership	N/A	Ownership of plantations mainly in hands of corporate growers and individual commercial farmers. It is envisaged that the ownership of the Industry will change dramatically - as much as 50% of the current plantation could be under claim therefore ownership shifting towards communities.
Unknown ownership	N/A	N/A

Management rights	During the reporting period, the management rights were only transferred to private companies. According to the Department in 2000, 76 567.000 ha was leased to Singisi (Pty) Ltd and 35 520.600 ha was leased to Siyaqhubeka (Pty) Ltd. Then in 2005, 25 314.323 ha was leased to Amathole Forests (Proprietary) Limited and 111 899.4500 ha leased to Mountain to Ocean (MTO) Forestry (Proprietary) Limited.	There is no change in the trend as there has not been any transfers to private companies or communities since 2005
-------------------	---	--

Other general comments to the table

According to the National Forest Act of 1998 (source 1), all natural (indigenous) forests are protected.

19. How many people are directly employed in forestry?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

19.1 Categories and definitions

Category	Definition
Full-time equivalents (FTE)	A measurement equal to one person working full-time during a specified reference period.
Employment in forestry	Employment in activities related to production of goods derived from forests. This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

19.2 National data

19.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	http://www-dwaf.pwv.gov.za/Events/Arborweek/2004/documents/EnablingEnvironment1Jul041.doc	2004	N/A	N/A
2	Department of Water Affairs & Forestry, Annual report, 2006/07	2005/06-2006/07	Employment in state managed operations and Forestry sector. Confirmed by the Human Resources department	N/A
3	Companion to the draft forest sector transformation charter,	2008	Based on 2006 plantation figures and 2003 GDP and employment figures (from Genesis Study) and adapted with Producer Price Increase for the various product groupings to obtain estimates for 2006	N/A
4	Global Forest Resources Assessment 2005, South Africa Country Report	2000	N/A	N/A
5	Department of Agriculture, Forestry and Fisheries: Draft 2009-2012 State of the Forests Report . Unpublished report	2012	Employment	N/A

19.2.2 Classification and definitions

National class	Definition
N/A	N/A

N/A	N/A
N/A	N/A
N/A	N/A

19.2.3 Original data

Forestry sub-sector	Employment (2004)
Commercial plantations	60 000
Mining timber	500
Poles	5000
Tourism (game parks; eco-tourism)	Estimated 200 000
Conservation	50 000
Government (DWAF)	5 000
Total	320 500

Forestry sub-sector	Employment (2006)
Commercial plantations	107 000
Mining timber	2 200
Poles	5 000
Charcoal Producers	5 500
Composite Board Producers	6 000
Woodchip producers	< 500
Pulp and Paper Manufactures	24 000
Sawmillers	Estimated 25 000
Tourism (game parks; eco-tourism)	Estimated 200 000

Conservation	50 000
Government (DWAF)	3 749
Total	Estimated 428 949

Reclassification into FRA 2010 categories

Forestry sub-sector	Employment (2004)	
	Employment	Primary Production of Goods
Commercial plantations	60 000	60 000
Mining timber	500	500
Poles	5 000	5 000
Tourism (game parks; eco-tourism)	Estimated 200 000	
Conservation	50 000	
Government (DWAF)	5 000	
Total	320 500	65 500

Forestry sub-sector	Employment (2006)			
	Employment	Paid employment	Self employment	Primary Production of Goods
Commercial plantations	107 000	69 556	37 444	107 000
Mining timber	2 200	2 200		2 200
Poles	5 000	5 000		5 000



Charcoal Producers	5 500	5 500		5 500
Composite Board Producers	6 000	6 000		
Woodchip producers	< 500	< 500		
Pulp and Paper Manufactures	24 000	13 219	10 781	
Sawmillers	+ - 25 000	+ - 25 000		
Tourism (game parks; ecotourism)	+ - 200 000	+ - 200 000		
Conservation	50 000	50 000		
Government (DWAF)	3 749	3 749		+ - 1 508
Total	Estimated 428 949	380 724	48 225	121 208

EMPLOYMENT 2011

Sub-sector	No. of employees		Total Employment
	Direct	Indirect	
Forestry	62,700	30,000	92,700
Pulp and Paper	13,200	10,800	24,000
Sawmilling	7 000	3 000	10 000
Timber Board	6,000	n/a	6,000
Mining Timber	2,200	n/a	2,200
Other	11,000	n/a	11,000
Government (DAFF)	2908	n/a	2908
Total	115,100	43,800	148,808

19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	N/A	66	107	63
	... of which female	N/A	N/A	N/A	N/A

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	Figures for 2005 are based on the 2006 data. Figures for 2010 are based on the 2011 data.	N/A

Other general comments to the table

Employment statistics in the forest sector are very difficult to obtain from primary production of goods, as most of these activities are either outsourced or are seasonal.

20. What is the contribution of forestry to Gross Domestic Product (GDP)?

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

20.1 Categories and definitions

Category	Definition
Gross value added from forestry (at basic prices)	This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

20.2 Data

Table 20 (Pre-filled data from UNdata/EUROSTAT)

Category	Million	Currency	Year for latest available information
Gross value added from forestry (at basic prices)	10155	Rand	2010

20.3 Comments

Category	Comments
N/A	N/A

Other general comments

--

21. What is forest area likely to be in the future

Documents for this question:

- [Guide for country reporting FRA 2015](#)
- [FRA 2015 Terms and Definitions](#)

21.1 Categories and definitions

Category	Definition
Government target/aspiration for forest area	Government target/aspiration for forest area for a specific year.
Forests earmarked for conversion	Forest area that is allocated/classified or scheduled to be converted into non-forest uses.

21.2 National data

21.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Mr I Van der Merwe-Expert Opinion	Government aspirations/target in relation to Natural Forests and Woodlands	2013	Interview
2	Department of Agriculture, Forestry and Fisheries, Intergrated Growth and Development Plan (2012)	Government aspirations/target in relation to plantations	2012	The plan provides a long term strategic plan for the growth and development of South Africa's Agriculture, Forestry and Fisheries sectors.
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	9246	9256

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	0.059

21.4 Comments

Category	Comments
Government target/aspiration for forest area	The expansion of plantation forestry is hampered by the availability of water and suitable land. As a result, the South African government has prioritised the expansion of plantations in areas where it is economically, environmentally and socially appropriate to do so. Government aims to have a net increase in afforested land of about 10 000 ha per year for the next 10 years. In natural Forests, ASPIRATIONS ARE TO HAVE AT LEAST 23% OF EACH OF THE 26 NATURAL FOREST TYPES IN FORMAL PROTECTED AREAS.TARGET IS TO LIMIT NATURAL FOREST DESTRUCTION (LEGITIMATE AND ILLEGAL) TO LESS THAN 2000HA PER ANNUM. In woodlands, AT LEAST 10% OF EACH OF THE 87 WOODLAND TYPES. FOR WOODLANDS NO DEFORESTATION LIMIT TARGET HAS BEEN SET.
Forests earmarked for conversion	A R52 MILLION OFF-SET WAS PROVISIONALLY SET FOR DESTRUCTION OF 7HA OF FOREST AND 52 HA OF THICKET FOR THE N2 TOLL ROAD IN THE WILD COAST AREA.

Other general comments
