

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Yemen

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.

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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?	19
3. What are the stocks and growth rates of the forests and how have they changed?	23
4. What is the status of forest production and how has it changed over time?	32
5. How much forest area is managed for protection of soil and water and ecosystem services?	37
6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?	42
7. What is the area of forest affected by woody invasive species?	45
8. How much forest area is damaged each year?	48
9. What is the forest area with reduced canopy cover?	52
10. What forest policy and regulatory framework exists to support implementation of sustainable forest management SFM?	53
11. Is there a national platform that promotes stakeholder participation in forest policy development?	55
12. What is the forest area intended to be in permanent forest land use and how has it changed over time?	56
13. How does your country measure and report progress towards SFM at the national level?	59
14. What is the area of forest under a forest management plan and how is this monitored?	61
15. How are stakeholders involved in the management decision making for publicly owned forests?	63
16. What is the area of forest under an independently verified forest certification scheme?	64
17. How much money do governments collect from and spend on forests?	66
18. Who owns and manages the forests and how has this changed?	68
19. How many people are directly employed in forestry?	73
20. What is the contribution of forestry to Gross Domestic Product (GDP)?	75
21. What is forest area likely to be in the future	76

Report preparation and contact persons

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

Introductory Text

Place an introductory text on the content of this report

This is a desk study prepared by the FRA secretariat as no report has been received from the Yemen.

Desk Study?

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

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	Hunting Service Co. LTD National land and water conservation, project wood land resources mapping project.	Wood Land Resources	1993	The source of data was Landsat imagery supported by extensive field work and air photography.

2	National symposium on Desertification.	Report (work paper)	1996	Understanding of Desertification, its Causes and Socio-Economic Impacts
3	Land Degradation Project Study in Republic of Yemen	Soil, Human Activities and Vegetation Cover	2002	The data used is the remote sensing and field survey.
4	Jameel Al-Emad	OWL and OLWTC	2009	a set of data prepared for FRA 2010

1.2.2 Classification and definitions

National class	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. Mangrove forest, Hyphaene trees, Tihama Acacia forest, Acacia-Commiphora forest, Riverine/ Valleys Forest (Ficus spp, Acacia spp, Other Forest Trees), Juniperus spp forest.
Other wood 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 in situ; or with a combined cover of shrubs, bushes and trees above 10 percent. Tihama Acacia woodland, Acacia-Commiphora woodland, Acacia- Commiphora woodland /shrubland, Acacia open woodland, Tamarix woodland, Anogeissus woodland, Commiphora -Acacia woodland.
Other land	Includes all land not classified as “Forest” or
Other land with tree cover (Subordinated to “Other land”).	Land classified as “Other land”, spanning 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. Agroforestry (Zizyphus orchards, Acacia spp, Ficus spp, ect..), and Date Palms

1.2.3 Original data

<p><i>National data</i></p> <p><i>Forest expansion, reforestation</i></p> <p><i>No reforestation or afforestation activities are taking place in Yemen.</i></p> <p>-----</p> <p><i>Forest area</i></p> <p><i>1993 data</i></p>

<i>National Classes</i>	<i>Area (1000 ha)</i>
<i>P1 - Mangrove woodland</i>	<i>0.927</i>
<i>P2 - Cultivated date palm</i>	<i>5.181</i>
<i>P3 - Hyphaene woodland</i>	<i>5.016</i>
<i>P4 - Salvadora thicket</i>	<i>10.796</i>
<i>P5 - Tihama Acacia woodland</i>	<i>17.561</i>
<i>P6 - Tihama Acacia woodland and agriculture</i>	<i>13.698</i>
<i>P7 - Plains agriculture</i>	<i>0.0</i>
<i>P8 - Acacia-Commiphora woodland on gravel plains</i>	<i>108.168</i>
<i>P9 - Range/bare land</i>	<i>0.0</i>
<i>E1. Acacia- Commiphora woodland /shrubland</i>	<i>1243.015</i>
<i>E1a. Acacia- Commiphora woodland /shrubland</i>	<i>32.265</i>
<i>E2. Terraced Agriculture with Acacia shrubland</i>	<i>124.096</i>
<i>E3. Riverine Forest</i>	<i>0.300</i>
<i>E4 - Riverine agriculture with forest trees</i>	<i>6.146</i>
<i>E5 - Agriculture with trees on field margins</i>	<i>374.918</i>
<i>E6 - Agriculture predominantly terraced</i>	<i>0.0</i>
<i>E7. Riverine Acacia woodland.</i>	<i>5.359</i>
<i>E8 - Agriculture and bare lands</i>	<i>0.0</i>
<i>E9 - Range/bare land</i>	<i>0.0</i>
<i>C1. Acacia open woodland.</i>	<i>332.116</i>
<i>C3 - Date palm agriculture</i>	<i>34.526</i>
<i>C4. Tamarix woodland</i>	<i>42.747</i>
<i>C5 - Zizyphus orchards</i>	<i>2.418</i>
<i>C6 - Agriculture</i>	<i>0.0</i>

<i>C7 - Range/bare land</i>	<i>0.0</i>
<i>J - Juniper woodland remnant</i>	<i>2.132</i>
<i>M1. Anogeissus woodland.</i>	<i>5.618</i>
<i>M2. Anogeissus Parkland.</i>	<i>0.678</i>
<i>M3. Anogeissus woodland with clearings</i>	<i>0.31</i>
<i>M4. Commiphora -Acacia shrubland</i>	<i>5.053</i>
<i>M5. Commiphora -Acacia woodland</i>	<i>5.15</i>
<i>M6 - Range/bare land</i>	<i>0.0</i>
<i>TOTAL MAPPED AREA</i>	<i>2378.194</i>

The report provides the following reclassification:

Woodland: P1, P3, P4, P5, P8, E1, E1a, E3, E7, C1, C4, M1, M2, M4, M5, J plus 50 percent of the mixed classes (P6, E2 and M3)

Traditional agroforestry: E4, E5 and C5

Date palms: P2, C3.

Based on this reclassification, the report provided the following summary of woodland resources by region:

<i>Area (1000ha)</i>		<i>National class</i>
<i>Agroforestry and Date Palms</i>	<i>Forestand Woodland</i>	
<i>5.181</i>	<i>156.166</i>	<i>Coastal Plains</i>
<i>381.064</i>	<i>1405.008</i>	<i>Escarpment and W. Mountains</i>
<i>36.944</i>	<i>374.863</i>	<i>Central Highlands and Wadis</i>
<i>0</i>	<i>16.809</i>	<i>Mahra Woodland</i>
<i>0</i>	<i>2.132</i>	<i>Juniper</i>

<i>423.189</i>	<i>1954.978</i>	<i>TOTAL</i>
<p><u>2002 data</u></p> <p><i>Total Forest ; Woodland and Agroforestry Area: 2500 000 ha</i></p>		
<p><u>2009</u></p> <p><i>Forest area is estimated to be 549 000 ha: Woodland: 1451 000 ha and Agroforestry: 500 000 ha.</i></p>		

1.3 Analysis and processing of national data

1.3.1 Adjustment

<p>Forest area</p> <p>The total area mapped is only part of the country, but covers all the main forests and woodlands.</p> <p>The total land area and inland water was calibrated according to the FAOSTAT. Calibration was done in the class of other land to keep the forest area constant.</p>

1.3.2 Estimation and forecasting

<p>Forest area</p> <p>Available data is for 1993. Estimation and forecasting is based on expert estimations after reclassification.</p> <p>There is some reduction in some coastal plain OWL due to charcoal making and in Escarpment and west</p> <p>At the same time, there is natural regeneration/ increase of woodland and Agroforestry in most Mountain and coastal plain regions result to using gas instead of fuelwood.</p> <p>The forest conditions are improving on density level (or vegetation cover), but the total areas remain constant over time, result to ownership system and sustainable use. There is, however, no detailed information on the areas of reduction/natural regeneration, so it is assumed that they more or less outweigh each other so that the total areas remain constant over time .</p>

The area of Other Land with tree cover for 2015 is estimated by linear inter and extrapolation based on the 2002 and 2009 estimates.

1.3.3 Reclassification

Forest area

The above estimates are based on information from 1993, the reclassification and definitions and update for data original are based on information from 2002 and interpretation plus expertise views. In addition to dependence FRA 2010 Categories and definitions

There is no information available for estimating changes over time.

Below is the reclassification matrix used:

National Classes	Forest	Other wooded land	Other land	Other land with tree cover	Inland water
P1 - Mangrove woodland	100%				
P2 - Cultivated date palm				100%	
P3 - Hyphaene woodland	100%				
P4 - Salvadora thicket		100%			
P5 - Tihama Acacia woodland	60%	40%			
P6 - Tihama Acacia woodland	100%				

P7 - Plains agriculture					
P8 - Acacia-Commiphora woodland on gravel plains	50%	50%			
P9 - Range/bare land					
E1. Acacia-Commiphora woodland / shrubland	20%	80%			
E1a. Acacia-Commiphora woodland / shrubland	20%	80%			
E2. Terraced Agriculture with Acacia shrubland		100%			
E3. Riverine Forest	100%				
E4 - Riverine agriculture with forest trees				100%	
E5 – Agriculture with trees on field margins				100%	
E6 – Agriculture predominantly terraced					
E7. Riverine Acacia woodland.	100%				
E8 – Agriculture and bare lands					
E9 - Range/bare land					

C1. Acacia open woodland.	60%	40%			
C3 - Date palm agriculture				100%	
C4. Tamarix woodland		100%			
C5 - Zizyphus orchards				100%	
C6 - Agriculture					
C7 - Range/ bare land					
J - Juniper woodland remnant	100%				
M1. Anogeissus woodland.		100%			
M2. Anogeissus Parkland.		100%			
M3. Anogeissus woodland with clearings		100%			
M4. Commiphora -Acacia shrubland		100%			
M5. Commiphora -Acacia woodland	50%	50%			
M6 - Range/ bare land					
Other land			100%		

Results after reclassification:

National Classes	TOTAL Area (1000 ha)	Woodland (Hunting, 1993) (1000 ha)	Forest (1000 ha)	wooded land (1000 ha)	Other land (1000 ha)	Other land with tree cover (1000 ha)
P1 - Mangrove woodland	0.927	0.927	0.927			
P2 - Cultivated date palm	5.181					5.181
P3 - Hyphaene woodland	5.016	5.016	5.016			
P4 - Salvadora thicket	10.796	10.796		10.796		
P5 - Tihama Acacia woodland	17.561	17.561	10.537	7.024		
P6 - Tihama Acacia woodland	13.698	13.698	13.698			
P7 - Plains agriculture	0.00	0.00				
P8 - Acacia-Commiphora woodland on gravel plains	108.168	108.168	54.084	54.084		
P9 - Range/bare land	0.00	0.00				

E1. Acacia-Commiphora woodland / shrubland	1243.015	1243.015	248.603	994.412		
E1a. Acacia-Commiphora woodland / shrubland	32.265	32.265	6.453	25.812		
E2. Terraced Agriculture with Acacia shrubland	124.069	124.069		124.069		
E3. Riverine Forest	0.300	0.300	0.300			
E4 - Riverine agriculture with forest trees	6.146	0.00				6.146
E5 - Agriculture with forest trees	374.918	0.00				374.918
E6 - Agriculture predominantly terraced	0.00	0.00				
E7. Riverine Acacia woodland.	5.359	5.359	5.359			
E8 - Agriculture and bare lands	0.00	0.00				
E9 - Range/ bare land	0.00	0.00				
C1. Acacia open woodland.	332.116	332.116	199.2696	132.8464		

C3 - Date palm agriculture	34.526					34.526
C4. Tamarix woodland	42.747	42.747		42.747		
C5 - Zizyphus orchards	2.418	0				2.418
C6 – Agriculture	0.00	0.00				
C7 - Range/ bare land	0.00	0.00				
J - Juniper woodland remnant	2.132	2.132	2.132			
M1. Anogeissus woodland.	5.618	5.618		5.618		
M2. Anogeissus Parkland.	0.678	0.678		0.678		
M3. Anogeissus woodland with clearings	0.31	0.31		0.31		
M4. Commiphora -Acacia shrubland	5.053	5.053		5.053		
M5. Commiphora -Acacia woodland	5.15	5.15	2.575	2.575		
M6 - Range/bare land	0.00	0.00				
Other land					50842.022	

TOTAL	2378.167	1954.978	548.9 53	1406.025		423.189
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Summary results:

FRA Categories	1993 (1000 ha)
Forest	549
Other wooded land	1406
Other land	50842
...of which with tree cover ¹⁾	423

1.4 Data

Table 1a













Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	549	549	549	549	549
	Other wooded land	1406	1406	1406	1406	1406
	Other land	50842	50842	50842	50842	50842
	... of which with tree cover	423	423	423	500	500
	Inland water bodies	0	0	0	0	0
	TOTAL	52797.00	52797.00	52797.00	52797.00	52797.00

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	0	0	0	0	0	0	0	0
	... 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	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which artificial	0	0	0	0	0	0	0	0

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 1	Tier 1
Other wooded land	Tier 1	Tier 1
Forest expansion	Tier 1	Tier 1
Deforestation	N/A	N/A
Reforestation	Tier 1	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	The data on forest area is from 1993; 2002; 2009 The Juniperus trees can reach heights up to 10 metres. Some other species in the national class "forest" (Mangrove forest, Riverine/ Valleys forest) reach up 6 metres. These areas have been classified as "Forest".	N/A

Other wooded land	The data available on OWL is from 1993; 2002; 2009 All wooded lands have been classified as "Other wooded land". The majority of the trees reach up 5 metres high or less and have thus been classified as "Other wooded land".	N/A
Other land	N/A	N/A
Other land with tree cover	The data available on Other land with tree cover is from 1993. 2002; 2009	N/A
Inland water bodies	N/A	N/A
Forest expansion	N/A	N/A
Deforestation	N/A	N/A
Reforestation	N/A	N/A

Other general comments to the table

The above table is a result of the inventories/assessments 1993, and the calculation of the change rate for 2010 based on the data (reference year 2002) and expert estimates (2009). The forests area remains constant over time. The areas of Other Land (.. of which with tree cover) are indicating an improvement and increase in the present position, as already explained in detailed in the estimation and forecasting paragraph.

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 outside 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	Hunting Service Co. LTD National land and water conservation, project wood land resources mapping project.	Wood Land Resources	(1993)	The source of data was Landsat imagery supported by extensive field work and air photography.

2	Forestry Department, Food and Agriculture Organization of the United Nations Mangroves of Asia 1980-2005: country reports	Mangroves (Forest and OWL)	2007	Forest Resources Assessment Programme Working Paper 136 Rome
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
Other naturally regenerated forest	Naturally regenerated forest where there are clearly visible indications of human activities.
N/A	N/A
N/A	N/A
N/A	N/A

2.2.3 Original data

Question 1 has been used as input to this question.

2.3 Analysis and processing of national data

2.3.1 Adjustment

It is assumed that all the forests areas fall within the areas classified as other naturally regenerated forest.

2.3.2 Estimation and forecasting

2.3.3 Reclassification

All forests are classified as modified other naturally regenerated forest.

2.4 Data

Table 2a

Categories	Forest area (000 hectares)
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		1990	2000	2005	2010	2015
	Primary forest	0	0	0	0	0
	Other naturally regenerated forest	549	549	549	549	549
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	0	0	0	0	0
	... of which of introduced species	0	0	0	0	0
TOTAL		549.00	549.00	549.00	549.00	549.00

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)	0.95	0.9	0.9	0.9	0.9
... of which planted	N/A	N/A	N/A	N/A	N/A

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
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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>
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2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	N/A	N/A
Other naturally regenerating forest	All forest areas are regenerated naturally and there are clearly visible indications of human activities.	N/A
Planted forest	N/A	N/A
Mangroves	The majority of the Mangrove forests are pure stands of <i>Avicenna marina</i> which grow up to 6 m in height and <i>Rhizophora mucronata</i> which grow up to 7-9 m	The estimates are expert estimates based on the information currently available. (Ref FAO 2007)

Other general comments to the table

N/A

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	Hunting Service Co. LTD National land and water conservation, project wood land resources mapping project.	Wood Land Resources	(1993)	The source of data was Landsat imagery supported by extensive field work and air photography.
2	Inventory of natural forest in Yemen, Consultant .	Management of forestry (Parts).	1988	Saad Allah, Jamal, Project development of forestry – Yemen.
3	FAO. Working Paper 82. 2004. FAO/Forestry Department	Biomass expansion factor. Root-shoot ratio.	2004	N/A

4	FAO. Working Paper 81. 2004.FAO/ Forestry Department	Biomass Expansion factor. Root-shoot ratio	2004	N/A
5	Intergovernmental Panel on Climate Change (WMO; UNEP) 2006 IPCC Guidelines for National Greenhouse Gas Inventories. Volume (4) Agriculture, Forestry and Other Land Use – Chapter (4) Forestry Land	Carbon Fraction of Above and below- ground Forest Biomass, Carbon in dead wood = 0.47 of the biomass in 6.5 table.	2006	http://www.ipcc-nggip.iges.or.jp

3.2.2 Classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees more than 7 cm in diameter at breast height. Includes the stem from the ground level up to a top diameter of 5 cm, It does not include branches.
Above-ground biomass	It corresponds to FRA 2015 definition.
Below-ground biomass	It corresponds to FRA 2015 definition.
Dead wood	It corresponds to FRA 2015 definition.
Carbon in above-ground biomass	It corresponds to FRA 2015 definition.
Carbon in below-ground biomass	It corresponds to FRA 2015 definition.
Carbon in dead wood biomass	It corresponds to FRA 2015 definition.
Carbon in litter	It corresponds to FRA 2015 definition.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a specified depth chosen by the country and applied consistently through the time series. It corresponds to FRA 2010 definition.

3.2.3 Original data

Growing stock		
National class	Volume (million cubic meters over bark)	
	Forest+ Woodland	
	1993	1995
Growing stock	16.8	16.8

The growing stock of all forests and woodlands (about 2 million ha) is 16.8 million cubic meters. The woodland areas correspond to the area of Forest and Other wooded land together in Question1.

National class (Broad classes of forest types)	Volume (m3/ha)
Forest	9.2
OWL	8.5

The above figures are expert estimates based on a partial inventory undertaken in 1988 and 1993.

Biomass stock

The final data on growing stock was used as input for the biomass estimations

Carbon stock

The final data on biomass stock was used as input for the carbon estimations.

3.3 Analysis and processing of national data

3.3.1 Adjustment

Growing stock

The above average volumes per hectare were applied to the area of forest and other wooded land from Question1.

Biomass stock

The following conversion factors were used (tropical Asia, deciduous and broad leaved forests):

Basic wood density for acacias is 0.76

R = 0.43

BEF = 2

Dead-live ratio = 0.14

Applying these conversion factors gives the following results:

	G. stock (Million m3)	Basic density (tones/ m3)	Stem biomass (million tones)	Biomass exp. fact	A.G biomass (million tones)	Root- Shoot ratio	B.G biomass (million tones)
Forest	5.05	0.76	3.84	2	7.68	0.43	3.30
OWL	11.95	0.76	9.08	2	18.16	0.43	7.81

Carbon stock

The default factor of 47 % was used to convert biomass stock from table on biomass stock to carbon stock.

The soil carbon was calculated for LAC soils (35 ton/ha)

The default value for carbon stock of litter in tropical forests (2.1 ton C/ha) has been used

3.3.2 Estimation and forecasting

3.3.3 Reclassification

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	5.05	5.05	5.05	5.05	5.05	11.95	11.95	11.95	11.95	11.95
	... 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	N/A	N/A	N/A	N/A	N/A	N/A
2 nd	N/A	N/A	N/A	N/A	N/A	N/A
3 rd	N/A	N/A	N/A	N/A	N/A	N/A
4 th	N/A	N/A	N/A	N/A	N/A	N/A
5 th	N/A	N/A	N/A	N/A	N/A	N/A
6 th	N/A	N/A	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A	N/A	N/A
Remaining			N/A	N/A	N/A	N/A
TOTAL			.00	.00	.00	.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)	7	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	5	N/A
Minimum diameter (cm) of branches included in growing stock (W)	N/A	not included

Volume refers to above ground (AG) or above stump (AS)	AG	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	2015
	Above ground biomass	7.68	7.68	7.68	7.68	7.68	18.16	18.16	18.16	18.16	18.16
	Below ground biomass	3.3	3.3	3.3	3.3	3.3	7.81	7.81	7.81	7.81	7.81
	Dead wood	1.54	1.54	1.54	1.54	1.54	3.64	3.64	3.64	3.64	3.64
TOTAL		12.52	12.52	12.52	12.52	12.52	29.61	29.61	29.61	29.61	29.61

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	3.61	3.61	3.61	3.61	3.61	8.54	8.54	8.54	8.54	8.54

	Carbon in below ground biomass	1.55	1.55	1.55	1.55	1.55	3.67	3.67	3.67	3.67	3.67
	<i>Subtotal Living biomass</i>	5.16	5.16	5.16	5.16	5.16	12.21	12.21	12.21	12.21	12.21
	Carbon in dead wood	0.72	0.72	0.72	0.72	0.72	1.71	1.71	1.71	1.71	1.71
	Carbon in litter	1.15	1.15	1.15	1.15	1.15	2.95	2.95	2.95	2.95	2.95
	<i>Subtotal Dead wood and litter</i>	1.87	1.87	1.87	1.87	1.87	4.66	4.66	4.66	4.66	4.66
	Soil carbon	19.22	19.22	19.22	19.22	19.22	49.21	49.21	49.21	49.21	49.21
TOTAL		26.25	26.25	26.25	26.25	26.25	66.08	66.08	66.08	66.08	66.08

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 1	Tier 1
Net annual increment	N/A	N/A
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
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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	Expert estimate of growing stock per hectare	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	N/A	N/A

Other general comments to the table

N/A

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	Hunting Service Co. LTD National land and water conservation, project wood land resources mapping project.	Wood Land Resources	(1993)	The source of data was Landsat imagery supported by extensive field work and air photography.
2	FAO/ Government Cooperation Programme	Plan of operation	1988	Forestry Development in Republic of Yemen, Phase
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

4.2.2 Classification and definitions

National class	Definition
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Multiple purpose	Same as FRA
N/A	N/A
N/A	N/A
N/A	N/A

4.2.3 Original data

Question 1 has been used as input. All forests fulfill multiple functions and all forests are considered to be Permanent Forest Estate.

4.3 Analysis and processing of national data

4.3.1 Adjustment

4.3.2 Estimation and forecasting

4.3.3 Reclassification

4.4 Data

Table 4a



Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	0	0	0	0	0
	Multiple use forest	549	549	549	549	549

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	N/A

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 beewax
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	173.22	173.22
1991	187.32	187.32
1992	202.59	202.59
1993	216.08	216.08
1994	232.82	232.82
1995	247.73	247.73
1996	258.48	258.48
1997	268.71	268.71
1998	278.49	278.49
1999	289.93	289.93
2000	301.9	301.9
2001	313.82	313.82
2002	326.26	326.26
2003	339.24	339.24
2004	352.77	352.77
2005	366.89	366.89
2006	380.53	380.53
2007	394.7	394.7
2008	409.5	409.5
2009	424.82	424.82

2010	440.79	440.79
2011	456.13	456.13

Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 1	Tier 1
Multiple use forest	Tier 1	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	All forest areas are designated primarily for multiple functions (Production, protection of soil and water, conservation of biodiversity and social services).	N/A
Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

Other general comments to the table

It is difficult to breakdown the area of multiple purpose forests. All the forests in Yemen are considered protective or have multiple purpose, and there are no management plans at all. According to this, all the forests and OWL in Yemen are considered to be under a designated function.

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	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

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

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5.3 Analysis and processing of national data

5.3.1 Adjustment

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5.3.2 Estimation and forecasting




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5.3.3 Reclassification

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5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
	Protection of soil and water	549	549	549	549	549
	... of which production of clean water	N/A	N/A	N/A	N/A	N/A
	... of which coastal stabilization	N/A	N/A	N/A	N/A	N/A

	... of which desertification control	N/A	N/A	N/A	N/A	N/A
	... of which avalanche control	0	0	0	0	0
	... of which erosion, flood protection or reducing flood risk	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

Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	N/A	N/A	N/A	N/A	N/A
...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	N/A	N/A

Tier criteria

Category	Tier for status	Tier for reported trend
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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

N/A

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	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

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

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6.3 Analysis and processing of national data



6.3.1 Adjustment

6.3.2 Estimation and forecasting

6.3.3 Reclassification

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	0	0	0	0	0
	Forest area within protected areas	0	0	30	31	31

Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 1	Tier 1
Forest area within protected areas	Tier 1	Tier 1

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	31000 ha from forests area are within protected areas and used for conservation of biodiversity and also used by communities for other purposes.
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Other general comments to the table
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N/A

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	field survey reports , General Directorate of forestry and desertification control, Ministry of Agriculture and Irrigation	Forests and WLD	2000 -2007	information on state forests vegetation are gathered from surveys without quantitative data
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

7.2.2 Classification and definitions

National class	Definition
Invasive species	Same as FRA 2010
N/A	N/A
N/A	N/A
N/A	N/A

7.2.3 Original data

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7.3 Analysis and processing of national data

7.3.1 Adjustment

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7.3.2 Estimation and forecasting

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7.3.3 Reclassification

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7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
Prosopis juliflora (Invasive species on the coastal plains areas).	N/A	N/A
Opuntia dillenii (Invasive species on the most Mountains regions).	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
N/A	N/A	N/A
N/A	N/A	N/A
Total	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 1	Tier 1

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
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7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	N/A	N/A

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	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

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	0.23	N/A	0.06	N/A	0	N/A	0.04	N/A	0.19	N/A
	... of which forest area burned	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	0	N/A	0.02	N/A	0	N/A	0.02	N/A	0.06	N/A
	... of which forest area burned	0	N/A	0	N/A	0	N/A	0	N/A	0	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
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	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 	N/A	N/A

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
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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

N/A

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	0

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	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

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				
... of which, in <u>publicly</u> owned forests				
... of which, in <u>privately</u> owned forests				
Legislation and regulations supporting sustainable forest management				
... of which, in <u>publicly</u> owned forests				
... of which, in <u>privately</u> owned forests				

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

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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	N/A	N/A	N/A
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?	
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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	Hunting Service Co. LTD National land and water conservation, project wood land resources mapping project.	Wood Land Resources	(1993)	The source of data was Landsat imagery supported by extensive field work and air photography.
2	FAO/ Government Cooperation Programme	Plan of operation	1988	Forestry Development in Republic of Yemen, Phase
3	N/A	N/A	N/A	N/A
4	N/A	N/A	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

Question 1 has been used as input. All forests fulfill multiple functions and all forests are considered to be Permanent Forest Estate.

12.3 Analysis and processing of national data



12.3.1 Adjustment

12.3.2 Estimation and forecasting

12.3.3 Reclassification

12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	549
	... of which permanent forest estate	549

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 1
Permanent forest estate	Tier 1

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	N/A

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	N/A	N/A						
Other field assessments	N/A	N/A						
Updates to other sources	N/A	N/A						
Expert estimate	100	2014						

Table 13b

Type of forest reporting used at national scale	Check boxes that apply
1 Criteria and Indicators reporting	
2 Periodic national state of the forest report	
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	Hunting Service Co. LTD National land and water conservation, project wood land resources mapping project.	Wood Land Resources	(1993)	The source of data was Landsat imagery supported by extensive field work and air photography.
2	FAO/ Government Cooperation Programme	Plan of operation	1988	Forestry Development in Republic of Yemen, Phase
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	0
... of which for production	0
... of which for conservation	0

Table 14b

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

Table 14c

Percent of area under forest management plan that is monitored annually	N/A
--	------------

Tiers

Category	Tier for status
Forest area with management plan	Tier 1
Percent of area under forest management plan that is monitored annually	N/A

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	N/A
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	
2. Operations phase	
3. Review of operations	

Tiers

Category	Tier for status
Type of stakeholder inputs	N/A

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	0	0	0	0	0	0	0
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	0	0	0	0	0	0	
	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	General Directorate of Forestry. Reports	Annual Reports	2000-2005	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

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	N/A	N/A	N/A
Public expenditure on forestry	7000	7000	7000

	2000	2005	2010
Name of Local Currency	Rial	Rial	Rial

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Currently, No statistics are available for forests revenue or government revenue collected from the forest products and non-wood forest products.
Public expenditure on forestry	All government expenditure on forestry sector is only 7000000 Y.R= 35000 US\$, not including salaries, most of which goes to cover nurseries activities, and the remainder part goes to implementation field surveys. - The GDFDC was established in 1984 with the help of FAO and other donor agencies, and was originally very active in many areas until the year 2000. From year 2000 no new projects have been launched related to forestry activities, therefore the funding is very few.
Other general comments	N/A

Other general comments

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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 symposium on Desertification.	Report (work paper)	1996	Yemen Traditions in Natural Conservation
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

18.2.2 Classification and definitions

National class	Definition
Public ownership	Forest owned by the State (by institution of the public administration).
Private ownership	Forest owned by individuals, families, private religious and educational institution
Individuals (sub-category of Private ownership)	Forest owned by individuals and families.
Private business entities and institutions (sub-category of Private ownership)	Forest owned by private religious and educational institution.

18.2.3 Original data

National class	Definition
Public ownership	Land owned by the government. It represents about 5 %.
Private ownership	Land owned by individuals and families. It represents about 80 %.
Other ownership	Land owned by corporations and institutions. It represents about 15 %.

Note: This classification is based on expert estimates.

18.3 Analysis and processing of national data

18.3.1 Adjustment

The percentages above have been applied to the area of forest in Question 1.









18.3.2 Estimation and forecasting

The figures for 1996 have been used for all reporting years, due to lack of other information.

18.3.3 Reclassification

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	27.4	27.4	27.4	27.4
	... of which owned by the state at national scale	N/A	N/A	N/A	N/A
	... of which owned by the state at the sub-national government scale	N/A	N/A	N/A	N/A
	Private ownership	521.6	521.6	521.6	521.6
	... of which owned by individuals	439.2	439.2	439.2	439.2
	... of which owned by private business entities and institutions	82.4	82.4	82.4	82.4
	... of which owned by local, tribal and indigenous communities	0	0	0	0
	Unknown ownership	0	0	0	0
TOTAL		549.00	549.00	549.00	549.00

Tiers

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

Public ownership	Tier 1	Tier 1
Private ownership	Tier 1	Tier 1
Unknown ownership	Tier 1	Tier 1

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	27.4	27.4	27.4	27.4
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	27.40	27.40	27.40	27.40

Category	Tier for reported trend	Tier for status
Public Administration	Tier 1	Tier 1
Individuals	Tier 1	Tier 1
Private companies	Tier 1	Tier 1
Communities	Tier 1	Tier 1
Other	Tier 1	Tier 1

18.5 Comments

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

Public ownership	No forest survey was done.	N/A
Private ownership	N/A	N/A
Unknown ownership	N/A	N/A
Management rights	Forests for which the transfer of management rights does not belong to any of the categories mentioned above.	Public Administration, individuals and communities retains management rights and responsibilities within the limits specified by the traditional (martial) law.

Other general comments to the table

The main weakness in the national data is the uncertainty of the forest area for the private and public ownership. Besides no data is available since the survey of 1996. The lack of any estimates or trends makes it difficult for extrapolation.

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	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

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

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19.3 Data

Table 19

Category	Employment (000 years FTE)
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		1990	2000	2005	2010
	Employment in forestry	N/A	N/A	N/A	N/A
	... 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	N/A	N/A

Other general comments to the table
N/A

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)	N/A	N/A	N/A

20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices)	N/A

Other general comments

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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	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

21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	N/A	N/A

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	N/A

21.4 Comments

Category	Comments
Government target/aspiration for forest area	N/A

Forests earmarked for conversion	N/A
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Other general comments

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