



Forestry Department

Food and Agriculture Organization of the United Nations

**GLOBAL FOREST RESOURCES
ASSESSMENT**

COUNTRY REPORTS

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The Forest Resources Assessment Programme

Sustainably managed forests have multiple environmental and socio-economic functions important at the global, national and local scales, and play a vital part in sustainable development. Reliable and up-to-date information on the state of forest resources - not only on area and area change, but also on such variables as growing stock, wood and non-wood products, carbon, protected areas, use of forests for recreation and other services, biological diversity and forests' contribution to national economies - is crucial to support decision-making for policies and programmes in forestry and sustainable development at all levels.

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Forest Resources Assessment Programme. This country report forms part of the Global Forest Resources Assessment 2010 (FRA 2010).

The reporting framework for FRA 2010 is based on the thematic elements of sustainable forest management acknowledged in intergovernmental forest-related fora and includes variables related to the extent, condition, uses and values of forest resources, as well as the policy, legal and institutional framework related to forests. More information on the FRA 2010 process and the results - including all the country reports - is available on the FRA Web site (www.fao.org/forestry/fra).

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The Global Forest Resources Assessment Country Report Series is designed to document and make available the information forming the basis for the FRA reports. The Country Reports have been compiled by officially nominated country correspondents in collaboration with FAO staff. Prior to finalisation, these reports were subject to validation by forestry authorities in the respective countries.

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Report preparation and contact persons

No report has been received from the country.

This report is the result of a desk study prepared by the FRA secretariats in Rome, which is based on the existing available information using the established format for FRA 2010 country reports.

1 Table T1 – Extent of Forest and Other wooded land

1.1 FRA 2010 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 <i>in situ</i> . 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 <i>in situ</i> ; 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”.
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.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.

1.2 National data

1.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
1985. Long term forestry development program	M	Forest areas	1985	Primary source
Forest inventory	M	State areas	1990	Primary source
State forest enterprise "Srpske Sume"; Annual report 1999-2003	H	Forest areas in Republic of Srpska	2000	Primary source
Ministry for agriculture, water management and forestry of F BiH	L	Forest areas in Federation of BiH	2000	Secondary source
FAOSTAT	H	Inland water	1990, 2000, 2005	

1.2.2 Classification and definitions

National class	Definition
Forest	Area of all types of forests
Other wooded land	Land not classified as “Forest”, with a combined cover of shrubs, bushes and trees. 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”.
Inland water bodies	Inland water bodies generally include major rivers, lakes and water reservoirs.

1.2.3 Original data

National Categories	Area (1000 hectares)
	1985
Forest	2210
Other wooded land	500
Other land	2363
...of which with tree cover ¹⁾	n.a.
Inland water bodies	47
TOTAL	5120

National Categories	Area (1000 hectares) in Republic of Srpska in year 2000		
	State	Private	Total
Forest	813	258	1071
Other wooded land	160	19	179
Other land			1255
...of which with tree cover			n.a.
Inland water bodies			n.a.
TOTAL			2505

National Categories	Area (1000 hectares) in Federation of Bosnia and Herzegovina in year 2000		
	State	Private	Total
Forest	905		905
Other wooded land	301		301
Forest and other wooded land		278	278
Other land			1131
...of which with tree cover			n.a.
Inland water bodies			n.a.
TOTAL			2615

1.3 Analysis and processing of national data

1.3.1 Calibration

Not needed.

1.3.2 Estimation and forecasting

The 1985 data is used for reporting year 1990. Available data for 2000 is used to report for 2000. It is assessed that it is not possible to estimate change based on available datasets, because of influence of factors (civil war 1992-1995) that are not measurable. Hence, it is assumed that there has been no change in the period 2000-2010.

1.3.3 Reclassification into FRA 2010 categories

	Forest	Other wooded land
Forest and other wooded land	75%	25%

The reclassification applies to the National category “Private forest and other wooded land” in Federation of Bosnia and Herzegovina for year 2000, giving the following result:

	Area in 1000 ha for Federation of BiH in 2000			Area in 1000 ha for Republic of Srpska in 2000			TOTAL
	State	Private	Total	State	Private	Total	
Forests	905	209	1114	813	258	1071	2185
OWL	301	69	370	160	19	179	549

1.4 Data for Table T1

FRA 2010 categories	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	2210	2185	2185	2185
Other wooded land	500	549	549	549
Other land	2410	2386	2386	2386
...of which with tree cover	n.a.	n.a.	n.a.	n.a.
Inland water bodies	1	1	1	1
Total for country	5121	5121	5121	5121

1.5 Comments to Table T1

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest	1985 data is used for reference year 1990.	For the period 2000 – 2010 no change assumed due to lack of data.
Other wooded land		
Other land	Adjusted to match FAOSTAT	
Other land with tree cover		
Inland water bodies	Figure in FAOSTAT has been corrected. In FRA 2005 inland water bodies accounted for 47 000 ha, in FRA 2010 the area has been adjusted to 1000 ha to match with FAOSTAT data.	

Other general comments to the table

It must be underlined that data for private sector in forestry are weak, and some of those data are based on estimation. This should be considered for all reporting tables that require data from the private sector.

Expected year for completion of ongoing/planned national forest inventory and/or RS survey / mapping

Field inventory	n.a.
Remote sensing survey / mapping	n.a.

2 Table T2 – Forest ownership and management rights

2.1 FRA 2010 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.
Private ownership	Forest owned by individuals, families, communities, private co-operatives, corporations and other business entities, private religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.
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 corporations, co-operatives, companies and other business entities, as well as private non-profit organizations such as NGOs, nature conservation associations, and private religious and educational institutions, etc.
Local communities (sub-category of Private ownership)	Forest owned by a group of individuals belonging to the same community residing within or in the vicinity of a forest area. The community members are co-owners that share exclusive rights and duties, and benefits contribute to the community development.
Indigenous / tribal communities (sub-category of Private ownership)	Forest owned by communities of indigenous or tribal people.
Other types of ownership	Other kind of ownership arrangements not covered by the categories above. Also includes areas where ownership is unclear or disputed.
Categories related to the holder of management rights of public forest resources	
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 institutions	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities, private co-operatives, private non-profit 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.

2.2 National data

2.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Long term forestry development program	M	Ownership of Forest and Other wooded land	1990	Primary source
State forest enterprise "Srpske Sume"; Annual report	H	Ownership of Forest and Other wooded land	2000	Primary source
Ministry for agriculture, water management and forestry of F BiH	M	Ownership of Forest and Other wooded land	2000	Secondary source

2.2.2 Classification and definitions

National class	Definition
Private ownership	Land owned by individuals, families and other private institutions.
State ownership	Land owned by the State (national, state and regional governments) or government-owned institutions or corporations or other public bodies.

2.2.3 Original data

	Area in 1000 ha for BiH in 1990		
	Total	State	Private
Forests	2210	1807	403
OWL	500	380	120

	Area in 1000 ha for Republic of Srpska in 2000		
	Total	State	Private
Forests	1071	813	258
OWL	179	160	19

	Area in 1000 ha for Federation of BiH in 2000		
	Total	State	Private
Forests	1114	905	
OWL	370	301	
Forests and OWL			278

2.3 Analysis and processing of national data

2.3.1 Calibration

Not needed.

2.3.2 Estimation and forecasting

No change is assumed between 2000 and 2005.

2.3.3 Reclassification into FRA 2010 categories

National Categories	Forest	Other wooded land
Forests and OWL	75%	25%

The reclassification applies to the National category “Private forest and other wooded land” in Federation of Bosnia and Herzegovina for year 2000:

FRA Categories	Area in 1000 ha for Federation of BiH in 2000		
	State	Private	Total
Forests	905	209	1114
OWL	301	69	370

2.4 Data for Table T2

Table 2a - Forest ownership

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public ownership	1807	1718	1718
Private ownership	403	467	467
...of which owned by individuals	n.a.	n.a.	n.a.
...of which owned by private business entities and institutions	n.a.	n.a.	n.a.
...of which owned by local communities	n.a.	n.a.	n.a.
...of which owned by indigenous / tribal communities	n.a.	n.a.	n.a.
Other types of ownership	0	0	0
TOTAL	2210	2185	2185

Note: If other types of ownership is reported, please specify details in comment to the table.

Does ownership of trees coincide with ownership of the land on which they are situated?	<input type="checkbox"/>	Yes
	<input type="checkbox"/>	No
If No above, please describe below how the two differ:		

Table 2b - Holder of management rights of public forests

FRA 2010 Categories	Forest area (1000 hectares)		
	1990	2000	2005
Public Administration	n.a.	n.a.	n.a.
Individuals	n.a.	n.a.	n.a.
Private corporations and institutions	n.a.	n.a.	n.a.
Communities	n.a.	n.a.	n.a.
Other	n.a.	n.a.	n.a.
TOTAL	1807	1718	1718

2.5 Comments to Table T2

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Public ownership		
Private ownership		
Other types of ownership		
Management rights		

Other general comments to the table
<p>It must be underlined that data for private sector in forestry are weak, and some of those data are based on estimation. This should be considered for all reporting tables that require data from the private sector. It is unknown whether the ownership of trees coincides with ownership of the land on which they are situated.</p>

3 Table T3 – Forest designation and management

3.1 FRA 2010 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.
Protected areas	Areas especially dedicated to the protection and maintenance of biological diversity, and of natural and associated cultural resources, and managed through legal or other effective means.
Categories of primary designated functions	
Production	Forest area designated primarily for production of wood, fibre, bio-energy and/or non-wood forest products.
Protection of soil and water	Forest area designated primarily for protection of soil and water.
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.
Social services	Forest area designated primarily for social services.
Multiple use	Forest area designated primarily for more than one purpose and where none of these alone is considered as the predominant designated function.
Other	Forest areas designated primarily for a function other than production, protection, conservation, social services or multiple use.
No / unknown	No or unknown designation.
Special designation and management categories	
Area of permanent forest estate (PFE)	Forest area that is designated to be retained as forest and may not be converted to other land use.
Forest area within protected areas	Forest area within formally established protected areas independently of the purpose for which the protected areas were established.
Forest area under sustainable forest management	To be defined and documented by the country.
Forest area with management plan	Forest area that has a long-term (ten years or more) documented management plan, aiming at defined management goals, which is periodically revised.

3.2 National data

3.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Long term forestry development program	L	Designated function of forests	1990	Primary source
Forest inventory	L	Designated function of forests	1990	Primary source
State forest enterprise "Srpske Sume"	L	Designated function of forests	2000	Secondary source
Ministry for agriculture, water management and forestry of F BiH	L	Designated function of forests	2000	Secondary source

3.2.2 Classification and definitions

National class	Definition
High forests	Forests with natural regeneration (degradation forests included)
Low forests	Forest with regeneration from roots
Other wooded area	Land not classified as “Forest”, with a combined cover of shrubs, bushes and trees. It does not include land that is predominantly under agricultural or urban land use.
Plantation	Forests established through planting or seeding mainly for production of wood or non wood goods.

3.2.3 Original data

National categories (BiH) 1990	1000 ha	National categories (R S) 2000	Rep. S 1000 ha	F BiH 1000 ha	Total (2000) 1000 ha
High forests	1292	High forests	562	643	1205
Low forests	918	Low forests	440	398	838
Other wooded area	500	Other wooded area	179	370	549
		Plantations	69	73	142
Total	2710		1250	1484	2734

In addition, an estimated 139 000 ha of forests were designated for protection of soil and water in 1990 and 25 000 ha for conservation of biological diversity in 1990 and 20 000 in 2000 (Author’s estimates, FRA 2005 country report).

3.3 Analysis and processing of national data

3.3.1 Calibration

Not needed.

3.3.2 Estimation and forecasting

No information is available to make any trend/change estimates for reporting years 2005 and 2010, hence, no change is reported.

3.3.3 Reclassification into FRA 2010 categories

High forests → 90% production and 10% unknown function

Plantations → 100% production

Protection areas → 100% protection of soil and water

Conservation areas → 100% Conservation of biodiversity

Remaining forests → 100% unknown function

Other wooded area → 100% no or unknown function

3.4 Data for Table T3

Table 3a – Primary designated function

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Production	1163	1226	1226	1226
Protection of soil and water	139	0	0	0
Conservation of biodiversity	25	20	20	20
Social services	0	0	0	0
Multiple use	0	0	0	0
Other (please specify in comments below the table)	0	0	0	0
No / unknown	883	939	939	939
TOTAL	2210	2185	2185	2185

Table 3b – Special designation and management categories

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Area of permanent forest estate	n.a.	n.a.	n.a.	n.a.
Forest area within protected areas	n.a.	n.a.	n.a.	n.a.
Forest area under sustainable forest management	n.a.	n.a.	n.a.	n.a.
Forest area with management plan	n.a.	n.a.	n.a.	n.a.

3.5 Comments to Table T3

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Production		
Protection of soil and water	There is data about protective forests in forest inventory, but there is not possible to reclassify because of different methodology used. Data for this table is very weak and it is mostly based on author's estimation.	The difference between reported figures for 1990 and 2000 could possibly be explained by different original data rather than actual change.
Conservation of biodiversity	There is an initiative for registration of several nominated area. Those are areas for protection of biodiversity. There is ca. 8.3 ha nominated for protection in Republic of Srpska.	
Social services		
Multiple use		
Other		
No / unknown designation		
Area of permanent forest estate		
Forest area within protected areas		
Forest area under sustainable forest management		
Forest area with management plan		

Other general comments to the table
It can not be excluded that some differences in reported figures for 1990 and 2000 could be a result of interpretation of different national classifications. No information is available to make any trend/change estimates for reporting years 2000 and 2005, hence, figures for 2000 is reported for 2005 and 2010.

4 Table T4 – Forest characteristics

4.1 FRA 2010 Categories and definitions

Term / category	Definition
Naturally regenerated forest	Forest predominantly composed of trees established through natural regeneration.
Introduced species	A species, subspecies or lower taxon, occurring <u>outside</u> 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).
Characteristics categories	
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.
Other naturally regenerated forest of introduced species (sub-category)	Other naturally regenerated forest where the trees are predominantly of introduced species.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
Planted forest of introduced species (sub-category)	Planted forest, where the planted/seeded trees are predominantly of introduced species.
Special categories	
Rubber plantations	Forest area with rubber tree plantations.
Mangroves	Area of forest and other wooded land with mangrove vegetation.
Bamboo	Area of forest and other wooded land with predominant bamboo vegetation.

4.2 National data

4.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Long term forestry development program	L	Characteristics of forests	1990	Primary source
Forest inventory	L	Characteristics of forests	1990	Primary source
State forest enterprise "Srpske Sume"	L	Characteristics of forests	2000	Primary source
Ministry for agriculture, water management and forestry F BiH	L	Characteristics of forests	2000	Secondary source

4.2.2 Classification and definitions

National class	Definition
Virgin forest	Forest / Other wooded land of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.
Forests with natural regeneration	Forest of naturally regenerated native species where there are clearly visible indications of human activities.
Plantation	Forest of introduced species, and in some cases native species, established through planting or seeding mainly for production of wood or non wood goods.
Low and degradation forests	Forests with assisted regeneration
High forests	Forests with natural regeneration (degradation forests included)
Low forests	Forest with regeneration from roots
Other wooded land	Land not classified as "Forest", with a combined cover of shrubs, bushes and trees. It does not include land that is predominantly under agricultural or urban land use.

4.2.3 Original data

Forest areas in BiH (1000 ha)	1990
High forests	1292
Low forests	918
OWL	500
Total	2710

Forest areas in RS (1000 ha)	2000
Virgin forest	2
Forests with natural regeneration	542
Plantation	69
Low and degradation forests	458
OWL	179
Total	1250

Forest areas in F BiH (1000 ha)	2000
Forests with natural regeneration	642
Plantation	73
Low and degradation forests	399
OWL	370
Total	1484

4.3 Analysis and processing of national data

4.3.1 Calibration

Not needed.

4.3.2 Estimation and forecasting

No information is available to make any trend/change estimates for reporting years 2005 and 2010, hence, no change is reported.

4.3.3 Reclassification into FRA 2010 categories

National class		FRA Categories		
		Primary forest	Other naturally regenerated forest	Planted forest
2000	Virgin forest	100%		
	Forests with natural regeneration		100%	
	Plantation			100%
	Low and degradation forests			100%
1990	High forests		90%	10%
	Low forests		100%	

4.4 Data for Table T4

Table 4a

FRA 2010 Categories	Forest area (1000 hectares)			
	1990	2000	2005	2010
Primary forest	2	2	2	2
Other naturally regenerated forest	1161	1184	1184	1184
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
Planted forest	1047	999	999	999
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
TOTAL	2210	2185	2185	2185

Table 4b

FRA 2010 Categories	Area (1000 hectares)			
	1990	2000	2005	2010
Rubber plantations (Forest)	0	0	0	0
Mangroves (Forest and OWL)	0	0	0	0
Bamboo (Forest and OWL)	0	0	0	0

4.5 Comments to Table T4

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Primary forest		Reported figure for 2000 used for 1990 (area of primary forest assumed to be constant).
Other naturally regenerating forest		
Planted forest		
Rubber plantations		
Mangroves		
Bamboo		

Other general comments to the table
It can not be excluded that some differences in reported figures for 1990 and 2000 could be a result of interpretation of different national classifications. No information is available to make any trend/change estimates for reporting years 2000 and 2005, hence, figures for 2000 is reported for 2005 and 2010.

5 Table T5 – Forest establishment and reforestation

No data available for this table.

6 Table T6 – Growing stock

6.1 FRA 2010 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees more than X cm in diameter at breast height (or above buttress if these are higher). Includes the stem from ground level or stump height up to a top diameter of Y cm, and may also include branches to a minimum diameter of W cm.
Growing stock of commercial species	Growing stock (see def. above) of commercial species.

6.2 National data

6.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Long term forestry development program	L	Growing stock	1990	Primary source
Forest inventory	L	Growing stock	1990	Primary source
State forest enterprise "Srpske Sume"	M	Growing stock	2000	Primary source
Ministry for agriculture, water management and forestry of F BiH	L	Growing stock	2000	Secondary source
Forest inventory	M	Growing stock composition	1990	Secondary source
Institute for statistic; Statistical bulletin 2003	L	Growing stock composition	2000	Secondary source

6.2.2 Classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees more than 10 cm in diameter at breast height. Includes the stem from ground level or stump height up to a top diameter of 7 cm, and may also include branches to a minimum diameter of 3 cm.

6.2.3 Original data

Growing stock in BiH 1990	million cubic meters
Growing stock	291
Growing stock in RS 2000	million cubic meters
Growing stock	191
Growing stock in F BiH 2000	million cubic meters
Growing stock	167

6.3 Analysis and processing of national data

Estimation of growing stock for private forests in F BiH is 18% of growing stock for state forests.

Estimation of growing stock of coniferous and broadleaved species: The proportion of coniferous and broadleaved species reported in T6b was used to derive share of coniferous and broadleaved species in T6a (remaining species were excluded as composition is unknown).

Estimation of commercial growing stock: All species are assumed to be commercial; this may be an overestimate as it includes unknown species (8-9% of total growing stock). The share of “remaining” species in T6b is relatively low (8-9% of total growing stock).

6.3.1 Calibration

Not needed.

6.3.2 Estimation and forecasting

No information is available to make any trend/change estimates for reporting years 2000 and 2005, hence, figures for 2000 is reported for 2005 and 2010.

6.4 Data for Table T6

Table 6a – Growing stock

FRA 2010 category	Volume (million cubic meters over bark)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Total growing stock	291	358	358	358	n.a.	n.a.	n.a.	n.a.
... of which coniferous	109	135	135	135	n.a.	n.a.	n.a.	n.a.
... of which broadleaved	154	194	194	194	n.a.	n.a.	n.a.	n.a.
Growing stock of commercial species	291	358	358	358	n.a.	n.a.	n.a.	n.a.

Table 6b – Growing stock of the 10 most common species

FRA 2010 category / Species name			Growing stock in forest (million cubic meters)		
Rank	Scientific name	Common name	1990	2000	2005
1 st	<i>Fagus sylvatica</i>	Beech	138	174	n.a.
2 nd	<i>Abies alba</i>	Fir	63	70	n.a.
3 rd	<i>Picea abies</i>	Norway spruce	35	50	n.a.
4 th	<i>Quercus petraea</i>	Oak	16	20	n.a.
5 th	<i>Pinus nigra</i>	Pine	6	8	n.a.
6 th	<i>Pinus silvestris</i>	Scots pine	5	7	n.a.
7 th					n.a.
8 th					n.a.
9 th					n.a.
10 th					n.a.
Remaining			28	29	n.a.
TOTAL			291	358	358

Note: Rank refers to the order of importance in terms of growing stock, i.e. 1st is the species with the highest growing stock. Year 2000 is the reference year for defining the species list and the order of the species.

Table 6c – Specification of threshold values

Item	Value	Complementary information
Minimum diameter (cm) at breast height ¹ of trees included in growing stock (X)	0 and 5	0 cm for low forests and 5 cm for high forests
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)		
Minimum diameter (cm) of branches included in growing stock (W)		
Volume refers to “above ground” (AG) or “above stump” (AS)	AS	

6.5 Comments to Table T6

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Total growing stock		Assumed constant since 2000.
Growing stock of broadleaved / coniferous		
Growing stock of commercial species	May be overestimated as it includes 8-9% of unknown species.	
Growing stock composition	Growing stock data are not available for the more than the six most important species.	

Other general comments to the table
No information is available to make any trend/change estimates for reporting years 2005 and 2010, hence, figures for 2000 is reported for 2005 and 2010.

¹ Diameter at breast height (DBH) refers to diameter over bark measured at a height of 1.30 m above ground level or 30 cm above buttresses if these are higher than 1 m.

7 Table T7 – Biomass stock

7.1 FRA 2010 Categories and definitions

Category	Definition
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 2mm 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.

7.2 National data

7.2.1 Original data

Growing stock data from T6 has been used as input.

7.3 Analysis and processing of national data

The following conversion factors have been used:

Wood density = 0.40 for coniferous, and 0.58 for broadleaves

Root-shoot ratio = 0.32 for coniferous, and 0.26 and 0.35 for broadleaves

BEF = 1.3 for coniferous, and 1.4 for broadleaves

7.4 Data for Table T7

FRA 2010 category	Biomass (million metric tonnes oven-dry weight)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Above-ground biomass	205	252	252	252	n.a.	n.a.	n.a.	n.a.
Below-ground biomass	57	70	70	70	n.a.	n.a.	n.a.	n.a.
Dead wood	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TOTAL	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

7.5 Comments to Table T7

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Above-ground biomass		No information is available to make any trend/change estimates for reporting years 2005 and 2010, hence, figures for 2000 is reported for 2005 and 2010.
Below-ground biomass		No information is available to make any trend/change estimates for reporting years 2005 and 2010, hence, figures for 2000 is reported for 2005 and 2010.
Dead wood		

Other general comments to the table

8 Table T8 – Carbon stock

8.1 FRA 2010 Categories and definitions

Category	Definition
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 specified depth chosen by the country and applied consistently through the time series.

8.2 National data

8.2.1 Original data

Biomass data from table T7 has been used as input.

8.3 Analysis and processing of national data

Carbon stock is calculated by multiplying the IPCC-GPG (2003) default value for carbon content of living biomass (50%) with the above-ground biomass and below-ground biomass respectively.

8.4 Data for Table T8

FRA 2010 Category	Carbon (Million metric tonnes)							
	Forest				Other wooded land			
	1990	2000	2005	2010	1990	2000	2005	2010
Carbon in above-ground biomass	102.5	126	126	126	n.a.	n.a.	n.a.	n.a.
Carbon in below-ground biomass	28.5	35	35	35	n.a.	n.a.	n.a.	n.a.
Sub-total: Living biomass	131	161	161	161	n.a.	n.a.	n.a.	n.a.
Carbon in dead wood	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Carbon in litter	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Sub-total: Dead wood and litter	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Soil carbon	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TOTAL	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

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

8.5 Comments to Table T8

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Carbon in above-ground biomass		No information is available to make any trend/change estimates for reporting years 2005 and 2010, hence, figures for 2000 is reported for 2005 and 2010.
Carbon in below-ground biomass		No information is available to make any trend/change estimates for reporting years 2005 and 2010, hence, figures for 2000 is reported for 2005 and 2010.
Carbon in dead wood		
Carbon in litter		
Soil carbon		

Other general comments to the table

9 Table T9 – Forest fires

9.1 FRA 2010 Categories and definitions

Category	Definition
Number of fires	Average number of vegetation fires per year in the country.
Area affected by fire	Average area affected by vegetation fires per year in the country.
Vegetation fire (supplementary term)	Any vegetation fire regardless of ignition source, damage or benefit.
Wildfire	Any unplanned and/or uncontrolled vegetation fire.
Planned fire	A vegetation fire regardless of ignition source that burns according to management objectives and requires limited or no suppression action.

9.2 National data

9.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
State institute for statistic; yearbook 1992	M	Disturbances affecting health and vitality	1990	Primary source
Institute for statistic of Republika Srpska; Statistical Bulletin 2004	H	Disturbances affecting health and vitality	2000	Primary source
Federal office of statistic; Statistical yearbooks 2001 and 2003	M	Disturbances affecting health and vitality	2000	Primary source

9.2.2 Classification and definitions

National class	Definition
Disturbance by fire	Disturbance caused by wildfire, independently whether it broke out inside or outside the forest/OWL in state forests.

9.2.3 Original data

Year	Disturbances (cubic meters) in BiH
	By fire
1987	28766
1988	9943
1989	2779
1990	1391
1991	4557
Average	9487

Year	Disturbances (ha) in R S
	By fire
1999	57
2000	8064
2001	5066
2002	1426
2003	18942
Average	6711

Year	Disturbances in F BiH
	By fire (ha)
1998	2909
1999	706
2000	22756
2001	1449
2002	1336
Average	5831

Year	Disturbances by fire (ha) on OWL
1998	1632
1999	102
2000	8944
2001	2118
2002	208
Average	2601

9.3 Analysis and processing of national data

9.3.1 Calibration

Not needed.

9.3.2 Estimation and forecasting

1990

BiH		
Disturbances	(cubic meters)	(ha)
By fire	9487	1116

2000

BiH			R S	Total
Disturbances	(cubic meters)	(ha)	(ha)	
By fire		5831	6711	12542

9.4 Data for Table T9

Table 9a

FRA 2010 category	Annual average for 5-year period					
	1990		2000		2005	
	1000 hectares	number of fires	1000 hectares	number of fires	1000 hectares	number of fires
Total land area affected by fire	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
... of which on forest	1.12	n.a.	12.5	n.a.	n.a.	n.a.
... of which on other wooded land	n.a.	n.a.	2.60	n.a.	n.a.	n.a.
... of which on other land	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Table 9b

FRA 2010 category	Proportion of forest area affected by fire (%)		
	1990	2000	2005
Wildfire	n.a.	n.a.	n.a.
Planned fire	n.a.	n.a.	n.a.

Note: The figures for the reporting years refer to the averages of annually affected areas for the 5-year periods 1988-1992, 1998-2002 and 2003-2007 respectively

9.5 Comments to Table T9

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Area affected by fire	Data for disturbance by fire on other wooded land is only for Federation of Bosnia and Herzegovina, it is possible that in Republic of Srpska those data are included in disturbance by fire in forests.	
Number of fires		
Wildfire / planned fire		

Other general comments to the table

10 Table T10 – Other disturbances affecting forest health and vitality

10.1 FRA 2010 Categories and definitions

Term	Definition
Disturbance	Damage caused by any factor (biotic or abiotic) that adversely affects the vigour and productivity of the forest and which is not a direct result of human activities.
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.
Category	Definition
Disturbance by insects	Disturbance caused by insect pests.
Disturbance by diseases	Disturbance caused by diseases attributable to pathogens, such as bacteria, fungi, phytoplasma or virus.
Disturbance by other biotic agents	Disturbance caused by biotic agents other than insects or diseases, such as wildlife browsing, grazing, physical damage by animals, etc.
Disturbance caused by abiotic factors	Disturbances caused by abiotic factors, such as air pollution, snow, storm, drought, etc.

10.2 National data

10.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
State institute for statistic; yearbook 1992	M	Disturbances affecting health and vitality	1990	Primary source
Institute for statistic of Republika Srpska; Statistical Bulletin 2004	H	Disturbances affecting health and vitality	2000	Primary source
Federal office of statistic; Statistical yearbooks 2001 and 2003	M	Disturbances affecting health and vitality	2000	Primary source

10.2.2 Classification and definitions

National class	Definition
Disturbance by insects and diseases	Disturbance caused by insect pests that are detrimental to tree health, and disturbance caused by diseases attributable to pathogens, such as a bacteria, fungi, phytoplasma or virus in state forests.
Disturbance by man	Disturbance caused by human activities in state forests
Disturbance by natural disasters	Disturbance caused by natural disasters other than fire, insects or diseases in state forests.

10.2.3 Original data

Year	Disturbances (cubic meters) in BiH			
	By insects	By man	By diseases	By natural disasters
1987	27670	24565	39505	57544
1988	36739	35438	36194	72536
1989	34912	39882	47964	71285
1990	32774	75926	21219	50489
1991	28750	61730	31503	43815
Average	32169	47508	35277	59133

Year	Disturbances (ha) in R S		
	By insects and diseases	By man	By natural disasters
1999	15082	0	1276
2000	13506	4	1472
2001	11674	2	1225
2002	2913	102	411
2003	4826	88	219
Average	9600	39	920

Year	Disturbances (cubic meters) in F BiH			
	By insects	By man	By diseases	By natural disasters
1998	25071	56727	150	1828
1999	29396	63217	921	15282
2000	16802	53791	250	86515
2001	32196	45831	0	3391
2002	5726	60742	32825	1646
Average	21838	56062	6829	21732

10.3 Analysis and processing of national data

10.3.1 Estimation and forecasting

1990

BiH		
Disturbances	(cubic meters)	(ha)
By insects	32169	1787
By man	47508	4751
By diseases	35277	1960
By natural disasters	59133	574

2000

BiH			R S	Total
Disturbances	(cubic meters)	(ha)	(ha)	
By insects	21838	1213	8640*	9853
By man	56062	5606	39	5645
By diseases	6829	379	960*	1339
By natural disasters	21732	211	920	1131

* By using the data for cut volume of trees damaged by insects and diseases for Republic of Srpska, it was calculated that insects cause 90% and diseases cause 10% of damage.

10.3.2 Reclassification into FRA 2010 categories

National class	FRA Categories		
	Disturbance by insects	Disturbance by diseases	Abiotic disturbance
By insects	100%	0%	0%
By diseases	0%	100%	0%
By natural disasters	0%	0%	100%
By insects and disasters	90%	10%	0%

10.4 Data for Table T10

Table 10a – Disturbances

FRA 2010 category	Affected forest area (1000 hectares)		
	1990	2000	2005
Disturbance by insects	1.79	9.85	n.a.
Disturbance by diseases	1.96	1.34	n.a.
Disturbance by other biotic agents	n.a.	n.a.	n.a.
Disturbance caused by abiotic factors	1.12	1.13	n.a.
Total area affected by disturbances	n.a.	n.a.	n.a.

Notes: The figures for the reporting years refer to the averages of annually affected areas for the 5-year periods 1988-1992, 1998-2002 and 2003-2007 respectively.

The total area affected by disturbances is not necessarily the sum of the individual disturbances as these may be overlapping.

Table 10b – Major outbreaks of insects and diseases affecting forest health and vitality

Description / name	Tree species or genera affected (scientific name)	Year(s) of latest outbreak	Area affected (1000 hectares)	If cyclic, approx. cycle (years)

Note: Area affected refers to the total area affected during the outbreak.

Table 10c – Area of forest affected by woody invasive species

Scientific name of woody invasive species	Forest area affected 2005 (1000 hectares)
Total forest area affected by woody invasive species	

Note: The total forest area affected by woody invasive species is not necessary the sum of the values above, as these may be overlapping.

10.5 Comments to Table T10

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Disturbance by insects		
Disturbance by diseases		
Disturbance by other biotic agents		
Disturbance caused by abiotic factors		
Major outbreaks		
Invasive species		

Other general comments to the table
Data for 1990 are only available for Federation of Bosnia and Herzegovina.

11 Table T11 – Wood removals and value of removals

11.1 FRA 2010 Categories and definitions

Category	Definition
Industrial roundwood removals	The wood removed (volume of roundwood over bark) for production of goods and services other than energy production (woodfuel).
Woodfuel removals	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

11.2 National data

11.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Statistical yearbook of Republic Bosnia and Herzegovina 1992	H	wood removal	1990	Primary source
Federal office for statistic; Statistical yearbook 2003	H	wood removal	2000	Primary source
Institute for statistic; Statistical bulletin 2003	H	wood removal	2000	Primary source
FAOSTAT	M	Industrial round wood and Wood fuel removals	2005	Direct query on FASTAT database
State forest enterprise "Srpske Sume"; Annual report 1999-2003	M	Value of industrial wood removal	2000	Primary source
Ministry for agriculture, water management and forestry of F BiH	L	Forest areas in Federation of BiH	2000	Secondary source

11.2.2 Classification and definitions

National class	Definition
Industrial wood	The wood removed (volume of roundwood over bark) for chemical processing.
Tehnickal wood	The wood removed (volume of roundwood over bark) for mechanical processing.
Woodfuel	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

11.2.3 Original data

Removals

Wood removal in BiH in 000 cubic meters in year 1990	
Industrial wood	3500
Tehnicl wood	291
Woodfuel	981
Total	4773

Wood removal in RS in 000 cubic meters in year 2000	
Industrial wood	1680
Woodfuel	605
Total	2285

Wood removal in F BiH in 000 cubic meters in year 2000	
Industrial wood	1446
Tehnicl wood	133
Woodfuel	462
Total	2041

2005

Categories	1000 m3 under bark					Average over bark	
	Year						
	2003	2004	2005	2006	2007		Average
Industrial round wood	2883	2683	2444	2646	2414	2614	3006
Woodfuel	1215	1310	1362	1459	1339	1337	1538

Value of removals

Ministry for agriculture, water management and forestry of F BiH, report that value of all wood removal is 285 000 000 \$, and no any other data. In state forest enterprise "Srpske Sume"; Annual report 1999-2003 there are data about value of all wood removal, and it is 1 730 000 000 \$. The existing data are considered weak and therefore data not available "n.a." is being reported in this reporting table.

11.3 Analysis and processing of national data

11.3.1 Reclassification into FRA 2010 categories

	FRA 2005 Categories	
	Industrial roundwood	Woodfuel
Industrial wood	100%	
Tehnicl wood	100%	
Woodfuel		100%

The reclassification matrix only applies to 1990 and 2000 figures.

11.4 Data for Table T11

FRA 2005 Category	Industrial roundwood removals			Woodfuel removals		
	1990	2000	2005	1990	2000	2005
Total volume (1000 m ³ o.b.)	3791	3259	3006	982	1067	1337
... of which from forest	3791	3259	3006	982	1067	1337
Unit value (local currency / m ³ o.b.)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Total value (1000 local currency)	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

Note: The figures for the reporting years refer to the averages of annually affected areas for the 5-year periods 1988-1992, 1998-2002 and 2003-2007 respectively.

	1990	2000	2005
Name of local currency			

11.5 Comments to Table T11

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Total volume of industrial roundwood removals	Reported figure may be underestimated as an unknown volume of removals from land outside forests could possibly be excluded.	
Total volume of woodfuel removals		
Unit value		
Total value		

Other general comments to the table

12 Table T12 – Non-wood forest products removals and value of removals

12.1 FRA 2010 Categories and definitions

Term	Definition
Non-wood forest product (NWFP)	Goods derived from forests that are tangible and physical objects of biological origin other than wood.
Value of NWFP removals	For the purpose of this table, value is defined as the market value at the site of collection or forest border.

NWFP categories

Category
<u>Plant products / raw material</u>
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
<u>Animal products / raw material</u>
9. Living animals
10. Hides, skins and trophies
11. Wild honey and bee-wax
12. Wild meat
13. Raw material for medicine
14. Raw material for colorants
15. Other edible animal products
16. Other non-edible animal products

12.2 National data

12.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
Long term forestry development program	L	Non-wood forest product removal	1990	Secondary source

12.2.2 Original data

National class	Tonnes	1000 USD
Medical plants	356	1748
Forest fruits	4471	3848
Ethereal oil	236	5869
Mushrooms	2670	17439
Snails	222	220

12.3 Analysis and processing of national data

12.3.1 Estimation and forecasting

Data for NWFP are based on a study that estimates possibilities for production on NWFP.

12.3.2 Reclassification into FRA 2010 categories

National class	NWFP Category
Medical plants	3
Forest fruits	1
Ethereal oil	3
Mushrooms	1
Snails	15

12.4 Data for Table T12

Rank	Name of product	Key species	Unit	NWFP removals 2005		NWFP category
				Quantity	Value (1000 local currency)	
1 st	Mushrooms	n.a.	tonnes	2670	17439	1
2 nd	Ethereal oil	n.a.	tonnes	236	5869	3
3 rd	Forest fruits	n.a.	tonnes	4471	3848	1
4 th	Medicinal plants	n.a.	tonnes	356	1748	3
5 th	Snails	n.a.	tonnes	222	220	15
6 th						
7 th						
8 th						
9 th						
10 th						
All other plant products					n.a.	
All other animal products					n.a.	
TOTAL					n.a.	

	2005
Name of local currency	USD

12.5 Comments to Table T12

Variable / category	Comments related to data, definitions, etc.
10 most important products	
Other plant products	
Other animal products	
Value by product	
Total value	

Other general comments to the table
1990 estimates are used for 2005. Reported values expressed in USD.

13 Table T13 – Employment

13.1 FRA 2010 Categories and definitions

Category	Definition
Full-time equivalents (FTE)	A measurement equal to one person working full-time during a specified reference period.
Employment	Includes all persons in paid employment or self-employment.
Paid employment	Persons who during a specified reference period performed some work for <u>wage or salary</u> in cash or in kind.
Self-employment	Persons who during a specified reference period performed some work for <u>profit or family gain</u> in cash or in kind (e.g. employers, own-account workers, members of producers' cooperatives, contributing family workers).

13.2 National data

13.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments
State institute for statistic; yearbook 1992	H	Employers in forestry	1990	Primary source
Institute for statistic of Republika Srpska; Statistical Bulletin 2004	H	Employers in forestry	2000	Primary source
Federal office of statistic; Statistical yearbooks 2001 and 2003	M	Employers in forestry	2000	Primary source

13.2.2 Classification and definitions

National class	Definition
Employers in forest enterprises (total)	Average number of employers for year 1990 in all services (forestry and hunting)
Employers in forestry sector	Average number of employers for year 2000
Employers in hunting sector	Average number of employers for year 2000

13.2.3 Original data

Year	Employers in forest enterprises in thousands (total)
1990	21.9

Year	Employers in forest enterprises in thousands in Republic of Srpska (total)												
2000	1	2	3	4	5	6	7	8	9	10	11	12	Average
	6081	6128	6122	6091	6080	6081	6086	6178	6104	6109	6105	6000	6097
Year	Employers in forest enterprises in thousands in Republic of Srpska (other services)												
2000	1	2	3	4	5	6	7	8	9	10	11	12	Average
	1233	1224	1199	1210	1204	1186	1188	1166	1195	1195	1193	1183	1198

Employers in hunting services in Republic of Srpska (total)	
2002	2003
439	433
Employers in hunting services in Republic of Srpska (other services)	
39	48

Year	Employers in forestry and other services in Federation of Bosnia and Herzegovina
2000	6044

13.3 Analysis and processing of national data

13.3.1 Estimation and forecasting

Employers in hunting services for 2000 in R Srpska is 451 (by using linear interpolation).

13.3.2 Reclassification into FRA 2010 categories

FRA 2005 Categories	Primary production of goods	Provision of services	Unspecified forestry activities
Employers in forest enterprises in thousands (total)	80%	20%	0%
Employers in forestry sector	80%	20%	0%
Employers in hunting sector	90%	10%	0%

13.4 Data for Table T13

FRA 2005 Category	Employment (1000 years FTE)		
	1990	2000	2005
Employment in primary production of goods	n.a.	n.a.	n.a.
...of which paid employment	18	10	n.a.
...of which self-employment	n.a.	n.a.	n.a.
Employment in management of protected areas	n.a.	n.a.	n.a.

13.5 Comments to Table T13

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Employment in primary production of goods		
Paid employment / self-employment		
Employment in management of protected areas		

Other general comments to the table

14 Table T14 – Policy and legal framework

14.1 FRA 2010 Categories and definitions

Term	Definition
Forest policy	A set of orientations and principles of actions adopted by public authorities in harmony with national socio-economic and environmental policies in a given country to guide future decisions in relation to the management, use and conservation of forest and tree resources for the benefit of society.
Forest policy statement	A document that describes the objectives, priorities and means for implementation of the forest policy.
National forest programme (nfp)	A generic expression that refers to a wide range of approaches towards forest policy formulation, planning and implementation at national and sub-national levels. The national forest programme provides a framework and guidance for country-driven forest sector development with participation of all stakeholders and in consistence with policies of other sectors and international policies.
Law (Act or Code) on forest	A set of rules enacted by the legislative authority of a country regulating the access, management, conservation and use of forest resources.

14.2 Data for Table T14

Indicate the existence of the following (2008)			
Forest policy statement with national scope	<input type="checkbox"/>	Yes	
	<input type="checkbox"/>	No	
If Yes above, provide:	Year of endorsement		
	Reference to document		
National forest programme (nfp)	<input type="checkbox"/>	Yes	
	<input type="checkbox"/>	No	
If Yes above, provide:	Name of nfp in country		
	Starting year		
	Current status	<input type="checkbox"/>	In formulation
		<input type="checkbox"/>	In implementation
		<input type="checkbox"/>	Under revision
<input type="checkbox"/>		Process temporarily suspended	
Reference to document or web site			
Law (Act or Code) on forest with national scope	<input type="checkbox"/>	Yes, specific forest law exists	
	<input type="checkbox"/>	Yes, but rules on forests are incorporated in other (broader) legislation	
	<input type="checkbox"/>	No, forest issues are not regulated by national legislation	
If Yes above, provide:	Year of enactment		
	Year of latest amendment		
	Reference to document		

In case the responsibility for forest policy- and/or forest law-making is decentralized, please indicate the existence of the following and explain in the comments below the table how the responsibility for forest policy- and law-making is organized in your country.	
Sub-national forest policy statements	Yes
	No
If Yes above, indicate the number of regions/states/provinces with forest policy statements	
Sub-national Laws (Acts or Codes) on forest	Yes
	No
If Yes above, indicate the number of regions/states/provinces with Laws on forests	

14.3 Comments to Table T14

Variable / category	Comments related to data, definitions, etc.
Forest policy statement with national scope	
National forest programme (nfp)	
Law (Act or Code) on forest with national scope	
Sub-national forest policy statements	
Sub-national Laws (Acts or Codes) on forest	

Other general comments to the table

15 Table T15 – Institutional framework

15.1 FRA 2010 Categories and definitions

Term	Definition
Minister responsible for forest policy-making	Minister holding the main responsibility for forest issues and the formulation of the forest policy.
Head of Forestry	The Head of Forestry is the Government Officer responsible for implementing the mandate of the public administration related to forests.
Level of subordination	Number of administrative levels between the Head of Forestry and the Minister.
University degree	Qualification provided by University after a minimum of 3 years of post secondary education.

15.2 Data for Table T15

Table 15a – Institutions

FRA 2010 Category	2008	
Minister responsible for forest policy formulation : please provide full title		
Level of subordination of Head of Forestry within the Ministry		1 st level subordination to Minister
		2 nd level subordination to Minister
		3 rd level subordination to Minister
		4 th or lower level subordination to Minister
Other public forest agencies at national level		
Institution(s) responsible for forest law enforcement		

Table 15b – Human resources

FRA 2010 Category	Human resources within public forest institutions					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Total staff						
...of which with university degree or equivalent						

Notes:

1. Includes human resources within public forest institutions at sub-national level
2. Excludes people employed in State-owned enterprises, education and research, as well as temporary / seasonal workers.

15.3 Comments to Table T15

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Minister responsible for forest policy formulation		
Level of subordination of Head of Forestry within the Ministry		
Other public forest agencies at national level		
Institution(s) responsible for forest law enforcement		
Human resources within public forest institutions		

Other general comments to the table

16 Table T16 – Education and research

16.1 FRA 2010 Categories and definitions

Term	Definition
Forest-related education	Post-secondary education programme with focus on forests and related subjects.
Doctor's degree (PhD)	University (or equivalent) education with a total duration of about 8 years.
Master's degree (MSc) or equivalent	University (or equivalent) education with a total duration of about five years.
Bachelor's degree (BSc) or equivalent	University (or equivalent) education with a duration of about three years.
Technician certificate or diploma	Qualification issued from a technical education institution consisting of 1 to 3 years post secondary education.
Publicly funded forest research centers	Research centers primarily implementing research programmes on forest matters. Funding is mainly public or channelled through public institutions.

16.2 National data

16.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments

16.2.2 Original data

16.3 Analysis and processing of national data

16.3.1 Estimation and forecasting

16.4 Data for Table T16

FRA 2010 Category	Graduation ¹⁾ of students in forest-related education					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Master's degree (MSc) or equivalent						
Bachelor's degree (BSc) or equivalent						
Forest technician certificate / diploma						
FRA 2010 Category	Professionals working in publicly funded forest research centres ²⁾					
	2000		2005		2008	
	Number	%Female	Number	%Female	Number	%Female
Doctor's degree (PhD)						
Master's degree (MSc) or equivalent						
Bachelor's degree (BSc) or equivalent						

Notes:

1. Graduation refers to the number of students that have successfully completed a Bachelor's or higher degree or achieved a certificate or diploma as forest technician.
2. Covers degrees in all sciences, not only forestry.

16.5 Comments to Table T16

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Graduation of students in forest-related education		
Professionals working in public forest research centres		

Other general comments to the table

17 Table T17 – Public revenue collection and expenditure

17.1 FRA 2010 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, forest products include: roundwood; sawnwood; wood-based panels; pulp and paper; and non-wood forest products. As far as possible, this should include revenue collected by all levels of government (i.e. central, regional/provincial and municipal level), but it should exclude the income of publicly owned business entities.
Public expenditure	All government expenditure on forest related activities (further defined below).
Operational expenditure (sub-category to Public expenditure)	All government expenditure on public institutions solely engaged in the forest sector. Where the forest administration is part of a larger public agency (e.g. department or ministry), this should only include the forest sector component of the agency's total expenditure. As far as possible, this should also include other institutions (e.g. in research, training and marketing) solely engaged in the forest sector, but it should exclude the expenditure of publicly owned business entities.
Transfer payments (sub-category to Public expenditure)	All government expenditure on direct financial incentives paid to non-government and private-sector institutions, enterprises communities or individuals operating in the forest sector to implement forest related activities.
Domestic funding	Public expenditure funded from domestic public financial resources, including: retained forest revenue; forest-related funds; and allocations from the national budget (i.e. from non-forest sector public revenue sources).
External funding	Public expenditure funded from grants and loans from donors, non-governmental organisations, international lending agencies and international organisations, where such funds are channelled through national public institutions.

17.2 National data

17.2.1 Data sources

References to sources of information	Quality (H/M/L)	Variable(s)	Year(s)	Additional comments

17.2.2 Classification and definitions

National class	Definition

17.2.3 Original data

17.3 Analysis and processing of national data

17.3.1 Calibration

17.3.2 Estimation and forecasting

17.3.3 Reclassification into FRA 2010 categories

17.4 Data for Table T17

Table 17a - Forest revenues

FRA 2010 Categories	Revenues (1000 local currency)	
	2000	2005
Forest revenue		

Table 17b - Public expenditure in forest sector by funding source

FRA 2010 Categories	Domestic funding (1000 local currency)		External funding (1000 local currency)		Total (1000 local currency)	
	2000	2005	2000	2005	2000	2005
Operational expenditure						
Transfer payments						
Total public expenditure						
If transfer payments are made for forest management and conservation, indicate for what specific objective(s) - Please tick all that apply.	<input type="checkbox"/>	Reforestation				
	<input type="checkbox"/>	Afforestation				
	<input type="checkbox"/>	Forest inventory and/or planning				
	<input type="checkbox"/>	Conservation of forest biodiversity				
	<input type="checkbox"/>	Protection of soil and water				
	<input type="checkbox"/>	Forest stand improvement				
	<input type="checkbox"/>	Establishment or maintenance of protected areas				
	<input type="checkbox"/>	Other, specify below				

17.5 Comments to Table T17

Variable / category	Comments related to data, definitions, etc.	Comments on the reported trend
Forest revenue		
Operational expenditure		
Transfer payments		

Other general comments to the table