

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Germany

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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Introductory Text

The primary information sources for the German reporting on FRA 2010 are the National Forest Inventory (NFI) (in German: Bundeswaldinventur - BWI), the annual forest condition monitoring on Level I and Level II, the German Forest Soil Assessment (BZE I), the Economic Accounting of the German forestry sector and wood industries. In addition few other – rather internal/non-official – sources are considered, which are maintained by the Federal Ministry of Food and Agriculture (BMEL), the Federal Research Institute for Rural Areas, Forestry and Fisheries/ Johann Heinrich von Thünen-Institute (TI), or other national institutions like the Federal Agency for Agriculture and Food (BLE) or the Federal Statistical Office (Destatis).

The German NFI was conducted three times, in 1987, 2002 and 2012. In 1987 the two different German states still existed (Federal Republic of Germany and German Democratic Republic) and the first NFI was conducted only in the former Federal Republic of Germany. The second NFI in 2002 was conducted after the re-unification. Reported data for 1990 rely on two different sources: a) the NFI 1, representing the former Federal Republic of Germany and b) the 'Datenspeicher Waldfond', which represents the former German Democratic Republic

(GDR) and which was not longer maintained after 1990. As both sources applied different methodologies and have different data acquisition dates, data are not necessarily comparable. Therefore NFI-data on changes from 1990 to 2000 cover only the Federal Republic of Germany, the so called “old Länder”. Estimations on total changes for Germany are based on these different data sources, the quality of the change is hardly to judge.

The data for the third NFI were collected in 2011-2012. The NFI, the forest condition monitoring and the soil assessment are conducted in responsibility of the Federal States (Laender), but are jointly coordinated and guided by the TI and the BMEL.

To support the harmonisation process and guarantee comparability between FAO-FRA and Forest Europe-C&I reporting (former MCPFE), same data as for the MCPFE reporting in 2007 were used in FRA 2005 and 2010, if data requests were the same.

Because of ministerial reorganisation there are the following abbreviations for the ministry used in this report: BML, BMVEL, BMELV, BMEL.

Desk Study?

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

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

Documents for this question:

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

1.1 Categories and definitions

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

1.2 National data

1.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	BMELV: Zweite Bundeswaldinventur, 2002	Forest area	2002	Field surveys were conducted in 2001 and 2002, see at: www.bundeswaldinventur.de

2	BML: Erste Bundeswaldinventur, 1987	Forest area	1990	Field surveys were conducted in the years 1986-1990 Geographical coverage: Federal Republic of Germany and western Berlin before reunification in the year 1990
3	Datenspeicher Waldfond (forest database) als Datengrundlage für BML, 1994 Der Wald in den neuen Bundesländern	Forest area	1990	Annual forest database of the former German Democratic Republic (GDR)
4	Statistisches Bundesamt, 2013: Land- und Forstwirtschaft, Fischerei, Fachserie 3/Reihe 5.1 www.destatis.de	Total land area; inland water bodies	1990- 2015	reference years 1992, 2000, 2004, 2009, 2011
5	BMELV, Ref. 515 Gartenbau	other land with tree cover	2000 onwards	Rough estimates, including fruit orchards, gardens and parks.
6	N/A	Other land	1990- 2015	Rechnerisches Saldo / on balance
7	Estimation based on NFI	Table 1b, Afforestation,	1990- 2015	N/A
8	Estimation BMELV, 535, Schmitz based on NFI	Table 1b, other variables	1990- 2015	Forest Europe 2010, Form 4.2 (Germany_Final-Draft-SoEF-20110119.xls)
9	BMEL: NFI-2012	Forest area	2012	adjustment: s. chap. 1.3.1

1.2.2 Classification and definitions

National class	Definition
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Forest	Wald im Sinne der BWI ist, unabhängig von den Angaben im Kataster oder ähnlichen Verzeichnissen, jede mit Forstpflanzen bestockte Grundfläche. Als Wald gelten auch kahl geschlagene oder verlichtete Grundflächen, Waldwege, Wald-einteilungs- und Sicherungstreifen, Waldblößen und Lichtungen, Waldwiesen, Wildäsungsplätze, Holzlagerplätze, im Wald gelegene Leitungsschneisen, weitere mit dem Wald verbundene und ihm dienende Flächen einschließlich Flächen mit Erholungseinrichtungen, zugewachsene Heiden und Moore, zugewachsene ehemalige Weiden, Almflächen und Hutungen sowie Latschen- und Grünerlenflächen. Heiden, Moore, Weiden, Almflächen und Hutungen gelten als zugewachsen, wenn die natürlich aufgekommene Bestockung ein durchschnittliches Alter von fünf Jahren erreicht hat und wenn mindestens 50 percent der Fläche bestockt sind. In der Flur oder im bebauten Gebiet gelegene bestockte Flächen unter 1.000 m ² , Gehölzstreifen unter 10m Breite und Weihnachtsbaum- und Schmuckreisigkulturen sowie zum Wohnbereich gehörende Parkanlagen sind nicht Wald im Sinne der BWI. Wasserläufe bis 5 m Breite unterbrechen nicht den Zusammenhang einer Waldfläche. Quelle: Allgemeine Verwaltungsvorschrift zur Durchführung der Bundeswaldinventur 2 Translation: Forest within the meaning of the National Forest Inventory (NFI) is any area of ground covered by forest vegetation, irrespective of the information in the cadastral survey or similar records. The term forest also refers to cutover or thinned areas, forest tracks, firebreaks, openings and clearings XE
N/A	N/A
N/A	N/A
N/A	N/A

1.2.3 Original data

For 1990 there are two sources on forest area:

1. **the 1st NFI. The 1st NFI (reference year: 1987) covers only the territory of the Federal Republic of Germany before 1990.
forest area = 7.757.318 ha**
2. **the forest database of the former German Democratic Republic (GDR) (BML, 1994) for the new federal states with its last reference year 1993 (published in BML 1994)
forest area = 2.983.328 ha**

These data sources for 1990 are not fully comparable because of different methods.

Further sources of area information are the 2nd and 3rd NFI (NFI-2002 and NFI 2012).

Methods are described in: Federal Ministry for Food, Agriculture and Consumer Protection, NFI 2, Inventory and Evaluation Methods, 2006, p. 62 ff.

Method-description of the 3rd NFI is in preparation.

Forest expansion, reforestation

Afforestation as indicated by Länder:

Here a chart is missing

1.3 Analysis and processing of national data

1.3.1 Adjustment

Estimation of afforestation and deforestation before NFI-2002

aBL ohne West- Berlin	Forest area 2002	Landnutzungs- änderung aus Länderabfrage / from questionnaire	per year		
Aufforstung / afforestation		66.185	4.412		
Umwandlung / deforestation		14.454	964		
aBL ohne West- Berlin	7.947.495	51.731	3.449		
nBL mit West- Berlin	2002				
Aufforstung / afforestation		28.401	2.840		

Umwandlung / deforestation		8.708	871		
nBL mit West- Berlin	3.128.304	19.693	1.969		
Germany	11.075.799				
Aufforstung / afforestation			7.252		
Umwandlung / deforestation			1.834		
D			5.418		
Forest area nBL/ forest area Germany	28,2%				
afforestation / deforestation	408%	? Estimated as much too high, Friedrich Schmitz			
2.03.1: Veränderung der Waldfläche [ha] nach Land und Waldveränderung					
für 1987-2002					
<i>Alte Bundesländer / einschließlich nicht begehrter Wald / Vereinigungsfläche gesamter Wald beider Inventuren / einschließlich Lücken in der Bestockung bzw. im Bestand(250/V107k)</i>					
2.03.1: change in forest area [ha] broken down by Land and change to the forest					
for 1987-2002					
<i>old Länder / incl. inaccessible forest / union of the total forest areas of both inventories / incl. gaps in the forest cover or in the stand(250/V107k)</i>					
	deforestation	new forest	forest		

old Länder	-81.754	135.328	53.574		
per year	-5.450	9.022	3.827		
D per year [Faktor D: B18 = 28,2%]	-6.990	11.570	4.580		
new forest/ deforestation	-166%				
eigene Dateien\INVENTUR\FRA\FRA2015\WF-Aff-vor2002.xlsx					
FRA 2010 Categories	Annual forest establishment (hectares/year)				
	1990	2000	2005		
Deforestation [not requested in FRA]	7000	4000	3000		
saldo	5000	3000	3000		

Estimation of afforestation and deforestation of the year 2005 and 2010 are based on NFI-2002 and 2012 data by linear interpolation.

s. [special calculation](#) in recalculationsFRA2015.xlsx; neue BWI-Berechnungen in recalculationsFRA2015_2014_06_24.xlsx

1.3.2 Estimation and forecasting

Between NFI 2012 and 2015 no changes for area are estimated.

1.3.3 Reclassification

Forestarea

None

Forest expansion, reforestation

none.

1.4 Data

Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	11300	11354	11384	11409	11419
	Other wooded land	0	0	0	0	0
	Other land	23561	23507	23477	23452	23442
	... of which with tree cover	1400	1400	1400	1400	1400
	Inland water bodies	851	851	851	851	851
	TOTAL	35712.00	35712.00	35712.00	35712.00	35712.00

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	12	7	11	11	N/A	N/A	N/A	N/A
	... of which afforestation	8	5	9	9	N/A	N/A	N/A	N/A
	... of which natural expansion of forest	4	2	2	2	N/A	N/A	N/A	N/A
	Deforestation	7	4	6	6	N/A	N/A	N/A	N/A

	... of which human induced	7	4	6	6	N/A	N/A	N/A	N/A
	Reforestation	30	25	48	48	N/A	N/A	N/A	N/A
	... of which artificial	9	5	7	7	N/A	N/A	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 3	Tier 3
Other wooded land	Tier 3	Tier 3
Forest expansion	Tier 3	Tier 3
Deforestation	Tier 3	Tier 3
Reforestation	Tier 3	Tier 3

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</p> <p>Tier 2 : Data sources: Full cover mapping / remote sensing or old NFI (more than 10 years ago)</p> <p>Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status)</p> <p>Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status)</p> <p>Tier 1 : Other</p>

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	N/A	Since at the time of NFI 1 and NFI 2 some forest area was not classified as such, total forest area was corrected backwards.
Other wooded land	Data on “other wooded land” are nyther assessed by the NFI nor any other source. Therefore no official statistics are available. Any area that fulfil the OWL criteria of FRA is therefore included under “other land”.	N/A
Other land	N/A	The annual change rate of other land is nearly zero. Therefore same data as in 2005 are reported for 2010.

Other land with tree cover	Within the NFI no data are assessed on “Other land with tree cover”. Reported are only rough estimates, which include about 400.000 ha sparse fruit orchards and about 1.000.000 ha gardens and parks (BMELV, Ref. 515.)	The data rely on an assessment in 2008. As these data are only rough estimates, same data are reported also for the years 2000, 2005 and 2010. There is no new assessment since 2008.
Inland water bodies	N/A	N/A
Forest expansion	Afforestation Estimation based on NFI Natural expansion of forest Estimation	Afforestation It is estimated that the dynamic of afforestation and deforestation is getting smaller Natural expansion of forest It is estimated that the dynamic of afforestation and deforestation is getting smaller
Deforestation	N/A	N/A
Reforestation	Figures represent rough estimates based on NFI-data. NFI estimates only ca. 20 % artificial regeneration, but the area of planting is larger, as after planting natural regeneration comes up and NFI estimates the product of natural and artificial regeneration. If natural regeneration has the bigger impact area is counted from point of NFI as naturally regenerated, from point of FRA it is planted as well. Area figures are rough estimates.	It is estimated that the dynamic of afforestation and deforestation is getting smaller

Other general comments to the table

N/A

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	BMELV: Zweite Bundeswaldinventur, 2001-2002	Introduced tree species, Type of regeneration	2000	N/A
2	Erste Bundeswaldinventur, 1986-1990	Forest area	1990	Geographical coverage: Federal Republic of Germany and western Berlin before 1990

3	Datenspeicher Waldfond (forest database) als Datengrundlage für BML, 1994Der Wald in den neuen Bundesländern	Forest area	1990	Annual forest database of the former German Democratic Republic (GDR)
4	Expert Estimate, Requardt, 2009	Regeneration/ Planting	1990	Based on available NFI 1 and NFI 2 data, data on regeneration and planting were estimated as no official figures are available for the year 1990.
5	Expert estimation, 533, BMELV	Table 2b, 2c	All	Because of the dense population and intensive use of the landscape nearly no primary forest is left in GermanyMangroves do not occur in Germany because of climatic conditions

2.2.2 Classification and definitions

National class	Definition
N/A	N/A

2.2.3 Original data

NFI 2: Forest area of introduced tree species		
Table: Fläche der Fremdländer: Waldfläche [ha] nach Land und Baumart - nur Fremdländer		
für 2002 Deutschland / nur begehbarer Wald / bestockter Holzboden / ohne Lücken im Hauptbestand bzw. Plenterwald(328/E357) table: area of introduced tree species: forest area [ha] broken down by land and tree size - only introduced tree species for 2002 Germany / only accessible forest / stocked timberland / without gaps in the main stand or plenter forest(328/E357)		
für 2012: Auswertung Hennig vom 25.6.2014		
	2002	2012
Quercus rubra	43960	54.533

Robinia pseudoacacia	33778	42.240
Aesculus hippocastanum	2539	n.a.
Castanea sativa	7445	9.177
Juglans. spec	1117	n.a.
Other broadleaves with long or short life expectancy	1830	18.787
Populus trichocarpa (+Hybrids)	24838	19.193
Prunus serotina	n.a.	10.680
Picea Omorika	4169	n.a.
Other Spruce/ Picea spec.	23454	29.301
Other coniferous trees with long life expectancy	1344	n.a.
Abies spec.	9223	16.887
Pseudotsuga menziesii	179607	217.604
Pinus nigra	13902	14.857
Pinus peuce	35	13.327
Other Pines	19859	2.978
Larix kaempferi (+Hybrid)	73618	83.431
Total	440719	532.996

NFI 2: Type of regeneration

Table 2.04.5: forest area [ha] broken down by type of forest cover of young forest cover and type of regeneration for 2002 Germany / only accessible forest / stocked timberland / without gaps in the young forest cover (< 4 m height)(241/E349)

	Natural regeneration	Seed	Planting	Coppice shoot	Classification not possible	Total
all types of young forest cover	1.790.648	9.873	384.019	19.948	20.833	2.225.320
%	80,5%	0,4%	17,3%	0,9%	0,9%	100 %

2.3 Analysis and processing of national data

2.3.1 Adjustment

2.3.2 Estimation and forecasting

The NFI 2 has a high proportion of natural regeneration in young forest cover (81%). In old forest cover, the proportion might be lower. 50 % are assumed. Introduced species are supposed to be planted.

Data on ‘Other naturally regenerating forest’ are estimated as the following for the years 2000 - 2015:

Angaben aus BWI2 [Thema 72/E322]: (Naturverjüngung der Jungbestockung + Unbekannt+ 50 % der (Bestockter Holzboden - Jungbestockung)-Fremdländer)+50% (Differenz zur Gesamtwaldfläche[= 50 % unbestockter Holzboden])

Figures of NFI2 [Thema 72/E322]: (natural regeneration of the young forest cover + unknown + 50 % of (stocked timberland - young forest cover)-introduced tree species)+50% (difference to total forest area[= 50 % of unstocked timberland])

year 2000: $1790+21+0,5*(10496 -2225)-441+287.5$ [1 000 ha] = 5 793 THa

Year 2010: $2249+27+0,5*(10846-2656)-533+0,5*(11419-10846)$ [1000 ha] = 6124,5 THa

Data on ‘Planted forests’ are estimated as the following:

(Rest der Jungbestockung + 50 % der (Bestockter Holzboden - Jungbestockung)+Fremdländer) +50% (Differenz zur Gesamtwaldfläche [= 50 % unbestockter Holzboden])

(rest of young forest cover + 50 % of (stocked timberland – young forest cover)+introduced tree species) +50% (difference to total forest area [= 50 % unstocked timberland])

Year 2000: $414+0,5*(10496-2225)+441+287.5$ [1 000 ha] = 5 278 THa

Year 2010: $(2656-2249-27)+0,5*(10846-2656)+533+0,5*(11419-10846)$ [1000 ha] = 5294,5 THa

1990: estimates of vTI (Requardt)

Because of larger forest area of NFI-2012 area of “Other naturally regenerated forest”, “Planted forest” and “...of which of introduced species” are enlarged proportionally

TOTAL (aktuelle Daten / data of actual report)	11.300	11.354			
TOTAL (Daten des letzten Berichtes / data of last report)	10741	11076			
%	105,2044%	102,5099%			

s. recalculationsFRA2015_2014_06_24.xlsx

2.3.3 Reclassification

2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	0	0	0	0	0
	Other naturally regenerated forest	5912	5938	6106	6119	6124
	... of which of introduced species	0	0	0	0	0
	... of which naturalized	0	0	0	0	0
	Planted forest	5388	5416	5278	5290	5295
	... of which of introduced species	450	452	468	515	533
TOTAL		11300.00	11354.00	11384.00	11409.00	11419.00

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
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Table 2c

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

Tiers

Category	Tier for status	Tier for reported trend
Primary forest	Tier 2	Tier 2
Other naturally regenerated forest	Tier 2	Tier 2
Planted forest	Tier 2	Tier 2
Mangroves	Tier 3	Tier 3

Tier Criteria

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

2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	In Germany only neglectable areas. Data are not available.	No bigger trend to face
Other naturally regenerating forest	N/A	N/A
Planted forest	Introduced species 1990 is an expert estimate.	N/A
Mangroves	There are no mangroves in Germany	N/A

Other general comments to the table

no primary forests, no mangroves in Germany

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	BMELV: Zweite Bundeswaldinventur, 2001-2002	Table 3a	2002	Cubic meters over bark, dead wood
2	BML, 1994: Der Wald in den neuen Bundesländern	Table 3a	1990	Geographical coverage: German Democratic Republic – New federal states (new laender), Reference year 1993

3	BML, 1992: Bundeswaldinventur 1986-1990	Table 3a	1990	Geographical coverage: Federal Republic of Germany before 1990 Federal Republic of Germany and Western Berlin before 1990
4	BMELF, 1997: Bodenzustandserhebung BZE1	C-stock in litter and soil	1990	Inventory years 1987-1993
5	National Inventory Report (NIR 2014) for the German Greenhouse Gas Inventory 1990-2012	C-stock in living biomass, dead wood, litter and soil	1990-2015	Methodology for the calculated c-stocks are described in NIR 2014, section 7.2.4
6	Oehmichen, K., et al. (2011): Inventurstudie 2008 und Treibhausgasinventar Wald. Braunschweig: vTI, 164 Seiten, Landbauforschung vTI agriculture and forestry research - Sonderheft 343	carbon in dead wood carbon in litter	2010, 2015	N/A
7	BML, 2004 Bundeswaldinventur 2002	Table 3c: net annual increment	1990	Geographical coverage: Federal Republic of Germany and Western Berlin before 1990
8	BMELV, 2004: Waldentwicklungs und Holzaufkommensmodellierung	Table 3c: net annual increment	2000	N/A
9	NFI-2012	Table 3c: net annual increment	2005 - 2015	N/A

3.2.2 Classification and definitions

National class	Definition
Above-ground biomass	Living biomass above the soil, including stem, stump, branches, bark, and, in the case of conifers, foliage. Seeds and foliage of deciduous trees not included.
Below-ground biomass	Same definition as used for FRA 2010
Growing stock	Volume of above-ground woody biomass with a minimum diameter overbark of at least 7 cm
Carbon in above-ground biomass	Carbon in living biomass above the soil, including stem, stump, branches, bark, and, in the case of conifers, foliage. Seeds and foliage of deciduous trees are not included.
Dead wood	Includes standing and lying dead stems and branches equal or larger than 20 cm at the larger end. Stumps were included if 50 cm or more in height or more than 60 cm in diameter
Carbon in litter	The humus layer included in the estimation of soil carbon includes the fine fractions of litter are included in soil carbon.
Soil carbon	Includes carbon in the humic and fomic layers (including litter) and in mineral and organic soil from 0 to 30 cm in depth.

Net Annual Increment (NAI)	Growth of all trees related to total forest area
----------------------------	--

3.2.3 Original data

Data for 2005 to 2015: s. recalculationsFRA2015_2014_06_24.xlsx

Growing stock

Data for 1990:

Growing stock in 1000 m ³			
	old Länder, NFI1 (1987)	new Laender, DSWF (1993)	Total
Quercus spec.	176 322	40 655	216 977
Fagus spec.	406 565	68 821	475 386
Broadleaved tree species with long life expectancy	65 150	20 476	85 626
Broadleaved tree species with short life expectancy	61 824	39 773	101 597
Picea abies	1 015 074	127 003	1 142 077
Abies alba	71 185	153	71 338
Pseudotsuga menziesii	19 645	2 712	22 357
Pinus sylvestriy	347 168	286 863	634 031
Larix spec.	55 251	10 055	65 306
Total	2 218 184	596 511	2 814 695

Data for 2000 (NFI2, 2002):

Species name	Growing Stock in Forests (million m ³)
Picea spec.	1231

Pinus spec.	705
Fagus sylvatica	583
Quercus spec.	302
Larix spec.	92
Abies spec.	82
Pseudotsuga menziesii.	50
Broadleaved tree species with short life expectancy	179
Broeadleaved tree species with long life expectancy	157
Total	3381

Biomass stock

Above-ground biomass, below-ground biomass and dead wood were calculated by scaling up German NFI single tree data. The above-ground biomass, below-ground biomass and dead wood was derived by each tree or piece using specific regression functions. Both, the regression functions and the scaling up procedures were described in NIR 2014.

Carbon stock

Estimates on carbon stock are based on the the national carbon factor 0,5 t C/t dm. Above-ground biomass, below-ground biomass and dead wood biomass were multiplied by this factor. The initial data of states for 1990, 2002, 2008 and 2012 are described in figure XXX (source NIR 2014, section 7.2.4). The estimates of years between are calculated using a linear interpolation.

Data on ‘carbon in litter’ are included in the data on ‘soil carbon’. Data are based on the national soil condition survey (BZE 1 and 2). Methods to derive carbon stocks and the up-scaling procedures were described in NIR 2014, section 7.2.4.

Figure XXX: Carbon stock in 1990, 2002, 2008 and 2015 (source NIR 2014)

Net annual increment (NFI 1 + 2)

BWI -2002: 2.09.12: Zuwachs des Vorrates [m³/ha*a] nach Baumartengruppe und Baumaltersklasse für alte Bundesländer/ 1987-2002

Alte Bundesländer / nur begehbarer Wald / Vereinigungsfläche produktiver Wald einschließlich Blöße beider Inventuren / einschließlich Lücken im Bestand / Bäume ab 7 cm Bhd des Hb oder Pl / Flächenbezug: Ideell(244/V452k)

*alle Baumarten: 12,12 m³ /ha*a*

SoEF Germany_Final-Draft-SoEF-20110119

Table 3.1: Increment and fellings			
Category	Year	Net annual increment	
Forest available for wood supply	1990	122000	

Assumption: stocked forest area for 1990: 10.083 Mio. Ha.

Estimation of Incement: 12.1 m³/ha

BWI-2012:1.07.8 Vorrat [1000 m³] nach Eigentumsart und Baumartengruppe

Kriterien: Deutschland, Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurgebiet bzw. -raster für BWI 2012 (Zustandsrechnungen)), Holzboden, nur begehbarer Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Bäume ab 7 cm Bhd aller Bestandesschichten, bestandesintern, Baumvolumen: BDat3.0 (Spline-Funktion, 2013); reeller Flächenbezug (Trakteckenanteil) (77Z1JI_L244of_2012_bi / 2014-6-12 14:34:8.660)

Eigentumsart	Einheit	Eiche	Buche	Fichte	Tanne	Douglasie	Kiefer	Lärche
alle Eigentumsarten	[1000 m ³]	361.231	635.258	1.206.199	93.434	72.731	767.814	102.224

BWI-2012: Zuwachs des Vorrates [m³/ha*a] nach Land und Baumartengruppe

Filter: Periode bzw. Jahr=2002-2012 ;

Kriterien: Deutschland, Raster: 16km²: NI, NW, HE, SL, BY, BE, BB, ST, TH / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, MV (Schnittmenge Inventurgebiet bzw. -raster für BWI Periode 2002-2012), Vereinigungsfläche Holzboden beider Inventuren, nur begehbarer Wald**, einschließlich Lücken in der Bestockung bzw. im Bestand, Bäume ab 7 cm Bhd aller Bestandesschichten, bestandesintern, Baumvolumen: BDat3.0 (Spline-Funktion, 2013), Sloboda (Wachstum); reeller Flächenbezug (Trakteckenanteil) (77Z1PB_L458mf_0212_bi / 2014-3-20 8:13:11.713)

		Baumartengruppe											
Land	Einheit	Eiche	Buche	andere Lb hoher Lebensdauer	andere Lb niedriger Lebensdauer	alle Laubbäume	Fichte	Tanne	Douglasie	Kiefer	Lärche	alle Nadelbäume	alle Baumarten
Deutschland	[m ³ /ha*a]	0,86	1,69	0,60	0,66	3,82	4,22	0,28	0,36	2,24	0,31	7,40	11,22

3.3 Analysis and processing of national data

3.3.1 Adjustment

3.3.2 Estimation and forecasting

Tabel 3a: Total growing stock

Data for 2005 to 2015: s. recalculationsFRA2015_2014_06_24.xlsx

Biomass stock

Methodological details for the calculations of biomass stock, like volume expansion factors, basic density figures, tree roots biomass etc. are described in the National Inventory Report (NIR) for the German Greenhouse Gas Inventory 1990-20011.

See at:

http://unfccc.int/national_reports/annex_i_ghg_inventories/national_inventories_submissions/items/7383.php

Chapter 7.1, page 498 ff.

Carbon stock

The carbon stocks for 1990, 2000, 2005 and 2010 were estimated separately for old and new federal states, using linear extra- and interpolation of NFI 1 and 2 to get total amounts of C in above-ground and below-ground biomass. Due to this calculation procedure, biomass stocks are not directly comparable to the growing stocks reported in Question 3. Biomass stock was converted to carbon stock by using a national carbon fraction of 0.5. Methodological details, like calculation of volume expansion factors, carbon fraction factor, tree roots biomass for carbon accounting etc. are described in the National Inventory Report (NIR) for the German Greenhouse Gas Inventory 1990-2011.

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	2815	3381	3502	3617	3663	0	0	0	0	0
	... of which coniferous	1935	2159	2205	2232	2242	0	0	0	0	0
	... of which broadleaved	880	1222	1298	1385	1421	0	0	0	0	0

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	<i>Picea spec.</i>	Spruce	1142	1231	N/A	1206
2 nd	<i>Pinus spec.</i>	Pine	634	705	N/A	768
3 rd	<i>Fagus sylvatica</i>	Beech	475	583	N/A	635

4 th	Quercus spec.	Oak	216	302	N/A	361
5 th	Larix spec.	Larch	65	92	N/A	102
6 th	Abies spec.	Fir	71	82	N/A	93
7 th	Pseudotsuga menziesii	Douglas Fir	22	50	N/A	73
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			190	336	N/A	425
TOTAL			2815.00	3381.00	.00	3663.00

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)	7	N/A
Minimum diameter (cm) of branches included in growing stock (W)	7	Branches are assessed only from broad leaved trees and not from coniferous trees.
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	12.1	10.5	11.22	11.22	11.22
	... of which coniferous	N/A	N/A	7.4	7.4	7.4
	... of which broadleaved	N/A	N/A	3.82	3.82	3.82

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	1496	1801	1877	1938	2053	0	0	0	0	0
	Below ground biomass	247	283	294	304	323	0	0	0	0	0
	Dead wood	N/A	50	60	64	58	0	0	0	0	0
TOTAL		1743.00	2134.00	2231.00	2306.00	2434.00	.00	.00	.00	.00	.00

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Carbon in above ground biomass	748	901	938	969	1027	0	0	0	0	0
	Carbon in below ground biomass	123	142	147	152	162	0	0	0	0	0
	<i>Subtotal Living biomass</i>	871	1043	1085	1121	1189	0	0	0	0	0
	Carbon in dead wood	N/A	25	30	32	29	0	0	0	0	0
	Carbon in litter	205	202	200	198	197	0	0	0	0	0
	<i>Subtotal Dead wood and litter</i>	205	227	230	230	226	0	0	0	0	0
	Soil carbon	665	705	725	745	765	0	0	0	0	0
TOTAL		1741.00	1975.00	2040.00	2096.00	2180.00	.00	.00	.00	.00	.00

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 2	Tier 2
Net annual increment	Tier 3	Tier 3
Above ground biomass	Tier 3	Tier 3
Below ground biomass	Tier 2	Tier 2
Dead wood	Tier 3	Tier 3
Carbon in above-ground biomass	Tier 2	Tier 2
Carbon in below ground biomass	Tier 2	Tier 2
Carbon in dead wood and litter	Tier 2	Tier 3
Soil carbon	Tier 2	Tier 2

Tier criteria

Category	Tier for status	Tier for reported trend
Total growing stock	Tier 3: Data sources Recent 10 years National Forest Inventory or remote sensing with ground truthing or programme for repeated compatible NFI 10 years Domestic volume functions Tier 2: Data sources/registers and statistics modelling or old NFI 10 years or partial field inventory Tier 1: Other data sources	Tier 3: Estimate based on repeated compatible tiers 3 (tier for status) Domestic growth functions Tier 2: Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 tier for status Tier 1: Other
Net annual increment	Tier 3: Scientifically tested national volume and growth functions Tier 2: Selection of volume and growth functions as relevant as possible Tier 1: Other	Tier 3: Confirmation/adjustment of functions used through scientific work Tier 2: Review work done to seek alternative functions Tier: 1 Other
Biomass	Tier 3: Country-specific national or sub-national biomass conversion expansion factors applied or other domestic or otherwise nationally relevant biomass studies Tier 2: Application of country specific national or sub-national biomass conversion factors from other country with similar climatic conditions and forest types Tier 1: International/regional default biomass expansion factors applied	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other

<ul style="list-style-type: none"> • Carbon in above ground biomass • Carbon in below ground biomass • Carbon in dead wood and litter • Soil carbon 	<p>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</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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3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	N/A	N/A
Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	N/A	N/A
Net annual increment	<p>1990: Result of the NFI 2002 Post 1990: Estimation by Rawwoodpotential-Modelling [Waldentwicklungs- und Holzaufkommensmodellierung (WEHAM)] Increment-models are estimated by remeasuring of trees in the NFI. Standwise estimation of net annual increment are not made.</p>	N/A
Above-ground biomass	N/A	N/A
Below-ground biomass	N/A	N/A
Dead wood	<p>Data on deadwood were assessed the first time in the NFI 2, 2002. Data on lying and standing deadwood include all woody debris with a diameter (standing deadwood: DBH) =20 cm at the thicker end. Data on stumps were measured only when having a DBH of at least 50 cm or a diameter of 60 cm at felling height.</p>	<p>Within the NFI 1 data on deadwood were not collected. Data on dead wood biomass stock are based on NFI 2 data. For 2000, 2005 and 2010 it was assumed that dead wood biomass stock will not significantly change.</p>
Carbon in above-ground biomass	see comments on biomass stock above	see comments on biomass stock above
Carbon in below-ground biomass	<p>Data on ‘carbon in litter’ are included in the data on ‘soil carbon’. Data are based on the national soil condition survey 1 (BZE 1).</p>	N/A
Carbon in dead wood	<p>Data on soil carbon stocks are based on national soil condition survey 1 (BZE 1). Reported figures includes carbon in litter.</p>	<p>For 2000, 2005 and 2010 it was assumed that soil carbon stock under existing forest does not change. No conclusions can be drawn regarding soil carbon stock changes, since results from BZE 2 are not yet available.</p>
Carbon in litter	N/A	N/A

Soil carbon	N/A	N/A
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Other general comments to the table
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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	Fowi-Gesamtrechnung BMELV 123 v. 05.03.2012 SJT-7011150-0000	other plant products	2010	N/A
2	Weber, K. 2006. Christbaumhändler schauen zuversichtlich in die kommende Saison. LWF aktuell Nr. 55, p. 8-9	X-mas trees	2010	estimate based on country-wide study
3	Dt. Jagdschutzverband, BMELV 533: Jagdstrecke der hauptsächlichen Wildarten v. 06.03.13	Game	2010	Reference year 2010/11
4	Deutscher Imkerbund (D.I.B.) Wachtberg – Villip Pressesprecherin Frau Petra Friedrich	Honey, Table 4b	2010	Estimation; production varies from year to year, no official statistics exist

5	German Federal Forest Law, § 1	table 4a	N/A	By law German forests are designated for more than one purpose
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4.2.2 Classification and definitions

National class	Definition
N/A	N/A

4.2.3 Original data

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4.3 Analysis and processing of national data

4.3.1 Adjustment

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4.3.2 Estimation and forecasting

<p>Honey:</p> <p>mittlere Jahrestracht / average production per year: 20.000 tons</p> <p>Anteil Waldhonig / proportion on honey with origins out of forests: 30 %.</p> <p>mittlerer Preis / average price: 10 €/kg</p> <p>Jahreswert / value per year: ca. 65 Mio. €</p>
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4.3.3 Reclassification

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4.4 Data

Table 4a

Categories	Forest area (000 hectares)
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		1990	2000	2005	2010	2015
	Production forest	N/A	N/A	N/A	N/A	N/A
	Multiple use forest	11300	11354	11384	11409	11419

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	Game	roe,deer,wildboar,reddeer,	105000	12
2 nd	X-mastrees	N/A	500000	6
3 rd	other products	N/A	80000	8
4 th	honey	N/A	65000	9
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			840000.00	

2010	
Name of local currency	Euro

Category
Plant products / raw material
1 Food
2 Fodder
3 Raw material for medicine and aromatic products
4 Raw material for colorants and dyes
5 Raw material for utensils handicrafts construction

6 Ornamental plants
7 Exudates
8 Other plant products
Animal products / raw material
9 Living animals
10 Hides skins and trophies
11 Wild honey and beeswax
12 Wild meat
13 Raw material for medicine
14 Raw material for colorants
15 Other edible animal products
16 Other non-edible animal products

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m ³ u.b.)	
	Total wood removals	...of which woodfuel
1990	84707	4366
1991	33618	3795
1992	32954	3795
1993	33152	3795
1994	39813	3795
1995	39343	2429
1996	37014	2476
1997	38207	2719
1998	39052	2611
1999	37634	2571
2000	53710	2622
2001	39483	2981

2002	42380	4625
2003	51182	5767
2004	54504	5847
2005	56946	6041
2006	62290	8290
2007	76728	8699
2008	55367	8561
2009	48073.3	9086.61
2010	54418.4	9030.52
2011	56141.6	10783.35

Tiers

Category	Tier for status	Tier for reported trend
Production forest	N/A	N/A
Multiple use forest	Tier 3	Tier 3

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	As Germany has no plantations, no production forest is assumed. Review by 6.1.2014: Production forest does not necessarily have to be related to "plantations". nat. corr.: no information on management unit level is available.	N/A

Multiple use forest	For 1990 and 2000 the total forest area is reported, as all forest was basically designated for more than one purpose. Since 2005, part of the forests are primarily dedicated for biodiversity conservation purposes. For years 2005 onwards the figures are estimated.	N/A
Total wood removals	The statistics origin mainly from wood consumption industry. The national forest inventories show a removal that is 20 to 30 % higher, but no yearly data can be obtained by NFI-data.	N/A
Commercial value of NWFP	N/A	N/A

Other general comments to the table

review by 6.1.2014: Please note the recommendation in the "Guide for country reporting for FRA 2015": Nation-wide function established in general clauses of national legislation or policies should not be considered as designations. So you must instead look into what functions have been designated at the management unit level. Nat. corr.: management unit level information are not available. If the general obligation of the forest law is not acceptable, no data are available. 27.1.2014 table 4c, review by 6.1.2014: If you have national data that you believe are more correct, you may change the pre-filled data (cf. your comment on wood removals below). nat. corr.: No yearly data can be obtained by NFI. Further research is done on improving these statistics.

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	BMELV – Report by Laender 2003, 2006, 2010	protection of soil and water	2000 - 2010	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

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	N/A	2981	3737	4616	N/A
	... 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	N/A	N/A	N/A	N/A	N/A
	... 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 2	Tier 2
Ecosystem services, cultural or spiritual values	N/A	N/A

Tier criteria

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

5.5 Comments

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

Other general comments to the table

review of 6.1.2014: Some data were actually reported for SoEF 2011. Are they no longer relevant? nat Corr.: The SoEF-data were added. No further information is available. 27.1.2014

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	BMELV Questionnaire (Report by) Laender 2009	Forest area designated for the conservation of biodiversity	1990-2010	BMELV-Länderabfrage 2009 (D-Waldschutzgebiete.xls)
2	Polley, H. 2009: Wald in Schutzgebieten – ein Überblick. In: Landbauforschung, Sonderheft 327, Waldstrategie 2020, Tagungsband zum Symposium des BMELV, p. 75-82, vTI Braunschweig	Forest area within protected areas	2005	Expert estimate based on cited study
3	Raths, U., Balzer, S., Ersfeld, M. & Euler, U. (2006): Deutsche Natura-2000-Gebiete in Zahlen. - Natur und Landschaft 81 (2): 68-80.	Natura 2000-Flächen Natura 2000-area	2005	N/A
4	Bundesamt für Naturschutz (BfN) 2011 nach Angaben der Länder und BfN-eigenen Recherchen	Natura 2000-Flächen Natura 2000-area	2010-2015	based on information by the Laender 2012 and Bfn-own investigations Es handelt sich um eine Verschneidung der Natura 2000-Gebietskulisse (FFH- und Vogelschutzgebiete) mit den CLC-Einheiten 3.1.1, 3.1.2 und 3.1.3. (Raths, BfN)

6.2.2 Classification and definitions

National class	Definition
----------------	------------

N/A	N/A

6.2.3 Original data

Result Laender Questionnaire (1000 HA)				
	1990	2000	2005	2010
MCPFE Class 1.1	0	0	0	0
MCPFE Class 1.2	n.a.	91	117	220
MCPFE Class 1.3	n.a.	2048	2690	3086
Natura 2000	-	n.a.	2600	2750

6.3 Analysis and processing of national data

6.3.1 Adjustment

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6.3.2 Estimation and forecasting

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6.3.3 Reclassification

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6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	N/A	2139	2807	2950	3000

	Forest area within protected areas	N/A	N/A	2897	3306	3306
---	------------------------------------	-----	-----	------	------	------

Tiers

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

Tier criteria

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

6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	MCPFE-Class 1.2 +1.3	2015: estimate
Forest area within protected areas	2 897 ha: Das ist die Vereinigungsfläche Wald für Natura2000-Gebiet, Naturschutzgebiet, Biosphärenreservat und Nationalpark (nicht mit einbezogen Landschaftsschutzgebiet und Naturpark: das wären zusätzlich 9 968 ha) 2 897 ha: Forest area of natura2000-network of protected area, protected area, biosphere reserve and national park (not included landscape protection area and nature park: that would be additional 9 968 ha)	For 1990 and 2000: no data are available. Area is included in the figure for multiple use. For 2010 and 2015: An increase of area is assumed. The figures are rough estimates.

Other general comments to the table

Review by 6. Januar 2014: If the forest area within protected areas corresponds to MCPFE Class 1.2 and 1.3, it is surprising that the area for conservation of biodiversity (covering several categories) is actually lower? Nat. correspondent answer: the rows have to be changed (27.1.2014)

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	NFI 2012	Area	2010	In a substratum of tractcorners (corners with forest habitats - WLRT-Ecken), woody invasive species are estimated with their abundance with a threshold of and 10 %, thereof a expert estimation was derived
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
N/A	N/A

7.2.3 Original data

Hier eine Häufigkeitsanalyse zu invasiven Gehölzen aus der BWI-2012: A abundance-statistic of invasive woody species form NFI-2012						
InvG-Icode (Flächenanteil) Thresholds	Anzahl Traktecken mit Aufnahme Number of plots		auf allen WLRT- Ecken		auf nicht- WLRT- Ecken (gelöschte WLRT- Sto ?)	
0 (keine)	19147	96,30%	12283	96,70%	6864	95,50%
1 (0 <10%)< span=""> <10%)<>	595	3,00%	328	2,60%	267	3,70%
2 (>10 %)	147	0,70%	92	0,70%	55	0,80%
Summe Ecken	19889	100 %	12703	100 %	7186	100 %

7.3 Analysis and processing of national data

7.3.1 Adjustment

7.3.2 Estimation and forecasting

Assumption			
DG red	Anteil Waldfläche	Holzbodenfläche	WF mit invasiven Gehölzen
% invasive woody spieces per plot	% of forest area	Stocked forest area	Forestwith invasive woody spieces
		10.5 Mio.Ha	

0,05	0,04		21000
0,5	0,009		47250
			Sum: 68250

Invasive species are assessed on NFI-Plots with the above mentioned thresholds.

Assumption: 4 % of all corners have invasive woody species on 5 % of the area =

10.5 Mio. Ha forest (Holzbodenfläche) * 0,04 * 0,05 = 21 THa etc.

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
1.n.a.	N/A	68
2.	N/A	N/A
3.	N/A	N/A
4.	N/A	N/A
5.	N/A	N/A
6.	N/A	N/A
7.	N/A	N/A
8.	N/A	N/A
9.	N/A	N/A
10.	N/A	N/A

Total	N/A	68
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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

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	BLE, BMELV (535) Waldbrände und ihre Ursachen MBT-050260-0000 v. 04.07.2012	... of which forest area burned	2003-2012	Reference years 2007-2012
2	Prefilled by FAO	Total burned area	2003-2012	Carsten-Michael Pix, Deutscher Feuerwehrverband, Berlin kann diese Zahlen weder bestätigen noch dementieren; Flächenbrände in D sind von keiner volkswirtschaftlichen Relevanz [pix@dfv.org] 21.01.2014; The prefilled figures cannot be verified. Total burned area is of no importance for german economy.
3	Julius Kühn-Institut, Die Waldschutzsituation in der Bundesrepublik Deutschland, Journal für Kulturpflanzen	Table 8b	2004-2007, 2010-2012	N/A
4	Mitteilungen aus der Biologischen Bundesanstalt für Land- und Forstwirtschaft: Massenvermehrungen von Forstschädlingen.	Table 8b	1993, 1996	N/A

5	Julius-Kühn-Archiv 440: Eichenprozessionsspinner	Table 8b	2012	N/A
6	Landesforstanstalt Eberswalde, Eberswalder Forstliche Schriftenreihe Band XXXII v. Nov. 2007: Die Kiefer im nordostdeutschen Tiefland.	Table 8b	1999-2007	N/A

8.2.2 Classification and definitions

National class	Definition
N/A	N/A

8.2.3 Original data

Ursache	Durchschnitt	2008	2009	2010	2011	2012
	1991-2007					
Zahl der Brände						
Fahrlässigkeit	335	230	199	126	193	179
Blitzschlag	59	33	41	27	37	42
Brandstiftung	314	200	140	167	148	131
Andere Ursachen	125	58	26	103	80	60
Unbekannte Ursachen	577	297	357	357	430	289
Zusammen	1410	818	763	780	888	701
Brandfläche in ha						

Fahrlässigkeit	227	137,2	40,8	57,8	64,4	55,2
Blitzschlag	77	12,6	11,6	7,3	8,4	9,5
Brandstiftung	136	41,1	34,3	28,8	20,3	29,7
Andere Ursachen	201	278,9	68,6	306,8	27,6	33,0
Unbekannte Ursachen	358	68,8	106,9	121,4	93,5	141,2
Zusammen	999,0	538,6	262,1	522,1	214,2	268,6
						Quelle: BLE, BMELV (535).

8.3 Analysis and processing of national data

8.3.1 Adjustment

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
	Insects		
1	European spruce bark beetle	After 2003	n.a.
1	Six-toothed spruce bark beetle	After 2003	n.a.
1	Pine shoot beetles	n.a.	n.a.
1	Metallic wood-boring beetle	After 2003	n.a.
1	Striped ambrosia beetle	n.a.	n.a.
1	European hardwood ambrosia beetle	n.a.	n.a.
1	Nun moth	2002-2004	n.a.

1	Gypsy moth	n.a.	n.a.
1	Bordered white moth	2005-2007	n.a.
1	Pine-tree lappet	2003-2005	n.a.
1	Pine beauty moth	2003	n.a.
1	European oak leaf roller	2004-2006	n.a.
1	Winter moth	2004-2006	n.a.
1	Mottled umber	2003-2007	n.a.
1	Oak processionary moth	Since 1990 th , 2003, 2007	n.a.
	Fungi and Fungus like microorganisms		
2	Diplodia blight of pines	Since 1990 th	n.a.
2	Swiss needle cast	2004	n.a.
2	Douglas-fir needle cast	2004	n.a.
2	Needle cast	n.a.	n.a.
2	Heterobasidium root rot	n.a.	n.a.
2	Armillaria root and cambium rot	after 2003	n.a.
2	Phytophthora disease of alder	Since 1995	n.a.
2	Shoot decline of ash	Since 2002	n.a.
2	Dutch elm disease	1970 th up to now	n.a.
2	Chestnut blight	Since 1992	n.a.
2	Hymenoscyphus pseudoalbidus (Eschentriebsterben)	Since 2002	n.a.
	Severe weather events		
3	Drought	2003	n.a.
3	Storm		n.a.

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

8.3.2 Estimation and forecasting

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8.3.3 Reclassification

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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	27.25	N/A	2.82	N/A	3.86	N/A	0.79	N/A	1.88	N/A
	... of which forest area burned	1.3	2524	0.3	626	0.2	496	0.5	930	0.3	779
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	0.9	N/A	5.18	N/A	0.6	N/A	3.55	N/A	2.78	N/A
	... of which forest area burned	0.5	818	0.3	763	0.5	780	0.2	888	0.3	703

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	Pine-tree lappet	2003-2005	N/A
1	European spruce bark beetle	After 2003	N/A

1	Six-toothedsprucebarkbeetle	After 2003	N/A
1	Pineshootbeetles	n.a.	N/A
1	Metallicwood-boringbeetle	After 2003	N/A
1	Stripedambrosiabeetle	n.a.	N/A
1	Europeanhardwoodambrosiabeetle	n.a.	N/A
1	Nunmoth	2002-2004	N/A
1	Gypsymoth	n.a.	N/A
1	Borderedwhitemoth	2005-2007	N/A

Outbreak category

1 Insects

2 Diseases

3 Severe weather events

Tiers

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

Tier criteria

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

8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
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Burned area	total land area burned is prefilled by FAO. The figures cannot be verified. Review: Note that the table requests areas in 1000 hectares. For 2010 the reported area of burned forest is bigger than the total burned land area, which cannot be correct. Schmitz: The figure therefore was enlarged to 0.6	N/A
Insects	Specification of the most important forest pests, based on the annual reports of the federal states (laender) Ips typographus and Pity. calco. occur together and can not be distinguished in the monitoring. The same is valid for the oak feeding society.	N/A
Diseases	Specification of the most important forest diseases, based on the annual reports of the federal states (laender)	N/A
Severe weather events	Specification of the most important weather events, based on the annual reports of the federal states (laender)	N/A

Other general comments to the table

table 8b contains a limited number of rows, here is the extended list

Outbreak category	Description/name	Year(s) of latest outbreak
Area damaged (000 hectares)	1 Pine beauty moth	2003 n.a.
	1 European oak leaf roller	2004-2006 n.a.
	1 Winter moth	2004-2006 n.a.
	1 Mottled umber	2003-2007 n.a.
	1 Oak processionary moth	Since 1990th, 2003, 2007 n.a.
	Fungi and Fungus like microorganisms	2
	Diplodia blight of pines	Since 1990th n.a.
	2 Swiss needle cast	2004 n.a.
	2 Douglas-fir needle cast	2004 n.a.
	2 Needle cast	n.a. n.a.
	2 Heterobasidium root rot	n.a. n.a.
	2 Armillaria root and cambium rot	after 2003 n.a.
	2 Phytophthora disease of alder	Since 1995 n.a.
	2 Shoot decline of ash	Since 2002 n.a.
	2 Dutch elm disease	1970th up to now n.a.
	2 Chestnut blight	Since 1992 n.a.
	2 Hymenoscyphus pseudoalbidus (Eschentriebsterben)	Since 2002 n.a.
	Severe weather events	3
	Drought	2003 n.a.
	Storm	??

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	N/A

Tiers

Category	Tier for reported trend
Reduction in canopy cover	N/A

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	silvicultural treatments may temporarily reduce canopy cover

Other general comments

the MODIS figure seems to be too high, but own estimations are not available

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	Waldbericht der Bundesregierung 2009 – Forest Report of the Federal Government 2009	N/A	N/A	N/A
2	Bundeswaldgesetz – Federal forest act	N/A	N/A	N/A
3	Waldgesetze der Länder – Forest acts of the länder	N/A	N/A	N/A
4	N/A	regional	N/A	What ist meant? Several Länder?This level does not exist in Germany,

10.2.2 Classification and definitions

National class	Definition
N/A	N/A

10.2.3 Original data

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10.3 Data

Table 10

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

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	N/A
Legislation and regulations supporting sustainable forest management	Sustainable forest management is an obligation of the forest law of federal government and Länder

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	BMELV 2011: Forest Strategy 2020	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?	yes
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11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	Discussion in preparation of the forest strategy 2020

Other general comments

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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	BMELV National Forest Strategy 2020	permanent forest land use	2010	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

12.2.2 Classification and definitions

National class	Definition
N/A	N/A

12.2.3 Original data

total forest area according to NFI-2012

12.3 Analysis and processing of national data

12.3.1 Adjustment

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12.3.2 Estimation and forecasting

--

12.3.3 Reclassification

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12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	11400
	... of which permanent forest estate	11400

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 3
Permanent forest estate	Tier 3

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	Gemäß § 1 Bundeswaldgesetz ist die Waldfläche zu erhalten, erforderlichenfalls zu mehren. Forest area shall be maintained or where appropriate extended (§ 1 National Forest Act)

Permanent forest estate	According to the National Forest Act the area of stocked forests can not be simply converted into other land use. The National Forest Act requires complex legal, administrative processes before forest area can be converted into other land use. Area that is designated as forests according to the Forest Act basically has to be retained as forest.
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Other general comments

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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	BMELV: National Forest Inventory – NFI	N/A	N/A	The NFI monitors periodically every 10 years.
2	BMELV: Ergebnisse der Waldzustandserhebung 2012 – Forest condition report	N/A	N/A	Regulation is in preparation
3	Forest management planning - Forsteinrichtung	N/A	N/A	Each forest enterprise above a threshold area has to prepare a management plan according to the forest laws in the Bundeslaender which is supervised by the local forest administrations.
4	Waldbericht der Bundesregierung 2009 – Forest Report of the Federal Government 2009	N/A	N/A	N/A

13.2.2 Classification and definitions

National class	Definition
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	100	2012		yes	yes			
Other field assessments	100	2012	yes	yes	yes			
Updates to other sources	N/A	N/A						
Expert estimate	N/A	N/A						

Table 13b

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

Other type of forest reporting

Other field assessment: Forest condition assessment, periodic: yearly

13.4 Comments

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

Other general comments

Reviewer: Could you include references to the C&I report and the national state of the forest report?

national correspondent: national forest report is mentioned. C&I-report is published by MCPFE, now Forest Europe. The national questionnaire was not published, because only the official report gives a picture as a whole.

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	BMELV: Zweite Bundeswaldinventur, 2001-2002	Forest ownership	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

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	7528
... of which for production	N/A
... of which for conservation	N/A

Table 14b

Indicate which (if any) of the following are required in forest management plans in your country	
1 Soil and water management	yes

2 High conservation value forest delineation	no
3 Social considerations community involvement	no

Table 14c

Percent of area under forest management plan that is monitored annually	N/A
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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	Basically all Public Forest and Private forest with more than 100 ha is managed according to a management plan. This includes also forest owned by the Church with more than 50 ha. Small scale private forests might also be managed according a management plan, as long as they are part of a private forest association. Data on this are hardly to estimate.
N/A	N/A
N/A	N/A

Other general comments

NFI 2: Forest Ownership/ Forest area with Management Plan		
	Forest area [ha]	Source: NFI2

State forest (Bund)	409 340	2.01.6: forest area [ha] broken down by ownership type and forest category for 2002 <i>Germany / incl. inaccessible forest / total forest / incl. gaps in the forest cover or in the stand(15/E104)</i>
State forest (Land)	3 276 661	dto.
Other forest (Treuhand)	405 887	dto.
Private forest >100 ha, incl. Communal forest > 50 ha	3 436 755	2.01.7: forest area [ha] broken down by ownership size class and ownership type for 2002 <i>Germany / incl. inaccessible forest / total forest / incl. gaps in the forest cover or in the stand, private or communal forest(83/E106)</i>
Total	7 528 643	

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	yes
2. Operations phase	yes
3. Review of operations	yes

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 3

Tier criteria

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

15.2 Comments

Category	Comments
Table 15	Waldstrategie, Charta für Holz, nationales Waldprogramm, Waldprogramme der Länder, FFH-Management-Pläne – Ref. 533, Lohner
N/A	N/A
N/A	N/A

Other general comments

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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	459.58	471.3	439.93	562.17	519.07
	PEFC	3020	5300	5957.48	6761.77	6957.61	7024.37	7193.84
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	475.54	442.06	451.71	374.4	385.12	634.91	
	PEFC	7272.11	7124.02	7343.37	7390.96	7395.07	7399.94	
	Other	0	0	0	0	0	0	

Table 16b

Domestic forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	1.Name	0	0	0	0	0	0	0
	2.Name	0	0	0	0	0	0	0
	3.Name	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
	1.Name	0	0	0	0	0	0	
	2.Name	0	0	0	0	0	0	
	3.Name	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	Tier 3

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	As domestic forest management certification scheme is in use: "Naturland". The area is counted under FSC by intention of "Naturland".

Other general comments

Estimation: In 2012 at least <2,5 % of the certified area is certified by both organisations (FSC and PEFC) (Ref. 534, Huber, 14.1.12014)

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	BMELV, Ref. 533	Public expenditure	2000 / 2010	Based on Länder-questionnaires for the year 2009
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	192000	127000	106600
	2000	2005	2010
Name of Local Currency	EURO	EURO	EURO

17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	No data available
Public expenditure on forestry	Support to private forest management
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	BMELV: Zweite Bundeswaldinventur, 2001-2002	Forest ownership	2000	N/A
2	Erste Bundeswaldinventur, 1986-1990	Forest ownership	1990	For year 1987; Geographical coverage: Federal Republic of Germany and western Berlin before 1990
3	BML, 1990: The forests of the new Laender	Forest ownership	1990	Geographical coverage: forest area of the new Laender in 1990 (covering former GDR)
4	BMELV Forest Report of the Federal Government 2009	Forest ownership	2010-15	Treuhandwald ist Wald, der im Zuge der Bodenreform in der DDR enteignet und in Volkseigentum überführt worden war und privatisiert werden sollte. Von den ursprünglich über 1,4 Mio. ha Treuhandwald wurden bislang ca. 0,8 Mio. ha nach Vermögensgesetz restituiert und weitere 0,5 Mio. ha verkauft. Derzeit stehen noch ca. 85.000 ha zur Privatisierung an. In Konsistenz mit den BWI-Ergebnissen ist er unter Privatwald subsummiert. Treuhandwald: Forest expropriated within the scope of the land reform in the GDR and transferred into public ownership and now either privatised or about to be privatised. Up to now there are about 85 000 ha to be privatized. In consistency to NFI-2012 this forest is subsummed under privat forest.
5	NFI-2012	Forest ownership	2010 - 2015	In NFI 2012 Treuhandwald is regarded as Private Forests

18.2.2 Classification and definitions

National class	Definition
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State forest (Federal)	Classes of the NFI-2002 are (s. NFI 2, English Manual, p. 25): State forest (Federal) State forest (Land) Corporate body forest Municipal forest Church forest assigned to corporate body forest Community forest assigned to corporate body forest Cooperative forest assigned to corporate body forest Privately owned forest Church forest assigned to privately owned forest Community forest assigned to privately owned forest Treuhand forest Classes of the NFI-2012 are (s. NFI2012, English Manual, p. 19f): 1 = state forest (national property) 2 = state forest (Land property) 3 = communal forest 30 = municipal forest 31 = church forest assigned to communal forest 32 = community forest assigned to communal forest 33 = cooperative forest assigned to communal forest 34 = communal forest under exclusive ownership or under exclusive sponsorship of the Land government 35 = communal forest under ownership or under exclusive sponsorship of the national government 4 = private forest 40 = private forest (in the narrower sense) 41 = church forest assigned to private forest 42 = community forest assigned to private forest 43 = cooperative forest assigned to private forest 44 = private forest under exclusive ownership or under exclusive sponsorship of the Land government 45 = Private forest under exclusive ownership or under exclusive sponsorship of the national government 5 = forest under Treuhandanstalt administration (Treuhand forest)
State forest (Land)	N/A
Community forest	N/A
Private forest	N/A
'Treuhand' forest	N/A

18.2.3 Original data

Original data for 2000 and 2005 (s. NFI 2):	
State forest (Federal)	409 339 ha
State forest (Land)	3 276 660 ha
Community forest	2 160 188 ha
Private forest	4 823 721 ha
Treuhand forest	405 887 ha
Total	11 075 795 ha

Data for 1990:

N

	ha	%
State forest (Federal)	172177	2.2
State forest (Land)	2189059	28.2
Community forest	1868784	24.1
Private forest	3527299	45.5
Total	7757318	100

BWI1-Werte wegen Plausi der FAO eingesetzt, Sz 10.12.2013

Total forest area of the new Laender in 1990 (covering former GDR)

(BML, 1990: The forests of the new Laender)

	ha	%
State forest (Federal)	291 054	9.8
State forest (Land)	986 651	33.1
Community forest	254 261	8.5
Private forest	771 870	25.9
Treuhand forest	679 391	22.8
Total	2 983 328	100

	alter Länder	neue Länder	Summe	Anpassung auf die neue Waldfläche

	ha	ha		104,10%
State forest (Federal)	170798	291.054	461.852	480.804
State forest (Land)	2218709	986.651	3.205.360	3.336.893
Community forest	1829181	254.261	2.083.442	2.168.936
Private forest	3652564	771.870	4.424.434	4.605.992
Treuhand forest		679.391	679.391	707.270
Total	7871252	2.983.328	10.854.580	11300

18.3 Analysis and processing of national data

18.3.1 Adjustment

Adjustments to forest area according to table 1.4 was made

18.3.2 Estimation and forecasting

18.3.3 Reclassification

Reclassification of national categories into FRA 2010 categories:

Manual of the second NFI, Chap. 3.2.2: Types of ownership (2002)

code		NFI-type	Reclassified to FRA-Class
1	=	State forest (Federal)	Public ownership
2	=	State forest (Land)	Public ownership
3	=	Corporate body forest	Public ownership
30	=	Municipal forest	Public ownership

31	=	Church forest assigned to corporate body forest	Public ownership
32	=	Community forest assigned to corporate body forest	Public ownership
33	=	Cooperative forest assigned to corporate body forest	Public ownership
4	=	Privately owned forest	Private ownership
40	=	Privately owned forest	Private ownership
41	=	Church forest assigned to privately owned forest	Private ownership
42	=	Community forest assigned to privately owned forest	Private ownership
5	=	Forest under Treuhandanstalt administration	Other types of ownership

The use of two-digit codes is optional and to be laid down as standard for each Land. The primary one-digit code numbers may not then be used.

The following codes are used in the Länder:

SH, NW, RP, SL, BE, BB	One-digit codes ¹⁾
HH, NI, HB, HE, BW, BY, MV, SN, ST, TH	Two-digit codes

¹⁾ Cooperative ownership and church forest are as a rule to be assigned to privately owned forest.

Manual of the third NFI, Chap. 3.2.2: Types of ownership (2012)

1	=	state forest (national property)	Public ownership
2	=	state forest (<i>Land</i> property)	Public ownership
3	=	communal forest	Public ownership
30	=	municipal forest	Public ownership
31	=	church forest assigned to communal forest	Public ownership

32	=	community forest assigned to communal forest	Public ownership
33	=	cooperative forest assigned to communal forest	Public ownership
34	=	communal forest under exclusive ownership or under exclusive sponsorship of the <i>Land</i> government	Public ownership
35	=	communal forest under ownership or under exclusive sponsorship of the national government	Public ownership
4	=	private forest	Private ownership
40	=	private forest (in the narrower sense)	Private ownership
41	=	church forest assigned to private forest	Private ownership
42	=	community forest assigned to private forest	Private ownership
43	=	cooperative forest assigned to private forest	Private ownership
44	=	private forest under exclusive ownership or under exclusive sponsorship of the <i>Land</i> government	Private ownership
45	=	Private forest under exclusive ownership or under exclusive sponsorship of the national government	Private ownership
5	=	forest under Treuhandanstalt administration (Treuhand forest)	Private ownership

The use of the two-digit codes is optional. This is determined uniformly for each *Land*. The primary one-digit code numbers may not be used in this case.

The following codes are used in the *Länder* :

BB, BE, NW, RP, SH, SL,

One-digit codes

BW, BY, HB, HE, HH, MV, NI, SN, ST, TH

Two-digit codes

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	5987	5993	5919	5932
	... of which owned by the state at national scale	481	419	403	403
	... of which owned by the state at the sub-national government scale	5506	5573	5517	5529
	Private ownership	4606	4945	5465	5477
	... of which owned by individuals	N/A	N/A	N/A	N/A
	... of which owned by private business entities and institutions	N/A	N/A	N/A	N/A
	... of which owned by local, tribal and indigenous communities	N/A	N/A	N/A	N/A
	Unknown ownership	707	416	0	0
TOTAL		11300.00	11354.00	11384.00	11409.00

Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 2	Tier 1
Private ownership	Tier 1	Tier 1

Unknown ownership	Tier 1	Tier 1
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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	6694	6409	5914	5927
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	6694.00	6409.00	5914.00	5927.00

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

18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	N/A	N/A
Private ownership	N/A	N/A

Unknown ownership	'Treuhand' forest: Forest expropriated within the scope of the land reform in the GDR and transferred into public ownership and now either privatised or about to be privatised. (see NFI 2 Glossary).	2002: Treuhand forest classified in "other", NFI-2012: Treuhand forest classified in private ownership, because the stratum is too small for own estimation. 85 THA is a figure delivered by Treuhandanstalt
Management rights	Public administration = Staatswald Bund + Staatswald Länder + Körperschaftswald Treuhandwald: Bis zum Jahr 2000 unter Staatswald Länder, danach unter Privatwald Public administration = state forest of Länder and Federal State + communal forest Treuhandwald: until year 2000 subsummed under state forest of Länder, after 2000 under private forest	N/A

Other general comments to the table

Data in Table 18.b, category "Public Administration" = Public ownership. Other types of ownership (= Treuhandwald, see Table 18a) is under management of public administration, now either to be privatised or about to be privatised, therefore here not included.

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	Eurostat	Employment, Table 19	all	Prefilled in SoEF 2011, can not be validated by TI-WF
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

19.2.3 Original data

Employment in the forest sector (Economic Accounting of Forestry/ WGR, 2006)		
	Number of Persons	FTE

2006	95 321	49 249
2005	91 798	n.a.
2004	94 719	n.a.
2003	92 590	n.a.

Employment (thousand FTE) by gender and age

Category	Year	Total	Gender		Agegroup	
			Male	Female	15-49	50+
Forestry (ISIC/ NACE 02)	2010	42,5	36,8	5,8	29,9	12,6
	2005	40,5	35,1	5,5	28,9	11,6
	2000	51,1	41,3	9,6	39,8	11,4
	1990	65,1	54,9	10,2	43,7	21,3
Manufacture of wood and articles in wood (ISIC/ NACE 20)	2010	146,0	120,6	26,3	107,5	39,3
	2005	161,8	132,8	28,9	122,6	39,2
	2000	239,8	197,2	42,6	190,2	49,6
	1990	n.a.	n.a.	n.a.	n.a.	n.a.
Manufacture of paper and paper products (ISIC/ NACE 21)	2010	146,1	104,6	41,5	110,3	35,8
	2005	147,6	106,8	40,8	113,3	34,3
	2000	151,7	109,4	42,3	118,6	33,1
	1990	n.a.	n.a.	n.a.	n.a.	n.a.

[JS1] Tabelle aus SoEF 2011, von EUROSTAT prefilled.

19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	65.1	51.1	40.5	42.5
	... of which female	10.2	9.6	5.5	5.8

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	the origin of the figures can not be validated by TI-WF. They are supposed to come from EUROSTAT and are prefilled in the SoEF2011-report.	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)	2400	Euro	2010

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	BMELV Forest Strategy 2020 (BMELV, 2011)	Government target/aspiration for forest area	2020, 2030	Forest area of NFI-2012
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	11419	11419

Table 21b

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

21.4 Comments

Category	Comments
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Government target/aspiration for forest area	Forest area shall be maintained or where appropriate extended (1 Federal forest act)
Forests earmarked for conversion	This lies in the responsibility of the forest owner and the local authorities; on federal level no information is available

Other general comments
