



Food and Agriculture
Organization of the
United Nations

Global Forest Resources Assessment 2020

Report

Germany

Rome, 2020



FAO has been monitoring the world's forests at 5 to 10 year intervals since 1946. The Global Forest Resources Assessments (FRA) are now produced every five years in an attempt to provide a consistent approach to describing the world's forests and how they are changing. The FRA is a country-driven process and the assessments are based on reports prepared by officially nominated National Correspondents. If a report is not available, the FRA Secretariat prepares a desk study using earlier reports, existing information and/or remote sensing based analysis.

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TABLE OF CONTENTS

Introduction

1. Forest extent, characteristics and changes
2. Forest growing stock, biomass and carbon
3. Forest designation and management
4. Forest ownership and management rights
5. Forest disturbances
6. Forest policy and legislation
7. Employment, education and NWFP
8. Sustainable Development Goal 15

Introduction

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Introductory text

Place an introductory text on the content of this report

1 Forest extent, characteristics and changes

1a Extent of forest and other wooded land

National data

Data sources

2002	References	NFI 2002
	Methods used	National Forest Inventory
	Additional comments	

2012	References	NFI 2012
	Methods used	National Forest Inventory
	Additional comments	

Classifications and definitions

2002	National class	Definition
	Forest	Forest within the meaning of the NFI is any area of ground covered by forest vegetation, irrespective of the information in the cadastre or similar records. The term forest also refers to cutover or thinned areas, forest tracks, firebreaks, temporarily unstocked land and clearings, forest glades, feeding grounds for game, landings, forest aisles, further areas linked to and serving the forest including areas with recreation facilities, overgrown heaths and moorland, overgrown former pastures, alpine pastures and rough pastures, as well as areas of dwarf pines and green alders. Heaths, moorland, pastures, alpine pastures and rough pastures are considered to be overgrown if the natural forest cover has reached an average age of five years and if at least 50% of the area is covered by forest. Areas with forest cover in open pasture land or in built-up areas of under 1000 m², coppices under 10 m wide, Christmas tree and ornamental brushwood plantations, commercial forest-tree nurseries as well as parkland attached to country houses are not forest within the meaning of the NFI. Watercourses up to 5 m wide do not break the continuity of a forest area.
	other wooded land	FAO

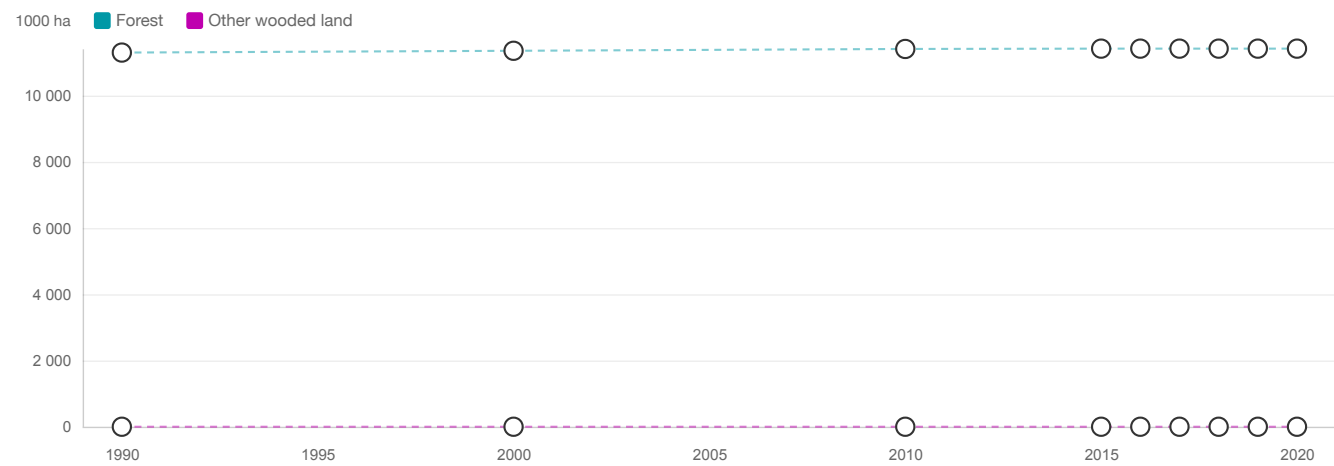
2012	National class	Definition
	Forest	Forest within the meaning of the NFI is any area of ground covered by forest vegetation, irrespective of the information in the cadastre or similar records. The term forest also refers to cutover or thinned areas, forest tracks, firebreaks, temporarily unstocked land and clearings, forest glades, feeding grounds for game, landings, forest aisles, further areas linked to and serving the forest including areas with recreation facilities, overgrown heaths and moorland, overgrown former pastures, alpine pastures and rough pastures, as well as areas of dwarf pines and green alders. Heaths, moorland, pastures, alpine pastures and rough pastures are considered to be overgrown if the natural forest cover has reached an average age of five years and if at least 50% of the area is covered by forest. Areas with forest cover in open pasture land or in built-up areas of under 1000 m², coppices under 10 m wide, Christmas tree and ornamental brushwood plantations, commercial forest-tree nurseries as well as parkland attached to country houses are not forest within the meaning of the NFI. Watercourses up to 5 m wide do not break the continuity of a forest area.

	other wooded land	FAO
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Original data and reclassification

2002	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Forest	11 360.00	100.00 %	%	%
	other wooded land	0.00	%	100.00 %	%
	Total	11 360.00	11 360.00	0.00	0.00

2012	Classifications and definitions		FRA classes		
	Class	Area (1000 ha)	Forest	Other wooded land	Other land
	Forest	11 419.00	100.00 %	%	%
	other wooded land	0.00	%	100.00 %	%
	Total	11 419.00	11 419.00	0.00	0.00



FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest (a)	11 300.00	11 354.00	11 409.00	11 419.00	11 419.00	11 419.00	11 419.00	11 419.00	11 419.00
Other wooded land (a)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other land (c-a-b)	23 586.00	23 532.00	23 477.00	23 467.00	23 467.00	23 467.00	23 467.00	23 467.00	23 467.00
Total land area (c)	34 886.00	34 886.00	34 886.00	34 886.00	34 886.00	34 886.00	34 886.00	34 886.00	34 886.00

The FAOSTAT land area figure for the year 2015 is used for all reference years

Climatic domain	% of forest area 2015	Override value
Boreal	0.00	
Temperate	100.00	
Sub-tropical	0.00	
Tropical	0.00	

Comments

fertig | done Sz 8.5.

Die Werte der Berichtsjahre sind aus FRA 2015 übernommen, Tab. 1a | The values of the reporting years origin from FRA 2015, see there for documentation Tab. 1a

Werte 2016 bis 2020 = 2015, es wird Konstanz unterstellt. | Figures for 2016 - 2020 = 2015, no canges assumed.

1b Forest characteristics

National Data

Data sources + type of data source eg NFI, etc

WF kommt aus NFI | Forest area of NFI

Verteilung auf die Klassen erfolgt gutachtlich | Distribution on classes is an estimate

National classification and definitions

Für die Jungbestockung (Hauptbestockung) liegt eine Information aus der NFI vor. Der Wert liegt nahe 50 %. Die Flächen sind im Vergleich der Waldfläche gering und sie ändert sich. Anteilsbildung ist daher fraglich. Daher wird der Wald gutachtlich je zur Hälfte auf die Verjüngungsart natürlich und gepflanzt verteilt. Dies weicht von der Berichterstattung der FRA 2015 ab. |

There is an information for the young stocking (main stocking) from NFI of ababout 50 % natural regeneration. The area is small in comparison to forest area and she is shifting. Buildung estimations on relationship is unsure. Therefore there is made an estimation to divide area equally on both types of regeneration. This is different to FRA 2015

Original data

Waldfläche [ha] nach Bestockungsschicht der Jungbestockung und Verjüngungsart								Waldfläche [ha] nach Bestockungsschicht der Jungbestockung und Verjüngungsart									
Filter: Jahr=2012 ;								Filter: 2002=2002 ;									
Basis: Deutschland, bestockter Holzboden, begehbarer Wald, ohne Lücken in der Jungbestockung (unter 4 m Höhe), mit Deckungsgrad reduziert, Bäume der Jungbestockung (unter 4 m Höhe), bestandesübergreifend, Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurnetz für BWI 2012 (Zustandsrechnungen)); ideelle Fläche (gemäß Deckungsanteil) (69Z1JI_L349of_2012_L350 / 2014-8-28 13:44:23.047)								Basis: Deutschland, bestockter Holzboden, begehbarer Wald, Bäume der Jungbestockung (unter 4 m Höhe), Raster: ...									
								(Inventurnetz für BWI 2002 (Zustandsrechnungen));									
								ideelle Fläche (gemäß Deckungsanteil) (77Z1JI_L337oa_2002 / 2004-11-3 7:29:47.000)									
		Verjüngungsart										Verjüngungsart					
Bestockungsschicht der Jungbestockung	Einheit	Naturverjüngung	Saat	Pflanzung	Stockausschlag	nicht zuzuordnen	alle Verjüngungsarten		Bestockungsschicht der Jungbestockung	Einheit	Naturverjüngung	Saat	Pflanzung	Stockausschlag	nicht zuzuordnen	alle Verjüngungsarten	
Jungbestockung ohne Schirm (Hauptbestockung)	[ha]	222.605	1.335	164.529	3.807	8.158	400.433	15%	Jungbestockung ohne Schirm (Hauptbestockung)	[ha]	182.285	6.171	227.016	4.920	12.301	432.693	
	%	55,6	0,3	41,1	1	2	100			%	42,1	1,4	52,5	1,1	2,8	100	
Jungbestockung unter Schirm (Verjüngung)	[ha]	2.026.184	8.197	179.547	22.168	19.341	2.255.438	85%	Jungbestockung unter Schirm (Verjüngung)	[ha]	1.608.363	3.702	157.003	15.028	8.531	1.792.627	
	%	89,8	0,4	8	1	0,9	100			%	89,7	0,2	8,8	0,8	0,5	100	
Jungbestockung mit oder ohne Schirm	[ha]	2.248.789	9.532	344.076	25.976	27.499	2.655.871		Jungbestockung mit oder ohne Schirm	[ha]	1.790.648	9.873	384.019	19.948	20.833	2.225.320	
	%	84,7	0,4	13	1	1	100			%	80,5	0,4	17,3	0,9	0,9	100	

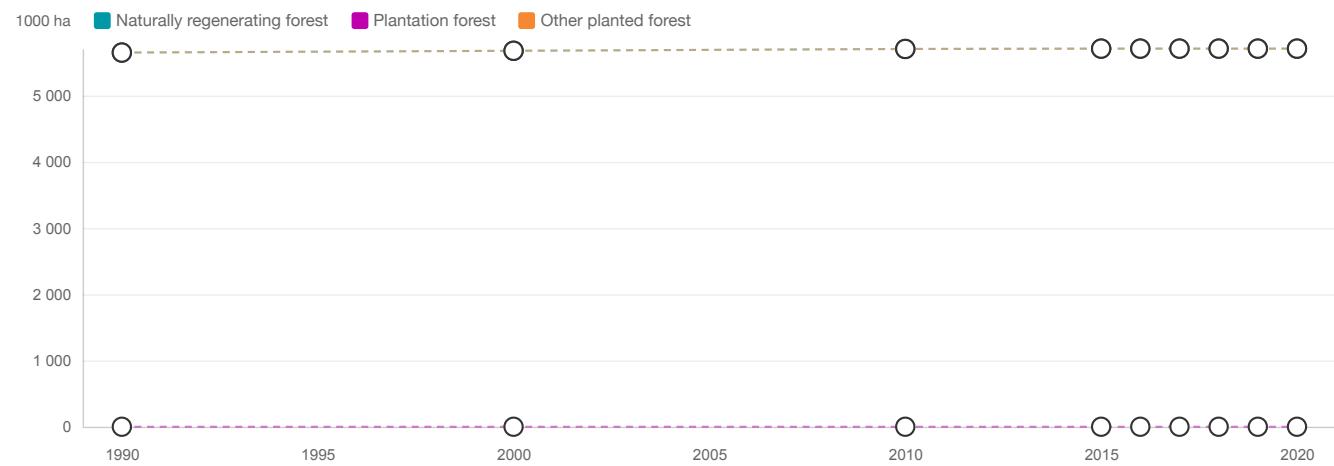
Analysis and processing of national data

Estimation and forecasting

forest area is divided equally on both regeneration types

Reclassification into FRA 2020 categories

no reclassification necessary



FRA categories	Forest area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest (a)	5 650.00	5 677.00	5 704.50	5 709.50	5 709.50	5 709.50	5 709.50	5 709.50	5 709.50
Planted forest (b)	5 650.00	5 677.00	5 704.50	5 709.50	5 709.50	5 709.50	5 709.50	5 709.50	5 709.50
Plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which introduced species	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Other planted forest	5 650.00	5 677.00	5 704.50	5 709.50	5 709.50	5 709.50	5 709.50	5 709.50	5 709.50
Total (a+b)	11 300.00	11 354.00	11 409.00	11 419.00	11 419.00	11 419.00	11 419.00	11 419.00	11 419.00
Total forest area	11 300.00	11 354.00	11 409.00	11 419.00	11 419.00	11 419.00	11 419.00	11 419.00	11 419.00

Comments

fertig | done Sz 9.5.

1c Primary forest and special forest categories

National Data

Data sources + type of data source eg NFI, etc

Bamboos and mangroves do not occure in Germany.

temporarily unstocked = BWI, entspricht Blöße | NFI, unstocked area

recently regenerated = keine Daten | not available

Primary forest = neglectible

National classification and definitions

-

Original data

BWI-Tabelle, Favorit 1.01

Waldfläche [ha] nach Land und Waldspezifikation						
Filter:Jahr=2012 ; ;						
Basis:Deutschland, gesamter Wald, einschließlich nicht begehbarer Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Baumvolumen: BDat3.0 (Spline-Funktion, 2013), Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurnetz für BWI 2012 (Zustandsrechnungen)); reelle Fläche (gemäß Trakteckenanteil))						
(77Z1JI_L101of_2012 / 2014-8-13 16:42:23.590)						
Land	Einheit	bestockter Holzboden	Blöße	Holzboden	Nichtholzboden	Wald
Deutschland (alle Länder)	[ha]	11.012.420	41.742	11.054.162	364.962	11.419.124
forest area [ha] by Land and forest specification						
Filter:year=2012 ; ;						
Basis:Germany, total forest, including impassable forest, including gaps in stocking/ stand, tree volume: BDat3.0 (spline-function, 2013), grid: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (inventory net for NFI 2012); reell area (share of the tract corner))						
(77Z1JI_L101of_2012 / 2014-8-13 16:42:23.590)						
Land	Measure	stocked timberland	temporarily unstocked	timberland	unstocked forest land	forest
Germany (all Länder)	[ha]	11.012.420	41.742	11.054.162	364.962	11.419.124

BWI-Tabelle, Favorit 2.01

change in forest area [ha] by federal state and forest specification						
Filter:period=2002-2012 ; ;						
Basis:Germany, intersection area total forest of both inventories, including impassable forest, grid: 16km²: NI, NW, HE, SL, BY, BE, BB, ST, TH / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, MV (intersection inventory net for NFI period 2002-2012); reell area (share of the tract corner))						
(77Z1PN_L113mf_0212 / 2014-5-12 9:51:38.940)						

federal state	Measure	stocked timberland	<u>temporarily unstocked</u>	timberland	unstocked forest land	forest
Germany (all Länder)	[ha]	83.832	- <u>23.579</u>	60.253	- 10.656	49.597

Veränderung der Waldfläche [ha] nach Land und Waldspezifikation						
Filter:Periode=2002-2012 ; ;						

Basis:Deutschland, Vereinigungsfläche gesamter Wald beider Inventuren, einschließlich nicht begehbarer Wald, Raster: 16km²: NI, NW, HE, SL, BY, BE, BB, ST, TH / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, MV (Schnittmenge Inventurnetz für BWI Periode 2002-2012); reelle Fläche (gemäß Trakteckenanteil))

(77Z1PN_L113mf_0212 / 2014-5-12 9:51:38.940)						
Land	Einheit	bestockter Holzboden	Blöße	Holzboden	Nichtholzboden	Wald
Deutschland (alle Länder)	[ha]	83.832	- 23.579	60.253	- 10.656	49.597

Waldfläche (gemäß Standflächenanteil) [ha] nach Jahr und Baumgröße							
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Basis: Deutschland, Holzboden, begehbarer Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Bäume im Hauptbestand oder Plenterwald, bestandesintern, Baumvolumen: BDat3.0 (Spline-Funktion, 2013), Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurnetz für BWI 2012 (Zustandsrechnungen)); ideeller Flächenbezug (gemäß Standflächenanteil) (77Z1JI_L654of_2012_bi_BG / 2014-8-8 14:31:31.067)

		Baumgröße							
Jahr	Einheit	20 -130 cm Höhe	über 130 cm Höhe, kleiner 7cm BHD	20 cm Höhe bis < 7 cm BHD	von 7,0 bis 19,9 cm BHD	von 20,0 bis 49,9 cm BHD	ab 50 cm BHD	ab 7 cm BHD	alle Baumgrößen
2012	[ha]	335.503	400.567	736.070	1.884.383	6.359.085	1.647.974	9.891.443	10.627.513
forest area with trees [ha] by year and tree size									

Base: Germany, forested area, accessible forest, including gaps in stocking/ stand, trees in main stand or plenter forest, within the stand, tree volume: BDat3.0 (spline-function, 2013), grid: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (inventory net for NFI 2012); ideell area (share of tree space percentage) (77Z1JI_L654of_2012_bi_BG / 2014-8-8 14:31:31.067)

		tree size							
year	Measure	<u>20 - 130 cm high</u>	over 130 cm high, less than 7 cm dbh	20 cm high to < 7 cm dbh	from 7 to 19,9 cm dbh	from 20 to 49,9 cm dbh	from 50 cm dbh upwards	from 7 cm dbh upwards	all tree sizes
2012	[ha]	<u>335,503</u>	400,567	736,07	1,884,383	6,359,085	1,647,974	9,891,443	10,627,513

Analysis and processing of national data

Estimation and forecasting

no change for tree size 20 to 130 cm is available, therefore area was kept constant

	1990 [1000 Ha]	2000 [1000 Ha]	2010 [1000 Ha]	BWI 2012 [1000 Ha]	2015 [1000 Ha]	2020 [1000 Ha]
temporarily unstocked	65	65	42	41,742	42	42
Change 2002 to 2012				-23,579		
tree size 20 - 130 cm				335,503		
Temporarily unstocked and/or recently regenerated	401	401	377	377,245	377	377

Reclassification into FRA 2020 categories

none

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Primary forest	0.00	0.00	0.00	0.00	0.00
Temporarily unstocked and/or recently regenerated	401.00	401.00	377.00	377.00	377.00
Bamboos	0.00	0.00	0.00	0.00	0.00
Mangroves	0.00	0.00	0.00	0.00	0.00
Rubber wood	0.00	0.00	0.00	0.00	0.00

Comments

fertig | done Sz 8.5.

figures corrected, documentation completed 1.2.2019

1d Annual forest expansion, deforestation and net change

National Data

Data sources + type of data source eg NFI, etc

1990 - 2000 = Daten der FRA 2010 für das Jahr 1990, übernommen aus dem Bericht FRA 2015, Tab 1b | Data of FRA 2010 for the year 1990 as given in the report 2015, Tab. 1b

2000-2010 = FRA 2015, Angaben für die Jahre 2005 und 2010 | FRA 2015, for the year 2005 and 2010

2010 - 2015 and 2015 - 2022 = Schätzung | estimation

National classification and definitions

none

Original data

see below

Analysis and processing of national data

Estimation and forecasting

copy of FRA 2015-report, chap. 1.3.1 adjustment:

Estimation of afforestation and deforestation before NFI-2002

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											
Alte Bundesländer / einschließlich nicht begehbarer Wald / Vereinigungsfläche gesamter Wald beider Inventuren / einschließlich Lücken in der Bestockung bzw. im Bestand(250/V107k)											
2.03.1: change in forest area [ha] broken down by Land and change to the forest											
for 1987-2002											
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)											
		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

Reclassification into FRA 2020 categories

none

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Forest expansion (a)	12.20	11.33	9.00	7.00
...of which afforestation	8.00	9.00	7.00	4.00
...of which natural expansion	4.00	2.00	2.00	3.00
Deforestation (b)	6.80	5.83	7.00	7.00
Forest area net change (a-b)	5.40	5.50	2.00	0.00

Comments

fertig | done Sz 8.5.

Zahlen aus FRA 2015, Tab. 1b | figures from FRA 2015, Tab. 1b

Zahlen gerundet zwecks passender Bilanz Sz 20.2.2019

1e Annual reforestation

National Data

Data sources + type of data source eg NFI, etc

1990 - 2000 = Daten der FRA 2010 für das Jahr 1990, übernommen aus dem Bericht FRA 2015, Tab. 1b | Data of FRA 2010 for the year 1990 as given in the report 2015, Tab. 1b

2000-2010 = FRA 2015, Angaben für die Jahre 2005 und 2010 | FRA 2015, for the year 2005 and 2010

2010 - 2015 and 2015 - 2022 = BWI 2012, entspricht der Datenlieferung der FRA2015 | NFI 2012, as delivered in FRA 2015

National classification and definitions

-

Original data

1990-2000: figure of FRA 2010

2000 - 2020:

1.02.3 Waldfläche [ha] nach Baumartengruppe und Baumaltersklasse												
Filter:Jahr=2012 ;												
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, bestandesintern; ideelle Fläche (Standfläche) (77Z1JI_L235of_2012_bi / 2014-6-10 16:7:59.927)												
		Baumaltersklasse										
Baumartengruppe	Einheit	1 - 20 Jahre trees of 1 - 20 Years	21 - 40 Jahre	41 - 60 Jahre	61 - 80 Jahre	81 - 100 Jahre	101 - 120 Jahre	121 - 140 Jahre	141 - 160 Jahre	> 160 Jahre	Angabe fehlt	alle Baumaltersklassen
alle Baumarten	[ha]	1.066.834	1.630.992	2.228.158	1.710.663	1.389.192	1.089.301	693.219	468.986	350.169	260.477	10.887.990
Gesamtfläche Wald+Nichtwald [ha] nach Land und Waldveränderung												
Filter:Waldentscheid bei BWI 2002=alle Waldentscheide ; Waldentscheid bei BWI 2012=alle Waldentscheide ; Periode=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), Gesamtfläche Wald + Nichtwald, einschließlich nicht begehbarer Wald; reelle Fläche (Trakteckenanteil) (77Z1JI_L006of_0212 / 2014-3-18 8:23:35.037)												
		Waldveränderung										
Land	Einheit	Waldumwandlung	Neuwald new forest	unverändert Wald	Vereinigungsmenge Wald			unverändert Nichtwald		alle Veränderungen Wald / Nichtwald		
Deutschland (alle Länder)	[ha]	58.278	107.875	11.302.162	11.468.314			24.252.466		35.720.780		

Analysis and processing of national data

Estimation and forecasting

copy of FRA 2015, cap.1.5 comments

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.
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2000 - 2020: Reforestation = (1,066,834 [ha trees of 1 - 20 years] - 107,875 [ha new forest])/20/1000 = 47.95

Reclassification into FRA 2020 categories

none

FRA categories	Area (1000 ha/year)			
	1990-2000	2000-2010	2010-2015	2015-2020
Reforestation	30.00	48.00	48.00	48.00

Comments

fertig | done Sz 8.5.

ergänzt | completed original data and estimation and forecasting Sz 1.2.

1f Other land with tree cover

National Data

Data sources + type of data source eg NFI, etc

Schätzung | estimation, Ref. 515 für FRA 2015

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.
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National classification and definitions

none

Original data

see above

Analysis and processing of national data

Estimation and forecasting

none

Reclassification into FRA 2020 categories

none

FRA categories	Area (1000 ha)				
	1990	2000	2010	2015	2020
Palms (a)	0.00	0.00	0.00	0.00	0.00
Tree orchards (b)	400.00	400.00	400.00	400.00	400.00
Agroforestry (c)					
Trees in urban settings (d)	1 000.00	1 000.00	1 000.00	1 000.00	1 000.00
Other (specify in comments) (e)					
Total (a+b+c+d+e)	1 400.00	1 400.00	1 400.00	1 400.00	1 400.00
Other land area	23 586.00	23 532.00	23 477.00	23 467.00	23 467.00

Comments

bei Referat 716 nach neuen Daten fragen Sz 8.5.2018

2 Forest growing stock, biomass and carbon

2a Growing stock

National Data

Data sources + type of data source eg NFI, etc

Vorat der BWI | growing stock of NFI, FRA 2015 Tab. 3a

National classification and definitions

Volume over bark of all living **trees** or shortly dead but useble trees with a minimum diameter of 7 cm at breast height. Includes the stem from ground level up to a top diameter of 7 cm, excluding branches, including stumps.

Original data

Category	Growing stock volume (million m ³ over bark)					FRA 2015	
	Forest						
	1990	2000	2005	2010	2015		
Total growing stock	2815	3381	3502	3617	3663		
... of which coniferous	1935	2159	2205	2232	2242		
... of which broadleaved	880	1222	1298	1385	1421		

Analysis and processing of national data

Estimation and forecasting

Volumen wird über Anteil Verjüngungsart jeweils zu 50 % aufgeteilt, auf diese Art stimmt das Gesamtvolumen.

Verjüngungsart ist ein Bestockungsmerkmal, daher kein Volumen nach Verjüngungsart verfügbar. |

Estimation to divide volume as area is equally on natural regeneration and planted forests

Werte der BWI2012 werden konstant gehalten, für die Prolongation in die Zukunft wird keine weitere Volumenerhöhung unterstellt. | For forecasting (2015 to 2020) the values of NFI 2012 are kept constant.

Reclassification into FRA 2020 categories

no reclassification

Es werden die Gesamtwerte eingetragen, die Hektarwerte werden durch Division mit der Waldfläche aus Tab. 1 automatisch abgeleitet. Dadurch unterscheiden sich die Werte von den national veröffentlichten Werten, da national das Gesamtvolumen durch die bestockte Holzbodenfläche geteilt wird. In FRA wird das Gesamtvolumen durch die Waldfläche geteilt. |

Total volume is inserted. m³/ha is derived by dividing through forest area of Tab. 1a. In spite of that nationally the m³/ha is estimated bey dividing through stocked timberland. That results in higher m³/ha values.

FRA categories	Growing stock m³/ha (over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	249.12	297.78	317.03	320.78	320.78	320.78	320.78	320.78	320.78
Planted forest	249.12	297.78	317.03	320.78	320.78	320.78	320.78	320.78	320.78
...of which plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which other planted forest	249.12	297.78	317.03	320.78	320.78	320.78	320.78	320.78	320.78
Forest	249.12	297.78	317.03	320.78	320.78	320.78	320.78	320.78	320.78
Other wooded land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

FRA categories	Total growing stock (million m³ over bark)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Naturally regenerating forest	1 407.50	1 690.50	1 808.50	1 831.50	1 831.50	1 831.50	1 831.50	1 831.50	1 831.50
Planted forest	1 407.50	1 690.50	1 808.50	1 831.50	1 831.50	1 831.50	1 831.50	1 831.50	1 831.50
...of which plantation forest	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
...of which other planted forest	1 407.50	1 690.50	1 808.50	1 831.50	1 831.50	1 831.50	1 831.50	1 831.50	1 831.50
Forest	2 815.00	3 381.00	3 617.00	3 663.00	3 663.00	3 663.00	3 663.00	3 663.00	3 663.00
Other wooded land	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Comments

fertig | done Sz 9.5.

korrigiert 6.6. Sz

2b Growing stock composition

National Data

Data sources + type of data source eg NFI, etc

BWI 2012

National classification and definitions

Die Klassifizierung nach native und introduced ist in den "original Data" eingetragen. |

The classification of native and introduced is given in the tabel of original data

Original data

Daten der BWI-2012 eingetragen für die Jahre 2010 und 2015

i = introduced, 1 - 5: ranking according to volume

n = native

g= total

z = subtotal

1. Tabelle: BWI-Werte aus dem Excel-Export

2. Tabelle: englische Übersetzung

3. Tabelle: Tabelle aus der BWI-Darstellung im Präsentationstool

Vorrat [1000 m³] nach Baumart und Jahr					timber stock [1000 m³] by tree species and year			Vorrat [1000 m³] nach Baumart und Jahr		
Filter:;					Filter:;			Filter:		
Basis:Deutschland, Holzboden, begehbare Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Bäume ab 7 cm Bhd aller Bestandesschichten, bestandesintern, Baumvolumen: BDat3.0 (Spline-Funktion, 2013), Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurnetz für BWI 2012 (Zustandsrechnungen)); reeller Flächenbezug (gemäß Trakteckenanteil))					Basis:Germany, forested area, accessible forest, including gaps in stocking/ stand, trees from 7 cm dbh of all stand layers, within the stand, tree volume: BDat3.0 (spline-function, 2013), grid: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (inventory net for NFI 2012); reell share of the tract corner			Basis: Deutschland, Holzboden, begehbare Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Bäume ab 7 cm Bhd aller Bestandesschichten, bestandesintern, Baumvolumen: BDat3.0 (Spline-Funktion, 2013), Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurnetz für BWI 2012 (Zustandsrechnungen)); reeller Flächenbezug (gemäß Trakteckenanteil)) (77Z1JI_L296of_2012_bi_Ba / 2017-6-1 15:2:47.247)		
(77Z1JI_L296of_2012_bi_Ba / 2017-6-1 15:2:47.247)					(77Z1JI_L296of_2012_bi_Ba / 2017-6-1 15:2:47.247)					
										Jahr
Baumart	Einheit	2012	Mio m³		tree species	Measure	2012	Baumart	Einheit	2012
alle Baumarten	[1000 m³]	3.662.971,84	3.662,97	G	all tree species	[1000 m³]	3.662.972	alle Baumarten	[1000 m³]	3.662.972
Balsampappel (+Hybriden)	[1000 m³]	5.973,09	5,97	i	balsam poplar (Populus balsamifera +hybrids)	[1000 m³]	5.973	Balsampappel (+Hybriden)	[1000 m³]	5.973
Schwarzkiefer	[1000 m³]	4.710,75	4,71	i	European black pine (Pinus nigra)	[1000 m³]	4.711	Schwarzkiefer	[1000 m³]	4.711
Weymouthskiefer	[1000 m³]	4.256,68	4,26	i	eastern white pine (Pinus strobus)	[1000 m³]	4.257	Weymouthskiefer	[1000 m³]	4.257
Edelkastanie	[1000			i	chestnut (Castanea sativa)	[1000		Edelkastanie	[1000 m³]	3.509

	m³]	3.508,84	3,51			m³]	3.509				
Küstentanne	[1000 m³]	2.961,29	2,96	i	Grand fir (Abies grandis)	[1000 m³]	2.961		Küstentanne	[1000 m³]	2.961
Sonstige Lb. mit hoher Lebensdauer	[1000 m³]	2.174,70	2,17	i	misc. deciduous trees with long life expectancy	[1000 m³]	2.175		Sonstige Lb. mit hoher Lebensdauer	[1000 m³]	2.175
Spätblühende Traubenkirsche	[1000 m³]	1.495,92	1,50	i	black cherry (Prunus serotina)	[1000 m³]	1.496		Spätblühende Traubenkirsche	[1000 m³]	1.496
Sonstige Fichten	[1000 m³]	1.249,07	1,25	i	other spruces	[1000 m³]	1.249		Sonstige Fichten	[1000 m³]	1.249
Sonstige Tannen	[1000 m³]	1.165,61	1,17	l	other firs	[1000 m³]	1.166		Sonstige Tannen	[1000 m³]	1.166
Sonstige Lb. mit niedriger Lebensdauer	[1000 m³]	821,60	0,82	i	misc. deciduous trees with short life expectancy	[1000 m³]	822		Sonstige Lb. mit niedriger Lebensdauer	[1000 m³]	822
Sonstige Kiefern	[1000 m³]	670,40	0,67	i	other pines	[1000 m³]	670		Sonstige Kiefern	[1000 m³]	670
sonstige Nadelbäume	[1000 m³]	663,87	0,66	i	other coniferous trees	[1000 m³]	664		sonstige Nadelbäume	[1000 m³]	664
Douglasie (E)	[1000 m³]	72.730,99	72,73	i1	Douglas fir (Pseudotsuga menziesii)	[1000 m³]	72.731		Douglasie (E)	[1000 m³]	72.731
Japanische Lärche (+Hybrid)	[1000 m³]	27.514,63	27,51	i2	Japanese larch (Larix kaempferi +hybrids)	[1000 m³]	27.515		Japanische Lärche (+Hybrid)	[1000 m³]	27.515
Roteiche	[1000 m³]	14.095,49	14,10	i3	Northern red oak (Quercus rubra)	[1000 m³]	14.095		Roteiche	[1000 m³]	14.095
Robinie	[1000 m³]	11.107,02	11,11	i4	black locust (Robinia pseudoacacia)	[1000 m³]	11.107		Robinie	[1000 m³]	11.107
Sitkafichte	[1000 m³]	6.459,15	6,46	i5	sitka spruce (Picea sitchensis)	[1000 m³]	6.459		Sitkafichte	[1000 m³]	6.459
Bergahorn	[1000 m³]	47.279,18	47,28	n	sycamore maple (Acer pseudoplatanus)	[1000 m³]	47.279		Bergahorn	[1000 m³]	47.279
Hainbuche (Weißbuche)	[1000 m³]	37.112,34	37,11	n	hornbeam	[1000 m³]	37.112		Hainbuche (Weißbuche)	[1000 m³]	37.112
Europäische Schwarzpappel (+Hybriden)	[1000 m³]	16.095,83	16,10	n	European black poplar (+ hybrids)	[1000 m³]	16.096		Europäische Schwarzpappel (+Hybriden)	[1000 m³]	16.096
Linde (heimische Arten)	[1000 m³]	14.115,70	14,12	n	linden tree (indigenous species)	[1000 m³]	14.116		Linde (heimische Arten)	[1000 m³]	14.116
Aspe, Zitterpappel	[1000 m³]	13.873,28	13,87	n	common aspen (Populus tremula)	[1000 m³]	13.873		Aspe, Zitterpappel	[1000 m³]	13.873
Weide	[1000 m³]	11.765,52	11,77	n	willow	[1000 m³]	11.766		Weide	[1000 m³]	11.766
Vogelkirsche	[1000			n	wild cherry (Prunus avium)	[1000			Vogelkirsche	[1000 m³]	11.307

	m³]	11.307,39	11,31			m³]	11.307				
Moorbirke (+Karpatenbirke)	[1000 m³]	6.969,96	6,97	n	Betula pubescens + Betula pubescens var. glabrata	[1000 m³]	6.970		Moorbirke (+Karpatenbirke)	[1000 m³]	6.970
Spitzahorn	[1000 m³]	5.606,47	5,61	n	Norway maple (Acer platanoides)	[1000 m³]	5.606		Spitzahorn	[1000 m³]	5.606
Feldahorn	[1000 m³]	4.491,78	4,49	n	field maple (Acer campestre)	[1000 m³]	4.492		Feldahorn	[1000 m³]	4.492
Weißerle, Grauerle	[1000 m³]	4.023,23	4,02	n	grey alder (Alnus incana)	[1000 m³]	4.023		Weißerle, Grauerle	[1000 m³]	4.023
Ulme (Rüster), heimische Arten	[1000 m³]	3.720,75	3,72	n	elm, native species	[1000 m³]	3.721		Ulme (Rüster), heimische Arten	[1000 m³]	3.721
Vogelbeere	[1000 m³]	2.545,70	2,55	n	European rowan (Sorbus aucuparia)	[1000 m³]	2.546		Vogelbeere	[1000 m³]	2.546
Graupappel (+Hybriden)	[1000 m³]	2.214,33	2,21	n	grey poplar (+hybrids)	[1000 m³]	2.214		Graupappel (+Hybriden)	[1000 m³]	2.214
Silberpappel, Weißpappel	[1000 m³]	1.167,68	1,17	n	silver poplar (Populus alba)	[1000 m³]	1.168		Silberpappel, Weißpappel	[1000 m³]	1.168
Gewöhnliche Traubenkirsche	[1000 m³]	782,81	0,78	n	bird cherry (Prunus padus)	[1000 m³]	783		Gewöhnliche Traubenkirsche	[1000 m³]	783
Elsbeere	[1000 m³]	714,96	0,71	n	wild service tree (Sorbus torminalis)	[1000 m³]	715		Elsbeere	[1000 m³]	715
Echte Mehlbeere	[1000 m³]	559,23	0,56	n	common whitebeam (Sorbus aria)	[1000 m³]	559		Echte Mehlbeere	[1000 m³]	559
Bergkiefer	[1000 m³]	452,12	0,45	n	mountain pine (Pinus mugo)	[1000 m³]	452		Bergkiefer	[1000 m³]	452
Holzbirne, Wildbirne	[1000 m³]	318,99	0,32	n	European wild pear (Pyrus pyraster)	[1000 m³]	319		Holzbirne, Wildbirne	[1000 m³]	319
Holzapfel, Wildapfel	[1000 m³]	212,59	0,21	n	European crab apple (Malus sylvestris)	[1000 m³]	213		Holzapfel, Wildapfel	[1000 m³]	213
Eibe	[1000 m³]	153,39	0,15	n	European yew (Taxus baccata)	[1000 m³]	153		Eibe	[1000 m³]	153
Zirbelkiefer	[1000 m³]	28,73	0,03	n	Pinus cembra (Cembra pine)	[1000 m³]	29		Zirbelkiefer	[1000 m³]	29
Speierling	[1000 m³]	15,48	0,02	n	service tree (Sorbus domestica)	[1000 m³]	15		Speierling	[1000 m³]	15
Gemeine Fichte	[1000 m³]	1.197.673,96	1.197,67	n1	Norway spruce (Picea abies)	[1000 m³]	1.197.674		Gemeine Fichte	[1000 m³]	1.197.674
Schwarzerle	[1000 m³]	69.257,55	69,26	n10	black alder (Alnus glutinosa)	[1000 m³]	69.258		Schwarzerle	[1000 m³]	69.258
Gemeine Kiefer	[1000			n2	Scots pine (Pinus sylvestris)	[1000			Gemeine Kiefer	[1000 m³]	757.695

	m³]	757.695,11	757,70			m³]	757.695				
Buche (E)	[1000 m³]	635.257,56	635,26	n3	beech (E)	[1000 m³]	635.258		Buche (E)	[1000 m³]	635.258
Stieleiche	[1000 m³]	175.309,28	175,31	n4	English oak (Quercus robur)	[1000 m³]	175.309		Stieleiche	[1000 m³]	175.309
Traubeneiche	[1000 m³]	171.826,27	171,83	n5	sessile oak (Quercus petraea)	[1000 m³]	171.826		Traubeneiche	[1000 m³]	171.826
Weißtanne	[1000 m³]	89.306,84	89,31	n6	silver fir (Abies alba)	[1000 m³]	89.307		Weißtanne	[1000 m³]	89.307
Europäische Lärche	[1000 m³]	74.709,62	74,71	n7	European larch (Larix decidua)	[1000 m³]	74.710		Europäische Lärche	[1000 m³]	74.710
Gemeine Esche	[1000 m³]	74.677,54	74,68	n8	common ash (Fraxinus excelsior)	[1000 m³]	74.678		Gemeine Esche	[1000 m³]	74.678
Gemeine Birke	[1000 m³]	70.171,58	70,17	n9	silver birch (Betula pendula)	[1000 m³]	70.172		Gemeine Birke	[1000 m³]	70.172
Fichte	[1000 m³]	1.206.199,44	1.206,20	Z	spruce	[1000 m³]	1.206.199		Fichte	[1000 m³]	1.206.199
Kiefer	[1000 m³]	767.813,79	767,81	Z	pine	[1000 m³]	767.814		Kiefer	[1000 m³]	767.814
Buche	[1000 m³]	635.257,56	635,26	Z	beech	[1000 m³]	635.258		Buche	[1000 m³]	635.258
Eiche	[1000 m³]	361.231,04	361,23	z	oak	[1000 m³]	361.231		Eiche	[1000 m³]	361.231
andere Lb niedriger Lebensdauer	[1000 m³]	219.712,00	219,71	z	other deciduous trees with short life expectancy	[1000 m³]	219.712		andere Lb niedriger Lebensdauer	[1000 m³]	219.712
andere Lb hoher Lebensdauer	[1000 m³]	204.369,02	204,37	z	other deciduous trees with long life expectancy	[1000 m³]	204.369		andere Lb hoher Lebensdauer	[1000 m³]	204.369
Lärche	[1000 m³]	102.224,25	102,22	z	larch	[1000 m³]	102.224		Lärche	[1000 m³]	102.224
Tanne	[1000 m³]	93.433,74	93,43	z	fir	[1000 m³]	93.434		Tanne	[1000 m³]	93.434
Douglasie	[1000 m³]	72.730,99	72,73	z	douglas fir	[1000 m³]	72.731		Douglasie	[1000 m³]	72.731
Vorrat [1000 m³] nach Baumart und 2002											
Filter:											
Basis: Deutschland, Holzboden, begehbarer Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Bäume aller Bestandesschichten, bestandesintern, Raster: 16km²: NI, NW, HE, SL, BY, BE, BB, ST, TH / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, MV (Inventurnetz für BWI 2002 (Zustandsrechnungen)); reeller Flächenbezug (gemäß Trakteckenanteil) (77Z1JI_L257oa_2002 / 2005-4-22 15:1:23.000)											

		2002
Baumart	Einheit	2002
alle Baumarten	[1000 m³]	3.380.602
Balsampappel (+Hybriden)	[1000 m³]	7.089
Sonstige Kiefern	[1000 m³]	5.490
Sonstige Fichten	[1000 m³]	5.442
Schwarzkiefer	[1000 m³]	3.661
Edelkastanie	[1000 m³]	2.816
Sonstige Tannen	[1000 m³]	1.661
Sonstige Lb. mit niedriger Lebensdauer	[1000 m³]	1.085
Rosskastanie	[1000 m³]	869
Sonstige Nadelbäume	[1000 m³]	567
Omorikafichte	[1000 m³]	522
Sonstige Lb. mit hoher Lebensdauer	[1000 m³]	458
Nußbaum-Arten (Wal-, Schwarz-, Butternuß)	[1000 m³]	255
Baumhasel	[1000 m³]	40
Rumelische Kiefer	[1000 m³]	14
Douglasie	[1000 m³]	49.864
Japanische Lärche (+Hybrid)	[1000 m³]	22.361
Roteiche	[1000 m³]	10.622
Robinie	[1000 m³]	7.681
Erle	[1000 m³]	55.607
Bergahorn	[1000 m³]	34.479
Hainbuche (Weißbuche)	[1000 m³]	31.677
Europäische Schwarzpappel (+Hybriden)	[1000 m³]	13.678
Linde	[1000 m³]	10.737
Vogelkirsche	[1000 m³]	8.314
Weide	[1000 m³]	8.286
Aspe, Zitterpappel	[1000 m³]	8.272
Moorbirke (+Karpatenbirke)	[1000 m³]	4.280
Spitzahorn	[1000 m³]	2.990

Ulme (Rüster)	[1000 m³]	2.840
Feldahorn	[1000 m³]	2.787
Vogelbeere	[1000 m³]	2.736
Graupappel (+Hybriden)	[1000 m³]	1.695
Silberpappel, Weißpappel	[1000 m³]	976
Gewöhnliche Traubenkirsche	[1000 m³]	554
Elsbeere	[1000 m³]	541
Echte Mehlbeere	[1000 m³]	530
Holzbirne, Wildbirne	[1000 m³]	221
Holzapfel, Wildapfel	[1000 m³]	172
Bergkiefer	[1000 m³]	152
Eibe	[1000 m³]	129
Stechpalme	[1000 m³]	115
Gemeiner Faulbaum, Pulverholz	[1000 m³]	58
Speierling	[1000 m³]	25
Zirbelkiefer	[1000 m³]	7
Zerreiche	-	-
Weißer Maulbeerbaum	[1000 m³]	-
Gemeine Fichte	[1000 m³]	1.224.448
Gemeine Kiefer	[1000 m³]	695.515
Buche	[1000 m³]	583.356
Stieleiche	[1000 m³]	141.220
Traubeneiche	[1000 m³]	150.536
Weißtanne	[1000 m³]	80.167
Europäische Lärche	[1000 m³]	69.065
Gemeine Esche	[1000 m³]	58.710
Gemeine Birke	[1000 m³]	65.231
Fichte	[1000 m³]	1.231.108
Kiefer	[1000 m³]	704.840
Eiche	[1000 m³]	302.378
andere Lb niedriger Lebensdauer	[1000 m³]	178.834

andere Lb hoher Lebensdauer	[1000 m³]	156.969
Lärche	[1000 m³]	91.426
Tanne	[1000 m³]	81.828

Analysis and processing of national data

Estimation and forecasting

Die Werte der BWI sind linear auf die geforderten Berichtsjahre interpoliert.

Die Werte für das Jahr 2010 wurden aus der BWI2012 abgeleitet gemäß Verhältnis des Gesamtvolumens (Faktor 98,74%).

Werte für das Jahr 2000 = BWI2002

2020 = 2015 = 2012

1990: not available

Herleitung in Datengrundlage_FRA2020_2018_05_16.xlsx, Tab_2b

Reclassification into FRA 2020 categories

none

FRA categories	Scientific name	Common name	Growing stock in forest (million m³ over bark)				
			1990	2000	2010	2015	2020
Native tree species							
#1 Ranked in terms of volume	Picea abies	Norway spruce		1 224.45	1 182.64	1 197.67	1 197.67
#2 Ranked in terms of volume	Pinus sylvestris	Scots pine		695.51	748.19	757.70	757.70
#3 Ranked in terms of volume	Fagus sylvatica	Beech		583.36	627.28	635.26	635.26
#4 Ranked in terms of volume	Quercus robur	English oak		141.22	173.11	175.31	175.31
#5 Ranked in terms of volume	Quercus petraea	sessile oak		150.54	169.67	171.83	171.83
#6 Ranked in terms of volume	Abies alba	silver fir		80.17	88.19	89.31	89.31
#7 Ranked in terms of volume	Larix decidua	European larch		69.07	73.77	74.71	74.71
#8 Ranked in terms of volume	Fraxinus excelsior	common ash		58.71	73.74	74.68	74.68
#9 Ranked in terms of volume	Betula pendula	silver birch		65.23	69.29	70.17	70.17
#10 Ranked in terms of volume	Alnus glutinosa	black alder			68.39	69.26	69.26
Remaining native tree species				191.86	183.20	185.53	185.53
Total volume of native tree species			–	3 260.12	3 457.47	3 501.43	3 501.43
Introduced tree species							
#1 Ranked in terms of volume	Pseudotsuga menziesii	Douglas fir		49.86	71.82	72.73	72.73
#2 Ranked in terms of volume	Larix kaempferi +hybrids	Japanese larch		22.36	27.17	27.51	27.51
#3 Ranked in terms of volume	Quercus rubra	Northern red oak		10.62	13.92	14.10	14.10

FRA categories	Scientific name	Common name	Growing stock in forest (million m³ over bark)				
			1990	2000	2010	2015	2020
Native tree species							
#4 Ranked in terms of volume	Robinia pseudoacacia	black locust		7.68	10.97	11.11	11.11
#5 Ranked in terms of volume	Picea sitchensis	sitka spruce			6.38	6.46	6.46
Remaining introduced tree species				29.97	29.28	29.65	29.65
Total volume of introduced tree species			–	120.49	159.54	161.56	161.56
Total growing stock			–	3 380.61	3 617.01	3 662.99	3 662.99

Comments

figures for the year 1990 n.a.

done 15.5.

2c Biomass stock

National Data

Data sources + type of data source eg NFI, etc

Above and below-ground biomass: NFI 1987, Datenspeicher Waldfonds (DSWF), NFI 2002, Inventurstudie 2008 (IS 2008), NFI 2012

Dead wood: NFI 2002, IS 2008, NFI 2012

National classification and definitions

The biomass stock calculations and results are based on the requirements, definitions and classifications of greenhouse gas reporting under the Framework Convention on Climate Change and the Kyoto Protocol. Detailed information can be found in the National Inventory Reports and CRF Tables for Germany.

<https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/national-inventory-submissions-2018>

Original data

Biomass:

Year	Data	Area [ha]	Above-biomass [t]	Above-biomass [t/ha]	Below-biomass [t]	Below-biomass [t/ha]	Biomass total [t]	Biomass total [t/ha]
1990	NFI 1987/DSWF	11,300,000	1,496,262,853	132.41	246,600,594	21.82	1,742,863,448	154.24
2002	NFI 2002	11,360,000	1,855,823,678	163.36	287,625,971	25.32	2,143,449,649	188.68
2008	IS 2008	11,396,750	1,891,151,883	165.95	296,839,010	26.05	2,187,990,893	191.98
2012	NFI 2012	11,419,000	1,965,483,167	172.12	307,826,623	26.96	2,273,309,790	199.08

Dead Wood:

Year	Area [ha]	Dead Wood >20cm [t]	Dead Wood >20cm [t/ha]	Dead Wood 10-20cm [t]	Dead Wood 10-20cm [t/ha]	Dead Wood gesamt [t]	Dead Wood total [t/ha]
2002	11.360.000	34.951.957	3,08	20.234.304	1,78	55.186.262	4,86
2008	11.396.750	42.595.010	3,74	23.078.966	2,03	65.673.975	5,76
2012	11.419.000	39.941.233	3,50	21.450.490	1,88	61.391.723	5,38

Analysis and processing of national data

Estimation and forecasting

Biomass: Linear interpolation between the years 1990-2002, 2002-2008 and 2008-2012. Extrapolation from 2013 to 2020.

Dead Wood: Linear interpolation between years 2002-2008 and 2008-2012. Extrapolation from year 2001 to 1990 and from 2013 to 2020.

Reclassification into FRA 2020 categories

-

FRA categories	Forest biomass (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass	132.41	158.17	169.02	177.01	178.63	180.26	181.89	183.52	185.14
Below-ground biomass	21.28	24.73	26.50	27.68	27.92	28.16	28.40	28.64	28.88
Dead wood	3.03	4.55	5.57	5.10	5.00	4.91	4.81	4.72	4.63

Comments

Stümer: Die Werte für die obere und untere Biomasse und das Totholz wurden an die Flächen aus Tabelle 1a angepasst.

done 21.06

2d Carbon stock

National Data

Data sources + type of data source eg NFI, etc

Above and below-ground biomass: NFI 1987, Datenspeicher Waldfonds (DSWF), NFI 2002, Inventurstudie 2008 (IS 2008), NFI 2012

Dead wood: NFI 2002, IS 2008, NFI 2012

Litter and soil: national forest soil inventories (BZE I and BZE II)

National classification and definitions

The carbon stock calculations and results are based on the requirements, definitions and classifications of greenhouse gas reporting under the Framework Convention on Climate Change and the Kyoto Protocol. Detailed information can be found in the National Inventory Reports and CRF Tables for Germany.

<https://unfccc.int/process/transparency-and-reporting/reporting-and-review-under-the-convention/greenhouse-gas-inventories-annex-i-parties/national-inventory-submissions-2018>

Original data

Biomass:

Year	Data	Area [ha]	Above-biomass [t]	Above-biomass [tC/ha]	Below-biomass [t]	Below-biomass [tC/ha]	Biomass total [t]	Biomass total [tC/ha]
1990	NFI 1987/DSWF	11,300,000	1,496,262,853	66.21	246,600,594	10.91	1,742,863,448	77.12
2002	NFI 2002	11,360,000	1,855,823,678	81.68	287,625,971	12.66	2,143,449,649	94.34
2008	IS 2008	11,396,750	1,891,151,883	82.97	296,839,010	13.02	2,187,990,893	95.99
2012	NFI 2012	11,419,000	1,965,483,167	86.06	307,826,623	13.48	2,273,309,790	99.54

Dead Wood:

Year	Data	Area [ha]	Dead Wood >20cm [tC]	Dead Wood >20cm [tC/ha]	Dead Wood 10-20cm [tC]	Dead Wood 10-20cm [tC/ha]	Dead Wood gesamt [tC]	Dead Wood total [tC/ha]
2002	NFI 2002	11,360,000	17,475,979	1.54	10,117,152	0.89	27,593,131	2.43
2008	IS 2008	11,396,750	21,297,505	1.87	11,539,483	1.01	32,836,988	2.88
2012	NFI 2012	11,419,000	19,970,617	1.75	10,725,245	0.94	30,695,862	2.69

Litter and Soil:

Year	Data	Soil [tC/ha]	Litter [tC/ha]
1990	BZE I	55.24	19.00
2006	BZE II	61.80	18.80

Analysis and processing of national data

Estimation and forecasting

Biomass: Linear interpolation between the years 1990-2002, 2002-2008 and 2008-2012. Extrapolation from 2013 to 2020.

Dead Wood: Linear interpolation between years 2002-2008 and 2008-2012. Extrapolation from year 2001 to 1990 and from 2013 to 2020.

Litter and Soil: Linear interpolation from year 1991 to 2005 and extrapolation from 2007 to 2020.

Reclassification into FRA 2020 categories

-

FRA categories	Forest carbon (tonnes/ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Carbon in above-ground biomass	66.21	79.09	84.51	88.50	89.32	90.13	90.94	91.76	92.57
Carbon in below-ground biomass	10.91	12.37	13.25	13.84	13.96	14.08	14.20	14.32	14.44
Carbon in dead wood	1.51	2.28	2.78	2.55	2.50	2.45	2.41	2.36	2.31
Carbon in litter	19.00	18.88	18.75	18.69	18.68	18.66	18.65	18.64	18.63
Soil carbon	55.24	59.34	63.44	65.49	65.90	66.31	66.72	67.13	67.54

Soil depth (cm) used for soil carbon estimates	30.00
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Comments

Stümer: Die Kohlenstoffwerte für die obere und untere Biomasse und das Totholz wurden an die Flächen aus Tabelle 1a angepasst.

done 21.06

3 Forest designation and management

3a Designated management objective

National Data

Data sources + type of data source eg NFI, etc

TI hat geprüft, ob Informationen aus KKEG (WKF-Projekt) oder aus der umweltökonomischen Gesamtrechnung vorliegen.
Wenn dort für Privatwald Informationen geliefert werden können, sind ggf. die Länder um weitere Informationen zu befragen.

Sz - TI (Seintsch, Schweinle) vom 16.5.

Ergebnis: Die genannten Quellen können zu FRA nicht beitragen.

zu bundesweit repräsentative Telefonbefragung von Privatwaldeigentümern:

- KKEG-Projekt: siehe <https://www.waldbefragung.de/>

- Die Ergebnisse sind für eine Datenlieferung für FRA-Tab 3a "Designated management objective" ungeeignet, da zum einen kopfrepräsentativ und nicht flächenrepräsentativ der Privatwald befragt wurde. Weiterhin wurden überwiegend forstliche Waldbehandlungsmaßnahmen und nicht Bewirtschaftsziele abgefragt. Eine regelmäßige Wiederholung der Befragung zeichnet sich aktuell nicht ab.

Seintsch, Mail von Do 24.05.2018 14:17

production: NFI

conservation on biodiversity: FRA 2015

National classification and definitions

Produciton: all accessible forest without restricton of use because of external causes

Original data

Sz, 30.1.3019:

Tab. 3b:

Waldfläche [ha] nach Nutzungseinschränkung und Außerbetriebliche Ursache der Nutzungseinschränkung								
Filter: Jahr=2012 ;								
Basis: Deutschland, Holzboden, begehbarer Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurnetz für BWI 2012 (Zustandsrechnungen)); reelle Fläche (gemäß Trakteckenanteil) (77Z1JI_L222of_2012 / 2014-5-5 16:32:14.980)								
	Außerbetriebliche Ursache der Nutzungseinschränkung							
Nutzungseinschränkung	Einheit	Naturschutz	Schutzwald	Erholungswald	Sonstige außerbetriebliche Ursachen	außerbetriebliche Ursachen	keine außerbetrieblichen Nutzungseinschränkungen	mit oder ohne Nutzungseinschränkungen
1/3 des üblichen Aufkommens erwartbar	[ha]	57.812	23.263	9.135	16.777	106.987	97.031	204.018
2/3 des üblichen Aufkommens erwartbar	[ha]	151.865	24.731	8.531	13.406	198.532	86.558	285.091
Holznutzung nicht zulässig oder nicht zu erwarten	[ha]	149.657	28.046	4.369	14.985	197.057	253.387	450.444

mit Einschränkung der Holznutzung	[ha]	359.334	76.039	22.035	45.169	502.576	436.977	939.553
keine Einschränkung der Holznutzung	[ha]	-	-	-	-	-	9.948.437	9.948.437
mit oder ohne Nutzungseinschränkungen	[ha]	359.334	76.039	22.035	45.169	502.576	10.385.414	10.887.990
								10.887.990-197.057=
Production								10.690.933

Analysis and processing of national data

Estimation and forecasting

none, NFI 2012 data are used for 2010, 2015 and 2020. In former NFI these categories were not used. Therefore nor estimation and extrapolation is made.

Reclassification into FRA 2020 categories

production is all accessible forest without external restriction of use

Primary designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production (a)					
Protection of soil and water (b)					
Conservation of biodiversity (c)					
Social Services (d)					
Multiple use (e)					
Other (specify in comments) (f)					
None/unknown (g)	11 300.00	11 354.00	11 409.00	11 419.00	11 419.00
Total forest area	11 300.00	11 354.00	11 409.00	11 419.00	11 419.00

Total area with designated management objective

FRA 2020 categories	Forest area (1000 ha)				
	1990	2000	2010	2015	2020
Production			10 690.93	10 690.93	10 690.93
Protection of soil and water					
Conservation of biodiversity			2 950.00	3 000.00	3 000.00
Social Services					
Other (specify in comments)					

Comments

tab. 3b ergänzt um production, Sz 18.2.

3b Forest area within protected areas and forest area with long-term management plans

National Data

Data sources + type of data source eg NFI, etc

Forest area within protected areas: see FRA 2015

management plan: NFI and estimation

National classification and definitions

Forest area within protected areas: see FRA 2015

management plan: aller Staatswald Land + Bund + Kwald ab 50 Ha + PW ab 100 Ha | all state forest federal and Länder, communal forest > 50 ha, private forest > 100 ha

Original data

Forest area within protected areas: see FRA 2015

management plan

for the year 1990: not available

for the year 2000: s. FRA 2015

for the year 2010 to 2020

FRA-Zahl aus BWI2012	7.580.248									
aller Staatswald Land + Bund + Kwald ab 50 Ha + PW ab 100 Ha										
Waldfläche [ha] nach Jahr und Eigentumsart										
Filter:										
Basis: Deutschland, gesamter Wald, einschließlich nicht begehbare Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Baumvolumen: BDat3.0 (Spline-Funktion, 2013), Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurnetz für BWI 2012 (Zustandsrechnungen)); reelle Fläche (gemäß Trakteckenanteil) (77Z1JI_L101of_2012 / 2014-8-13 16:42:23.590)										
		Eigentumsart								
Jahr	Einheit	Staatswald - Bund	Staatswald - Land	Körperschaftswald	Privatwald	alle Eigentumsarten				
2012	[ha]	403.464	3.309.537	2.220.445	5.485.679	11.419.124				
Waldfläche [ha] nach Eigentumsart und Eigentumsgrößenklasse										
Filter: Jahr=2012 ;										

Basis: Deutschland, gesamter Wald, einschließlich nicht begehbarer Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Privat- und Körperschaftswald inkl. Treuhandwald, Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurnetz für BWI 2012 (Zustandsrechnungen)); reelle Fläche (gemäß Trakteckenanteil) (77Z1JI_L106of_2012 / 2014-6-17 13:35:59.407)										
		Eigentumsgrößenklasse								
Eigentumsart	Einheit	bis 20 ha	über 20 bis 50 ha	über 50 bis 100 ha	über 100 bis 200 ha	über 200 bis 500 ha	über 500 bis 1000 ha	über 1000 ha	Angabe fehlt	alle Eigentumsgrößenklassen
Körperschaftswald	[ha]	74.029	63.595	90.632	178.873	436.882	429.492	946.942	-	2.220.445
Privatwald	[ha]	2.733.389	529.029	333.526	308.910	442.597	328.787	704.132	105.308	5.485.679
Privat-, Treuhand und Körperschaftswald	[ha]	2.807.418	592.624	424.158	487.782	879.480	758.279	1.651.073	105.308	7.706.124

Analysis and processing of national data

Estimation and forecasting

Forest area within protected areas:the value for 2015 is kept constant for the following years

for managment 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. No assumptions are made.

Reclassification into FRA 2020 categories

Forest area within protected areas: see FRA 2015

FRA categories	Area (1000 ha)								
	1990	2000	2010	2015	2016	2017	2018	2019	2020
Forest area within protected areas		2 139.00	3 306.00	3 306.00	3 306.00	3 306.00	3 306.00	3 306.00	3 306.00
Forest area with long-term forest management plan		7 528.00	7 580.00	7 580.00	7 580.00	7 580.00	7 580.00	7 580.00	7 580.00
...of which in protected areas									

Comments

Forest area is protected by forest law. Deforestation is prohibited.

In case of deforestation mearures have to be taken to avoid negativ impact on nature.

done Sz 25.7.

Forest area within protected areas: see FRA 2015 Sz, 18.2.2019

4 Forest ownership and management rights

4a Forest ownership

National Data

Data sources + type of data source eg NFI, etc

NFI,

see FRA 2015, Tab. 18a

National classification and definitions

National class	Definition
State forest (Federal)	Classes of the NFI-2002 are (s. NFI 2, English Manual, p. 25): <ul style="list-style-type: none">State forest (Federal)State forest (Land)Corporate body forestMunicipal forest
State forest (Land)	<ul style="list-style-type: none">Church forest assigned to corporate body forestCommunity forest assigned to corporate body forestCooperative forest assigned to corporate body forestPrivately owned forestChurch forest assigned to privately owned forestCommunity forest assigned to privately owned forestTreuhand forest
Community forest	Classes of the NFI-2012 are (s. NFI2012, English Manual, p. 19f): <div>1 = state forest (national property)</div> <div>2 = state forest (<i>Land</i> property)</div> <div>3 = communal forest</div> <div>30 = municipal forest</div>
Private forest	<div>31 = church forest assigned to communal forest</div> <div>32 = community forest assigned to communal forest</div> <div>33 = cooperative forest assigned to communal forest</div> <div>34 = communal forest under exclusive ownership or under exclusive sponsorship of the <i>Land</i> government</div> <div>35 = communal forest under ownership or under exclusive sponsorship of the national government</div> <div>4 = private forest</div>
'Treuhand' forest	<div>40 = private forest (in the narrower sense)</div> <div>41 = church forest assigned to private forest</div> <div>42 = community forest assigned to private forest</div> <div>43 = cooperative forest assigned to private forest</div> <div>44 = private forest under exclusive ownership or under exclusive sponsorship of the <i>Land</i> government</div> <div>45 = Private forest under exclusive ownership or under exclusive sponsorship of the national government</div>
	<div>5 = forest under Treuhandanstalt^[1] administration (Treuhand forest)</div> <div>the 2 digit code is use only in some Länder. Therefore information for Germany on subcategories are not available.</div>

[1] Since 1995: Bundesanstalt für vereinigungsbedingte Sonderaufgaben (Federal Institute for Special Tasks Arising from Unification)

Original data

s. table 4b

Analysis and processing of national data

Estimation and forecasting

Adaption to forest area in Tab 1a

Reclassification into FRA 2020 categories

s. table 4b

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Private ownership (a)	4 606.00	4 945.00	5 477.00	5 486.00
...of which owned by individuals				
...of which owned by private business entities and institutions				
...of which owned by local, tribal and indigenous communities				
Public ownership (b)	5 987.00	5 993.00	5 932.00	5 933.00
Unknown/other (specify in comments) (c)	707.00	416.00	0.00	0.00
Total forest area	11 300.00	11 354.00	11 409.00	11 419.00

Comments

done, Sz 24.7.

unknown: '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 to small for own estimation. 85 THA is a figure delivered by Treuhandanstalt
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4b Holder of management rights of public forests

National Data

Data sources + type of data source eg NFI, etc

NFI

see also FRA 2015, Chap. 18

National classification and definitions

National class	Definition	
State forest (Federal)	<div>Classes of the NFI-2002 are (s. NFI 2, English Manual, p. 25):</div> <ul style="list-style-type: none">• 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	
State forest (Land)		
Community forest		
Private forest	<div>Classes of the NFI-2012 are (s. NFI2012, English Manual, p. 19f):</div> <div>1 = state forest (national property)</div> <div>2 = state forest (<i>Land</i> property)</div> <div>3 = communal forest</div>	
	<div>30 = municipal forest</div> <div>31 = church forest assigned to communal forest</div> <div>32 = community forest assigned to communal forest</div> <div>33 = cooperative forest assigned to communal forest</div> <div>34 = communal forest under exclusive ownership or under exclusive sponsorship of the <i>Land</i> government</div> <div>35 = communal forest under ownership or under exclusive sponsorship of the national government</div>	
	'Treuhand' forest	<div>4 = private forest</div> <div>40 = private forest (in the narrower sense)</div> <div>41 = church forest assigned to private forest</div> <div>42 = community forest assigned to private forest</div> <div>43 = cooperative forest assigned to private forest</div> <div>44 = private forest under exclusive ownership or under exclusive sponsorship of the <i>Land</i> government</div>
		<div>45 = Private forest under exclusive ownership or under exclusive sponsorship of the national government</div> <div>5 = forest under Treuhandanstalt^[1] administration (Treuhand forest)</div>

[1] Since 1995: Bundesanstalt für vereinigungsbedingte Sonderaufgaben (Federal Institute for Special Tasks Arising from Unification)

Original data

Data for 1990

Total forest area of the former Federal Republic of Germany in 1987

2.03.32: Waldfläche am Beginn oder Ende der Auswertungsperiode [ha] nach Eigentumsart und 1987-2002

für alte Bundesländer

Alte Bundesländer / einschließlich nicht begehbarer Wald / Vereinigungsfläche gesamter Wald beider Inventuren / einschließlich Lücken in der Bestockung bzw. im Bestand(136/V104k)

2.03.32: forest area at the beginning or end of the evaluation period [ha] broken down by ownership type and 1987-2002

for alte Bundesländer , 1987

old Länder / incl. inaccessible forest / union of the total forest areas of both inventories / incl. gaps in the forest cover or in the stand(136/V104k)

	ha	%
State forest (Federal)	170 798	2.2
State forest (Land)	2 218 709	28.2
Community forest	1 829 181	23.2
Private forest	3 652 564	46.4
Total	7 871 252	100

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	<i>480.804</i>
State forest (Land)	2218709	986.651	3.205.360	<i>3.336.893</i>
Community forest	1829181	254.261	2.083.442	<i>2.168.936</i>
Private forest	3652564	771.870	4.424.434	<i>4.605.992</i>
Treuhand forest		679.391	679.391	<i>707.270</i>
Total	<i>7871252</i>	2.983.328	10.854.580	11300

number in *italics* are public forest

Original data for 2000 (s. NFI 2):

2.01.9: Waldfläche [ha] nach Land und Eigentumsart

State forest (Federal)	<i>409 339 ha</i>
State forest (Land)	<i>3 276 660 ha</i>
Community forest	<i>2 160 188 ha</i>

Private forest	4 823 721 ha
Treuhand forest	405 887 ha
Total	11 075 795 ha

number in *italics* are public forest

Adaption of the area by factor 1,0251 to new forest area

Data for 2010

Minor correction because of smaler forest area (s. recalculationsFRA2015_2014_06_24.xlsx!18_EigA)

Data for 2015: see NFI 2012

Waldfläche [ha] nach Jahr und Eigentumsart							
Filter:							
Basis: Deutschland, gesamter Wald, einschließlich nicht begehbarer Wald, einschließlich Lücken in der Bestockung bzw. im Bestand, Baumvolumen: BDat3.0 (Spline-Funktion, 2013), Raster: 16km²: NI, NW, HE, SL, BY, BE, BB / 8km²: NI, BY, SN, TH / 4km²: SH, RP, BW, ST, MV (Inventurnetz für BWI 2012 (Zustandsrechnungen)); reelle Fläche (gemäß Trakteckenanteil) (77Z1JI_L101of_2012 / 2014-8-13 16:42:23.590)							
		Eigentumsart					
Jahr	Einheit	Staatswald - Bund	Staatswald - Land	Körperschaftswald	Privatwald	alle Eigentumsarten	public forest
2012	[ha]	403.464	3.309.537	2.220.445	5.485.679	11.419.124	
		403.464	3.309.537	2.220.445	-		5.933.446

Analysis and processing of national data

Estimation and forecasting

Adaption to forest area in Tab 1a

Reclassification into FRA 2020 categories

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 ^[1] 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

[1] Since 1995: Bundesanstalt für vereinigungsbedingte Sonderaufgaben (Federal Institute for Special Tasks Arising from Unification)

FRA categories	Forest area (1000 ha)			
	1990	2000	2010	2015
Public Administration (a)	5 987.00	5 993.00	5 932.00	5 933.00
Individuals (b)	0.00	0.00	0.00	0.00
Private business entities and institutions (c)	0.00	0.00	0.00	0.00
Local, tribal and indigenous communities (d)	0.00	0.00	0.00	0.00
Unknown/other (specify in comments) (e)	0.00	0.00	0.00	0.00
Total public ownership	5 987.00	5 993.00	5 932.00	5 933.00

Comments

the total public ownership in Tab. 4b = public ownership in Tab. 4a; in contrast to FRA 2015 no "Treuhandwald" is subsummized under public forest. Therefore there are different figures to FRA 2015

done Sz 24.7.

5 Forest disturbances

5a Disturbances

National Data

Data sources + type of data source eg NFI, etc

Data on the current status of forest diseases and disturbances are provided annually by the forest services of the federal states and yearly published in issue 7 of the journal 'AFZ der Wald' .

National classification and definitions

Data on the current status of forest diseases also include information on severity and tendency of the development of the reported pests.

Some diseases and disturbances are reported (e. g. damages by bark beetle, storm felling) in m³ instead of ha by the federal states. Since a conversion into ha is not feasible these diseases and disturbances are not covered.

Original data

The forest services of the federal states annually provide empirical data on forest health/disturbances.

Analysis and processing of national data

Estimation and forecasting

Only original data are reported.

Reclassification into FRA 2020 categories

Original information on severity of the damages cannot be translated into FRA 2020 categories.

For category a) no reclassification is necessary.

For category b) only infections by fungi are reported.

For category c) disturbances by wind, ice, snow and heat are reported. The area of storm/wind damages is higher as reported since the original data report m³ of wind felled timber.

For category d) damages of complex nature that cannot be clearly assigned to one pathogen or weather event are reported.

FRA categories	Area (1000 ha)																	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Insects (a)	66.65	82.82	107.56	206.85	216.35	140.75	90.40	49.81	35.98	76.54	66.37	48.53	56.98	70.94	75.75	51.36	52.05	29.35
Diseases (b)	30.87	34.01	38.37	182.84	56.17	28.29	33.33	21.10	20.97	42.13	62.84	61.30	61.25	67.78	43.73	59.84	85.47	88.58
Severe weather events (c)	3.69	1.24	0.96	179.93	6.87	23.50	6.73	2.86	4.47	2.05	4.91	20.49	12.84	10.40	10.28	15.46	10.85	9.26
Other (specify in comments) (d)	22.97	24.18	26.38	15.50	18.77	22.42	15.64	11.98	12.53	19.90	19.45	23.83	21.61	19.17	17.24	16.16	14.63	14.48
Total (a+b+c+d)	124.18	142.25	173.27	585.12	298.16	214.96	146.10	85.75	73.95	140.62	153.57	154.15	152.68	168.29	147.00	142.82	163.00	141.67
Total forest area	11 354.00	–	11 360.00	–	–	–	–	–	–	–	11 409.00	–	11 419.00	–	–	11 419.00	11 419.00	11 419.00

Comments

Done: Schweinle, 24.07.2018

5b Area affected by fire

National Data

Data sources + type of data source eg NFI, etc

Forest Fire Statistics provided by the Federal Office for Agriculture and Food

National classification and definitions

entfällt

none

Original data

Forest Fire Statistics: Bundesanstalt für Landwirtschaft und Ernährung (BLE) (Hrsg.) (2000 bis 2016): Waldbrandstatistik der Bundesrepublik Deutschland für das Jahr 2000 (bis 2016), Bonn

Analysis and processing of national data

Estimation and forecasting

National Forest Fire Statistics

Reclassification into FRA 2020 categories

entfällt

none

FRA categories	Area (1000 ha)																	
	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total land area affected by fire																		
...of which on forest	0.58	0.12	0.12	1.32	0.27	0.18	0.48	0.26	0.54	0.76	0.52	0.21	0.27	0.20	0.12	0.53	0.28	0.39

Comments

Stümer: Die alten Zahlen waren um ein Jahr verschoben und in ha statt in 1000ha angegeben - korrigiert. Zahlen von 2000 bis 2006 wurden ergänzt.

done Sz, 25.7.

5c Degraded forest

Does your country monitor area of degraded forest		No
If "yes"	What is the national definition of "Degraded forest"?	
	Describe the monitoring process and results	

Comments

There is no special monitoring because there is no necessity for that
done, Sz 24.7.

6 Forest policy and legislation

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

National Data

Data sources + type of data source eg NFI, etc

Nachfrage bei Ref. 534, H. Hinrichs

personal interview of Ref. 534, H. Hinrichs

National classification and definitions

534: Zu „Traceability system“: in wie weit ist „Yes“ gerechtfertigt durch Zertifizierungen als freiwilliges System?

Vergleiche mit MCPFE-Berichterstattung der letzten Jahre

Original data

entfällt

none

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

Comments

done Sz 10.7.

Examples:

Policies supporting SFM: Waldstrategien von Bund und Ländern, Charta für Holz, Clusteraktivitäten der Länder

Legislations and regulations supporting SFM: Waldgesetze von Bund und Ländern, forstliche Rahmenpläne, Waldbaurichtlinien, GAK mit finanziellem Beitrag von Bund und Ländern

Platform that promotes or allows for stakeholder participation in forest policy development: demokratische Willensbildung im Parlament in Bund und Ländern, Verbändeanhörungen bei Gesetzgebungsverfahren

6b Area of permanent forest estate

National Data

Data sources + type of data source eg NFI, etc

Forest area of table 1a

National classification and definitions

All forest is protected by forest law and must noch converted. No further classification is made in the forest laws of Bund and Länder

Original data

entfällt

FRA 2020 categories	Forest area (1000 ha)					
	Applicable?	1990	2000	2010	2015	2020
Area of permanent forest estate	Yes	11 300.00	11 354.00	11 409.00	1 419.00	11 419.00

Comments

whole forest area is protected by forest law and must not converted.

Below this category there is no preference for forest remaining fores.

done, Sz 24.7.

Whole forest area is protected by forest law and must not be converted.

Below this category there is no preference for forest remaining forest in the forest law of Federal State or Länder.

Sz, 25.1.2019

changed, Sz 13.2.

7 Employment, education and NWFP

7a Employment in forestry and logging

National Data

Data sources + type of data source eg NFI, etc

Eurostat Labour Force Survey: <http://ec.europa.eu/eurostat/data/database> 'Employment in forestry and forest-based industry'

3 year averages covering 'forestry ISIC/NACE 02' are calculated as follows:

1990: 1992-1994
2000: 1999-2001
2010: 2009-2011
2015: 2014-2016

National classification and definitions

No specific national classification and definitions

Original data

Original data from the EUROSTAT Labour Force Survey

FRA 2020 categories	Full-time equivalents (1000 FTE)											
	1990			2000			2010			2015		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Employment in forestry and logging	64.53	10.13	54.40	50.53	9.77	40.77	39.20	5.20	34.10	34.37	4.20	30.17
...of which silviculture and other forestry activities												
...of which logging												
...of which gathering of non wood forest products												
...of which support services to forestry												

Comments

done, Schweinle 24.7.

7b Graduation of students in forest-related education

National Data

Data sources + type of data source eg NFI, etc

Source for doctoral, master's and bachelor's degree: Higher education statistics of the Federal Statistical Office. Publication "Prüfungen an Hochschulen. Fachserie 11 Reihe 4.2"

Source for technician certificate: Vocational training statistics of the Federal Statistical Office. Publication "Berufliche Bildung. Fachserie 11 Reihe 3"

for 1990 for the former GDR: Dr. Stephan Bonn, Leiter Verwaltungsbereich / Prüfungsamt

Technische Universität Dresden

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National classification and definitions

A different national education degree system with the higher education degrees "Fachhochschulabschluss" and "Diplom" prevailed in Germany prior to the implementation of the Bologna-framework. The former degrees have coexisted up until the reporting year 2015. They have been allocated as follows in the reporting table: "Fachhochschulabschluss" is included in the number of Bachelor's degrees, "Diplom" is included in the number of Master's degrees. Please note that this is a very rough split/allocation method which does not necessarily reflect the education level.

Number of "Diplom" degree reported as Master's degree: 1990: 280; 2000: 301; 2010: 155; 2015: 4

Number of "Fachhochschulabschluss" degrees reported as Bachelor's degree: 1990: 355; 2000: 264; 2010: 115; 2015: 2

For the year 1990 data are the sum of the

1. data of the Federal Statistical Office for the former Federal Republic of Germany (western part of Germany, prior to the reunification) and
2. data of the Technische Universität Dresden for the German Democratic Republic (now eastern part of Germany)

Please note that all higher education degrees (Doctoral degree, Master's degree and Bachelor's degree) include forestry and wood sector-related qualifications (Forst- und Holzwirtschaft). Technician certificate/diploma do only include the profession of skilled forest worker ("Forstwirt").

Original data

Data reported are original data.

Mail Technische Universität Dresden for GDR:

7b Graduation of students in forest-related education (3 year average)

FRA 2020 categories	1990		
	Total	Female	Male
Doctoral degree	9	2	7
Master's degree	57	15	42
Bachelor's degree	0	0	0
Technician certificate / diploma	0	0	0
	66	17	49

FRA 2020 categories	Number of graduated students											
	1990			2000			2010			2015		
	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male
Doctoral degree	60.00	11.00	50.00	76.00	11.00	65.00	77.00	28.00	49.00	81.00	31.00	50.00
Master's degree	337.00	54.00	283.00	310.00	78.00	232.00	352.00	130.00	223.00	376.00	151.00	222.00
Bachelor's degree	355.00	27.00	328.00	304.00	61.00	243.00	566.00	166.00	401.00	802.00	255.00	549.00
Technician certificate / diploma	1 084.00	9.00	1 076.00	763.00	49.00	714.00	586.00	26.00	559.00	558.00	28.00	530.00
Total	1 837.00	100.00	1 737.00	1 452.00	199.00	1 254.00	1 581.00	349.00	1 231.00	1 817.00	465.00	1 351.00

Comments

Tharandt ergänzt,

done Sz 21.8.

7c Non wood forest products removals and value 2015

National Data

Data sources + type of data source eg NFI, etc

Honig | honey: Deutscher Imkerbund (D.I.B.), Wachtberg – Villip, Pressesprecherin Frau Petra Friedrich; Estimation for year 2015; production varies from year to year, no official statistics exist

x-mas trees: Bundesverband der Weihnachtsbaumerzeuger | federal association of x-mas tree producer

Wild / game: Deutscher Jagdverband (DJV) Jagdstatistik 2016/17 <https://www.jagdverband.de/node/3304> |

National classification and definitions

Waldhonig: Honig, der im Wald gewonnen wird, i.d.R. aus dem Lausbefall von Fichte und Tanne / honey with origins out of forests

Original data

30%	Anteil Waldhonig / proportion on honey with origins out of forests
30,34	Kg /Volk
770.000	Völker beehives
23.361.800	kg Ertrag in D /kg harvest of honey
10,08 €	Preis je Kg Waldhonig
7.008.540	kg Waldhonig
70.646.083,20 €	Ertrag Waldhonig

x-mas trees: original data are given

Wild: die originalen Zahlen sind eingetragen | game: original data are given

Jahresjagdstrecke Bundesrepublik Deutschland



Wildart	Jagdjahr 2016/17 Stück	Jagdjahr 2015/16 Stück	gegenüber Vorjahr Stück	gegenüber Vorjahr %
Rotwild	79132	78596	536	0,68%
Damwild	64895	65176	-281	-0,43%
Sikawild	2091	1828	263	14,39%
Schwarzwild	589417	610631	-21214	-3,47%
Rehwild	1214458	1188066	26392	2,22%
Gamswild	4783	4743	40	0,84%
Muffelwild	8080	7982	98	1,23%
Feldhasen	212452	247405	-34953	-14,13%
Wildkaninchen	156778	246218	-89440	-36,33%
Fasane	86812	99824	-13012	-13,03%
Rebhühner	2229	2683	-454	-16,92%
Waldschnepfen	7829	8835	-1006	-11,39%
Wildgänse	94331	96217	-1886	-1,96%
Wildenten ²⁾	317843	344998	-27155	-7,87%
Wildtauben	453913	509706	-55793	-10,95%
Füchse	435700	466186	-30486	-6,54%
Dachse	69257	70575	-1318	-1,87%
Baumarder	6038	5487	551	10,04%
Steinmarder	43562	43137	425	0,99%
Ilrtisse	9328	9063	265	2,92%
Wiesel	4019	4753	-734	-15,44%
Waschbären	134098	128103	5995	4,68%
Marderhunde	30272	27842	2430	8,73%

Primärwert der Jahresjagdstrecke in Deutschland 2016/2017

Wildart	kg ^{1) 2)}	Stück	EUR/ kg ³⁾	EUR/ Stück ³⁾	EUR	%
Rotwild	4864 405	–	4,5	–	21 889 822,50	10,7%
Damwild	2130 590	–	5	–	10 652 950,00	5,2%
Schwarzwild	23 093 134	–	4	–	92 372 537,60	45,3%
Rehwild	12 738 238	–	5	–	63 691 187,50	31,2%
Feldhasen	–	212 452	–	13	2 761 876,00	1,4%
Wildkaninchen	–	156 778	–	1,5	235 167,00	0,1%
Fasanen	–	86 812	–	10	868 120,00	0,4%
Rebhühner	–	2 229	–	8	17 832,00	0,0%
Wildenten	–	317 843	–	3,5	1 112 450,50	0,5%
Wildtauben	–	453 913	–	1,5	680 869,50	0,3%
Wildgänse ⁴⁾	–	94 331	–	6	565 986,00	0,3%
Füchse ⁴⁾	–	437 900	–	15	6 568 500,00	3,2%
Dachse ⁴⁾	–	69 257	–	21	1 454 397,00	0,7%
Marder ⁴⁾	–	49 600	–	23	1 140 800,00	0,6%
Summe 204 017 495,60 (Vorjahr 200 636 465,30)					100 %	

1) Rohaufkommen in der Decke/Schwarte

2) Um den Anteil an Fallwild reduzierte Strecke; abgerundete Zahlen

3) Durchschnittswerte ab Revier

4) Wert des Balges

Preisschwankungen u. a. je nach Landesgegend, Alter, Geschlecht und Gewicht je Stück, Jahreszeit und Käufer (Wildhandel oder Direktabnehmer als Endverbraucher). Bälge (gestreift) und Schwarten des Raubwildes stellen, auch wenn für sie kein geregelter Markt vorhanden ist, zumindest aber doch einen fiktiven Wert dar.

	Name of NWFP product	Key species	Quantity	Unit	Value (1000 local currency)	NWFP category
#1	X-mas trees		24 000 000	pieces	700 000	6 Ornamental plants
#2	wild boar / Schwarzwild		610 631	pieces	95 968	12 Wild meat
#3	roe deer / Rehwild		1 188 066	pieces	62 307	12 Wild meat
#4	red deer / Rotwild		78 596	pieces	21 741	12 Wild meat
#5	fallow deer / Damwild		65 716	pieces	10 698	12 Wild meat
#6	honey		7 008	tonns	70 646	11 Wild honey and bee wax
#7						
#8						
#9						
#10						
All other plant products						
All other animal products						
Total					961 360	

Name of currency	EURO
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Comments

Wild nachgetragen Sz, 11.9., korrigiert auf Jagdjahr 2015/16,

Wert über Stückzahlen angepaßt [Wert2016/Stück2016*Stück2015=Wert2015]

Sz 29.10.

H. Schweinle liefert zu Weihnachtsbäumen und anderen Produkten - erl. Sz 8.10.

Reihenfolge geändert, Sz 18.2.2019

8 Sustainable Development Goal 15

8a Sustainable Development Goal 15

SDG Indicator 15.1.1 Forest area as proportion of total land area 2015

Indicator	Percent							
	2000	2010	2015	2016	2017	2018	2019	2020
Forest area as proportion of total land area 2015	32.55	32.70	32.73	32.73	32.73	32.73	32.73	32.73

Name of agency responsible	
----------------------------	--

SDG Indicator 15.2.1 Progress towards sustainable forest management

Sub-Indicator 1	Percent						
	2000-2010	2010-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
Forest area annual net change rate	0.05	0.02	0.00	0.00	0.00	0.00	0.00

Name of agency responsible	
----------------------------	--

Sub-Indicator 2	Forest biomass (tonnes/ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Above-ground biomass stock in forest	158.17	169.02	177.01	178.63	180.26	181.89	183.52	185.14

Name of agency responsible	
----------------------------	--

Sub-Indicator 3	Percent (2015 forest area baseline)							
	2000	2010	2015	2016	2017	2018	2019	2020
Proportion of forest area located within legally established protected areas	18.73	28.95	28.95	28.95	28.95	28.95	28.95	28.95

Name of agency responsible	
----------------------------	--

Sub-Indicator 4	Percent (2015 forest area baseline)							
	2000	2010	2015	2016	2017	2018	2019	2020
Proportion of forest area under long-term forest management plan	65.93	66.38	66.38	66.38	66.38	66.38	66.38	66.38

Name of agency responsible	
----------------------------	--

Sub-Indicator 5	Forest area (1000 ha)							
	2000	2010	2015	2016	2017	2018	2019	2020
Forest area under independently verified forest management certification schemes	148.50	7 424.40	7 549.69	7 499.36	7 645.63	7 760.41	–	–