

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

# **Russian Federation**

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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# Introduction

In the present country report FRA 2015, the State Forest Register (SFR) of the Russian Federation data, prepared by federal enterprise "Roslesinforg", has been used basically. From 2003 for 2008, the area of the forest lands of Russia has increased by 20 million in hectare at the expense of the agricultural lands which have grown with wood plants. Therefore the data on 2010 FRA has been counted anew, according to real initial data SFR-2010. Data on 2015 has been received according to SFR-2013 without extrapolation.

According to SFR-2013, the Total Forest area includes: (1) forest land covered by forest vegetation (stocked forest land – 795.2 million ha); (2) forest land not covered by forest vegetation but destined for forest regeneration (felled areas, burned-out forests, open forests, failed areas etc. – 95.7 million ha); and (3) non-forested land, destined for forestry management (clearances, roads, bogs etc. – 292.2 million ha). The Forest land covered and not covered by forest vegetation accounts for 75.3 percent of Total forest area. The Ground Fund of the Russian Federation (2011) accounted 19.3 million ha of the forests located on farmlands which are not considered by the SFR.

The SFR, as of the beginning of 2013, estimates forest lands as 890.9 million hectares, including 864.3 million hectares of forest estate land (*“forestfund”*). Forest estate land does not include forest land pertaining to the Ministry of Defense and Urban forests - 5.2 million hectares, Strict protected forests - 17.7 million hectares and other categories of forest land – 3.7 million hectares. According to national classification, the “forest land” includes shrubs – 74.9 million hectares and urban forests - 1.1 million hectares. According to FAO classification, these categories of forest land are excluded from the concept of “Forest” and pertain to the category of “Other wooded lands” (OWL and OLWTC). The percentage of forest cover on the territory of the Russian Federation, that is the area of stocked forest land as a share of the total land area of the country, amounts to 46.5 percent.

Russian forests are represented predominantly by boreal forest plants (88%). Main forest-forming tree species are larch, pine, spruce, fir, cedar, birch and aspen. They account for over 98 percent of land covered by tree forest vegetation. Standing larch trees account for 35.8 percent, pine accounts for 15.6 percent, and spruce accounts for 10.0 percent of stocked land area. Subboreal and nemoral forests, composed of broadleaved oak species, beech, elm, lime tree, maple and other deciduous tree species, account for 12 percent of total forest land area. Other tree species (pear tree, chestnut, European walnut, Manchurian walnut, etc.) account for less than 1 percent of lands, while other species including shrubs (dwarf Siberian pine, shrubby birch, etc.) account for about 9 percent of the area. Forest-forming tree species of the coniferous group account for 67.9 percent, hard-leaved deciduous accounts for 2.5 percent, and soft-leaved deciduous trees accounts for 29.6 percent of Forest lands.

During work on the Russian report of FRA 2015, there were some difficulties.

1. The statistical data on volume of removal and market cost of not wood products is absent in our country. Expert estimations are almost impossible (tab. 4).
2. The official statistical data on the area of forest fires essentially differs from the data of remote monitoring. Reliability of that and other data does not give in to an exact estimation. Apparently, it is necessary to cite the data both official and results of remote monitoring (tab. 8#).
3. We have no data MODIS VCF, therefore reduced cover of canopy was defined approximately on the area of selective and passage cutting (tab. 9).
4. Now the network of the national forest inventory only is created. Annually put of 4500 ... 5000 permanent plots with annual coverage of the area of forests about 40 million hectare. Forest management plan is spent by next ways: field valuation - 43.4 % of the area of forests, de-enciphering aviation pictures and remote valuation - 56.5 %, expert estimations - 0.1 %. Annual remote monitoring of use of forests is spent on the area of 120 million in hectare (tab. 13).
5. The statistical data under revenue of sale of wood goods is not accessible to us.  
The revenue received in the silvaculture is resulted only (tab. 17).
6. The state expenses for forestry surpass the revenue received from forestry (see tab. 17). Therefore we believe that there cannot be positive contribution from a forestry in Gross Domestic Product (tab. 20).

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	Forest resources USSR (under the count on 01.01.1988). The statistical collection / Goscomles USSR, M., 1990 (in Russian).	Forest lands	1990	total coverage

2	Forest resources of Russia (as of 01.01.1998). Handbook / VNIIClesresurs, M., 1999 (in Russian).	Forest lands	2000	total coverage
3	Forest resources of Russia (as of 01.01.2003).Handbook / VNIILM, M., 2003 (in Russian).	Forest lands	2005	total coverage
4	The state (national) report on a status and use of lands of Russian Federation in 2003/ Roszemkadastr, M., 2002 (in Russian).	Other lands with tree cover	1990 2000 2005	partial coverage
5	Roslesinfor Forest Resources Database as of 01.01.2008	Forest lands	2010	total coverage for FRA-2010
6	State Forest Register (SFR) database as of 01.01.2010// Roslesinfor, 2010	Forest lands	2010	total coveragefor FRA-2015
7	The basic parameters of forestry activity for 1988, 1992-2011 years// Roslesinfor, 2012	AfforestationReforestationPlantation areas	1990,2000,2005,2010	total coverage
8	State Forest Register (SFR) of the Russian Federation// Roslesinfor, 2013	Forest lands	2015	total coverage
9	THE RUSSIAN FEDERATIONFOREST SECTOR OUTLOOK STUDY TO 2030 (FAO, 2012)	Forest lands	2015	modeling of total coverage
10	Ground Fund of the Russian Federation in 2011(2012) <a href="http://rosreestr.ru/wps/portal/cc_ib_texts_of_documents">http://rosreestr.ru/wps/portal/cc_ib_texts_of_documents</a>	Total area, Other lands with tree cover	2010, 2015	N/A

### 1.2.2 Classification and definitions

National class	Definition
Forest lands	The forest lands include stocked forest lands and unstocked forest lands. This term completely corresponds to definitions “Forest + Other wooded land” in the FAO terms.
Stocked forest lands, included:	- consist from closed stands of trees and bushes with relative stand density equal or more than 30 %.
Forest tree stands	- aggregate of trees and shrubs forming a forest cover.
Bushes (shrubs)	- bush tangle usually having height up to 6 m and less.
Unstocked forest lands	include sparse stands with crown density of trees and bushes less than 30 %, cutting down area, burned forest lands and glade.

Urban forests	Urban forest parks include stocked forest lands and unstocked forest lands
Fruit plantations	Fruit trees in agricultural production systems
Field-protective belts	Field-protective tree belts (of width less than 20 m ) in agricultural production systems
Afforestation	Artificial wood planting on the agricultural land
Reforestation	Natural and/or artificial re-establishment of a forest stands on the cut down and burnt forest lands.
Natural expansion of forest	There is no official definition

## 1.2.3 Original data

<b>Forest area, 1000 ha</b>						
<b>National classification</b>	<b>Years</b>					
	<b>1988</b>	<b>1998</b>	<b>2003</b>	<b>2008</b>	<b>2010</b>	<b>2013</b>
<i>Forest Lands</i>						
Stocked forest lands	771109.2	774250.9	776144.6	796194.4	797496.3	795220.7
included:						
forest tree stands	723693.7	702644.3	702975.5	720613.9	721684.2	720296.1
bushes (shrubs)	47415.5 <sup>3)</sup>	71606.6	73169.1	75580.5	75812.1	74924.6
Unstocked forest lands	112984.4	107723.3	106830.6	94570.1	94458.6	95703.5
<b>Total forest lands</b>	<b>884093.6</b>	<b>881974.2</b>	<b>882975.2</b>	<b>890764.5</b>	<b>891954.9</b>	<b>890924.2</b>
included Urban forest	153.0	1099.1	1016.1	1149.7	1007.3	1069.1
<i>Non-forest lands</i>						

Other non-forest lands	<b>754040.4</b>	<b>756159.8</b>	<b>755163.8</b>	<b>747374.5</b>	<b>746184.1</b>	<b>746762.8</b>
included lands with tree cover	4820.0	4724.7	4698.5	4500.0 <sup>1)</sup>	19355.9 <sup>4)</sup>	19258.9 <sup>4)</sup>
<b>Total land area</b>	1638134.0	1638134.0	1638139.0	1638139.0	1638139.0	1637687.0
Inland water bodies <sup>2)</sup>	71690.0	71690.0	71685.0	71685.0	71685.0	72137.0
<b>Total for country <sup>2)</sup></b>	<b>1709824.0</b>	<b>1709824.0</b>	<b>1709824.0</b>	<b>1709824.0</b>	<b>1709824.0</b>	<b>1709824.0</b>

**Notes:**

1). Assessment based on expert knowledge.

2). FAOSTAT data.

3). 27574.3 th. ha of Dwarf Siberian Pine stands (stocked forest lands) was included to a category "forest tree stands" in State account of forest resources - SAFR-1988. It has come in category "bushes" after SAFR-1993.

4) Data from Ground Fund of the Russian Federation (2012)

**Forest afforestation and reforestation original dates:**

<b>Years</b>	<b>1988</b>	<b>1992</b>	<b>1993</b>	<b>1994</b>	<b>1995</b>	<b>1996</b>	<b>1997</b>
Afforestation, ha	85 215	78 886	67 931	63 116	46 033	19 920	21 833
Reforestation, 1000 ha	1 311.5	1 126.2	1 416.7	2 024.3	2 401.4	1 905.5	1 927.7
...of which on areas previously planted, 1000 ha	352.9	430.5	441.8	538.5	529.9	511.7	451.8

Continuation :

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
17 596	28 452	27 745	23032	20 480	18 210	14 345	6 571	8 500	6 705
2048.1	1752.7	1931.7	1434.0	1 317.3	1 198.8	813.9	1 137.0	1 105.9	1 030.1
438.3	420.4	402.8	346.3	316.2	292.8	269.8	244.5	229.7	216.2

Continuation:

2008	2009	2010	2011	2012
5626.6	3182.0	6561.3	5654.8	2297.5
979.2	988.6	1018.7	1000.1	955.0
200.1	200.7	181.9	169.9	184.4

### 1.3 Analysis and processing of national data

#### 1.3.1 Adjustment

<b>Area, 1000 ha</b>			
<b>Source</b>	<b>Inland water bodies</b>	<b>Total land area</b>	<b>Total country area</b>
National data (1988,1998)	71690.0	1638134.0	<b>1709824.0</b>
FAOSTAT (1990, 2000)	71690.0	1638134.0	<b>1709824.0</b>
National data (2003, 2008)	71685.0	1638139.0	<b>1709824.0</b>
FAOSTAT (2005)	71685.0	1638139.0	<b>1709824.0</b>
FAOSTAT(2013)	72137.0	1637687.0	<b>1709824.0</b>

**Note:** There is no need to perform calibration since the national land area data matches the FAOSTAT land area.

## 1.3.2 Estimation and forecasting

a) The extrapolation and forecast of the national data of SAFR cannot be carried out, since the data of forest management plans are heterogeneous for 1800 forest enterprises, and their prescription realization changes from 5 to 50 years.

b) In the FRA2010, the increase in stocked forest lands of more than 20 million ha is not realistic for the period 2003-2008 and the large positive change rate in Table 1.2.3 does not accurately reflect the actual trend (see Table 1b data). In order to meet the FRA2010 objective of realistic assessment of trends, the area of Forest in 2010 was estimated through expert's assessment of the approximate change of forest area in the period 2003-2008 (~ 300 000 hectares) which is one of the methods recommended by FAO. The area of Other Wooded Land in FRA2010 was also assessed on the basis of expert evaluation, assuming an increase of this category of about 50 000 hectares since 2005. In the FRA2015, data for 2010 has been corrected by real figures taken of the State Forest Register (SFR) for 2010.

## 1.3.3 Reclassification

## 1.1.1 Reclassification

National classes in 2013	FRA 2015 Categories				
	Forest	OWL	Other Land	Total	OLWTC
<b>Forest lands:</b>					
Forest tree stands	99.8	0	0.2	100	0.1
Bushes (shrubs)	0	100	0	100	0
Unstocked forest lands	100	0	0	100	0
<b>Non-forests:</b>					
Other Non-forest Land	0	0	100	100	2.6
<b>Total land area</b>	49.7	4.6	45.7	100	1.2

**Notes:**

OWL = Other Wooded Land

OLWTC = Other land with tree cover. This is a subcategory of "Other land", hence the percentage given in this reclassification matrix refers the percentage of the area of "Other land" that has tree cover.

### Result of reclassification for example SFR-2013:

National categories	FRA 2015 Categories (1000 ha)				
	Forest	OWL	Other Land	Total Land	OLWTC
<b>Forests:</b>					
Forest tree stands	<b>719227.0</b>	0.0	1069.1	720296.1	1069.1
Bushes (shrubs)	0.0	74924.6	0	74924.6	n.a.
Unstocked forest lands	<b>95703.5</b>	0.0	0	95703.5	n.a.
<b>Non-forest:</b>					
Other land	0.0	0.0	746762.8	746762.8	19258.9*)
<b>Total land area</b>	<b>814930.5</b>	<b>74924.6</b>	<b>747831.9</b>	<b>1637687.0</b>	<b>20328.0</b>

*Note:* \*) – Data from Ground Fund of the Russian Federation (2011)

## 1.4 Data

Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	808949.9	809268.5	808790	815135.6	814930.5
	Other wooded land	74989.8	71606.6	73169.1	75812.1	74924.6
	Other land	754194.3	757258.9	756179.9	747191.3	747831.9
	... of which with tree cover	4973	5823.8	5714.6	20363.2	20328
	Inland water bodies	71690	71690	71685	71685	72137
	TOTAL	1709824.00	1709824.00	1709824.00	1709824.00	1709824.00

Table 1b

Categories	Annual forest establishment / loss (000 hectares per year)	...of which of introduced species (000 hectares per year)
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		1990	2000	2005	2010	1990	2000	2005	2010
CFRQ	Forest expansion	82.1	66.71	70.23	1269.1	0	0	0	0
CFRQ	... of which afforestation	82.05	23.46	11.91	6.6	0	0	0	0
CFRQ	... of which natural expansion of forest	N/A	43.25	58.32	1262.5	0	0	0	0
CFRQ	Deforestation	0	0	0	0	0	0	0	0
CFRQ	... of which human induced	0	0	0	0	0	0	0	0
CFRQ	Reforestation	1219.85	1697.76	1057.14	1018.7	0	0	0	0
CFRQ	... of which artificial	390	236.2	188.3	170.8	0	0	0	0

## Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 3	Tier 2
Other wooded land	Tier 2	Tier 2
Forest expansion	Tier 1	Tier 1
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"> <li>• Forest</li> <li>• Other wooded land</li> <li>• Afforestation</li> <li>• Reforestation</li> <li>• Natural expansion of forest</li> <li>• Deforestation</li> </ul>	<p><b>Tier 3</b> : Data sources: Either recent (less than 10 years ago) National Forest Inventory or remote sensing, with ground truthing, or programme for repeated compatible NFIs <b>Tier 2</b> : Data sources: Full cover mapping / remote sensing or old NFI (more than 10 years ago) <b>Tier 1</b> : Other</p>	<p><b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other</p>

## 1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	In table 1A used official data of the NFI, as well as the data of the Land Fund of the Russian Federation and FAOSTAT. Wave-like data due to the change of legislative documents, as well as irregular transfer of agricultural lands with wood vegetation in to forest lands.	The increase of the forest areas is caused by settling of farmlands by wood vegetation. Wood plantations do not play an essential role in this trend, it means natural expansion of forest.

Other wooded land	All area (bushes) of Dwarf Siberian Pine (27574,3 th. ha ) were classified as Forest in the SAFR 1988 while in subsequent SAFRs they were classified as bushes (OWL). The figure for 1990, based on SAFR 1988, has therefore been adjusted in order to correspond to the definitions used for SAFR 1998 and SAFR 2003.	N/A
Other land	FAOSTAT data	N/A
Other land with tree cover	Land Fund of the RF data. Figure for 2005 - assessment based on expert knowledge.	N/A
Inland water bodies	FAOSTAT data	N/A
Forest expansion	Figure for 2010 = (815135.6 - 808790) / 5. Natural expansion of forest: Almost all agricultural forests were transferred to the Forest Fund for the period 2005 - 2010. The statistical account is not conducted	Afforestation: Area reduction is connected with reduction of financing of these works.
Deforestation	No data	N/A
Reforestation	Artificial reforestation: In the Russian Federation, reforestation includes assistance to natural renewal on the cut down and burnt forest lands.	Artificial reforestation: Area reduction is connected with reduction of financing of these works.

#### Other general comments to the table

The database of the State account of forest resources (SAFR) of Russia for 1988 were used for the characteristic of FRA –1990 data; the SAFR database of 1998 - for FRA-2000; the SAFR database of 2003 - for FRA-2005 without extrapolations. Data for FRA-2010 have been received on the basis of expert estimations and SAFR-2008 data. In the FRA2015, data of 2010 has been corrected by real figures taken of the State Forest Register (SFR) for 2010. The fullest SAFR is carried out once to five years on the basis of data of the forest inventory. The forest inventory has been lead 5 - 50 years back by different taxators with different accuracy and errors. The areas of wood enterprises constantly vary in this or that side. SAFR cannot reflect all current changes. They reflect only the general tendency with the big mistake and uncertainty. The increase in the area of forests occurs due to the agricultural lands growing by wood vegetation.

## 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 <b>outside</b> 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	Forest resources USSR (under the count on 01.01.1998). The statistical collection / Goscomles USSR, M., 1990. (in Russian).	Forest lands	1990	total coverage

2	Forest resources of Russia (as of 01.01.1998). Handbook / VNIIClesresurs, M., 1999 (in Russian).	Forest lands	2000	total coverage
3	Forest resources of Russia (as of 01.01.2003). Handbook / VNIILM, M., 2003.(in Russian).	Forest lands	2005	total coverage
4	Roslesinforg Forest Resources Database as of 01.01.2008	Forest lands	2010	total coverage
5	State Forest Register (SFR) database as of 01.01.2010	Forest lands	2010	total coveragefor FRA-2015
6	The basic parameters of forestry activity for 1988, 1992-2011 years// Roslesinforg, 2012	Afforestation'Reforestation Planted"areas	1990 2000 2005 2010	total coverage
7	State Forest Register (SFR) of the Russian Federation, Roslesinforg, 2013	Forest lands	2015	total coverage

### 2.2.2 Classification and definitions

National class	Definition
Primary forests	Undisturbed by man forest is climax forest (boreal climax of succession) where there are ecological processes are not significantly disturbed. Climax forests are mature and overmature stands of coniferous tree species. All Reserve forests and the mature forest in protected areas are considered as a primary forest (expert data).
Other naturally regenerated forest	It is equal to Total forest lands minus Primary forest minus Planted forest areas.
Planted forest	All planted forests of the RF
N/A	N/A

### 2.2.3 Original data

National Categories in 01.01.2013	Forest area (1000 hectares) *)	%%
Primary forest **)	257916.0	33.5

Other naturally regenerated forest	494020.4	64.1
Planted forest	18764.1	2.4
<b>TOTAL</b>	<b>770700.5</b>	100

Notes: \*) - forest stocked area in the NFI for 01.01.2013;

\*\*) – expert assessment. (see Comments 2.5)

## 2.3 Analysis and processing of national data

### 2.3.1 Adjustment

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### 2.3.2 Estimation and forecasting

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### 2.3.3 Reclassification

<b>National Categories</b>	<b>Forest stocked area in 2013 (1000 ha)</b>	<b>%%</b>	<b>FRA-2015 Forest area in 2015 (1000 ha)</b>
Primary forest *)	257916.0	33.5	272717.6
Other naturally regenerated forest	494020.4	64.1	522371.9
Planted forest	18764.1	2.4	19841.0
<b>TOTAL</b>	<b>770700.5</b>	100	<b>814930.5</b>

\*) – expert assessment.

## 2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	241725.7	258130.8	255469.8	273343	272717.6
	Other naturally regenerated forest	554573	535777.3	536357.7	522179.7	522371.9
	... of which of introduced species	0	0	0	0	0
	... of which naturalized	0	0	0	0	0
	Planted forest	12651.2	15360.4	16962.5	19612.9	19841
	... of which of introduced species	N/A	N/A	63.4	65.7	65.7
TOTAL		808949.90	809268.50	808790.00	815135.60	814930.50

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

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 1	Tier 1
Other naturally regenerated forest	Tier 3	Tier 2
Planted forest	Tier 3	Tier 3

Mangroves	Tier 3	Tier 3
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## Tier Criteria

Category	Tier for status	Tier for reported trend
Primary forest/Other naturally regenerated forest/Planted forest	<p><b>Tier 3</b> : 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><b>Tier 2</b> : Data sources: Full cover mapping/ remote sensing or old NFI (more than 10 years) <b>Tier 1</b> : Other</p>	<p><b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other</p>

## 2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	<p>Assessment based on expert knowledge. The area of primary forests is not taken into account in the forest management, therefore these data is not present in the State account of forest resources (SAFR). We assumed that all mature and over-mature coniferous stands of trees as primary, as they are a climatic climax in terrain of Russia. The sharp increase of the area of Primary forests is connected with the increase of Total forest area in 2010.</p>	<p>The increase of the primary forest area is caused by accumulation of the old tree stands of low productivity and stands in the remote lands.</p>
Other naturally regenerating forest	N/A	N/A
Planted forest	<p>Total planted forest. Forest area with the dominated by introduced tree species included area of stands with domination of Robinia pseudacacia, Armeniaca vulgaris, Gleditsia sp., Quercus suber, Juglans regia, Morus sp. Data for another introduced tree species is absent.</p>	N/A
Mangroves	N/A	N/A

## Other general comments to the table

The database of the State account of forest resources (SAFR) of Russia for 1988 were used for the characteristic of FRA –1990; the SAFR database of 1998 - for FRA-2000; the SAFR database of 2003 - for FRA-2005 without extrapolations. Data for 2010 have been received on the basis SFR-2010.

### 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	Zagreev V.V. et al. All-union specifications for taxation of forests / ?. Kolos, 1992 (in Russian).	Complementary information	1990-2005	Conversion factors
2	Forest resources USSR (under the count on 01.01.1998). The statistical collection / Goscomles USSR, M., 1990. (in Russian).	Growing Stock	1988	total dataAll Forest lands

3	Forest resources of Russia (as of 01.01.1998). Handbook / VNIIClesresurs, M., 1999.(in Russian).	Growing Stock	1998	total dataAll Forest lands
4	Forest resources of Russia (as of 01.01.2003).Handbook / VNIILM, M., 2003.(in Russian).	Growing stock	2003	total dataAll Forest lands
5	Roslesinforg Forest Resources Database as of 01.01.2008( <a href="http://www.roslesinforg.ru/">http://www.roslesinforg.ru/</a> )	Growing stock	2008	total dataAll Forest lands
6	State Forest Register (SFR) database as of 01.01.2010	Growing stock	2010	total coveragefor FRA-2015
7	Bazilevich N.I. A biological productivity of Boreal Eurasia ecosystems - M.: Nauka, 1993. (in Russian)	Biomass stock Carbon in dead wood and litter	1990-2010	Conversion factors The method of calculations is used
8	Moiseev B., Filipchuk A. Method of Carbon Balance Assessment for the Russian Forests// World Climate Change Conference, Moscow, 2003 (in English).	Biomass stock'Carbon of biomass	1990-2010	Conversion factors
9	Moiseev B.N. & Filipchuk A.N.. Carbon balance for Russian forests // Use and protection of natural resources of Russia, ? 4-5, 2003 (in Russian).	Carbon of biomass	1990-2010	N/A
10	Boris N. Moiseev and Andrei N. Filipchuk Carbon Balance in the Russian Forests// <a href="http://www.fao.org/docrep/ARTICLE/WFC/XII/0151-B1.HTM">http://www.fao.org/docrep/ARTICLE/WFC/XII/0151-B1.HTM</a>	Carbon of biomass	1990-2010	N/A
11	Moiseev B.N. Calculations of the carbon deposition in Russian forests according to the State forest register data// Forestry N1, 2011	Carbon of biomass	1990 - 2010	N/A
12	Senkin N.I. A database on stores of a humus in soils of Russian regions ( <a href="http://www.biodat.ru/db/dv/gumus.htm">http://www.biodat.ru/db/dv/gumus.htm</a> )	Soil carbon	1990 - 2010	Recalculation is made for the forest lands only and for soil depth = 0.3 m .

### 3.2.2 Classification and definitions

National class	Definition
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Growing stock of forest stands	Volume over bark of all living trees 8 cm in diameter at breast height and more than. Includes the stem above stump excluded branches and tops.
Growing stock of coniferous stands	Its included mixed forest stands. The mixed forests are not excreted in national data of the account of forest resources.
Growing stock of broadleaved stands	Growing stock of deciduous forests (excluded Larch stands).
Above-ground biomass	All living biomass above the soil. The account is made for Stocked forest land only.
Below-ground biomass	All biomass of live roots.
Dead wood	All non-living woody biomass. Dead wood does not include a litter and the dead roots in soils.
Carbon in above-ground biomass	Carbon in all living biomass above the soil, including stem, stump, branches, tops and bark.
Carbon in below-ground biomass	Carbon in all living biomass of roots.
Carbon in dead wood biomass	Carbon in all non-living woody biomass. Dead wood includes dry trees, trees lying on the surface, dead branches, roots and stumps.
Carbon in litter	Carbon in all non-living biomass in various states of decomposition above the mineral or organic soil. This includes the dead branches (small), bark, seeds and foliage.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a specified depth = 0.3 m.

## 3.2.3 Original data

<b>Biomass stock'</b> (according to IPCC method, 2003, 2006)										
Species	Growing stock, mill m3	Basic density t/m3	Stem biomass, mill tone	BEF m3/ tone	AGB, mill tone	R	BGB, mill tone	D/L	DWB, mill tone	Total, mill tone
Larch	24950.84	0.52	12974.4	1.48	19202.1	0.25	4800.5	0.26	6182.6	30185.2
Pine	16202.61	0.42	6805.1	1.37	9323.0	0.30	2796.9	0.20	2428.1	14548.0

Birch	11549.62	0.51	5890.3	1.30	7657.4	0.20	1531.5	0.14	1314.9	10503.8
Spruce	10807.36	0.40	4322.9	1.43	6181.7	0.25	1545.4	0.23	1769.2	9496.3
Pine siberian stone	8419.63	0.35	2946.9	1.46	4302.5	0.25	1075.6	0.23	1231.4	6609.5
Aspen	3331.99	0.40	1332.8	1.32	1759.3	0.20	351.9	0.20	423.0	2534.2
Fir	2742.84	0.40	1097.1	1.35	1481.1	0.20	296.2	0.17	305.2	2082.5
Oak	897.52	0.58	520.6	1.40	728.8	0.30	218.6	0.14	135.6	1083.0
Lime	598.69	0.35	209.5	1.35	282.8	0.20	56.6	0.11	38.9	378.3
Beech	228.52	0.58	132.5	1.35	178.9	0.30	53.7	0.14	33.3	265.9
Remainder of species	749.43	0.46	344.7	1.38	475.7	0.25	118.9	0.17	102.1	696.7
<b>Total</b>	<b>80479.05</b>	<b>0.45</b>	<b>36576.8</b>	<b>1.41</b>	<b>51573.3</b>	<b>0.25</b>	<b>12845.8</b>	<b>0.23</b>	<b>13964.1</b>	<b>78383.5</b>

Thresholds used for “woody biomass” (e.g. minimum diameter): 4 cm.

Mean conversion factors used:

Basic density = 0.45 tone/m<sup>3</sup> ;

Biomass expansion factors (BEF) = 1.41 m<sup>3</sup>/tone (in this case, BEF there is the mean ratio of the growing stock to above ground biomass of all trees);

Root factors (R) = 0.25;

Dead-live ratios (D/L) = 0.23 (excluded litter).

### Carbon stock

#### Example of calculation of the carbon stock in forest litter in 2005

Species	Forest area, 1000 ha	Litter, tone C/ha	Total Litter, mill tone C
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Larch (Larix)	291554.3	13.7	3994.3
Pine (Pinus)	129592.7	13.7	1775.4
Birch (Betula)	117929.6	7.9	931.6
Spruce (Picea)	85163.1	13.7	1166.7
Pine siberian stone (Pinus sibirica)	45066.8	11.8	531.8
Aspen (Populus tremula)	22696.0	7.9	179.3
Fir (Abies)	16470.6	7.9	130.1
Oak (Quercus)	7538.7	8	59.6
Lime (Tilia)	3623.4	5.9	21.4
Beech (Fagus)	871.1	6	5.1
Remainder of species	88283.9	7.9	697.4
<b>Total</b>	<b>808790.0</b>		<b># 9500</b>

### 3.3 Analysis and processing of national data

#### 3.3.1 Adjustment

<b>Growing stock, million m<sup>3</sup></b>			
<b>National classification</b>	<b>National data in 2013</b>	<b>%%</b>	<b>FRA – 2015 Forest stock in 2015</b>
Growing stock of total forest stands:	<b>83022.38</b>	100	<b>81488.06*)</b>
of which Growing stock of coniferous stands	60801.36	73.1	59535.93

of which Growing stock of broadleaved stands	22221.02	26.9	21952.13
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Note: Growing stock volume in 2015 is equal to Total volume for NFI in 2013 without bushland and urban forests.

#### Mean annual increment (MAI), 1000 m<sup>3</sup>/year (NFI data)

National Category	Mean annual increment (000 m <sup>3</sup> per year)				
	Forest				
	1990	2000	2005	2010	2015
Mean annual increment	900	970.4	993.8	1016.1	1020.0
... of which coniferous	n.a.	565.8	571.4	595.7	593.8
... of which broadleaved	n.a.	404.6	422.4	420.4	426.2

Note: MAI is the sum of the Stock volume according to the age classes divided by the Average age of the class.

### 3.3.2 Estimation and forecasting

#### Growing stock

The database of the State account of forest resources (SAFR) of Russia for 1988 were used for the characteristic of FRA –1990; the SAFR database of 1998 - for FRA-2000; the SAFR database of 2003 - for FRA-2005; the SAFR database of 2010 – for FRA 2015 without extrapolations.

#### Carbon stock

Data on biomass stock have been used for calculations of the wood carbon.

### 3.3.3 Reclassification

#### Growing stock

<b>FRA 2015 Categories</b>	<b>National categories</b>
Total Growing stock	Growing stock is determined for the stocked forest land (Total = <b>83022.38</b> mill m <sup>3</sup> in 2013).
Growing stock composition	<p>It was re-counted (on %%) for Forest Growing stock in 2015.</p> <p>Growing Stock composition (as in 2010) is known for the “forest fund” only.</p> <p>It was re-counted (on %%) for Forest Growing stock of the FRA-2015.</p>

### Growing stock composition

<b>FRA 2010 category / Species name (Scientific name and common name)</b>	<b>Growing Stock in Forests (million cubic meters)</b>		
	<b>2010 for FRA 2015</b>	<b>%%</b>	<b>National data as in 2010 (without bushes)</b>
Larch (Larix - 4 species)	23832.5	29.2	22902.0
Pine (Pinus – 6 species)	16381.6	20.1	15742.0
Birch (Betula – 10 species)	13737.9	16.9	13201.5
Spruce (Picea – 6 species)	10811.4	13.3	10389.3
Pine siberian stone (Pinus sibirica-1sp.)	7789.5	9.6	7485.4
Aspen (Populus tremula – 1 species)	3859.5	4.7	3708.9
Fir (Abies – 4 species)	2504.7	3.1	2406.9
Oak (Quercus – 5 species)	886.2	1.1	851.6
Lime (Tilia – 6 species)	610.2	0.7	586.4
Beech (Fagus – 2 species)	182.2	0.2	175.1

Remainder of species (136 species)	927.2	1.1	891.0
<b>Total (181 native species)</b>	<b>81522.85</b>	100.0	<b>78340.14</b>

### 3.4 Data

Table 3a

Category		Growing stock volume (million m <sup>3</sup> over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	80039.64	80270.39	80479.05	81522.85	81488.06	1604.82	1593.3	1651.05	1775.35	1534.32
	... of which coniferous	63123.53	57787.58	57541.14	57851.31	57535.93	1315.95	1306.51	1353.86	1455.79	1265.43
	... of which broadleaved	16916.11	22482.81	22937.91	23671.54	23952.13	288.87	286.79	297.19	319.56	268.89

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	Larix	Larch - 4 species	27245.49	25338.11	24950.84	23832.472
2 nd	Pinus	Pine– 6 species	15663.76	16289.58	16202.61	16381.594
3 rd	Betula	Birch -10 species	11653.77	11022.96	11549.62	13737.881
4 th	Picea	Spruce – 6 species	9388.64	10915.47	10807.36	10811.4

5 th	Pinus sibirica	Pine siberian stone -1sp.	8212.07	8457.73	8419.63	7789.51
6 th	Populus tremula	Aspen - 1 species	2905.44	3237.76	3331.99	3859.543
7 th	Abies	Fir - 4 species	2865.42	2682.57	2742.84	2504.672
8 th	Quercus	Oak – 5 species	856.42	858.75	897.52	886.21
9 th	Tilia	Lime - 6 species	480.24	570.99	598.69	610.2
10 th	Fagus	Beech - 2 species	192.1	201.26	228.52	182.2
Remaining			576.29	695.21	749.43	927.168
TOTAL			80039.64	80270.39	80479.05	81522.85

**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)	8	For tree stands
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	6	Top of stem not included.
Minimum diameter (cm) of branches included in growing stock (W)	0	Branches and stump not included.
Volume refers to above ground (AG) or above stump (AS)	AS	

**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 <sup>3</sup> per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	1.2	1.25	1.29	1.32	1.32
	... of which coniferous	N/A	1.11	1.11	1.13	1.13
	... of which broadleaved	N/A	1.52	1.64	1.73	1.74

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	52103.2	51471.1	51573.5	52000	52400	450	400	450	500	520
	Below ground biomass	12904	12842.4	12845.9	13000	13200	225	200	225	250	260
	Dead wood	14195	14022.3	13964.1	14356	14900	450	400	450	500	520
TOTAL		79202.20	78335.80	78383.50	79356.00	80500.00	1125.00	1000.00	1125.00	1250.00	1300.00

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	26052	25736	25787	26000	26200	225	200	225	250	260
	Carbon in below ground biomass	6452	6421	6423	6500	6600	110	100	110	120	130
	<i>Subtotal Living biomass</i>	32504	32157	32210	32500	32800	335	300	335	370	390
	Carbon in dead wood	7317	7228	7198	7400	7450	225	200	225	250	260
	Carbon in litter	9600	9500	9500	9600	9650	0	0	0	0	0
	<i>Subtotal Dead wood and litter</i>	16917	16728	16698	17000	17100	225	200	225	250	260
	Soil carbon	78000	78000	78000	78000	78000	2000	2000	2000	2000	2000
TOTAL		127421.00	126885.00	126908.00	127500.00	127900.00	2560.00	2500.00	2560.00	2620.00	2650.00

## Tiers

Variable/category	Tier for status	Tier for trend
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Total growing stock	Tier 2	Tier 2
Net annual increment	Tier 2	Tier 2
Above ground biomass	Tier 1	Tier 1
Below ground biomass	Tier 2	Tier 2
Dead wood	Tier 2	Tier 1
Carbon in above-ground biomass	Tier 1	Tier 1
Carbon in below ground biomass	Tier 1	Tier 1
Carbon in dead wood and litter	Tier 1	Tier 1
Soil carbon	Tier 1	Tier 1

## Tier criteria

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

### 3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	The estimates of growing stock are made for Stocked forest land only.	The total stock increase according to increase of the forest area. However rate of a total stock deposition is much less than rate of the forest area increase.
Growing stock of broadleaved coniferous	The so-called mixed forests enter into a category of coniferous forests. However the mixed forests do not enter into a category deciduous forests.	A change occurred in 1995 to the forest classification system. Before 1995 a forest was classified as “coniferous forest” if needleleaved trees occupied 30-40% of the crown cover. The threshold was increased to 50% (or more) while after 1995. The different classification system adopted after 1995, thus brought to a decrease of the area occupied by the coniferous forests, which does not correspond to a real decrease of the coniferous forest area.
Growing stock composition	All native species.	N/A
Net annual increment	NAI = Mean annual increment were: NAI - current increment in this year; MAI - the average increment for many years. In Russian forests, NAI it is defined only on experimental plots. MAI it is defined by division of a growing stock to middle age of forest stands on age classes.	For very large areas of NAI is approximately equal to the MAI with a high degree of uncertainty.
Above-ground biomass	According to LULUCF method (2003, 2006)	The total biomass increase according to increase of the forest area and stock for 2000-2010 period.
Below-ground biomass	According to Bazilevich method (1993)	N/A
Dead wood	According to Bazilevich method (1993)	In FRA-2010 mass of a litter have increased in 2 times in comparison with data of the national report for FRA-2005. Therefore above-ground dead wood has decreased accordingly. The total sum of a mortmass has not changed.
Carbon in above-ground biomass	According to LULUCF method (2003, 2006)	The carbon stock is estimated with an error +/- 20...30%. Under this data it is impossible to define authentically about stock tendencies in time.
Carbon in below-ground biomass	According to Bazilevich method (1993)	High degree of uncertainty
Carbon in dead wood	According to Bazilevich method (1993)	Expert assessment
Carbon in litter	According to Bazilevich method (1993)	High degree of uncertainty

Soil carbon	The stock of carbon in forest soil (96 tone C/ha) be well agreed with literary data: Stolbovoi, 2002 = 81 tone C/ha; Chestnih et al, 2004 = 103 tone C/ha.Low stock of carbon in OWL soil (26 tone C/ha) is caused by severe climatic and ecological conditions of forest-tundra and mountain forest-tundra (Dwarf Siberian Pine).	High degree of uncertainty
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**Other general comments to the table**

Growing stock: *Pinus sibirica* is allocated as the most important and valuable species of the Pine.

## 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	Forest resources USSR (under the count on 01.01.1998). The statistical collection / Goscomles USSR, M., 1990. (in Russian).	Forest lands	1990	total coverage in 1988
2	Forest resources of Russia (as of 01.01.1998). Handbook / VNIIClesresurs, M., 1999 (in Russian).	Forest lands	2000	total coverage in 1998
3	Forest resources of Russia (as of 01.01.2003). Handbook / VNIILM, M., 2003.(in Russian).	Forest lands	2005	total coverage in 2003
4	Roslesinforg Forest Resources Database as of 01.01.2008 (office data)	Forest lands	2010	total coverage in 2008

5	State Forest Register (SFR) database as of 01.01.2010	Forest lands	2010	total coverage for FRA-2015
6	The basic parameters of forestry activity for 1988, 1992-2011 years// Roslesinforg, 2012	Afforestation/Reforestation/Plantation areas	1990 2000 2005 2010	total coverage
7	State Forest Register (SFR) of the Russian Federation, Roslesinforg, 2013	Forest lands	2015	total coverage

#### 4.2.2 Classification and definitions

National class	Definition
Protective forests	Protective forests are a subject to development with a view of preservation, water-security, protective, sanitary-and-hygienic, improving and other useful functions of forests with simultaneous use of forests under condition of if this use is compatible to a special-purpose designation of protective forests and useful functions carried out by them.
Operational forests	Operational forests are a subject to development with a view of steady, as much as possible effective reception of high-quality wood and other wood resources, products of their processing with maintenance of preservation of useful functions of forests.
Reserve forests	The remote forests which will not be developed in 20 and more years
N/A	N/A

#### 4.2.3 Original data

	National Categories / Designated function	Original forest lands, 1000 ha	%%
	Protected forests*)	17666.5	2.2
	Protective forests	215139.2	24.0
	Operational forests	453780.0	50.9
	Reserve forests	204338.5	22.9
	<b>Total</b>	<b>890924.2</b>	<b>100</b>

\*) – Protected forest lands included: special protected forest area (strict reservations -zapovedniks, national and natural parks, nature monuments and srate zakasniks).

### 4.3 Analysis and processing of national data

#### 4.3.1 Adjustment

FRA 2015 Categories / Designated function	National categories	
<b>Forest:</b>		
Production	Operational forests having mainly wood production importance.	
Protection of soil and water	Protective forests carrying out soil and water protective of function.	
Conservation of biodiversity	Protected forests of strict reservations (zapovedniks), national and nature parks, nature monuments and state zakasnik.	
Social services	Protective forests of green zones of settlements and preservation of resorts.	
Multiple purpose	Other forest lands of the Protective forests in were wood harvested is resolved.	
Other	Reserve forests - the remote forests which will not be developed 20 and more years	
No or unknown function		

#### 4.3.2 Estimation and forecasting

Categories	Forest area (000 hectares)
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	1990	2000	2005	2010	2015
Production forest	446678.6	411437.1	413103.0	421491.0	415073.7
Multiple use forest <sup>1)</sup>	251848.4	292343.9	277875.0	255713.0	254926.3
Forest area available for wood supply	698527.0	703781.0	690978.0	677204.0	670000.0 <sup>2)</sup>

Note: 1) – include all reserve and a part of protective forests in which wood harvested is resolved.

2) - expert assessment.

#### 4.3.3 Reclassification

Reclassification into FRA 2015 categories, 1000 ha				
National Categories / Designated function	Original forest lands in 2013	%%	FRA 2015 Categories	Forest area in 2015
Protective forests	232805.7	26.1	Protective forests	212947.9
Operational forests	453780.0	50.9	Production forest	415073.7
Reserve forests	204338.5	23.0	Multiple use forest	186908.9
<b>Total</b>	<b>890924.2</b>	<b>100</b>	<b>Total</b>	<b>814930.5</b>

#### 4.4 Data

Table 4a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	446678.6	411437.1	413103	421491	415073.7

	Multiple use forest	208720.4	202589.7	199894	173906.3	178064.1
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Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	N/A	N/A	N/A	N/A
2 nd	N/A	N/A	N/A	N/A
3 rd	N/A	N/A	N/A	N/A
4 th	N/A	N/A	N/A	N/A
5 th	N/A	N/A	N/A	N/A
6 th	N/A	N/A	N/A	N/A
7 th	N/A	N/A	N/A	N/A
8 th	N/A	N/A	N/A	N/A
9 th	N/A	N/A	N/A	N/A
10 th	N/A	N/A	N/A	N/A
TOTAL			.00	

2010	
Name of local currency	rouble

Category
<b>Plant products / raw material</b>
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
<b>Animal products / raw material</b>
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 <sup>3</sup> u.b.)	
	Total wood removals	...of which woodfuel
1990	325293	71578
1991	355400	81100
1992	227900	63900
1993	174630	38600
1994	111800	32020
1995	116210	33460
1996	96814	23809
1997	134664	46290
1998	124790	47390
1999	143600	49000
2000	158100	52300
2001	164700	46900
2002	165000	46400
2003	174000	47400

2004	178400	47800
2005	185000	47000
2006	190600	46000
2007	207000	45000
2008	181400	44700
2009	151400	38500
2010	175000	38924
2011	197000	43817

## Tiers

Category	Tier for status	Tier for reported trend
Production forest	Tier 3	Tier 2
Multiple use forest	Tier 3	Tier 2

## 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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	N/A	The increases of the Production forests are caused by settling of farmlands by wood vegetation.
Multiple use forest	In Table 4a, the Multiple use forest included all Reserve forest and part of the Protective forests.	N/A
Total wood removals	FAOSTAT data	N/A
Commercial value of NWFP	No data	N/A

**Other general comments to the table**

The database of the State account of forest resources (SAFR) of Russia for 1988 were used for the characteristic of FRA –1990; the SAFR database of 1998 - for FRA-2000; the SAFR database of 2003 - for RA-2005 without extrapolations. Data for 2010 have been received on the basis of the SFR-2010. In 1988, total wood removals was 325293.0 (1000 m<sup>3</sup> u.b) ("roslesinforg" data)

## 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	Forest resources USSR (under the count on 01.01.1998). The statistical collection / Goscomles USSR, M., 1990. (in Russian).	Forest lands	1990	total coverage in 1988
2	Forest resources of Russia (as of 01.01.1998). Handbook / VNIIClesresurs, M., 1999 (in Russian).	Forest lands	2000	total coverage in 1998
3	Forest resources of Russia (as of 01.01.2003). Handbook / VNIILM, M., 2003.(in Russian).	Forest lands	2005	total coverage in 2003
4	Roslesinforg Forest Resources Database as of 01.01.2008 (office data)	Forest lands	2010	total coverage in 2008
5	State Forest Register (SFR) database as of 01.01.2010	Forest lands	2010	total coveragefor FRA-2015
6	The basic parameters of forestry activity for 1988, 1992-2011 years// Roslesinforg, 2012	Forest lands	1990 2000 2005 2010	total coverage
7	State Forest Register (SFR) database of the Russian Federation. Roslesinforg, 2013	Forest lands	2015	total coverage

### 5.2.2 Classification and definitions

National class	Definition
Protective forests	Protective forests are a subject to development with a view of preservation, water-security, protective, sanitary-and-hygienic, improving and other useful functions of forests with simultaneous use of forests under condition of if this use is compatible to a special-purpose designation of protective forests and useful functions carried out by them.
Operational forests	Operational forests are a subject to development with a view of steady, as much as possible effective reception of high-quality wood and other wood resources, products of their processing with maintenance of preservation of useful functions of forests.
Reserve forests	The remote forests which will not be developed in 20 and more years
N/A	N/A

### 5.2.3 Original data

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	<b>National Categories / Designated function</b>	<b>Original forest lands, 1000 ha</b>	<b>%%</b>
Protected forests*)		17666.5	2.2
Protective forests		215139.2	24.0
	Operational forests	453780.0	50.9
	Reserve forests	204338.5	22.9
	<b>Total</b>	<b>890924.2</b>	<b>100</b>

\*) – Protected forest lands included: special protected forest area (strict reservations -zapovedniks, national and natural parks, nature monuments and state reserve -zakasniks).

### 5.3 Analysis and processing of national data

#### 5.3.1 Adjustment

Protective forests are a subject to development with a view of preservation, water-security, protective, sanitary-and-hygienic, improving and other useful functions of forests with simultaneous use of forests under condition of if this use is compatible to a special-purpose designation of protective forests and useful functions carried out by them. \*)Forests of the strict protected natural terrains enter into a category of protective forests. \*) - according to Forest Code of the RF (2006)

#### 5.3.2 Estimation and forecasting

<b>FRA 2010 Categories / Designated function</b>	<b>National categories</b>	
<b>Forest:</b>		
Production	Operational forests having mainly wood production importance.	
Protection of soil and water	Protective forests carrying out soil and water protective of function.	

Conservation of biodiversity	Protected forests of strict reservations (zapovedniks), national and nature parks, nature monuments and state zakasnik.	
Social services	Protective forests of green zones of settlements and preservation of resorts.	
Multiple purpose	Other forest lands of the Protective forests .	
Other	Reserve forests - the remote forests which will not be developed 20 and more years	
No or unknown function		

### 5.3.3 Reclassification

National Categories / Designated function	Original forest lands in 2013	%%	FRA 2015 Categories	Forest area in 2015
Protective forests	232805.7	26.1	Protective forests	212947.9
Operational forests	453780.0	50.9	Production forest	415073.7
Reserve forests	204338.5	23.0	Multiple use forest	186908.9
<b>Total</b>	<b>890924.2</b>	<b>100</b>	<b>Total</b>	<b>814930.5</b>

## 5.4 Data

Table 5a

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015

	Protection of soil and water	58695.4	70387.8	70555.7	85110.7	86353.5
	... of which production of clean water	33077.9	40134	39694.5	49687.2	51668.8
	... of which coastal stabilization	24041.8	21268.8	21487.5	24775.1	24264.4
	... of which desertification control	0	0	0	0	0
	... of which avalanche control	0	0	0	0	0
	... of which erosion, flood protection or reducing flood risk	1575.7	8985	9373.7	10648.4	10420.3
	... of which other (please specify in comments below the table)	0	0	0	0	0

### Other

All forests make function for protection of soils and water.

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	73685.7	99572.5	99397.8	108025	108927.9
...of which public recreation	17376.2	11333.1	11722.5	12368	12316.7
...of which carbon storage or sequestration	0	0	0	0	0
...of which spiritual or cultural services	108.2	154.5	156.7	1703.8	1482.4
...of which other (please specify in comments below the table)	56201.3	88084.9	87518.6	93953.2	95128.8

## Tiers

Category	Tier for reported trend	Tier for status
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Protection of soil and water	Tier 3	Tier 2
Ecosystem services, cultural or spiritual values	Tier 3	Tier 2

## 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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other
<ul style="list-style-type: none"> <li>• Cultural or spiritual values</li> <li>• Public recreation</li> <li>• Spiritual or cultural services</li> <li>• Other</li> </ul>	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 5.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	N/A	The increase of the forest areas is caused by strengthening of nature protection tendencies in forestry.
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	All forests store carbon.	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	Forests representing scientific and historical value	N/A

**Other general comments to the table**

Classification and definitions: according to Forest Code of the RF (2006) Table 5a Protection of soil and water: Under this reporting category all areas designated for protection of soil and water should be reported, regardless whether they are primarily designated or not.

## 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	Forest resources USSR (under the count on 01.01.1998). The statistical collection / Goscomles USSR, M., 1990. (in Russian).	Forest lands	1990	total coverage in 1988
2	Forest resources of Russia (as of 01.01.1998). Handbook / VNIIClesresurs, M., 1999 (in Russian).	Forest lands	2000	total coverage in 1998
3	Forest resources of Russia (as of 01.01.2003). Handbook / VNIILM, M., 2003.(in Russian).	Forest lands	2005	total coverage in 2003
4	Roslesinforg Forest Resources Database as of 01.01.2008 (office data)	Forest lands	2010	total coverage in 2008
5	State Forest Register (SFR) database as of 01.01.2010	Forest lands	2010	total coverage for FRA-2015
6	The basic parameters of forestry activity for 1988, 1992-2011 years// Roslesinforg, 2012	Forest lands	1990 2000 2005 2010	total coverage
7	State Forest Register (SFR) of the Russian Federation, Roslesinforg, 2013	Forest lands	2015	total coverage

8	State report “On condition and protection of the environment of the Russian Federation in 2010	Protected forests	1990 - 2010	total area
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### 6.2.2 Classification and definitions

National class	Definition
Specisly Protected Natural Territories (SPNT)	Specially protected natural territories (SPNT) - parts of land, water surface and air space above them, where natural complexes and objects that are of special environmental, scientific, cultural, aesthetic, recreational and sanitary significance, withdrawn decisions of organs of state authority fully or partially from economic use and for which a special protection regime is established.
SPNT forest	Total forest land within protected areas
SPNT	In accordance with the Federal law “About special protected natural territories” dated March 14, 1995, # 33-FZ distinguish the following main categories mentioned areas: - the state natural reserves, including biosphere reserves; - national Park; - natural parks; - the state natural reserves; - natural monuments; - dendrological parks and Botanical gardens; - health rehabilitation areas and resorts.
N/A	N/A

### 6.2.3 Original data

Categories	Forest area (000 hectares)				
	1990	2000	2005	2010	2013
Total forest land of the SPNT*)	21169,8	25281,4	25839,5	26602,6	26511,3
Forest area within protected areas	11814,5	16190,2	16487,8	17572,2	17666,5

Note: \*) Gross forest area included bogs, meadows, glades, lakes according to "Roslesinfor" data

## 6.3 Analysis and processing of national data

### 6.3.1 Adjustment

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## 6.3.2 Estimation and forecasting

## 6.3.3 Reclassification

## 6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	21169.8	25281.4	25839.5	26602.6	26511.3
	Forest area within protected areas	11814.5	16190.2	16487.8	17572.2	17666.5

## Tiers

Category	Tier for status	Tier for reported trend
Conservation of biodiversity	Tier 3	Tier 2
Forest area within protected areas	Tier 3	Tier 2

## Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> <li>Conservation of biodiversity</li> <li>Forests within protected areas</li> </ul>	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	Gross forest lands included bogs, meadows, glades, lakes...	"Roslesinform" data
Forest area within protected areas	Forest lands of the strict reservations, national and nature parks, nature monuments.	The increase of the forest areas is caused by strengthening of nature protection tendencies in forestry.

**Other general comments to the table**

In accordance with the Russian Federal law “About special protected natural territories” dated March 14, 1995, # 33-FZ distinguish the following main categories mentioned areas: - the state natural reserves, including biosphere reserves; - national Park; - natural parks; - the state natural reserves; - natural monuments; - dendrological parks and Botanical gardens; - health rehabilitation areas and resorts.

## 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	State Forest Register (SFR) database as of 01.01.2010	Forest lands	2010	total coverage for FRA-2015
2	The basic parameters of forestry activity for 1988, 1992-2011 years// Roslesinform, 2012	Forest lands	1990 2000 2005 2010	total coverage
3	State Forest Register (SFR) of the Russian Federation, Roslesinform, 2013	Forest lands	2015	total coverage
4	N/A	N/A	N/A	N/A

#### 7.2.2 Classification and definitions

National class	Definition
Invasive plants	Invasive plants - objects of plant world outside their natural range, number and distribution of which create a threat to the life or health of citizens, preservation of biological diversity, causing harm to the individual branches of the economy.
N/A	N/A
N/A	N/A
N/A	N/A

#### 7.2.3 Original data

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### 7.3 Analysis and processing of national data

### 7.3.1 Adjustment

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### 7.3.2 Estimation and forecasting

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### 7.3.3 Reclassification

<p>Invasive species = Introduce species (?)</p>
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## 7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
<i>Robinia pseudoacacia</i> L.	56.1	57.8
<i>Gleditsia triacanthos</i> L.	4.9	5.3
<i>Armeniaca vulgaris</i> Lam. (= <i>Prunus armeniaca</i> L.)	1.9	1.9
<i>Prunus domestica</i> L.	0.5	0.7
<i>Juglans regia</i> L.	N/A	N/A
<i>Cerasus vulgaris</i> Mill. (= <i>Prunus cerasus</i> L.)	N/A	N/A
<i>Malus domestica</i> Borkh.	N/A	N/A
<i>Malus prunifolia</i> (Willd.) Borkh.	N/A	N/A
<i>Elaeagnus angustifolia</i> L.	N/A	N/A
<i>Ribes rubrum</i> L.	N/A	N/A

Total	63.4	65.7
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## Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 2	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	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

## 7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	We conventionally made the assumption that all introduced tree species are invasive tree species.	N/A

## Other general comments to the table

N/A
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## 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	According to institute Roslesozashchita	Insects Diseases Severe weather events	2010	Forest monitoring (partly)
2	The basic parameters of forestry activity for 1988, 1992-2012 years// Roslesinforg, 2013	Forest lands burned by fire	1990 2000 2005 2010	total coverage
3	Rosleshoz data on forest lands burned by fire	Data from remote sensing	2003 - 2012	Forest fire remote sensing monitoring
4	Rosstat data on forest lands burned by fire	Official statistical data	2003 - 2012	Forest fire monitoring

#### 8.2.2 Classification and definitions

National class	Definition
N/A	N/A

## 8.2.3 Original data

**Table Area and number of forest land fires (Rosstat official data)**

FRA 2015 category	1000 - ha and number of fires- #									
	2003		2004		2005		2006		2007	
	ha	#	ha	#	ha	#	ha	#	ha	#
Total land area burned	3575.3	33019	680.3	27171	1145.9	19249	2450.2	32524	1620.3	17812
... of which forest area burned	2309.2		543.3		845.3		1493.5		1036.1	
FRA 2015 category	2008		2009		2010		2011		2012	
	ha	#	ha	#	ha	#	ha	#	ha	#
	Total land area burned by fire	2534.8	26285	2592.6	23245	2475.3	34812	1673.8	21074	2372.3
... of which forest area burned	2069.8		2111.6		2027.8		1408.4		2101.2	

## 8.3 Analysis and processing of national data

## 8.3.1 Adjustment

## 8.3.2 Estimation and forecasting

## 8.3.3 Reclassification

## 8.4 Data

Table 8a

Category		000 ha, number of fires									
		2003		2004		2005		2006		2007	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	3575.3	33019	680.3	27171	1145.9	19249	2450.2	32524	1620.3	17812
	... of which forest area burned	2309.2	N/A	543.3	N/A	845.3	N/A	1493.5	N/A	1036.1	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	2534.8	26285	2592.6	23245	2475.3	34812	1673.8	21074	2372.3	20238
	... of which forest area burned	2069.8	N/A	2111.6	N/A	2027.8	N/A	1408.4	N/A	2101.2	N/A

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1. Insects	Disturbance caused by complex insect pests that are detrimental to tree health	2010	3171.5

2. Diseases	Disturbance caused by complex diseases attributable to pathogens, such as bacteria, fungiorvirus.	2010	1122
3. Severe weather events	Complex weather factors	2010	363.1
Total			4656.6
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A
N/A	N/A	N/A	N/A

### Outbreak category

1 Insects
2 Diseases
3 Severe weather events

### Tiers

Category	Tier for status	Tier for trend
Area affected by fire	Tier 2	Tier 2
<ul style="list-style-type: none"> <li>• Insects</li> <li>• Diseases</li> <li>• Severe weather events</li> </ul>	Tier 3	Tier 2

### Tier criteria

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

## 8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	Official Rosstat data	Official data of Rosstat significantly differ from Rosleskhoz remote sensing data
Insects	Melolontha hippocastani F., Hylobius abietis L., Ocnaria (Lymantria) monacha L., Dendrolimus pini L., Dendrolimus sibiricus Ts., Ocnaria dispar L, Ips typographus L. etc.	N/A
Diseases	Fomitopsis annosa Fr., Phellinus pini Pil, Phellinus igniarius L., Peridermium pini Kleb, Lophodermium seditiosum Mint., Cronartium flaccidum Wint., etc	N/A
Severe weather events	Complex of weather factors	N/A

### Other general comments to the table

Official data of Rosstat significantly differ from Rosleskhoz remote sensing data

## 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	15818.92

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 3

Tier criteria

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

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	.FRA 2015 external data

Other general comments

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## 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	Order of the Government of the Russian Federation. 2003 . No. 69-r. The concept of development of forestry of the Russian Federation for 2003-2010. In edition of 28.09.2007 No. 1305-r.	N/A	2005, 2010	N/A
2	Forest Codex of the Russian Federation, 2006	N/A	2010	N/A
3	Order of the Government of the Russian Federation. 2011 . No. 2322-r. The concept of development of system of especially protected natural territories of federal value for the period till 2020.	N/A	2011	N/A
4	Forest plans	N/A	2007 - 2012	regional level
5	Reglament of forestry	N/A	2007 - 2012	local level

#### 10.2.2 Classification and definitions

National class	Definition
N/A	N/A

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

### 10.2.3 Original data

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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	yes
... of which, in <u>publicly</u> owned forests	yes	yes	yes	yes
... of which, in <u>privately</u> owned forests	no	no	no	no
Legislation and regulations supporting sustainable forest management	yes	yes	yes	yes
... of which, in <u>publicly</u> owned forests	yes	yes	yes	yes
... of which, in <u>privately</u> owned forests	no	no	no	no

## 10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	Forest area under sustainable forest management: Operational and Protective forest lands (All forest lands without Reserve forests)

Legislation and regulations supporting sustainable forest management	Forest plans at the regional level
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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	Order of the Government of the Russian Federation. 2003 . No. 69-r. The concept of development of forestry of the Russian Federation for 2003-2010. In edition of 28.09.2007 No. 1305-r.	2003, 2007	
2	Forest Codex of the Russian Federation	2006	It is installed in 2007
3	The order of the Government of the Russian Federation, 2011. , 2322-p, The Concept of development of system of especially guarded natural terrains of federal value for the season till 2020.	2011	
4	N/A	N/A	N/A

Table 11

<b>Is there a national platform that promotes or allows for stakeholder participation in forest policy development?</b>	yes
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### 11.3 Comments

Category	Comments related to data definitions etc
National stakeholder platform	Public Council on forestry, Ministry of Natural Resources and Ecology. Public Council on forestry Rosleskhoz

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	Roslesinforg Forest Resources Database as of 01.01.2010 (office data)	Forest lands	2010	total coverage in 2010
2	Forest Codex RF, 2006	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
Forest area intended to be in permanent forest land use	All Protective forest lands
Permanent forest estate	All strict protected forest lands
N/A	N/A
N/A	N/A

#### 12.2.3 Original data

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## 12.3 Analysis and processing of national data

### 12.3.1 Adjustment

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### 12.3.2 Estimation and forecasting

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### 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	198062.6
	... of which permanent forest estate	17572.2

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

## 12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	All Protective forest lands
Permanent forest estate	All strict protected forest lands

## Other general comments

All Protective and Protected forest land allocated for permanent use for forestry and nature protection. All other forest lands can be converted to another use according to the Forest Codex (2006).

## 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	State Forest Register (SFR) database as of 01.01.2010	Forest lands	2010	total coverage for FRA-2015
2	The basic parameters of forestry activity for 1988, 1992-2011 years// Roslesinform, 2012	Forest lands	1990 2000 2005 2010	total coverage
3	State Forest Register (SFR) of the Russian Federation, Roslesinform, 2012	Forest lands	2010 2015	total coverage
4	N/A	N/A	N/A	N/A

#### 13.2.2 Classification and definitions

National class	Definition
Forest inventory	Forest inventory is made annually with frequency of 10 years. The first stage of a bookmark of the permanent plots concludes in 2017.
Forest management plan	Terraneous forest management plan is made annually with frequency of 10 years.
Forest monitoring	Remote sensing annual monitoring of forest fires, pests, diseases and use of forests
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	2014	yes	yes	yes	yes	yes	no
Other field assessments	43.4	2012	yes	yes	yes	yes	yes	no
Updates to other sources	56.5	1992	yes	yes	no	no	no	no
Expert estimate	0.1	2013						

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	no

#### Other type of forest reporting

Internet

### 13.4 Comments

Category	Comments
Forest inventory	Forest inventory is made annually with frequency of 10 years. The first stage of a bookmark of the permanent plots concludes in 2017.
Other field assessments	Terraneous forest management plan is made annually with frequency of 10 years.
Updates to other sources	De-enciphering of aerofotos and aerovisual taxation of forests

Other general comments

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## 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	Roslesinfor Forest Resources Database as of 01.01.2010 (office data)	Forest lands	2010	total coverage in 2010
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	815135.6
... of which for production	421491
... of which for conservation	393644.6

Table 14b

Indicate which (if any) of the following are required in forest management plans in your country	
1 Soil and water management	no

2 High conservation value forest delineation	yes
3 Social considerations community involvement	yes

Table 14c

<b>Percent of area under forest management plan that is monitored annually</b>	<b>14</b>
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## Tiers

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

## Tier criteria

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

## 14.4 Comments

Category	Comments
Forest area with management plan	Total forest lands of the RF.All forests of the country are under management plans, but forest inventory is carried out by different methods and with different accuracy. Periodic forest inventories = 10-20 yr.
....of which for conservation	included protective forests =197033.5 th. ha and reserve forests =196611.1 th. ha
N/A	N/A

## Other general comments

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## 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	no
3. Review of operations	yes

Tiers

Category	Tier for status
Type of stakeholder inputs	Tier 2

Tier criteria

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

### 15.2 Comments

Category	Comments
Planning phase	The decision of the Public Council
Review of operations	Discussion in the mass media
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	146.51	1470.6	1573.97	4915.99	8351.32
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	15926.62	17974.94	21370.23	26525.85	28769.88	28680.33	
	PEFC	0	0	0	51.468	878.468	897.688	
	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. Démarche qualité de l'ONF vérifiée par le bureau Veritas	0	0	0	0	0	0	0
	2. Nom	0	0	0	0	0	0	0
	3. Nom	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
	1. Démarche qualité de l'ONF vérifiée par le bureau Veritas	0	0	0	0	0	0	
	2. Nom	0	0	0	0	0	0	
	3. Nom	0	0	0	0	0	0	

## Tier criteria

Category	Tier for status
<b>International</b> 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
<b>Domestic</b> 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
<b>International</b> forest management certification	Tier 2
<b>Domestic</b> forest management certification	N/A

## 16.3 Comments

Category	Comments related to data definitions etc
Certified forest area using an international forest management certification scheme	FAO data. THE RUSSIAN FEDERATION FOREST SECTOR OUTLOOK STUDY TO 2030// FAO, 2012
Domestic forest management certification	No data

## Other general comments

Table 16. *)	
Total forest area certified under	Forest area 2010 (000 ha)
<u>International</u> forest management certification	25 177
...of which for FSC	25 000
...of which PEFC	177

<u>Domestic</u> forest management certification	0
...of which: List <u>domestic</u> forest management certification schemes and forest area covered by each	0

\*) Data from “THE RUSSIAN FEDERATION FOREST SECTOR OUTLOOK STUDY TO 2030”

## 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"> <li>• <b>Goods</b> : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products.</li> <li>• <b>Services</b> : 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.</li> </ul>
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	Substantive provisions of forest management for 1988, 1992-2011. – Roslesinforg, 2012 (office database)	Forest revenue	1998-2002	2 860... 13 416 mill. roubles
2	Substantive provisions of forest management for 1988, 1992-2011. – Roslesinforg, 2012 (office database)	Forest revenue	2003-2007	16 328... 40 877 mill. roubles
3	Substantive provisions of forest management for 1988, 1992-2011. – Roslesinforg, 2012 (office database)	Forest revenue	2009-2011	16489.6...21642.2mill. roubles
4	Substantive provisions of forest management for 1988, 1992-2011. – Roslesinforg, 2012 (office database)	Operational expenditure	1998-2002	25647.1...40890.2mill. roubles
5	Substantive provisions of forest management for 1988, 1992-2011. – Roslesinforg, 2012 (office database)	Operational expenditure	2003-2007	3 741 – 15 497 mill. roubles
6	Substantive provisions of forest management for 1988, 1992-2011. – Roslesinforg, 2012 (office database)	Operational expenditure	2009-2011	19 550 – 42 170 mill. roubles

**17.3 Data**

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	7892240	28744580	19371100
Public expenditure on forestry	8983235	27966472	30765670
	2000	2005	2010
Name of Local Currency	rouble	N/A	N/A

**17.4 Comments**

Category	Comments related to data definitions etc
Forest revenue	Substantial degree of the Forest revenue in 2010, conducting to the greatest degree results from bad reforms in a forestry.
Public expenditure on forestry	Substantial growth of the Public expenditure on forestry conducting to the greatest degree results from inflation in a national economy.
Other general comments	N/A

## Other general comments

Classification and definitions	
National class	Definition
Forest revenue	The Forest revenue includes budgetary financing (federal + regional), off-budget incomes and incomes from forest used. It includes a payment for the cutting of forest stands which is released on a root (growing wood taxes).
Operational expenditure	It is actual expenses for forestry conducting (reforestation, preventive maintenance and suppression of fires, forest shelter works, the payment of workers, other forest actions and services). They do not include an expense for wood cutting operation.

**National data of institute “Roslesinforg”:****Forest revenue on forestry, million roubles**

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
2 860	5 578	7 825	9 782	13 416	16 328	24 368	27 277	34 872	40 877

2008	2009	2010	2011	2012
18483.2	16489.6	19981.5	21642.2	22585.7

**Operational expenditure on forestry, million roubles**

1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
3 741	6 306	8 751	10 614	15 497	19 550	23 024	24 953	30 135	42 170

2008	2009	2010	2011	2012
31753.6	25647.1	25759.7	40890.2	45386.3

## 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	Forest Code of the Russian Federation, 1997	Public ownership	2000 - 2005	It has lost a validity in 2007
2	Forest Code of the Russian Federation, 2006	Public ownership,Public Administration	2010	The new Forest Code (2006) is installed since 2007.
3	State Forest Register (SFR) database as of 01.01.2010	Forest lands	2010	total coveragefor FRA-2015
4	The basic parameters of forestry activity for 1988, 1992-2012 years// “Roslesinform”, 2013	Forest lands	1990 2000 2005 2010	total coverage

## 18.2.2 Classification and definitions

National class	Definition
Public ownership	All forest resources and forest lands owned by the State
Public Administration (as for 2010)	Forest lands owned by the state at the regional government scale
Public Administration (as for 2010)	Forest lands owned by the Ministry of defence of the RF
Public Administration (as for 2010)	Forest lands owned by the City authorities
Public Administration (as for 2010)	Forest lands of the strict conserved territories owned by the Ministry of natural resources and ecology of the Russian Federation
Public Administration (as for 2010)	Other forest lands

## 18.2.3 Original data

Public Administration (as for 2010)	Forest lands, 1000 ha	%
Forest lands owned by the state at the regional government scale	862575.3	96.71
Forest lands owned by the Ministry of defence of the RF	3952.3	0.44
Forest lands owned by the city authorities	1110.6	0.12

Forest lands of the strict conserved territories owned by the Ministry of natural resources of the Russian Federation	17850.3	2.00
Other forest lands*)	6466.4	0.72
<b>Total</b>	<b>891954.9</b>	<b>100.00</b>

\*) - Forests without owners.

### 18.3 Analysis and processing of national data

#### 18.3.1 Adjustment

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#### 18.3.2 Estimation and forecasting

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#### 18.3.3 Reclassification

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### 18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	808949.9	809268.5	808790	808669.2
	... of which owned by the state at national scale	808949.9	809268.5	808790	0
	... of which owned by the state at the sub-national government scale	0	0	0	808669.2
	Private ownership	0	0	0	0
	... of which owned by individuals	0	0	0	0
	... of which owned by private business entities and institutions	0	0	0	0

	... of which owned by local, tribal and indigenous communities	0	0	0	0
	Unknown ownership	0	0	0	6466.4
TOTAL		808949.90	809268.50	808790.00	815135.60

## Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 3	Tier 3
Private ownership	Tier 3	Tier 3
Unknown ownership	Tier 2	Tier 2

## Tier criteria

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

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	808949.9	721556.5	671357.6	608850.6
Individuals	0	0	0	0
Private companies	0	87712	137432.4	193352.2
Communities	0	0	0	0
Other	0	0	0	6466.4
TOTAL	808949.90	809268.50	808790.00	808669.20

Category	Tier for reported trend	Tier for status
Public Administration	Tier 2	Tier 3

Individuals	N/A	N/A
Private companies	Tier 2	Tier 3
Communities	N/A	N/A
Other	Tier 2	Tier 2

### 18.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Public ownership	Forest resources and forest lands owned by the State, according to Forest Code of the RF in 1997 and 2006.	The new Forest Code RF (2006) is installed since 2007. According to it, the forest resources on the rented land could be owned by the private companies and other users.
Private ownership	No	N/A
Unknown ownership	No	N/A
Management rights	The private companies and other users rented of the state forest lands for the purpose of resources used.	Long-term (<50; <100 yr) rent of forest lands for the purpose of wood cutting, conducting hunting, non-wood forest using, recreation, etc.

#### Other general comments to the table

Individuals could rent state forest lands, but there is no data on this category. Total area of rented forests, that could include area rented by individuals, is reported under category “Private corporations and institutions”.

## 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	The basic parameters of forestry activity for 1988, 1992-2011 years// Roslesinforg, 2012	Employment in forestry	2000 –2010	Workers and employees in forestry (without logging)
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

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### 19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	N/A	201	170	74
	... of which female	N/A	N/A	N/A	N/A

#### 19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	The workers and employees of forestry system only (without logging). Unfortunately, we have no data on number of workers occupied at timber cuttings.	Employment reduction in forestry is result from bad reform of a silvaculture in the Russian Federation.

#### Other general comments to the table

After acceptance of the new Forest Code (2006), forest guards was completely dismissed, the workers of "leskhoz" (old forest enterprises) and employees of the forest inventory organizations are reduced.

## 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)	74114.32	Russian ruble(re-denom.1:1000)	2011

### 20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices)	FAO data

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	THE RUSSIAN FEDERATION FOREST SECTOR OUTLOOK STUDY TO 2030 (FAO, 2012)	Government target	2020 2030	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

### 21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	822000	825000

Table 21b

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

### 21.4 Comments

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Category	Comments
Government target/aspiration for forest area	Extrapolation data modeling
Forests earmarked for conversion	No data

Other general comments

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