

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

Latvia

Rome, 2014

FAO, at the request of its member countries, regularly monitors the world's forests and their management and uses through the Global Forest Resources Assessment (FRA). This country report is prepared as a contribution to the FAO publication, the Global Forest Resources Assessment 2015 (FRA 2015).

The content and the structure are in accordance with the recommendations and guidelines given by FAO in the document Guide for country reporting for FRA 2015 (<http://www.fao.org/3/a-au190e.pdf>). These reports were submitted to FAO as official government documents.

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Introductory Text

Place an introductory text on the content of this report

It can be said with ample certainty that Latvia is a land of forests and timber is the country's green gold. Nearly every resident of Latvia is involved with the forest, forestry and forest products in one way or another. For some people, the forest is a major source of revenues, others see it as a place to spend free time, a place to go hunting or, on the contrary, a place that must be watched with full respect from the sidelines so as to see environmental processes in the woods. Some people pick mushrooms and berries in the forest, while others visit it to breathe in fresh air and to find new and creative ideas.

The forest has deep roots in our cultural traditions, it offers ways of spending one's free time, and it allows people to earn money. Timber has been used for centuries in construction and the manufacturing of furniture and various household objects. Since the restoration of Latvia's independence, moreover, the forestry sector has become one of the most important sectors in the country's economy. The forest is one of the most important resources for the development of rural regions.

The success of Latvia's forest sector has everything to do with the fact that all of these seemingly diverse interests have been successfully harmonised. Compromise has been achieved so as to ensure sustainable forest management. Latvia's official forest policy speaks to the agreement reached in terms of its principles and goals among members of the public, environmental activists and representatives of the wood processing industry.

The forest covers 3.354 million hectares of land in Latvia, or 52% of the country's territory. Latvia is the fourth highest forest cover among all EU countries.

Wood in Latvia is the main resource and in comparison for example with oil, that sooner or later will run low, wood is renewable. Taking a good care of it and using with consideration we will not exhaust it but on contrary – increase this treasure. Wood processing industry is the second largest producing industry in Latvia.

The most important producers of official forestry statistics, in Latvia are the State Forest Service, the National Forest Inventory, State Land Service and Central Statistical Bureau. The main data source for estimates of

forest resource parameters since 2008 is National Forest Inventory. This work has been done since 2003 by the Latvian State Forest Research Institute “Silava”.

The other important producer of official forestry statistics is the State Forest Service

Forest inventories that are conducted at the level of forest districts make it possible to plan and implement forest management plans in each specific area. It shall be a duty of a forest owners or lawful possessors to perform, in the forests of their ownership or lawful possession, the first time forest inventory and to submit these materials to the State Forest Service as well as at least once in 20 years and in other cases required by regulatory enactments perform repeated forest inventory.

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
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1	The Land Fund of the Republic of Latvia Prepared by Ministry of Agriculture Department of the organization of the use of land (As of November 1, 1990)	Land use categories	1990	N/A
2	Land use balance Prepared by State Land Service	Land use categories	2000, 2005, 2006, 2007, 2008, 2010, 2012	N/A
3	Information of Forest resources prepared by The State Forest Service (Source - National Forest register)	Area of forest, forest infrastructure, gaps	1988, 1994, 2000, 2005	N/A
4	Information of Forest resources from National Forest Inventory	Area of forest, forest infrastructure, gaps	2008, 2012	N/A
5	FAOSTAT	Total land area Inland water bodies	2000, 2005, 2010	N/A
6	State Forest Service	Afforestation, Reforestation	1988 – 2012	N/A
7	Information of Forest resources from National Forest Inventory	Natural expansion of forest	1988 – 2012	N/A

1.2.2 Classification and definitions

National class	Definition
Forest	A forest is an ecosystem in all stages of its development, dominated by trees the height of which at the particular location may reach at least five metres and the present or potential projection of the crown of which is at least 20 per cent of the area occupied by the forest stand;
Forest land	Forestland is land covered by forest, land under forest infrastructure facilities, as well as adjacent overflowing clearings, marshes and glades. A forest is an ecosystem in all stages of its development, dominated by trees the height of which at the particular location may reach at least seven metres and the present or potential projection of the crown of which is at least 20 per cent of the area occupied by the forest stand. The following shall not be regarded as forest: 1) Areas separate from forests, covered with trees, the size of which does not exceed 0.5 hectare; 2) Rows of trees of artificial or natural origin, the width of which is less than 20 metres; and 3) Orchards, parks, cemeteries and forest tree seed orchards.
Gaps	Small open areas in forest with characteristic plant cover.
Farmland	Farmland includes: arable land, orchards, meadows and pastures.
Bushland	Land, which is evenly overgrown with wooden plants, which does not have trunk normally (such as osiers, buckthorns, woodbines, guelder-roses, spindletrees, currants, hazels, junipers, rowan-trees, bird-cherries etc.).

Bogs	Humid peat land which can't be used in agriculture and which is not forest.
Yards	Land under buildings, constructions and courtyards, as well as land which is needed for maintenance of buildings and constructions.
Roads	Land under streets, roads and railways.
Water bodies	Land under rivers, lakes, ponds, water reservoirs
Other land	Sand areas, dingles, steep slopes, and land which is used for mineral mining and for other non-agricultural needs.
Afforestation	Establishment of forest through planting and/or deliberate seeding on land that, until then, was not classified as forest. Cultivation of naturally overgrown agricultural lands and classification as forest not included.
Reforestation	Re-establishment of forest through planting and/or deliberate seeding on land classified as forest. Exclude natural regeneration of forest.

1.2.3 Original data

Forest area				
<p>There are two main sources of information, which were used. The State Land Service Register, which maintain information on land use and the State Forest Service register which only contains information on forestland. Forest area used in Question 1 is given according to the register of State Forest Service because it provides more detailed information on forestland.</p> <p>Since 2008 information about forest area has been acquired from national forest inventory data.</p>				
National class	1988	1990	1994	2000
Forest land	3197	3224	3277	3209
Forest	2757	2778	2820	2888
Forest infrastructure, gaps, bogs and marches of which	440	446	457	321 (100%)
Forest infrastructure		89		64 (20%)
Gaps		40		28 (9%)
Bogs				218 (68%)

Marches				10 (3%)
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Italic (1990) is estimated as following. Forest area in 1990 is calculated by liner interpolation using data 1998 and 1994. Likewise, forest infrastructure, gaps, bogs and marches in 1990 was estimated by interpolation.

Forest infrastructure and gaps were calculated by multiplying the percentage of forest infrastructure and gaps among “forest infrastructure, gaps, bogs and marches” in 2000.

National class	Area, 1000 ha					
	1990	2000	2005	2008	2010	2012
Forest	2778	2888	2950	3220,9	3248	3236
Forest infrastructure	89	64	53	81,4	75	89
Gaps	40	28	35	28,8	31	31
Bushland	112	120	115	115	114	112
Orchards	21	29	29	29	29	29
Land under water	255	254	235	238	238	238
Total area for country	6459	6459	6459	6459	6456	6456

Forest expansion, reforestation

National class	hectares/year					
	1988	1989	1990	1991	1992	average for the year
Afforestation	0	0	0	0	0	0
Reforestation	6259	6114	5629	6813	5899	6143
of which artificial	6259	6114	5629	6813	5899	6143

National class	hectares/year					
	1998	1999	2000	2001	2002	average for the year
Afforestation	0	282	416	469	383	310
Reforestation	14 189	17 447	25 287	15 164	17 973	18 012
of which artificial	7412	8800	8609	8005	8774	8320

National class	hectares/year					
	2003	2004	2005	2006	2007	average for the year
Afforestation	886	1788	1804	2008	1917	1681
Reforestation	29 411	37 571	34 795	29 488	36 190	33 491
of which artificial	10408	11972	11676	10999	11451	11301
Deforestation	483	336	359	497	423	420
...of which human induced	483	336	359	497	423	420

National class	hectares/year					
	2008	2009	2010	2011	2012	average for the year
Afforestation	1 215	2 277	1 598	3 542	2 739	2274
Reforestation	40621	34445	32205	35230	35230	35546
of which artificial	11211	10574	10811	12908	13290	11759
Deforestation	426	404	271	345	310	351
...of which human induced	426	404	271	345	310	351

Natural expected forests in abandoned agriculture land

	1988 - 1997	1998 - 2007	2008-2012
Total natural expansion of forest in 10 year period, hectares	47240	66320	X
Total natural expansion of forest in 5 year period, hectares	X	X	2403
average for the year, hectares	4724	6632	481

1.3 Analysis and processing of national data

1.3.1 Adjustment

The FAOSTAT figure for inland water in 2005 (230,000ha) differs from national data (254,000ha). In order to align the figure to FAOSTAT, the difference is allocated to the category “Other Land”, and the area of forest/ other wooded land is not affected by the calibration.

The land area figures for country match with the land area figure with FAOSTAT. Therefore, there is no need to calibrate the national data of land area.

1.3.2 Estimation and forecasting

The data year 2008, the first cycle of national forest inventory, differs significantly from the data used till now. Data of national forest inventory are more precise compared to the data used till now. Difference between original data of years 2005 and 2008 does not characterize the changes in forest area. The difference is due to the use of more precise methods.

Hence the original data in 2008 is used as the basis for the estimation of forest, and apply the annual change rate.

$$EF_{2010} = DF_{2008} + DF_{2008} \times ACR_{2000-2005} \times 2$$

$$EF_{2005} = DF_{2008} - DF_{2008} \times ACR_{2000-2005} \times 3$$

$$EF_{2000} = DF_{2008} - DF_{2008} \times ACR_{2000-2005} \times 8$$

$$EF_{1990} = EF_{2000} - EF_{2000} \times ACR_{1990-2000} \times 10$$

* DF (Data of Forest), EF (Estimated Forest), ACR (Annual Change rate)

The same procedure was applied for estimating bushland area. Inland water was taken from FAOSTAT data and other land was estimated by difference.

Annual change rates

Year	1990- 2000			2001-2005		
	National class	Change of forest area	Annual change	Annual change rate	Change of forest area	Annual change
Forest	110	11	0.38%	62	12.4	0.42%
Forest infrastructure	-25	-2.5	-3.91%	-11	-2.2	-4.15%
Gaps	-12	-1.2	-4.29%	7	1.4	4.00%
Bushland	8	0.8	0.67%	-5	-1	-0.87%

Estimation of Forest, Forest infrastructure, Gaps and Bushland

National class	Area (1000 hectares)			
	1990	2000	2005	2010
Forest	2994	3113	3180	3248
Forest infrastructure	150	108	92	75
Gaps	29	20	25	31
Bushland	115	123	118	113

For year 2015 is used data from year 2012 because NFI second cycle results showed that growth of forest area between 2008 to 2012 has stopped. Experts also doesn't predict the growth of forest area between 2012 to 2015.

1.3.3 Reclassification

	Forest	Other wooded land	Other land	Total	OLWTC

Forest	100%			100%	
Forest infrastructure	100%			100%	
Gaps	100%			100%	
Bush land		100%		100%	
Orchards			100%	100%	100%

1.4 Data

Table 1a

Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	3173	3241	3297	3354	3356
	Other wooded land	115	123	118	113	112
	Other land	2932	2856	2805	2753	2752
	... of which with tree cover	21	29	29	29	29
	Inland water bodies	228	228	228	228	228
	TOTAL	6448.00	6448.00	6448.00	6448.00	6448.00

Table 1b

Categories		Annual forest establishment / loss (000 hectares per year)				...of which of introduced species (000 hectares per year)			
		1990	2000	2005	2010	1990	2000	2005	2010
	Forest expansion	4.724	6.942	8.313	2.755	0	0	0	0
	... of which afforestation	0	0.31	1.681	2.274	0	0	0	0
	... of which natural expansion of forest	4.724	6.632	6.632	0.481	0	0	0	0
	Deforestation	N/A	N/A	0.42	0.321	N/A	N/A	0	0
	... of which human induced	N/A	N/A	0.42	0.321	N/A	N/A	0	0
	Reforestation	6.143	18.012	33.491	35.546	0	0	0	0

	... of which artificial	6.143	8.32	11.301	11.759	0	0	0	0
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Tiers

Category	Tier for status	Tier for reported trend
Forest	Tier 3	Tier 2
Other wooded land	Tier 3	Tier 2
Forest expansion	Tier 3	Tier 2
Deforestation	Tier 3	Tier 2
Reforestation	Tier 3	Tier 3

Tier criteria

Category	Tier for status	Tier for reported trend
<ul style="list-style-type: none"> • Forest • Other wooded land • Afforestation • Reforestation • Natural expansion of forest • Deforestation 	<p>Tier 3 : Data sources: Either recent (less than 10 years ago) National Forest Inventory or remote sensing, with ground truthing, or programme for repeated compatible NFIs</p> <p>Tier 2 : Data sources: Full cover mapping / remote sensing or old NFI (more than 10 years ago)</p> <p>Tier 1 : Other</p>	<p>Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status)</p> <p>Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status)</p> <p>Tier 1 : Other</p>

1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends

Forest	<p>Definitions used in national level differs from FRA 2010 definitions - minimal area for land use category is 0.1 ha not 0,5 ha. Another assumptions - 1) separate areas of bush land less than 0.5 ha is not considerable amount; 2) in reality variables used in national forest definition (the height of trees at the particular location may reach at least seven metres and the present or potential projection of the crown is at least 20 per cent of the area occupied by the forest stand) do not make significant changes in forest area. Since 2011 definitions of forest have changed. Minimal area for land use category is 0.5 ha. Data from NFI 2012 proving our expert estimation - variables used in national forest definition until 2012 (the height of trees at the particular location may reach at least seven metres and the present or potential projection of the crown is at least 20 per cent of the area occupied by the forest stand and minimal area for land use category 0.1 ha) did not make changes in forest area. No one NFI plot don't change land use category.</p>	<p>In 2008 data of the first cycle of national forest inventory was acquired. The data acquired differs significantly from the data used till now. Data of national forest inventory are more precise compared to the data used till now. Difference between years 2005 and 2008 does not characterize the changes in forest area. The difference is due to the use of more precise methods. Increase in forest area is due to natural growth of forest in abandoned agricultural lands. Only over the last five years there have been no changes. According to national forest inventory data, the actual beginning of this process started 40 years ago, but the most rapid decrease was in the last 10 years when the forest area reached 66 thousand ha. And NFI second cycle results (2012) shows that the growth of forestland has almost stopped. It is mostly because of abandoned agricultural land been restored for agriculture purpose.</p>
Other wooded land	N/A	N/A
Other land	N/A	N/A
Other land with tree cover	N/A	N/A
Inland water bodies	N/A	N/A
Forest expansion	N/A	N/A
Deforestation	N/A	N/A
Reforestation	N/A	N/A

Other general comments to the table

N/A

2. What is the area of natural and planted forest and how has it changed over time?

Documents for this question:

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

2.1 Categories and definitions

Term	Definition
Naturally regenerated forest	Forest predominantly composed of trees established through natural regeneration.
Naturalized introduced species	Other naturally regenerated forest where the tree species are predominantly non-native and do not need human help to reproduce/maintain populations over time.
Introduced species	A species, subspecies or lower taxon occurring outside its natural range (past or present) and dispersal potential (i.e. outside the range it occupies naturally or could occupy without direct or indirect introduction or care by humans).
Category	Definition
Primary forest	Naturally regenerated forest of native species where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed.
Other naturally regenerated forest	Naturally regenerated forest where there are clearly visible indications of human activities.
...of which of introduced species (<i>sub-category</i>)	Other naturally regenerated forest where the trees are predominantly of introduced species.
...of which naturalized (<i>sub-sub category</i>)	Other naturally regenerated forest where the trees are predominantly of naturalized introduced species.
Planted forest	Forest predominantly composed of trees established through planting and/or deliberate seeding.
...of which of introduced species (<i>sub-category</i>)	Planted forest where the planted/seeded trees are predominantly of introduced species.
Mangroves	Area of forest and other wooded land with mangrove vegetation.
...of which planted (<i>sub-category</i>)	Mangroves predominantly composed of trees established through planting.

2.2 National data

2.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	State Forest Service	Planted forest, planted forest of introduced species primary forest	2000, 2005, 2010, 2012	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
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2.2.2 Classification and definitions

National class	Definition
Strict and regulatory regime zone of nature reserves	Territories untouched by human activities or nearly natural, where unhindered development of natural processes is ensured, in order to protect and study rare and typical ecosystems and their parts. In the zone of strict regime all natural resources are completely excluded from economic and other activities.
Strict regime zone of national parks	National parks are broad areas which are characterised by outstanding nature formations of national significance, landscapes and cultural heritage landscapes untouched by human activities or nearly natural, a diversity of habitats, abundance of cultural and historical monuments, and peculiarities of cultural environment. In the zone of strict regime all natural resources are completely excluded from economic and other activities.
N/A	N/A
N/A	N/A

2.2.3 Original data

Primary forest					
	Forest area*, hectares				
	2000	2005	2008	2010	2012
Strict regime zone of nature reserves	1402	2828	2768	2833	398
Regulatory regime zone of nature reserves	10553	5007	5327	5556	8303
Strict regime zone of national parks	3271	6145	6497	6529	6521
Total (primary forest)	15226	13980	14592	14919	15233

* – area of gaps and infrastructure not included.

Planted forest

National class	Forest area*, (1000 hectares)					
	1990	2000	2005	2008	2010	2012
Planted forest		631,8	618,7	603,2	603,2	590
of which of introduced species	1,7	1,7	1,7	1,7	1,7	1,7

* – area of gaps and infrastructure not included.

- expert estimation:

- 1) Primary forest area in the period of 1990 to 2000 has not changed.
- 2) Planted forest area in the period of 1990 to 2000 has changed according to the changes in the forest area.
- 3) Other naturally regenerated forest area is total forest area subtracted by planted forest area and primary forest area.

2.3 Analysis and processing of national data

2.3.1 Adjustment

Calibration from national forest area categories to FRA forest area categories

	1990	2000	2005	2010	2012/15
Forest area according to national categories	2778	2888	2950	3248	3236
Forest area according to FRA categories	3173	3241	3297	3354	3356
Calibration factor (Forest area according to FRA categories / Forest area according to national categories)	1.142	1.122	1.118	1,033	1,037

Calibrated national data

National class	Forest area, hectares				
	2000	2005	2008	2010	2012
Total primary forest	17087	15624	15195	15487	15808
Planted forest	709025	691476	628107	628107	611690

2.3.2 Estimation and forecasting

Since national forest inventory data is collected in a five-year cycle and the first cycle was finished in 2008, for the next five years in the second cycle data of year 2008 will be used.

For year 2015 is used data from year 2012 because NFI second cycle results showed that growth of forest area between 2008 to 2012 has stopped. Experts also doesn't predict the growth of forest area between 2012 to 2015.

2.3.3 Reclassification

FRA 2015 Categories	National class
Primary forest	Strict and regulatory regime zone of nature reserves
	Strict regime zone of national parks
Other naturally regenerated forest	Remaining forest area
Planted forest	Planted forest
...of which of introduced species	Planted forest of introduced species

2.4 Data

Table 2a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	17	17	16	15	16

	Other naturally regenerated forest	2432	2515	2590	2711	2728
	... of which of introduced species	0	0	0	0	0
	... of which naturalized	0	0	0	0	0
	Planted forest	724	709	691	628	612
	... of which of introduced species	1.9	1.9	1.9	1.8	1.8
TOTAL		3173.00	3241.00	3297.00	3354.00	3356.00

Table 2b

Primary forest converted to (000 ha)								
1990-2000			2000-2010			2010-2015		
Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land	Other natural regeneration	Planted	Other land
0	0	0	N/A	0	0	0	0	0

Table 2c

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

Tiers

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

Tier Criteria

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

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	N/A	Primary forest data change for year 2005, 2010 is not related to transition to other category. It is explained by zoning changes in nature reserves and national parks.
Other naturally regenerating forest	N/A	N/A
Planted forest	N/A	Planted forest area between 2005 and 2013 have been reduced by 28600 hectares. Area decrease has occurred despite the fact that every year the regeneration of forest by planting or seeding is 11 thousand hectares. Planted forest area reduction occurred because since 1995 has significantly reduced the proportion of planted forests in forest regeneration. If until 1995 the proportion of planted forests in forest regeneration was almost 100% after 1998 it is already below 50% and by 2012 the decrease already below 37%. In turn, before 1990 artificial regeneration had a strong national policy and forest management regulatory requirement. But after 1995, when the property recovered by private forest owners, there was a rapid increase in the proportion of natural forest regeneration. This has given rise to a whole Planted forest area reduction.
Mangroves	N/A	N/A

Other general comments to the table

N/A

3. What are the stocks and growth rates of the forests and how have they changed?

Documents for this question:

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

3.1 Categories and definitions

Category	Definition
Growing stock	Volume over bark of all living trees with a minimum diameter of 10 cm at breast height (or above buttress if these are higher). Includes the stem from ground level up to a top diameter of 0 cm, excluding branches.
Net Annual Increment (NAI)	Average annual volume of gross increment over the given reference period less that of natural losses on all trees, measured to minimum diameters as defined for "Growing stock".
Above-ground biomass	All living biomass above the soil including stem stump branches bark seeds and foliage.
Below-ground biomass	All biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Dead wood	All non-living woody biomass not contained in the litter either standing lying on the ground or in the soil. Dead wood includes wood lying on the surface dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in above-ground biomass	Carbon in all living biomass above the soil including stem stump branches bark seeds and foliage.
Carbon in below-ground biomass	Carbon in all biomass of live roots. Fine roots of less than 2 mm diameter are excluded because these often cannot be distinguished empirically from soil organic matter or litter.
Carbon in dead wood	Carbon in all non-living woody biomass not contained in the litter, either standing, lying on the ground, or in the soil. Dead wood includes wood lying on the surface, dead roots and stumps larger than or equal to 10 cm in diameter or any other diameter used by the country.
Carbon in litter	Carbon in all non-living biomass with a diameter less than the minimum diameter for dead wood (e.g. 10 cm) lying dead in various states of decomposition above the mineral or organic soil.
Soil carbon	Organic carbon in mineral and organic soils (including peat) to a soil depth of 30 cm.

3.2 National data

3.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Information of Forest resources prepared by The State Forest Service	Growing stock on forest	1988, 1994, 2000, 2005	N/A
2	Information of Forest resources prepared by The State Forest Service	Growing stock by species	2000, 2005	N/A
3	Information of Forest resources from National Forest Inventory	Growing stock on forest, Dead wood	2008, 2012	N/A

4	Information of Forest resources from National Forest Inventory	Growing stock by species	2010,	N/A
5	Information of Forest resources from National Forest Inventory	Growing stock on other wooded land	N/A	N/A
6	LATVIA'S NATIONAL INVENTORY REPORT submitted under United Nations Convention on Climate Change	factors for converting growing stock to biomass Biomass stock converting factor to carbon stock Average amount of litter found in the BioSoil plots (tonnes C ha-1) soil organic carbon stock in mineral soil (tonnes C ha-1	N/A	N/A
7	Data from Question 1	Forest area, area of other wooded land	1990 2000 2005 2008, 2012	N/A
8	Information of Forest resources from National Forest Inventory	Dead wood on forest	2008, 2012	N/A
9	Information of Forest resources from National Forest Inventory	Net annual increment	2012	N/A

3.2.2 Classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees more than 10 cm in diameter at breast height (or above buttress if these are higher). Includes the stem from ground level up to a top diameter of 0 cm. Does not include branches.
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 stock	No national classification is available.
N/A	N/A

3.2.3 Original data

Growing stock

National class	Million m ³					
	1988	1994	2000	2005	2008	2012
Growing stock on forest according to the old definition	432	489	546	569	633	682
Growing stock on forest according to the new definition			537	557	614	665

Growing stock on other wooded land m ³ per hectare	16,95
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National class	1990	2000	2005	2008	2012
Area of other wooded land T1 (1000 hectares)	115	123	118	113	112
Growing stock on other wooded land, million m ³	1.9	2.1	2.0	1.9	1.9

Growing stock composition. (DBH 10 CM)

Scientific name	Common name	2000	2005	2010
<i>Pinus sylvestris</i>	Scots pine	232.4	244	227.4

<i>Betula*</i>	Silver birch	152.1	155.1	149.4
<i>Picea abies</i>	Norway spruce	87.8	84.5	99.3
<i>Populus tremula</i>	Aspen	19.2	23.3	55.6
<i>Alnus incana</i>	Grey alder	25.8	28.5	36.3
<i>Alnus glutinosa</i>	Common alder	13.3	15	34
<i>Fraxinus excelsior</i>	European ash	3.3	3.6	5.5
<i>Quercus robur</i>	Common oak	2	2	3.9
Remaining		0.9	1	2.6
01		537	557	614

* – *Betula pendula* and *Betula pubescens*

Species composition, 1994

	Scientific name	Common name	Growing stock, %
	<i>Pinus sylvestris</i>	Scots pine	40,5
	<i>Betula*</i>	birch	24,2
	<i>Picea abies</i>	Norway spruce	19,8
	<i>Alnus incana</i>	Grey alder	4,6
	<i>Populus tremula</i>	Aspen	6,1
	<i>Alnus glutinosa</i>	Common alder	3,5
	<i>Fraxinus excelsior</i>	European ash	0,6
	<i>Quercus robur</i>	Common oak	0,4
	Other		0,3

* – *Betula pendula* and *Betula pubescens*

Biomass stock

Dead wood for year 1990 and 2000 is 6 m³ per hectare (expert assumption)

Dead wood for year 2005 is 17,7 m³ per hectare (expert assumption based on data from National forest inventory)

Data for 2008 and 2012 are original data from the national forest inventory

Dead wood on other wooded land is 0 (expert assumption)

	1990	2000	2005	2008	2012
M ³ /ha	6	6	17,7	17,7	23,9
Dead wood total milj.m ³	17	18	53,7	56,0	77,2

Carbon stock

Year	AGB (above ground biomass)	Converting factor	Carbon in above- ground biomass	BGB (below ground biomass)	Converting factor	Carbon in below- ground biomass	Dead wood biomass	Converting factor	Carbon in dead wood
1990	287.3	0.5	143.75	91.9	0.5	46	10.2	0.5	5.1
2000	349.1	0.5	174.6	111.7	0.5	55.9	10.8	0.5	5.4
2005	362.1	0.5	181.1	115.9	0.5	58	32.2	0.5	16.1
2008	399.1	0.5	199.6	127.7	0.5	63.9	33.6	0.5	16.8
2012	432.3	0.5	216.2	138.3	0.5	69.2	46.3	0.5	23.2

Other wooded land

Year	AGB (above ground biomass)	Converting factor	Carbon in above- ground biomass	BGB (below ground biomass)	Converting factor	Carbon in below- ground biomass
1990	1.23	0.5	0.615	0.39	0.5	0.195
2000	1.36	0.5	0.68	0.42	0.5	0.215
2005	1.30	0.5	0.65	0.39	0.5	0.205
2008	1.23	0.5	0.615	0.39	0.5	0.195
2012	1.23	0.5	0.615	0.39	0.5	0.195

Carbon stock in litter

Year	Average amount of litter found in the BioSoil plots (tonnes C ha ⁻¹)	Forest area (Million hectares)	Carbon in litter (Million metric tonnes)	Area of other wooded land (Million hectares)	Carbon in litter (Million metric tonnes)
1990	21.2	3.173	67.26	0.115	2.43
2000	21.2	3.241	68.70	0.123	2.60
2005	21.2	3.297	69.89	0.118	2.43
2008	21.2	3.331	70.61	0.113	2.39
2012	21.2	3.356	71.15	0.112	2.37

Soil carbon

There are used IPCC default values per hectare (Guidelines for country reporting to FRA 2010 Appendix 5, table 5.10)

Year		Area of HAC soils (Million hectares)	Soil organic C stocks (Tones C ha-1)	Carbon (Million metric tonnes)	Area of sandy soil	Soil organic C stocks (Tones C ha-1)	Carbon (Million metric tonnes)
1990	Dry soil	1.086	50	54.30	0.319	34	10.85
	moist soil	0.306	95	29.07	0.090	71	6.39
2000	Dry soil	1.110	50	55.50	0.326	34	11.08
	moist soil	0.313	95	29.74	0.092	71	6.53
2005	Dry soil	1.129	50	56.45	0.332	34	11.29
	moist soil	0.318	95	30.21	0.094	71	6.67
2008	Dry soil	1.141	50	57.05	0.335	34	11.39
	moist soil	0.322	95	30.59	0.095	71	6.75
2012	Dry soil	1.149	50	57.05	0.338	34	11.39
2012	moist soil	0.324	95	30.59	0.095	71	6.75

Year	Area of spodic soil	Soil organic C stocks (Tones C ha-1 in 0-30 cm depth)	Carbon (Million metric tonnes)	Area of wetland soil	Soil organic C stocks (Tones C ha-1 in 0-30 cm depth)	Carbon (Million metric tonnes)
1990	0.568	115	65.32	0.803	87	69.86
2000	0.580	115	66.7	0.820	87	71.34
2005	0.590	115	67.85	0.834	87	72.55
2008	0.596	115	68.54	0.843	87	73.34
2012	0.601	115	69.12	0.849	87	73.86

Year		Area of OWL (Million hectares)	Soil organic C stocks (Tones C ha-1)	Carbon (Million metric tonnes)
1990	Dry soil	0.090	50	4.50
	moist soil	0.025	95	2.38
2000	Dry soil	0.096	50	4.80
	moist soil	0.027	95	2.57
2005	Dry soil	0.092	50	4.60
	moist soil	0.026	95	2.47
2008	Dry soil	0.088	50	4.40
	moist soil	0.025	95	2.38
2012	Dry soil	0.087	50	4.35
2012	moist soil	0.025	95	2.38

Percentage of soil types (expert assumption)

HAC	43,9 %
Sandy soil	12,9 %
Spodic soil	17,9 %
Wetland soil	25,3 %
	100 %

Dry soil – 78 %; moist soil 22 %

3.3 Analysis and processing of national data

3.3.1 Adjustment

Not needed.

3.3.2 Estimation and forecasting

Growing stock

Estimation for 1990 using linear interpolation - Calculation of differences

#x (1994-1988)	6	Time between observations
#y growing stock (489-432)	57	Difference between observed values
#y y growing stock /#x	9,5	Difference per year
	98	Percentage of the growing stock, which correspondsto the new definition

Estimations

National class	Million m³
	1990
Growing stock on forest	451
Growing stock on forest, according to the newdefinition	442

Forecasting

For year 2010 data of national forest inventory for year 2008 is used. Since national forest inventory data is collected in a five-year cycle and the first cycle was finished in 2008, for the next five years in the second cycle data of year 2008 will be used.

For year 2015 data of national forest inventory for year 2012 is used.

Biomass stock

There are used country specific factors for converting growing stock to biomass.

Forest

Year	Growing stock Million m ³	WD (basic wood density)	BEF (Biomass expansion factor)	AGB (above ground biomass)	R (root-shoot ratio)	BGB (below ground biomass)	Dead wood biomass	Conversion factor	Carbon in dead wood
1990	442	0,5	1,3	287.3	0,32	91.9	10.2	0,5	0,51
2000	537	0,5	1,3	349.1	0,32	111.7	10.8	0,5	0,54
2005	557	0,5	1,3	362.1	0,32	115.9	32.22	0,5	16,11
2008	614	0,5	1,3	399.1	0,32	127.7	33.6	0,5	16,8
2012	665	0,5	1,3	432.3	0,32	138.3	46.32	0,5	32.1

Other wooded land

Year	Growing stock Million m ³	WD (basic wood density)	BEF (Biomass expansion factor)	AGB (above ground biomass)	R (root-shoot ratio)	BGB (below ground biomass)
1990	1,9	0,5	1,3	1,23	0,32	0,39
2000	2,1	0,5	1,3	1,36	0,32	0,43
2005	2,0	0,5	1,3	1,30	0,32	0,41
2008	1,9	0,5	1,3	1,23	0,32	0,39
2012	1,9	0,5	1,3	1.23	0,32	0,39

For year 2010 data of national forest inventory for year 2008 is used. Since national forest inventory data is collected in a five-year cycle and the first cycle was finished in 2008, for the next five years in the second cycle data of year 2008 will be used.

Carbon stock

For year 2010 data of national forest inventory for year 2008 is used. Since national forest inventory data is collected in a five-year cycle and the first cycle was finished in 2008, for the next five years in the second cycle data of year 2008 will be used.

3.3.3 Reclassification

3.4 Data

Table 3a

Category		Growing stock volume (million m ³ over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	442	537	557	614	665	1.9	2.1	2	1.9	1.9
	... of which coniferous	267	320	329	327	356	0	0	0	0	0
	... of which broadleaved	175	217	228	287	309	1.9	2.1	2	1.9	1.9

Table 3b

Category/Species name			Growing stock in forest (million cubic meters)			
Rank	Scientific name	Common name	1990	2000	2005	2010
1 st	<i>Pinus sylvestris</i>	Scots pine	179.1	232.4	244	227.4
2 nd	<i>Betula pendula</i> *	Silver birch	107.1	152.1	155.1	149.4
3 rd	<i>Picea abies</i>	Norway spruce	87.5	87.8	84.5	99.3
4 th	<i>Populus tremula</i>	Aspen	27	19.2	23.3	55.6
5 th	<i>Alnus incana</i>	Grey alder	20.3	25.8	28.5	36.3
6 th	<i>Alnus glutinosa</i>	Common alder	15.4	13.3	15	34
7 th	<i>Fraxinus excelsior</i>	European ash	2.6	3.3	3.6	5.5
8 th	<i>Quercus robur</i>	Common oak	1.7	2	2	3.9
9 th	N/A	N/A	N/A	N/A	N/A	N/A

10 th	N/A	N/A	N/A	N/A	N/A	N/A
Remaining			1.3	0.9	1	2.6
TOTAL			442.00	536.80	557.00	614.00

THE PRE-FILLED VALUES FOR GROWING STOCK REFER TO THE FOLLOWING THRESHOLD VALUES (SEE TABLE BELOW)

Item	Value	Complementary information
Minimum diameter (cm) at breast height of trees included in growing stock (X)	0	N/A
Minimum diameter (cm) at the top end of stem for calculation of growing stock (Y)	0	N/A
Minimum diameter (cm) of branches included in growing stock (W)	N/A	Not included
Volume refers to above ground (AG) or above stump (AS)	AG	N/A

PLEASE NOTE THAT THE DEFINITION OF GROWING STOCK HAS CHANGED AND SHOULD BE REPORTED AS GROWING STOCK DBH 10 CM INCLUDING THE STEM FROM GROUND LEVEL UP TO A DIAMETER OF 0 CM, EXCLUDING BRANCHES.

Table 3c

Category		Net annual increment (m ³ per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	N/A	N/A	N/A	6.64	6.64
	... of which coniferous	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	N/A	N/A	N/A	N/A	N/A

Table 3d

Category		Biomass (million metric tonnes oven-dry weight)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Above ground biomass	287.3	349.1	362.1	399.1	432.3	1.23	1.36	1.3	1.23	1.23

	Below ground biomass	91.9	111.7	115.9	127.7	138.3	0.39	0.43	0.41	0.39	0.39
	Dead wood	10.2	10.8	32.2	33.6	46.3	0	0	0	0	0
TOTAL		389.40	471.60	510.20	560.40	616.90	1.62	1.79	1.71	1.62	1.62

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	143.7	174.6	181.1	199.6	216.2	0.62	0.68	0.65	0.62	0.62
	Carbon in below ground biomass	46	55.9	58	63.9	69.2	0.2	0.22	0.21	0.2	0.2
	<i>Subtotal Living biomass</i>	189.6	230.4	239	263.4	285.3	0.82	0.9	0.86	0.82	0.82
	Carbon in dead wood	5.1	5.4	16.1	16.8	23.2	0	0	0	0	0
	Carbon in litter	61.56	63.11	64.34	70.17	71.15	2.37	2.54	2.37	2.37	2.37
	<i>Subtotal Dead wood and litter</i>	66.66	68.51	80.44	86.97	94.35	2.37	2.54	2.37	2.37	2.37
	Soil carbon	235.79	240.89	245.03	247.66	248.76	6.88	7.37	7.07	6.78	6.73
TOTAL		492.15	539.90	564.57	598.13	628.51	10.07	10.81	10.30	9.97	9.92

Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 3	Tier 2
Net annual increment	Tier 2	Tier 2
Above ground biomass	Tier 2	Tier 2
Below ground biomass	Tier 2	Tier 2

Dead wood	Tier 2	Tier 2
Carbon in above-ground biomass	Tier 2	Tier 2
Carbon in below ground biomass	Tier 2	Tier 2
Carbon in dead wood and litter	Tier 2	Tier 2
Soil carbon	Tier 2	Tier 2

Tier criteria

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

3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
Total growing stock	N/A	The original data source doesn't mention why the growing stock increased substantially from 2005 to 2008, however it might be due to the more precise inventory method.

Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	* # White birch <i>Betula pubescens</i> also approximately 5 mln. cubic metres	N/A
Net annual increment	N/A	N/A
Above-ground biomass	N/A	N/A
Below-ground biomass	N/A	N/A
Dead wood	N/A	Dead wood increase is linked to the windfall of 2005. Almost all forests of Latvia were affected. After the windfall most part of affected trees was taken out of the forest. The fallen trees that were not taken out were mostly left in protected areas and in those forest stands where the amount of felled trees was less than 10m ³ per hectare.
Carbon in above-ground biomass	N/A	N/A
Carbon in below-ground biomass	N/A	N/A
Carbon in dead wood	N/A	N/A
Carbon in litter	N/A	N/A
Soil carbon	N/A	N/A

Other general comments to the table

N/A

4. What is the status of forest production and how has it changed over time?

Documents for this question:

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

4.1 Categories and definitions

Term	Definition
Primary designated function	The primary function or management objective assigned to a management unit either by legal prescription documented decision of the landowner/manager or evidence provided by documented studies of forest management practices and customary use.
Non wood forest product (NWFP)	Goods derived from forests that are tangible and physical objects of biological origin other than wood.
Commercial value of NWFP	For the purpose of this table, value is defined as the commercial market value at the forest gate.
Category	Definition
Production forest	Forest area designated primarily for production of wood, fibre, bio-energy and/or non-wood forest products.
Multiple use forest	Forest area designated for more than one purpose and where none of these alone is considered as the predominant designated function.
Total wood removals	The total of industrial round wood removals and woodfuel removals.
...of which woodfuel	The wood removed for energy production purposes, regardless whether for industrial, commercial or domestic use.

4.2 National data

4.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Information of Forest resources prepared by The State Forest Service	Forest area by types of protected territories	1990, 2000, 2005, 2010, 2012	N/A
2	Information of Forest resources prepared by The State Forest Service	State forest	1990, 2000, 2005, 2010, 2012	N/A
3	Study "Evaluation of Contribution of Non-wood Product and Services to the Economy of Latvia"	NWFP quantity and value	2010	N/A
4	N/A	N/A	N/A	N/A

4.2.2 Classification and definitions

National class	Definition
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Restricted economic activity zone along the Baltic sea and Bay of Riga	A restricted economic activity zone up to a width of 5 kilometres is determined taking into account natural circumstances, in order to decrease the negative effects of pollution in the Baltic Sea, to preserve the protective functions of the forest, to eliminate the development of erosion processes, to protect the coastal landscapes, to ensure preservation and protection of coastal natural resources, including resources necessary for leisure and tourism and other territories important for society, and balanced and the continuous utilisation of them.
Forests within the administrative territories of cities	Forests within the administrative territories of cities
Protection zones surrounding urban territories	Protection zones surrounding urban territories are determined to ensure appropriate conditions for recreation and improvement of health for urban population, as well as to decrease or compensate the negative effects of cities to environment.
Forests within the administrative territories of cities	Forests within the administrative territories of cities
Production forest	The total forest area, excluding forests for soil and water protection, biodiversity conservation, social services and research.

4.2.3 Original data

Forest area by types of protected territories		
National class	Forest area * (1000 hectares)	
	1990	1994
Strict nature reserves	38,7	38,7
National parks	51,6	51,6
Nature parks	15,0	15,0
Nature reserves	87,6	87,6
Anti-erosion forests	44,4	44,4
Suburban parks	72,2	72,2
Protected landscape areas	55,1	55,1
Suburban forests	244,0	244,0
Specially protected forest areas	196,3	196,3
Total forest area within protected areas	560,9	560,9

* – area of gaps and infrastructure not included.

National class	Forest area*, ha			
	2000	2005	2010	2012
Strict nature reserves	19155	8641	9202	8724
National parks	50284	77393	102206	102952
Nature reserves	61766	89592	99331	105872
North Vidzeme Biosphere Reserve (Nature reserve zone)		2991	0	0
Nature parks	28436	78540	63177	63684
Protected landscape areas	54451	69588	78766	82139
Protected dendrological plantations	-	569	698	718
Protected geological and geomorphological nature monuments		1245	1460	1512
Micro-reserves		25295	36566	37592
Buffer zones around micro-reserves		26196	33849	35465
Protected belt of dunes along the Baltic Sea and Bay of Riga	5124	7954	8499	8794
Belt of limited economic activity along the Baltic sea	57122	71003	67394	65716
Protected zones along waters		27481	50858	61433
Protected zones along wetlands		15192	30252	37121

Protected zone surrounding urban territories	46766	33157	26309	23754
Forests within the administrative territories of cities		3245	14519	15900
Specially protected forest areas	179203	26343	16776	13583
Specially protected Habitats of spaces	43113	-	0	0
Total forest area within protected areas	545 420	564 452	568 432	579 421

* – area of gaps and infrastructure not included.

National class	Forest area*, ha			
	2000	2005	2007	2010
Scientific research forest**	23753	23753	23753	28937

* – area of gaps and infrastructure not included. Forest area according to national categories.

** - expert estimation – there have not been considerable changes in the area of scientific research forests since 1990, therefore data for 2005 is used for years 2000 and 2007.

4.3 Analysis and processing of national data

4.3.1 Adjustment

Calibration from national forest area categories to FRA forest area categories

	1990	2000	2005	2010	2012
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Forest area according to national categories	2778	2888	2950	3248	3236
Forest area according to FRA categories	3173	3241	3297	3354	3356
Calibration factor (Forest area according to FRA categories/Forest area according to national categories)	1.142	1.122	1.118	1,033	1,037

Calibrating

Primary designated function	Forest area, 1000 ha			
	national data	calibrated data	national data	calibrated data
	2010	2010	2012	2012
Protection of soil and water	126,8	131	135,9	141
Conservation of biodiversity	472,3	488	489,4	507
Social services	69,8	72	68,6	71

4.3.2 Estimation and forecasting

For year 2015 is used data from year 2012 because NFI second cycle results showed that growth of forest area between 2008 to 2012 has stopped. Experts also doesn't predict the growth of forest area between 2012 to 2015.

4.3.3 Reclassification

National class	Primary designated function according FRA 2015 Categories
Strict nature reserves	Conservation of biodiversity
National parks	Conservation of biodiversity
Nature parks	Conservation of biodiversity
Nature reserves	Conservation of biodiversity
Anti-erosion forests	Protection of soil and water
Suburban parks	Social services
Protected landscape areas	Conservation of biodiversity
Suburban forests	Social services
Forests for environment protection	Conservation of biodiversity
Specially protected forest areas	Conservation of biodiversity
North Vidzeme Biosphere Reserve (Nature reserve zone)	Conservation of biodiversity
Protected dendrological plantations	Conservation of biodiversity
Protected geological and geomorphological nature monuments	Conservation of biodiversity
Micro-reserves	Conservation of biodiversity
Buffer zones around micro-reserves	Conservation of biodiversity
Protected belt of dunes along the Baltic Sea and Bay of Riga	Protection of soil and water
Belt of limited economic activity along the Baltic sea	Protection of soil and water
Protected zones along waters	Protection of soil and water
Protected zones along wetlands	Conservation of biodiversity
Protected zone surrounding urban territories	Social services

Forests within the administrative territories of cities	Social services
Specially protected Habitats of spaces	Conservation of biodiversity
Scientific research forest	Social services
Remaining area.	Production

4.4 Data

Table 4a

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Production forest	2254	2591	2624	2663	2636
	Multiple use forest	0	0	0	0	0

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	Mushrooms	N/A	35979	1
2 nd	Birchen juice	Betula pendula	15791	1
3 rd	Berries	N/A	11937	1
4 th	Game products	N/A	4497	12
5 th	Christmas trees	Picea abies	3136	6
6 th	Wild honey	N/A	553	11
7 th	Hides, skins	N/A	46	10
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			71939.00	

2010	
Name of local currency	LVL

Category
Plant products / raw material
1 Food
2 Fodder
3 Raw material for medicine and aromatic products
4 Raw material for colorants and dyes
5 Raw material for utensils handicrafts construction
6 Ornamental plants
7 Exudates
8 Other plant products
Animal products / raw material
9 Living animals
10 Hides skins and trophies
11 Wild honey and beeswax
12 Wild meat
13 Raw material for medicine
14 Raw material for colorants
15 Other edible animal products
16 Other non-edible animal products

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m ³ u.b.)	
	Total wood removals	...of which woodfuel
1990	12833.49	1184.38
1991	0	0

1992	2471	700
1993	4931	1100
1994	5700	1100
1995	6900	1210
1996	8080	2530
1997	8697	2864
1998	10030	2845
1999	14008	2490
2000	14304	1680
2001	12841	1580
2002	13465.9	1198
2003	12915.81	990.81
2004	12754	970
2005	12842.6	950
2006	12844.6	979
2007	12172.9	1028
2008	8805.75	598.42
2009	10442.31	1736.28
2010	12533.82	2312
2011	12833.49	1184.38

Tiers

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

Tier Criteria

Category	Tier for status	Tier for reported trend
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Production forest Multiple use forest	Tier 3: Updated including field verifications national forest maps including functions Tier 2: Forest maps older than 6 years including forest functions Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
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4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	N/A	N/A
Multiple use forest	N/A	N/A
Total wood removals	N/A	N/A
Commercial value of NWFP	The value refers to processed products	N/A

Other general comments to the table

N/A

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	State Forest Service	Forest area by types of protected territories	1990, 2000, 2005, 2010, 2012	N/A

2	State Forest Service	Public forest area	1990, 2000, 2005, 2010, 2012	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

5.2.2 Classification and definitions

National class	Definition
Protection zones of coastal dunes along the Baltic Sea and Bay of Riga	A protection zone of coastal dunes the width of which depends on the width of dune zone, but not less than 300 metres in the direction of land, counting from the place where the natural land vegetation begins.
Restricted economic activity zone along the Baltic sea and Bay of Riga	A restricted economic activity zone up to a width of 5 kilometres is determined taking into account natural circumstances, in order to decrease the negative effects of pollution in the Baltic Sea, to preserve the protective functions of the forest, to eliminate the development of erosion processes, to protect the coastal landscapes, to ensure preservation and protection of coastal natural resources, including resources necessary for leisure and tourism and other territories important for society, and balanced and the continuous utilisation of them.
Surface water body protection zones	Surface water body protection zones are determined for reservoirs, water courses and artificial water bodies, in order to decrease the negative effects of pollution to water ecosystems, to eliminate the development of erosion processes, and to restrict economic activity in the flood zones, as well as to preserve the characteristic landscape of the area.
N/A	N/A

5.2.3 Original data

National class	Forest area, 1000 ha				
	1990	2000	2005	2010	2012
Public forests (State forests and forest owned or used by local governments) Area of gaps and infrastructure included	2886	1607	1639	1638	1625
National class	Forest area * (1000 hectares)				

	1990	1994		
Anti-erosion forests	44,4	44,4		
* – area of gaps and infrastructure not included.				
National class	Forest area*, ha			
	2000	2005	2010	2012
Protected belt of dunes along the Baltic Sea and Bay of Riga	5124	7954	8499	8794
Belt of limited economic activity along the Baltic sea	57122	71003	67394	65716
Surface water body protection zones		27481	50858	61433
* – area of gaps and infrastructure not included.				

5.3 Analysis and processing of national data

5.3.1 Adjustment

Calibration from national forest area categories to FRA forest area categories					
	1990	2000	2005	2010	2012/15
Forest area according to national categories	2778	2888	2950	3248	3236
Forest area according to FRA categories	3173	3241	3297	3354	3356
Calibration factor (Forest area according to FRA categories / Forest area according to national categories)	1.142	1.122	1.118	1,033	1,037

Calibrating				
	Forest area, ha			
	national data	calibrated data	calibrated data	calibrated data
	2010	2010	2012	2012
Protected belt of dunes along the Baltic Sea and Bay of Riga	8499	8776	8794	9120
Belt of limited economic activity along the Baltic sea	67394	69593	65716	68152
Protected zones along waters	50858	52517	61433	63711

5.3.2 Estimation and forecasting

For year 2015 is used data from year 2012 because NFI second cycle results showed that growth of forest area between 2008 to 2012 has stopped. Experts also doesn't predict the growth of forest area between 2012 to 2015.

5.3.3 Reclassification

5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
	Protection of soil and water	51	71	122	131	141
	... of which production of clean water	0	0	0	0	0
	... of which coastal stabilization	0	0	0	0	0
	... 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	51	71	122	131	141
	... of which other (please specify in comments below the table)	0	0	0	0	0

Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	312	85	75	72	71
...of which public recreation	283	52	40	43	32
...of which carbon storage or sequestration	0	0	0	0	0
...of which spiritual or cultural services	N/A	N/A	N/A	N/A	N/A
...of which other (please specify in comments below the table)	29	29	29	29	29

Tiers

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

Tier criteria

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

5.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Protection of soil and water	N/A	N/A
Production of clean water	N/A	N/A
Coastal stabilization	N/A	N/A
Desertification control	N/A	N/A
Avalanche control	N/A	N/A
Erosion, flood protection or reducing flood risk	N/A	N/A
Other protective functions	N/A	N/A
Ecosystem services, cultural or spiritual values	N/A	N/A
Public recreation	National law regulates that all public forestland are freely available for public recreation. Only private forestland owners can restrict free movement at their forestland.	N/A
Carbon storage or sequestration	N/A	N/A
Spiritual or cultural services	N/A	N/A
Other ecosystem services	N/A	N/A

Other general comments to the table
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N/A

6. How much forest area is protected and designated for the conservation of biodiversity and how has it changed over time?

Documents for this question:

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

6.1 Categories and definitions

Category	Definition
Conservation of biodiversity	Forest area designated primarily for conservation of biological diversity. Includes but is not limited to areas designated for biodiversity conservation within the protected areas.
Forest area within protected areas	Forest area within formally established protected areas independently of the purpose for which the protected areas were established.

6.2 National data

6.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Information of Forest resources prepared by The State Forest Service	Forest area by types of protected territories	1990, 2000, 2005, 2010, 2012	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

6.2.2 Classification and definitions

National class	Definition
Strict nature reserves	Strict nature reserves are territories untouched by human activities or nearly natural, in which territories unhindered development of natural processes shall be ensured in order to protect and study rare or typical ecosystems and parts thereof.
National parks	National parks are broad areas which are characterised by outstanding nature formations of national significance, landscapes and cultural heritage landscapes untouched by human activities or nearly natural, a diversity of biotopes, abundance of cultural and historical monuments, and peculiarities of cultural environment.
Nature reserves	Nature reserves are nature territories little transformed or transformed in varying degrees by human activities, which territories include habitats of specially protected wild plant and animal species, and specially protected biotopes.

North Vidzeme Biosphere Reserve	Biosphere reserves are broad territories in which landscapes and ecosystems of international significance are located. The goal of establishing biosphere reserves is to ensure the preservation of natural diversity and to promote sustainable social and economic development of the territory.
Nature parks	Nature parks are territories that represent the natural, cultural and historical values of a particular area, and that are suitable for recreation, education and the instruction of society.
Protected landscape areas	Protected landscape areas are territories remarkable for original and diverse landscapes and special beauty. The goals of such territories are to protect and preserve the cultural environment and landscapes characteristic of Latvia in all their diversity, as well as to ensure the preservation of environment appropriate for recreation of society and for tourism, and use of environment friendly management methods.
Protected dendrological plantations	Nature monuments are separate, isolated natural formations: protected trees, dendrological plantings, avenues, geological and geomorphological nature monuments and other natural rarities having scientific, cultural and historical, aesthetic or ecological value.
Protected geological and geomorphological nature monuments	Nature monuments are separate, isolated natural formations: protected trees, dendrological plantings, avenues, geological and geomorphological nature monuments and other natural rarities having scientific, cultural and historical, aesthetic or ecological value.
Micro-reserves	Micro Reserve – a territory that is determined in order to ensure protection of Specially Protected Species or Habitats outside Specially Protected Nature Territories, as well as within the Specially Protected Nature Territories, if protection is not ensured by any of the functional zones
Buffer zones around micro-reserves	Areas where restrictions on economic activity are prescribed in order to reduce the impact of intensive economic activities on the micro-reserves of specially protected bird species
Protection zones along wetlands	Protection zones along wetlands are determined in order to preserve biological diversity and to stabilise the regime of humidity in the zone of contiguity (transition) of the forest and marsh.
Specially protected Habitats of spaces / Specially protected forest areas	Specially protected forest areas for protection of specially protected species, habitats with biological importance and objects with cultural and historic importance.

6.2.3 Original data

See 4.2.3.		
National class	Forestarea * (1000 hectares)	
	1990	1994

Strict nature reserves	38,7	38,7
National parks	51,6	51,6
Nature parks	15,0	15,0
Nature reserves	87,6	87,6
Anti-erosion forests	44,4	44,4
Suburban parks	72,2	72,2
Protected landscape areas	55,1	55,1
Suburban forests	244,0	244,0
Specially protected forest areas	196,3	196,3
Total forest area within protected areas	560,9	560,9

* – area of gaps and infrastructure not included.

National class	Forest area*, ha			
	2000	2005	2010	2012
Strict nature reserves	19155	8641	9202	8724
National parks	50284	77393	102206	102952
Nature reserves	61766	89592	99331	105872
North Vidzeme Biosphere Reserve (Nature reserve zone)		2991	0	0
Nature parks	28436	78540	63177	63684
Protected landscape areas	54451	69588	78766	82139
Protected dendrological plantations	-	569	698	718
Protected geological and geomorphological nature monuments		1245	1460	1512
Micro-reserves		25295	36566	37592

Buffer zones around micro-reserves		26196	33849	35465
Protected zones along wetlands		15192	30252	37121
Specially protected forest areas	179203	26343	16776	13583
Specially protected Habitats of spaces	43113	-		
Total forest area designated for biodiversity conservation within the protected areas	436408	421585	472281	489362
Total forest area within protected areas	545420	564452	568432	579421
* – area of gaps and infrastructure not included.				

6.3 Analysis and processing of national data

6.3.1 Adjustment

See 4.3.1.

	1990	2000	2005	2010	2012
Forest area according to national categories	2778	2888	2950	3248	3236
Forest area according to FRA categories	3173	3241	3297	3354	3356
Calibration factor (Forest area according to FRA categories / Forest area according to national categories)	1.142	1.122	1,118	1,033	1,037

Forest area, 1000 ha

	national data	calibrated data	national data	calibrated data
	2010	2010	2012	2012
Conservation of biodiversity	472,3	487,9	489,4	507,5
Forest area within protected areas	568,4	587,2	579,4	600,9

6.3.2 Estimation and forecasting

For year 2015 data for year 2012 is used.

6.3.3 Reclassification

See 4.3.3.

6.4 Data

Table 6

Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Conservation of biodiversity	507	498	482	487.9	507.5
	Forest area within protected areas	641	612	631	587.2	600.9

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

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	N/A	N/A
Forest area within protected areas	N/A	N/A

Other general comments to the table
N/A

7. What is the area of forest affected by woody invasive species?

Documents for this question:

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

7.1 Categories and definitions

Category	Definition
Invasive species	Species that are non-native to a particular ecosystem and whose introduction and spread cause, or are likely to cause, socio-cultural, economic or environmental harm or harm to human health.

7.2 National data

7.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Information of Forest resources prepared by The State Forest Service	Destroyed forest stands by disturbance factors	1991-2012	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

7.2.2 Classification and definitions

National class	Definition
N/A	N/A

7.2.3 Original data

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7.3 Analysis and processing of national data

7.3.1 Adjustment

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7.3.2 Estimation and forecasting

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7.3.3 Reclassification

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7.4 Data

Table 7

Scientific name of woody invasive species	Forest area affected (000 ha)	
	2005	2010
N/A	N/A	N/A
Total	N/A	N/A

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	Tier 3	Tier 3

Tier Criteria

Category	Tier for status	Tier for reported trend
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Invasive species	Tier 3: Systematic assessment in forest inventory or other survey (e.g. by conservation department) within the last 5 years) Tier 2: Systematic assessment in forest inventory or other survey (e.g. by conservation department conducted more than 5 years ago) Tier 1: Other	Tier 3 : Estimate based on repeated compatible tiers 3 (tier for status) Tier 2 : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) Tier 1 : Other
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7.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	There are no significant woody invasive species in Latvia that constitute, or are expected to constitute, a problem for forest ecosystem health and vitality. A great part of foreign species cannot compete with domestic species, therefore in natural ecosystems they can be found in comparatively small areas, or their life is not long.	N/A

Other general comments to the table

N/A

8. How much forest area is damaged each year?

Documents for this question:

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

8.1 Categories and definitions

Category	Definition
Number of fires	Number of fires per year
Burned area	Area burned per year
Outbreaks of insects	A detectable reduction in forest health caused by a sudden increase in numbers of harmful insects.
Outbreaks of diseases	A detectable reduction in forest health caused by a sudden increase in numbers of harmful pathogens, such as bacteria, fungi, phytoplasma or virus.
Severe weather events	Damage caused severe weather events, such as snow, storm, drought, etc.

8.2 National data

8.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Information of Forest resources prepared by The State Forest Service	land area affected by forest fire, number of fires, insects, diseases and severe weather events	2003 - 2012	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

8.2.2 Classification and definitions

National class	Definition
N/A	N/A

8.2.3 Original data

	Total land area burned*		of which forest area burned	
	ha	number	ha	number
2003	559	900	444	
2004	485	647	427	
2005	120	365	114	
2006	3790	1929	3387	
2007	331	425	272	
2008	364	700	311	
2009	646	823	590	
2010	104	317	90	272
2011	115	360	86	322
2012	90	162	68	144
2013	217	422	170	380

* no dry grass fires on agriculture land included

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	#
CFRQ	Total land area burned	0.56	900	0.48	647	0.12	365	3.79	1929	0.33	425
CFRQ	... of which forest area burned	0.44	N/A	0.43	N/A	0.11	N/A	3.39	N/A	0.27	N/A
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
CFRQ	Total land area burned	0.36	700	0.65	823	0.1	317	0.12	360	0.09	162
CFRQ	... of which forest area burned	0.31	N/A	0.59	N/A	0.09	272	0.09	322	0.07	144

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
1	Gilpinia pallida	1993 - 1995	5
1	Panolis flammea	1994	0.1
1	Bupalus piniarius	1999	0.1
2	Dessication of ash-trees	2005 - 2007	0.5
1	Neodiprion sertifer	2004-2008	20
1	Ips typographus	2006 - 2008	1.2
1	Ips accuminatus	2006-2008	0.04
1	Lymantria dispar	2008- ongoing	0.04
3	storm Ervin	2005	19.1
1	Lymantria monacha	2010 - 2012	5

Outbreak category

1 Insects
2 Diseases
3 Severe weather events

Tiers

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

Tier criteria

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

8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	The external data from the FAO does not coincide with national statistics about forest fires. National statistics on forest fires obtained by The State Forest Service. Each forest fire area is surveyed in nature because national data are more accurate than the FAO. The State Forest Service deletes and lists both fires in forests and swamps. By 2009, there were not individually isolated fires in the marshes. According to experts, forest fires constitute 88-90% of the total number of fires.	N/A
Insects	N/A	N/A
Diseases	N/A	N/A
Severe weather events	N/A	N/A

Other general comments to the table
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N/A

9. What is the forest area with reduced canopy cover?

Documents for this question:

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

Category	Definition
Reduction in canopy cover	Forest that has undergone a reduction of canopy cover of more than 20% between the years 2000 and 2010 within the forest canopy cover range of 30-80% as detected by the MODIS VCF sensor.

Table 9

Category	Area of forest with reduced canopy cover (000 ha)
Reduction in canopy cover	433.09

Tiers

Category	Tier for reported trend
Reduction in canopy cover	Tier 2

Tier criteria

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

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	In Latvia, Reduced canopy cover pre - filled data from remote sensing does not represent the quality of permanent forests, whether they are degraded or not. Canopy reduction does not represent degradation of the stand. In Latvia we use basal area to determine the extent of damage to the stand. Basal area is the total of basal Areas of tree trunks (in square meters) growing in the area of one hectare , at the height of 1.3 m from the root collar. Cabinet of Ministers has set critical basal area - limit value of a basal area below which satisfactory development of a forest stand is impossible, and the forest stand is to be regenerated. Pre - filled data from remote sensing in Latvia show a reduction of canopy cover Between the years 2000 and 2010 433 thousand hectares of young forest is now likely to be restored in cut forest area. By NFI data area of destroyed forest stands is 3.82 thousand hectares and area of cutovers is 59.85 thousand hectares. According to the regulations extinct clearings and forest stands are restored and the area of accumulation does not occur. It is an obligation of a forest owner to regenerate a forest stand within a period of 5 to 10 years, depending on forest type, after the performance of felling or the impact of other factors, if the basal area of the forest stand has become, due to such impact, smaller than the critical basal area. The State Forest Service strictly controls each stand is to be restored

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	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

10.2.2 Classification and definitions

National class	Definition
N/A	N/A

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

10.4 Comments

Variable / category	Comments related to data definitions etc
Policies supporting sustainable forest management	N/A
Legislation and regulations supporting sustainable forest management	N/A

Other general comments

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11. Is there a national platform that promotes stakeholder participation in forest policy development?

Documents for this question:

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

11.1 Categories and definitions

Category	Definition
National stakeholder platform	A recognized procedure that a broad range of stakeholders can use to provide opinions, suggestions, analysis, recommendations and other input into the development of national forest policy.

11.2 National data

11.2.1 Data sources

	References to sources of information	Years	Additional comments
1	N/A	N/A	N/A
2	N/A	N/A	N/A
3	N/A	N/A	N/A
4	N/A	N/A	N/A

Table 11

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

Category	Comments related to data definitions etc
National stakeholder platform	N/A

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	Information of Forest resources prepared by The State Forest Service	Forest area within protected territories	2010	N/A
2	Information of Forest resources prepared by The State Forest Service	Forest area within protected areas in private forests	2010	N/A
3	Information of Forest resources from National Forest Inventory	State forest	2010	N/A
4	N/A	N/A	N/A	N/A

12.2.2 Classification and definitions

National class	Definition
N/A	N/A

12.2.3 Original data

See 4.2.3.

	2010
	Forest area (1000 ha)
State forest	1686
Forest area within protected areas in private forests (Calibrated data. Gaps and infrastructure included)	211,7
Forest area within protected areas (Q6)	587,2

12.3 Analysis and processing of national data

12.3.1 Adjustment

See 4.3.1.

12.3.2 Estimation and forecasting

12.3.3 Reclassification

See 4.3.3.

FRA 2015 Categories	National class
Forest area intended to be in permanent forest land use	State forest; Forest area within protected areas in private forests
of which permanent forest estate (sub-category)	Forest area within protected areas

12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	1898
	... of which permanent forest estate	587

Tiers

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 2
Permanent forest estate	Tier 2

Tier Criteria

Category	Tier for status
Forest area intended to be in permanent forest land use	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other
Permanent forest estate	Tier 3 : National or sub-national land use plans strategy documents or other reports within the past 10 years Tier 2 : National or sub-national land use plans strategy documents or other reports within the past 20 years Tier 1 : Other

12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	N/A
Permanent forest estate	N/A

Other general comments

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13. How does your country measure and report progress towards SFM at the national level?

Documents for this question:

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

13.1 Categories and definitions

Category	Definition
Forest area monitored under a national forest monitoring framework	Forest area monitored by a national monitoring framework or systems that provide measurement based periodic monitoring of forest extent and quality.
Forest reporting at national scale	National reporting of forest extent and characteristics that includes some measure of progress toward sustainable forest management.

13.2 National data

13.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	N/A	N/A	N/A	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

13.2.2 Classification and definitions

National class	Definition
N/A	N/A

13.3 Data

Table 13a

Category	% of total forest area	Most recent year	Check all boxes that apply					
			Continuous	Periodic	Permanent ground plots	Temporary ground plots	Aerial/remote sensing sample based	Aerial/remote sensing full coverage
Forest inventory	100	2012	yes	no	yes	no	no	no
Other field assessments	92	2012	yes	yes	yes	no	no	no
Updates to other sources	92	2012	yes	yes	no	no	no	no
Expert estimate	N/A	N/A						

Table 13b

Type of forest reporting used at national scale	Check boxes that apply
1 Criteria and Indicators reporting	yes
2 Periodic national state of the forest report	yes
3 Other (please document)	no
4 None	no

Other type of forest reporting
N/A

13.4 Comments

Category	Comments
Other field assessments	There is a basic obligation (in the Forest law) for all forest owners or lawful possessors regarding forest inventory : It shall be a duty of a forest owners or lawful possessors to perform, in the forests of their ownership or lawful possession, the first time forest inventory and to submit these materials to the State Forest Service as well as at least once in 20 years and in other cases required by regulatory enactments perform repeated forest inventory. Areas with special protection regimes are identified in forest inventory.
Updates to other sources	There is an obligation for forest owners to inform State Forest Service about forest management activities. This information is entered into the state forest register and are used for monitoring of forest extent and quality

Criteria and Indicators reporting	Cabinet of Ministers shall determine the procedures for the assessment of sustainable forest management in accordance with the Pan-European sustainable forest management criteria and indicators. Not less frequently than once every five years or at the request of the Cabinet of Ministers to assess the situation given the Ministry of Agriculture shall prepare a report to the Cabinet on Forest Policy formulated goals. The report shall include information about the forest as a capital value and change, conservation of biodiversity in the forest environment, society and forest owners' interests in the social value of forest use.
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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	Information of Forest resources prepared by The State Forest Service	Forest area by types of protected territories	2010	N/A
2	Information of Forest resources prepared by The State Forest Service	State forest	2010	N/A
3	Information of Forest resources prepared by The State Forest Service	Forest area with management plan	2010	N/A
4	Information of Forest resources prepared by The State Forest Service	Forest area within protected areas in private forests	2010	N/A

14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	3072
... of which for production	2403
... of which for conservation	669

Table 14b

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

Table 14c

Percent of area under forest management plan that is monitored annually	100
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Tiers

Category	Tier for status
Forest area with management plan	Tier 3
Percent of area under forest management plan that is monitored annually	Tier 2

Tier criteria

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

14.4 Comments

Category	Comments
Forest area with management plan	There is a mandatory requirement for forest owners in Latvia to carry out their forest inventory for forest management planning, which can be treated as equal to a forest management plan, only without economic activities to be carried out and the time of their implementation. However, the permissible economic activities and, in certain cases, the implementation of them are set out by laws and regulations. There are forest areas indicated in the table where forest inventory has been carried out. Besides, a greatest part of forest owners have elaborated forest management plans for economic activity. There is an obligation for state forest to have a Forest Management plan. The requirement is included in the Forest law.
Forest area with management plan of which for production and for conservation	Forest management plans are divided directly proportional to forest management primarily designated function.

Monitoring of forest management plans	Government is monitoring all forest management plans randomly. It is done only by mandatory actions that regulated by legislation. Forest owner's or person's who manages the forest voluntary initiatives are not monitored. All information provided by forest owners is included in the state forest register. It is used also for administration of forest management in all forests.
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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	yes
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	Tier 3 : Government (national or sub-national) documentation of stakeholder inputs Tier 2 : Government (national or subnational) requirement but stakeholder inputs not documented Tier 1 : Other

15.2 Comments

Category	Comments
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Type of stakeholder inputs	The Latvian agriculture minister has had the Forest Consulting Council (FCC), which helps to ensure transparency in the taking of fundamentally important decisions for the forest sector, to co-ordinate co-operation between state and public organizations, and to allow all interested parties to take part in the drafting of normative acts which regulate the forest sector. This is a forum in which there is representation of forest owners and managers, the timber industry sector, service providers, environmental and ecological protection organizations, employees, educational and scientific institutions, as well as local governments. When dealing with issues related to the economic, ecological and social functions of the forest, the FCC correlates the interests and viewpoints of various entities in the forest sector so as to strike a balance in terms of sustainable forest sector development policies.
N/A	N/A
N/A	N/A

Other general comments

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16. What is the area of forest under an independently verified forest certification scheme?

Documents for this question:

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

16.1 Categories and definitions

Category	Definition
FSC certification	Forest area certified under the Forest Stewardship Council certification scheme
PEFC certification	Forest area certified under the Programme for the Endorsement of Forest Certification scheme
Other international forest management certification	Forest area certified under an international forest management certification scheme with published standards and is independently verified by a third-party, excluding FSC and PEFC certification.
Certified forest area using a domestic forest management certification scheme	Area certified under a forest management certification scheme with published standards that are nationally recognized and independently verified by a thirdparty

16.2 Data

Table 16a

International forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	FSC	0	0	906.53	1686.2	1686.2	1686.2	1626.95
	PEFC	0	0	17	21	31	38	38
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	1624.13	1624.13	1620.92	1622.59	8.19	795.14	
	PEFC	81	0	0	0	1622	1622	
	Other	0	0	0	0	0	0	

Table 16b

Domestic forest management certification		Forest area (000 ha)						
		2000	2001	2002	2003	2004	2005	2006
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0
	N/A	0	0	0	0	0	0	0

		2007	2008	2009	2010	2011	2012	
		0	0	0	0	0	0	
		0	0	0	0	0	0	
		0	0	0	0	0	0	

Tier criteria

Category	Tier for status
International forest management certification	Tier 3: International forest management scheme records maintained by the certifying organization for the reporting year Tier 2: International forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other
Domestic forest management certification	Tier 3: National registry reports for domestic forest management certification maintained by the certifying organization for the reporting year Tier 2: Domestic forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other

Tiers

Category	Tier for status
International forest management certification	Tier 3
Domestic forest management certification	Tier 3

16.3 Comments

Category	Comments related to data definitions etc
Certified forest area using an international forest management certification scheme	N/A
Domestic forest management certification	There is no domestic forest management certification scheme with published standards that are nationally recognized and independently verified by a third party in Latvia.

Other general comments

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17. How much money do governments collect from and spend on forests?

Documents for this question:

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

17.1 Categories and definitions

Category	Definition
Forest revenue	All government revenue collected from the domestic production and trade of forest products and services. For this purpose revenue include: <ul style="list-style-type: none"> • <u>Goods</u> : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products. • <u>Services</u> : including concession fees and royalties, stumpage payments, public timber sales revenue taxes and charges based on forest area or yield, taxes on domestic trade and export of forest products, special levies on forestry activities and payments into forest related funds, other miscellaneous inspection, licence and administrative fees levied by forest administrations, permit and licence fees for recreation and other forest related activities.
Public expenditure on forestry	All government expenditure on forest related activities.

17.2 National data

17.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Public Report of the Ministry of Agriculture	State support to forest sector	2005, 2010	N/A
2	Public Report of the State Forest Service	Public expenditure on state control of forest resources	2000, 2005, 2010	N/A
3	Public Report of the State Forest Service	Revenue from charges and administrative fees levied by State Forest Service	2010	N/A
4	State Revenue Service	Taxes from forest sector	2010	N/A

17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	N/A	N/A	49292
Public expenditure on forestry	8420	12748	9314
	2000	2005	2010

Name of Local Currency	LVL	N/A	N/A
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17.4 Comments

Category	Comments related to data definitions etc
Forest revenue	Full information is not available. There included tax revenue from the forestry sector taxpayers, income from fees and fee-based services in the forest sector, the state forest manager dividend payments into state budget.
Public expenditure on forestry	Full information is not available. Include the total budget expenditure of State Forest Service and the government support to the forest sector. No information is available about the costs of public institutions whose activities are related not only to the forest, but also in other sectors administration, because the budget is not broken down by sector.
Other general comments	N/A

Other general comments

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18. Who owns and manages the forests and how has this changed?

Documents for this question:

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

18.1 Categories and definitions

Category	Definition
Public ownership	Forest owned by the State or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at national scale (<i>sub-category</i>)	Forest owned by the State at the national scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
...of which owned by the state at the sub-national government scale (<i>sub-category</i>)	Forest owned by the State at the sub-national government scale or administrative units of the public administration or by institutions or corporations owned by the public administration.
Private ownership	Forest owned by individuals, families, communities, private cooperatives corporations and other business entities, private, religious and educational institutions, pension or investment funds, NGOs, nature conservation associations and other private institutions.
...of which individuals (<i>sub-category</i>)	Forest owned by individuals and families.
...of which private business entities and institutions (<i>sub-category</i>)	Forest owned by private corporations cooperatives companies and other business entities as well as private nonprofit organizations such as NGOs nature conservation associations, and private religious and educational institutions etc.
...of which local tribal and indigenous communities (<i>sub-category</i>)	Forest owned by a group of individuals belonging to the same community residing within or in the vicinity of a forest area or forest owned by communities of indigenous or tribal people The community members are coowners that share exclusive rights and duties and benefits contribute to the community development.
Unknown ownership	Forest area where ownership is unknown includes areas where ownership is unclear or disputed.
Categories related to management rights of public forests	Definition
Public Administration	The Public Administration (or institutions or corporations owned by the Public Administration) retains management rights and responsibilities within the limits specified by the legislation.
Individuals households	Forest management rights and responsibilities are transferred from the Public Administration to individuals or households through long-term leases or management agreements.
Private companies	Forest management rights and responsibilities are transferred from the Public Administration to corporations, other business entities private cooperatives, private nonprofit institutions and associations, etc., through long-term leases or management agreements.
Communities	Forest management rights and responsibilities are transferred from the Public Administration to local communities (including indigenous and tribal communities) through long-term leases or management agreements.
Other form of management rights	Forests for which the transfer of management rights does not belong to any of the categories mentioned above.

18.2 National data

18.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	The Land Fund of the Republic of Latvia Prepared by Ministry of Agriculture Department of the organization of the use of land (As of November 1, 1990)	Forest ownership structure	1990	N/A
2	Land use balance prepared by The State Forest Service	Forest ownership categories	2000	N/A
3	National Real Estate Cadastre from State Land Service	Forest ownership categories	2005, 2010	N/A
4	N/A	N/A	N/A	N/A

18.2.2 Classification and definitions

National class	Definition
1990	N/A
Land of forestry enterprises	Land of forestry enterprises, organizations and institutions
Land of agricultural enterprises	Land of agricultural enterprises and soviet collective farms (kolkhozs)
Land of farms	Land of farms
Land of state reserve	Land of state reserve is all land not allocated to land users in permanent use or long-term lease
Land of urban territories	Land of urban territories
Land of industry, transport	Land allocated to industrial enterprises, transport enterprises, resorts in permanent use or long-term lease
2000, 2005, 2010	N/A
Land owned or used by physical entity	Land owned by individuals and families.
Land owned or used by legal entity	Land owned by private corporations, co-operatives, companies and other business entities
Land owned or used by local governments	Land owned or used by local governments
Land owned or used by State or state institutions	Land owned or used by State or state institutions
Joint ownership land	Real estates formed by undivided shares which are owned by owners with different owner status (physical persons, legal persons, local governments or state and state institutions)

Free land	Land without renewed property rights during land reform, not transferred in ownership for payment or not transferred in permanent use to physical or legal persons, local governments or state institutions
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18.2.3 Original data

National class	Percentage of forest area
1990	
Land of forestry enterprises	62.4
Land of agricultural enterprises	34.0
Land of farms	1.0
Land state reserve	0.3
Land of urban territories	0.7
Land of industry, transport	1.6
2000	
Land owned or used by physical entity	42.99
Land owned or used by legal entity	2.17
Land owned or used by local governments	4.03
Land owned or used by State or state institutions	49.93
Joint ownership land	0.01
Free land	0.87
2005	
Land owned or used by physical entity	41.41
Land owned or used by legal entity	4.47
Land owned or used by local governments	3.30
Land owned or used by State or state institutions	50.72
Joint ownership land	0.05

Free land	0,05
2010	
Land owned or used by physical entity	37,37
Land owned or used by legal entity	10,22
Land owned or used by local governments	2,10
Land owned or used by State or state institutions	50,15
Joint ownership land	0,1
Free land	0,06

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

FRA 2015 category	National category, 1990	National category, 2000, 2005, 2010
Public ownership	Land of forestry enterprises	Land owned or used by local governments
	Land of agricultural enterprises	
	Land of urban territories	
	Land of industry, transport	
Private ownership owned by individuals		Land owned or used by physical entity
Private ownership owned by private business entities and institutions	Land of farms	Land owned or used by legal entity

Unknown ownership	Land state reserve	Joint ownership land
		Free land

18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	3132	1749	1781	1755
	... of which owned by the state at national scale	3132	1618	1672	1686
	... of which owned by the state at the sub-national government scale	0	131	109	69
	Private ownership	32	1463	1512	1594
	... of which owned by individuals	0	1393	1365	1252
	... of which owned by private business entities and institutions	32	70	147	342
	... of which owned by local, tribal and indigenous communities	0	0	0	0
	Unknown ownership	9	29	4	5
TOTAL		3173.00	3241.00	3297.00	3354.00

Tiers

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

Tier criteria

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

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	3132	1749	1781	1755
Individuals	0	0	0	0
Private companies	0	0	0	0
Communities	0	0	0	0
Other	0	0	0	0
TOTAL	3132.00	1749.00	1781.00	1755.00

Category	Tier for reported trend	Tier for status
Public Administration	Tier 3	Tier 3
Individuals	Tier 3	Tier 3
Private companies	Tier 3	Tier 3
Communities	Tier 3	Tier 3
Other	Tier 3	Tier 3

18.5 Comments

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

Other general comments to the table
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N/A

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	National statistics on employment	Employment in forestry	1990, 2000, 2005, 2010	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

19.2.2 Classification and definitions

National class	Definition
N/A	N/A

19.2.3 Original data

FRA 2010 Category	Employment (years FTE)			
	1990	2000	2005	2010

Employment in primary production of goods	15 000	19 000	35 000	20 606
...of which paid employment	15 000	19 000	33 761	
...of which self-employment	n.a.	n.a.	1 239	
of which female	n.a.	n.a.	2519	2819

19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	15	19	35	20.6
	... of which female	N/A	N/A	2.5	2.8

19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	N/A	N/A
Other general comments to the table		
N/A		

20. What is the contribution of forestry to Gross Domestic Product (GDP)?

Documents for this question:

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

20.1 Categories and definitions

Category	Definition
Gross value added from forestry (at basic prices)	This category corresponds to the ISIC/NACE Rev. 4 activity A02 (Forestry and logging).

20.2 Data

Table 20 (Pre-filled data from UNdata/EUROSTAT)

Category	Million	Currency	Year for latest available information
Gross value added from forestry (at basic prices)	240.7	lats	2010

20.3 Comments

Category	Comments
N/A	N/A

Other general comments

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21. What is forest area likely to be in the future

Documents for this question:

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

21.1 Categories and definitions

Category	Definition
Government target/aspiration for forest area	Government target/aspiration for forest area for a specific year.
Forests earmarked for conversion	Forest area that is allocated/classified or scheduled to be converted into non-forest uses.

21.2 National data

21.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	National Development Plan of Latvia for 2014–2020	Government target/aspiration for forest area (Forest coverage (percentage of forested areas in the total area of the country))	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	3400	3550

Table 21b

Category	Forest area (000 ha)
	2013
Forests earmarked for conversion	0

21.4 Comments

Category	Comments
Government target/aspiration for forest area	Latvian National Development Plan predicts that by year 2030 the forestland territory could cover 55 % of all Latvia territory. Experts doesn't predict bigger growth of forest territory after year 2030.
Forests earmarked for conversion	There are no clearly marked forestland territory, which would say that it must be converted to a different type of land use. It is not very common in Latvia to convert forestland in agriculture land or different tipe of land use. Only in last couple years, we have noticed an occasions when overgrown agriculture land been used for agriculture not forestland purpose. In Latvia deforestation each year is about 350 to 450 hectares within . Forest conversion needs for development of infrastructure every year is only 20-30 hectares. This is mainly for roads and construction energetic routes. Forest area does not cause deforestation reduction because it is offset by a forest on land afforestation, which, until then, was not classified as forest.

Other general comments
