

GLOBAL FOREST RESOURCES ASSESSMENT 2015

COUNTRY REPORT

**Republic of Korea**

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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## Report preparation and contact persons

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### Introductory Text

Place an introductory text on the content of this report

The National Forest Inventory ( NFI ) in Korea is carried out by the Division of Forest Inventory, Korea Forest Research Institute (KFRI) under Korea Forest Service (KFS). The NFI has been conducting on a regular base from 1972 approximately at 10-year intervals. Since the third inventory (1986-1992), about 3,500 sample plots have been systematically distributed all over the country and measured to investigate forest resources. The results of Province-wise inventory data are reported to the KFS at the end of the year, and KFS compiles and publishes the Statistical Yearbook of Forestry annually, based on the inventory data. The Yearbook covers all aspects of the status of Korean forestry, including national forestry statistics such as forest area, growing stock, timber production, forestry products, timber market etc. In addition, the Yearbook is updated every year using up-to-date data reported by local governments. The local government (Province) reports some kinds of forestry statistics annually to KFS, including change of forest area, disturbances, cutting, etc. In compiling the national report of FRA2010, the Statistical Yearbook of Forestry is the major source of national data. Only some of data come from the results of research projects.

From the 5<sup>th</sup>NFI (2006-2010), the inventory program has been improved, moving from periodic to annual inventory system to meet increasing demands for reliable forest information from international processes and conventions. The new NFI design focuses on assessing and monitoring the extent and state of forest resources in Korea on accurate and timely manner. Core changes include transition to annual inventory at 5 year intervals, new systematic layout of 4,000 permanent sample plots, new ground plot design, addition of new variables related to forest carbon estimation and biodiversity, etc. According to the annual inventory system, all permanent sample plots are divided into five panels, and each panel will be remeasured every five years.

It is commonly recognized that growing stock has been underestimated so far. Analysis of 3-year(2006-2008) NFI data revealed that average growing stock volume is more than 120 m<sup>3</sup> per ha, whereas the present(2007) is 97.8 m<sup>3</sup>/ha. The final result of the 5<sup>th</sup>NFI will come out in 2010. Based on the new result, all the previous statistics of growing volume will be recalculated in 2011 to keep consistency in internal and international reporting.

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Desk Study?

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

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

Documents for this question:

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

### 1.1 Categories and definitions

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

### 1.2 National data

#### 1.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Statistical Yearbook of Forestry, Korea Forest Service. Korea.	Forest Other land	1991-2013	N/A

2	Statistical Yearbook of Forestry, Korea Forest Service. Korea.	Reforestation	1988-2013	N/A
3	FAO STAT	Land area, Inland water	1990 2000 2005 2010	N/A
4	N/A	N/A	N/A	N/A

### 1.2.2 Classification and definitions

National class	Definition
Forest	It consists of stocked forest land and un-stocked forest land. Stocked forest is land spanning more than 1 hectare with trees and a canopy cover of more than 30 percent. The number of young tree per ha is more than 1,200 in coniferous forest and 1,600 in broad-leaved forest, respectively. Un-stocked forest is land spanning more than 1 hectares with trees and a canopy cover of less than 30 percent, and includes non-stocked land, denuded land, reclaimed land, and miscellaneous forest land. The non-stocked forest lands are forested lands. The miscellaneous forest lands include rock, roads, grave/cemetery, nursery, orchard, military facilities etc.
Other land	All land that is not classified as “Forest”, also includes “In Inland water bodies” which are rivers, lakes, ditches, marshes, dams, ponds, water reservoirs, etc
Afforestation	Same as FRA2015 definition
Reforestation	(Same as FRA2015 definition) Re-establishment of forest through planting and/or deliberate seeding on land classified as forest.
Natural expansion of forest	(Same as FRA2015 definition) 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).

### 1.2.3 Original data

<b>Forest area</b>				
A. Land-use				
National categories	Area (1,000 hectares)			
	1990	2000	2005	2010
<b>Forest</b>	<b>6,476</b>	<b>6,422</b>	<b>6,394</b>	<b>6,369</b>
Stocked	6,302	6,268	6,239	6,172

Un-stocked	174	154	155	197
<b>Other land</b>	<b>3,451</b>	<b>3,524</b>	<b>3,571</b>	<b>3,634</b>
<b>TOTAL</b>	<b>9,927</b>	<b>9,946</b>	<b>9,965</b>	<b>10,003</b>

## B. Detail Breakdown of Un-stocked Forest Lands

Un-stocked Forest	Area (1,000 hectares)			
	1990	2000	2005	2010
Non-stocked	47.01	32.26	39.23	55.96
Denuded	0.51	0.34	1.18	2.08
Reclaimed	21.82	0.03	0.03	0.12
Miscellaneous	105.10	121.20	114.19	139.18
<b>TOTAL</b>	<b>174.44</b>	<b>153.82</b>	<b>154.62</b>	<b>197.33</b>

## Forest expansion, reforestation, deforestation

Classification/ Species	Area (hectares)					
	Average	1988	1989	1990	1991	1992
Forest expansion	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Deforestation	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Reforestation	38,235	46,099	36,404	37,350	37,095	34,226
Native species	23,570	26,048	22,883	28,823	22,069	18,028
Introduced	14,665	20,051	13,521	8,527	15,026	16,198
Japanese larch	4,803	7,416	4,608	1,136	5,166	5,690
Pitch pine	1,091	2,420	1,210	957	568	300



Japanese cedar	648	1,145	542	620	572	360
Japanese cypress	3,895	5,219	3,702	3,274	3,691	3,588
other conifers	1,810	1,889	1,860	1,302	1,354	2,647
Italian poplar	2,417	1,962	1,599	1,238	3,675	3,613

Classification/ Species	Area (hactares)					
	Average	1998	1999	2000	2001	2002
<b>Forest expansion</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Deforestation</b>	<b>6,011</b>	<b>n.a.</b>	<b>6,083</b>	<b>5,558</b>	<b>6,021</b>	<b>6,383</b>
<b>Reforestation</b>	<b>21,019</b>	<b>20,383</b>	<b>21,232</b>	<b>22,131</b>	<b>20,691</b>	<b>20,657</b>
<b>Native species</b>	<b>16,707</b>	<b>14,348</b>	<b>17,353</b>	<b>16,078</b>	<b>17,579</b>	<b>18,178</b>
<b>Introduced</b>	<b>4,312</b>	<b>6,035</b>	<b>3,879</b>	<b>6,053</b>	<b>3,112</b>	<b>2,479</b>
Japanese larch	2,100	2,880	2,514	2,642	1,296	1,168
Pitch pine	19	59	6	11	3	15
Japanese cedar	45	35	41	37	43	69
Japanese cypress	1,346	2,073	161	1,924	1,523	1,050
other conifers	802	988	1,157	1,439	247	177
Italian poplar	0	0	0	0	0	0

Classification/ Species	Area (hactares)					
	Average	2003	2004	2005	2006	2007

<b>Forest expansion</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Deforestation</b>	<b>5,891</b>	<b>5,751</b>	<b>5,772</b>	<b>6,528</b>	<b>4,594</b>	<b>6,812</b>
<b>Reforestation</b>	<b>20,781</b>	<b>21,139</b>	<b>21,452</b>	<b>19,938</b>	<b>20,600</b>	<b>20,775</b>
<b>Native species</b>	<b>17,129</b>	<b>16,818</b>	<b>16,929</b>	<b>16,863</b>	<b>17,278</b>	<b>17,756</b>
<b>Introduced</b>	<b>3,652</b>	<b>4,321</b>	<b>4,523</b>	<b>3,075</b>	<b>3,322</b>	<b>3,019</b>
Japanese larch	647	838	944	329	565	559
Pitch pine	57	287	0	0	0	0
Japanese cedar	28	51	33	21	14	22
Japanese cypress	1,328	1,493	1,477	1,193	1,313	1,164
other conifers	1,591	1,652	2,069	1,532	1,430	1,274
Italian poplar	0	0	0	0	0	0

<b>Classification/ Species</b>	<b>Area (hactares)</b>					
	<b>Average</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Forest expansion</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Deforestation</b>	<b>6,634</b>	<b>8,790</b>	<b>5,419</b>	<b>5,693</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Reforestation</b>	<b>21,329</b>	<b>21,992</b>	<b>21,919</b>	<b>21,515</b>	<b>21,179</b>	<b>20,039</b>
<b>Native species</b>	<b>18,335</b>	<b>18,855</b>	<b>18,579</b>	<b>18,615</b>	<b>18,521</b>	<b>17,103</b>
<b>Introduced</b>	<b>2,994</b>	<b>3,137</b>	<b>3,340</b>	<b>2,900</b>	<b>2,658</b>	<b>2,936</b>
Japanese larch	689	505	962	805	712	463
Pitch pine	57	287	0	0	0	0
Japanese cedar	24	31	18	24	6	43

Japanese cypress	1,619	1,622	1,656	1,495	1,449	1,872
other conifers	604	692	704	576	491	558
Italian poplar	0	0	0	0	0	0

### 1.3 Analysis and processing of national data

#### 1.3.1 Adjustment

<b>Forest area</b>				
<p>The figure of forest from the national data has been maintained and not subjected to calibration. These are derived from reliable inventory data as well as up-to-date information. The area of inland water bodies has been adopted from FAOSTAT and changes due to this have been made in the area of “other land” to match the total and land area of the country with FAOSTAT.</p>				
<b>Data sources</b>	<b>Area (1,000 hectares)</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
<b>National data</b>	<b>9,874</b>	<b>9,893</b>	<b>9,912</b>	<b>9,723</b>
<b>FAO</b>	<b>9,873</b>	<b>9,873</b>	<b>9,873</b>	<b>9,710</b>
<b>Calibration factor</b>	<b>0.9999</b>	<b>0.9980</b>	<b>0.9961</b>	<b>0.9986</b>
<b>Categories</b>	<b>Area (1,000 hectares)</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
<b>Stocked Forest</b>	<b>6,301</b>	<b>6,256</b>	<b>6,215</b>	<b>6,163</b>
<b>Un-stocked Forest</b>	<b>174</b>	<b>153</b>	<b>154</b>	<b>197</b>
Non-stocked	47	32	39	56

Denuded	0.51	0.34	1.18	2.08
Reclaimed	21.82	0.03	0.03	0.12
Miscellaneous	105	121	114	139
<b>Other Land</b>	<b>3,398</b>	<b>3,464</b>	<b>3,504</b>	<b>3,349</b>
<b>Inland Water Bodies</b>	<b>53</b>	<b>53</b>	<b>53</b>	<b>280</b>
<b>TOTAL Land Area</b>	<b>9,926</b>	<b>9,926</b>	<b>9,926</b>	<b>9,990</b>

### Forest expansion, reforestation, deforestation

This step is not needed.

### 1.3.2 Estimation and forecasting

#### Forest area

The figures for 1990, 2000, 2005 and 2010 have been developed after reclassification. The figure for forest in 2015 has been forecasted by linear extrapolation with all adjustment in the “other land”.

Categories	Area (1,000 hectares)				
	1990	2000	2005	2010	2015
<b>Stocked Forest</b>	<b>6,301</b>	<b>6,256</b>	<b>6,215</b>	<b>6,163</b>	<b>6,129</b>
<b>Un-stocked Forest <sup>1)</sup></b>	<b>69</b>	<b>33</b>	<b>40</b>	<b>58</b>	<b>55</b>
<b>Miscellaneous</b>	<b>105</b>	<b>121</b>	<b>114</b>	<b>139</b>	<b>147</b>
<b>Other Land</b>	<b>3,398</b>	<b>3,464</b>	<b>3,504</b>	<b>3,349</b>	<b>3,379</b>
<b>Inland Water Bodies</b>	<b>53</b>	<b>53</b>	<b>53</b>	<b>280</b>	<b>280</b>
<b>TOTAL Land Area</b>	<b>9,926</b>	<b>9,926</b>	<b>9,926</b>	<b>9,990</b>	<b>9,990</b>

1) Un-stocked forest area w/o miscellaneous area

**Forest expansion, reforestation, deforestation**

This step is not needed.

## 1.3.3 Reclassification

**Forest area**

There is no matching classification and data for “Other wooded land” and “Other land with tree cover” in the country.

National Class	Percentage allocation to FRA Categories			
	Forest	Other wooded land	Other land	Other land with tree cover
Stocked Forest	100			
Un-stocked Forest				
Non-Stocked	100			
Denuded	100			
Reclaimed	100			
Miscellaneous			100	

(Note: “Non-Stocked” under un-stocked forests are forest with canopy cover between 10% and 30%. The miscellaneous forests under un-stocked forests include rock areas, roads, grave/cemetery, nursery, orchard, military facilities etc. )

**Forest expansion, reforestation, deforestation**

This step is not needed.

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## 1.4 Data

Table 1a













Categories		Area (000 hectares)				
		1990	2000	2005	2010	2015
	Forest	6370	6288	6255	6222	6184
	Other wooded land	N/A	N/A	N/A	N/A	0
	Other land	3503	3585	3618	3488	3526
	... of which with tree cover	N/A	N/A	N/A	N/A	N/A
	Inland water bodies	53	53	53	280	280
	TOTAL	9926.00	9926.00	9926.00	9990.00	9990.00

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	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which afforestation	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which natural expansion of forest	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Deforestation	N/A	6	6	7	N/A	N/A	N/A	N/A
	... of which human induced	N/A	6	6	7	N/A	N/A	N/A	N/A
	Reforestation	38	21	21	21	15	4	4	3
	... of which artificial	38	21	21	21	15	4	4	3

## Tiers

Category	Tier for status	Tier for reported trend
----------	-----------------	-------------------------

Forest	Tier 3	Tier 3
Other wooded land	Tier 1	N/A
Forest expansion	N/A	N/A
Deforestation	Tier 3	Tier 3
Reforestation	Tier 3	Tier 3

## Tier criteria

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

## 1.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trends
Forest	N/A	N/A
Other wooded land	The category and definition of "Other wooded land" is not applicable to national data. There is no national classification and data for "Other wooded land". Any areas that may fall under the FAO definition of Other wooded land are included under Other land.	N/A
Other land	N/A	N/A
Other land with tree cover	The category and definition of "Other land with tree cover" are not applicable to national data. There is no national classification and data for "Other land with tree cover".	N/A
Inland water bodies	N/A	N/A
Forest expansion	Afforestation is very rare and no data. No data applicable.	N/A
Deforestation	N/A	N/A
Reforestation	Previous forest type of reforested area is not recorded.	N/A

## Other general comments to the table

Even though there is no clear classification between native and introduced species, most of coniferous planting species are the introduced.



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

Documents for this question:

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

### 2.1 Categories and definitions

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

### 2.2 National data

#### 2.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Statistical Yearbook of Forestry, Korea Forest Service. Korea.	Forest characteristic	1991-2013	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
Conifers	Coniferous forests
Non-conifers(Hardwoods)	Broadleaved forest
Mixed	Mixed forests with conifers and hardwoods
Bamboo	Bamboo forest
Unstocked	Non-stocked, denuded, reclaimed, miscellaneous forests.

### 2.2.3 Original data

Classification	Area (1,000 hectares)			
	1990	2000	2005	2010
<b>Natural forest</b>	n.a.	<b>4,368</b>	<b>3,697</b>	n.a.
<b>Other naturally regenerated forest</b>	n.a.	<b>279</b>	<b>877</b>	n.a.
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
<b>Planted forest</b>	n.a.	<b>1,775</b>	<b>1,820</b>	n.a.
... of which of introduced species	n.a.	1,256	1,254	n.a.
<b>TOTAL forest</b>	<b>6,476</b>	<b>6,422</b>	<b>6,394</b>	<b>6,369</b>

There is no clear classification between introduced species and native species. But introduced coniferous species include larch, pitch pine, some coniferous species, which are major planting species.

## 2.3 Analysis and processing of national data

### 2.3.1 Adjustment

Data sources	Area (1,000 hectares)			
	1990	2000	2005	2010
<b>Forest area-national data</b>	<b>6,476</b>	<b>6,422</b>	<b>6,394</b>	<b>6,369</b>
<b>New forest area for FRA2015</b>	<b>6,370</b>	<b>6,288</b>	<b>6,255</b>	<b>6,221</b>
<b>Calibration factor for forest</b>	<b>0.9836</b>	<b>0.9791</b>	<b>0.9783</b>	<b>0.9768</b>

Categories	Area (1,000 hectares)			
	1990	2000	2005	2010
<b>Natural forest</b>	n.a.	<b>4,277</b>	<b>3,617</b>	n.a.
<b>Other naturally regenerated forest</b>	n.a.	<b>273</b>	<b>858</b>	n.a.
...of which of introduced species	n.a.	n.a.	n.a.	n.a.
<b>Planted forest</b>	n.a.	<b>1,738</b>	<b>1,781</b>	n.a.
... of which of introduced species	n.a.	1,230	1,227	n.a.
<b>TOTAL forest</b>	<b>6,370</b>	<b>6,288</b>	<b>6,255</b>	<b>6,221</b>

## 2.3.2 Estimation and forecasting

The figures for forest in 2010 and 2015 have been forecasted by linear extrapolation.

Categories	Area (1,000 hectares)				
	1990	2000	2005	2010	2015
<b>Natural forest</b>	n.a.	<b>4,277</b>	<b>3,617</b>	<b>3,540</b>	<b>3,460</b>
<b>Other naturally regenerated forest</b>	n.a.	<b>273</b>	<b>858</b>	<b>858</b>	<b>858</b>
...of which of introduced species	n.a.	n.a.	n.a.	n.a.	n.a.
<b>Planted forest</b>	n.a.	<b>1,738</b>	<b>1,781</b>	<b>1,823</b>	<b>1,866</b>
... of which of introduced species	n.a.	1,230	1,227	1,224	1,221
<b>TOTAL forest</b>	<b>6,370</b>	<b>6,288</b>	<b>6,255</b>	<b>6,221</b>	<b>6,184</b>

## 2.3.3 Reclassification

National Classes	Percentage allocation to FRA Categories					
	Primary forest	Other naturally regenerated forest	...of which of introduced species	...of which naturalized	Planted forest	...of which of introduced species
<b>Natural forest</b>	100					

<b>Other naturally regenerated forest</b>		100		n.a.		
...of which of introduced species			100	n.a.		
<b>Planted forest</b>					100	
... of which of introduced species						100

## 2.4 Data

Table 2a







Categories		Forest area (000 hectares)				
		1990	2000	2005	2010	2015
	Primary forest	N/A	4277	3617	3540	3460
	Other naturally regenerated forest	N/A	273	858	858	858
	... of which of introduced species	N/A	N/A	N/A	N/A	N/A
	... of which naturalized	N/A	N/A	N/A	N/A	N/A
	Planted forest	N/A	1738	1781	1823	1866
	... of which of introduced species	N/A	1230	1227	1224	1221
TOTAL		.00	6288.00	6256.00	6221.00	6184.00

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

N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
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Table 2c

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

## Tiers

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

## Tier Criteria

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

## 2.5 Comments

Category	Comments related to data definitions etc	Comments on reported trend
Primary forest	N/A	N/A
Other naturally regenerating forest	N/A	N/A
Planted forest	N/A	N/A
Mangroves	No mangroves in Korea	N/A

**Other general comments to the table**

In national classification, forest characteristics are classified into natural forest and plantation. But no clear definitions for plantation and natural forest are available. In general, plantation is a man-made forest by planting seedlings, and natural forest is a naturally regenerated forest. There is no clear classification between native and introduced species. But major coniferous planting species are introduced.

### 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	Statistical Yearbook of Forestry, Korea Forest Service. Korea	Growing stock	1989-2011	N/A
2	Unpublished data, Korea Forest Research Institute, Korea	Growing stock	1988-2010	Recalculating based on data from forest growth rates and NFI5
3	Unpublished data from NFI5 by Korea Forestry Promotion Institute, Korea	Growing stock and proportion by tree species in forest	2010	N/A



4	National GHG Inventory Reporting Guidelines of Korea 2013 based on default values from GPG-LULUCF	Basic wood density, Biomass expansion factor, Root-shoot ratio, Carbon fraction	2013	N/A
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### 3.2.2 Classification and definitions

National class	Definition
Growing stock	Volume over bark of all living trees more than 6cm in diameter at breast height (or above buttress if these are higher). Includes the stem from ground level up to a tree top, and dose not include branches.
Merchantable tree volume	Part of volume over bark of all living trees more than 6cm in diameter at breast height (or above buttress if these are higher). Includes the stem from stump height(20cm) up to a top of 6cm in diameter, and dose not include branches.
Production forest	Forest reserved for mainly timber production. Forest management activities are allowed.
Non-production forest	Forest reserved for mainly public functions and services. Some kinds of management activities are legally and administratively restricted. Includes most of protection forests.
Commercial growing stock	Merchantable Growing stock in Production forest.
Non-commercial growing stock Non-commercial growing stock	Growing stock of Non-production forest.
Above-ground biomass	All living biomass above the soil including stem, stump, branches, bark
Below-ground biomass	All living biomass of live roots. No data on threshold value for fine root
Dead wood	No definitions
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 living biomass of live roots. No data on threshold value for fine root
Carbon in dead wood	N/A
Carbon in litter	Minimum diameter for deadwood is less than 6cm.
Soil carbon	Same as FRA2015

### 3.2.3 Original data

<p><b>Growing stock</b></p> <p>A. Growing Stock</p>
-----------------------------------------------------

Forest type	Volume (millioncubic meters)			
	1990	2000	2005	2010
<b>Conifers</b>	<b>140</b>	<b>215</b>	<b>267</b>	<b>333</b>
<b>Non-conifers</b>	<b>86</b>	<b>146</b>	<b>181</b>	<b>217</b>
<b>Mixed</b>	<b>94</b>	<b>164</b>	<b>205</b>	<b>249</b>
<b>TOTAL</b>	<b>320</b>	<b>526</b>	<b>654</b>	<b>799</b>

### Growing stockcomposition

#### A. Growing stock and proportion by tree species in forest

Tree species	Volume (millioncubic meters)	Proportion (%)
<b>Red pine in Gangwon region</b>	<b>90.24</b>	<b>18.75</b>
<b>Red pine in Central region</b>	<b>227.60</b>	<b>47.28</b>
<b>Pitch pine</b>	<b>40.07</b>	<b>8.32</b>
<b>Japanese black pine</b>	<b>19.22</b>	<b>3.99</b>
<b>Korean white pine</b>	<b>25.24</b>	<b>5.24</b>
<b>Japanese larch</b>	<b>44.30</b>	<b>9.20</b>
<b>Japanese cedar</b>	<b>2.89</b>	<b>0.60</b>
<b>Japanese cypress</b>	<b>2.31</b>	<b>0.48</b>
<b>Other conifers</b>	<b>29.50</b>	<b>6.13</b>
<b>Sub-total(conifers)</b>	<b>481</b>	<b>100</b>
<b>Mongolian oak</b>	<b>97.95</b>	<b>30.74</b>
<b>Serrate oak</b>	<b>3.78</b>	<b>1.19</b>
<b>Oriental cork oak</b>	<b>47.71</b>	<b>14.97</b>

<b>Oriental chestnut oak</b>	<b>7.80</b>	<b>2.45</b>
<b>Yellow poplar</b>	<b>0.00</b>	<b>0.00</b>
<b>Populus x albaglandulosa</b>	<b>0.43</b>	<b>0.14</b>
<b>Loose flower hornbeam</b>	<b>2.17</b>	<b>0.68</b>
<i>Castanopsis cuspidata</i> var. <i>sieboldii</i>	<b>0.12</b>	<b>0.04</b>
<b>Chestnut</b>	<b>6.54</b>	<b>2.05</b>
<b>White birch</b>	<b>0.30</b>	<b>0.10</b>
<b>False acasia</b>	<b>7.24</b>	<b>2.27</b>
<b>Japanese evergreen oak</b>	<b>0.10</b>	<b>0.03</b>
<b>Blue Japanese Oak</b>	<b>0.14</b>	<b>0.05</b>
<b>Other non-conifers</b>	<b>144.36</b>	<b>45.30</b>
<b>Sub-total(non-conifers)</b>	<b>319</b>	<b>100</b>
<b>TOTAL</b>	<b>800</b>	

(Source: Unpublished data from NFI5 by Korea Forestry Promotion Institute in 2010)

#### B. Growing stock composition of mixed forests

According to the ‘Growing stock and proportion by tree species in forest, 2010’(above table), the ratio of coniferous and non-coniferous forest in Korea is following;

- Coniferous forest: 60.17 %
- Non-coniferous forest: 39.83 %.

#### Net annual increment

Forest types	Net annual increment (cubic meters per hectares per year)					
	Average	1988	1989	1990	1991	1992

<b>Conifers</b>	<b>3.01</b>	<b>3.28</b>	<b>3.68</b>	<b>3.03</b>	<b>1.87</b>	<b>3.17</b>
<b>Non-conifers</b>	<b>2.86</b>	<b>3.12</b>	<b>3.50</b>	<b>2.88</b>	<b>1.77</b>	<b>3.01</b>
<b>AVERAGE</b>	<b>2.94</b>	<b>3.22</b>	<b>3.61</b>	<b>2.97</b>	<b>1.83</b>	<b>3.10</b>

<b>Forest types</b>	<b>Net annual increment (cubic meters per hectares per year)</b>					
	<b>Average</b>	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<b>Conifers</b>	<b>4.56</b>	<b>4.83</b>	<b>5.12</b>	<b>4.19</b>	<b>4.40</b>	<b>4.26</b>
<b>Non-conifers</b>	<b>4.33</b>	<b>4.59</b>	<b>4.87</b>	<b>3.98</b>	<b>4.18</b>	<b>4.05</b>
<b>AVERAGE</b>	<b>4.47</b>	<b>4.73</b>	<b>5.02</b>	<b>4.10</b>	<b>4.31</b>	<b>4.17</b>

<b>Forest types</b>	<b>Net annual increment (cubic meters per hectares per year)</b>					
	<b>Average</b>	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Conifers</b>	<b>4.20</b>	<b>4.10</b>	<b>4.42</b>	<b>3.66</b>	<b>4.11</b>	<b>4.69</b>
<b>Non-conifers</b>	<b>3.99</b>	<b>3.90</b>	<b>4.20</b>	<b>3.48</b>	<b>3.90</b>	<b>4.46</b>
<b>AVERAGE</b>	<b>4.11</b>	<b>4.02</b>	<b>4.32</b>	<b>3.59</b>	<b>4.02</b>	<b>4.60</b>

<b>Forest types</b>	<b>Net annual increment (cubic meters per hectares per year)</b>					
	<b>Average</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Conifers</b>	<b>5.03</b>	<b>4.96</b>	<b>5.11</b>	<b>5.03</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Non-conifers</b>	<b>4.78</b>	<b>4.71</b>	<b>4.86</b>	<b>4.78</b>	<b>n.a.</b>	<b>n.a.</b>
<b>AVERAGE</b>	<b>4.93</b>	<b>4.86</b>	<b>5.01</b>	<b>4.93</b>	<b>n.a.</b>	<b>n.a.</b>

### 3.3 Analysis and processing of national data

#### 3.3.1 Adjustment

##### Growing, biomass and carbon stock

This step is not needed.

#### 3.3.2 Estimation and forecasting

##### 1. Growing Stock

Forest type	Growing stock (millioncubic meters)				
	1990	2000	2005	2010	2015
Conifers	192	316	393	480	552
Non-conifers	127	210	260	318	366
<b>TOTAL</b>	<b>320</b>	<b>526</b>	<b>654</b>	<b>799</b>	<b>918</b>

##### 1. Breakdown of Growing Stock by Species

Tree species	Proportion (%)	Volume (millioncubic meters)			
	2010	1990	2000	2005	2010
Red pine in Gangwon region	18.75	36.15	59.44	73.86	90.24
Red pine in Central region	47.28	91.16	149.92	186.28	227.60
Pitch pine	8.32	16.05	26.39	32.79	40.07
Japanese black pine	3.99	7.70	12.66	15.73	19.22

<b>Korean white pine</b>	<b>5.24</b>	<b>10.11</b>	<b>16.63</b>	<b>20.66</b>	<b>25.24</b>
<b>Japanese larch</b>	<b>9.20</b>	<b>17.75</b>	<b>29.18</b>	<b>36.26</b>	<b>44.30</b>
<b>Japanese cedar</b>	<b>0.60</b>	<b>1.16</b>	<b>1.90</b>	<b>2.37</b>	<b>2.89</b>
<b>Japanese cypress</b>	<b>0.48</b>	<b>0.92</b>	<b>1.52</b>	<b>1.89</b>	<b>2.31</b>
<b>Other conifers</b>	<b>6.13</b>	<b>11.82</b>	<b>19.43</b>	<b>24.15</b>	<b>29.50</b>
<b>Sub-total(conifers)</b>	<b>100</b>	<b>193</b>	<b>317</b>	<b>394</b>	<b>481</b>
<b>Mongolian oak</b>	<b>30.74</b>	<b>39.23</b>	<b>64.52</b>	<b>80.17</b>	<b>97.95</b>
<b>Serrate oak</b>	<b>1.19</b>	<b>1.51</b>	<b>2.49</b>	<b>3.09</b>	<b>3.78</b>
<b>Oriental cork oak</b>	<b>14.97</b>	<b>19.11</b>	<b>31.43</b>	<b>39.05</b>	<b>47.71</b>
<b>Oriental chestnut oak</b>	<b>2.45</b>	<b>3.12</b>	<b>5.14</b>	<b>6.38</b>	<b>7.80</b>
<b>Yellow poplar</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>	<b>0.00</b>
<b>Populus x albaglandulosa</b>	<b>0.14</b>	<b>0.17</b>	<b>0.28</b>	<b>0.35</b>	<b>0.43</b>
<b>Loose flower hornbeam</b>	<b>0.68</b>	<b>0.87</b>	<b>1.43</b>	<b>1.78</b>	<b>2.17</b>
<b><i>Castanopsis cuspidata</i> var. <i>sieboldii</i></b>	<b>0.04</b>	<b>0.05</b>	<b>0.08</b>	<b>0.10</b>	<b>0.12</b>
<b>Chestnut</b>	<b>2.05</b>	<b>2.62</b>	<b>4.31</b>	<b>5.35</b>	<b>6.54</b>
<b>White birch</b>	<b>0.10</b>	<b>0.12</b>	<b>0.20</b>	<b>0.25</b>	<b>0.30</b>
<b>False acasia</b>	<b>2.27</b>	<b>2.90</b>	<b>4.77</b>	<b>5.93</b>	<b>7.24</b>
<b>Japanese evergreen oak</b>	<b>0.03</b>	<b>0.04</b>	<b>0.07</b>	<b>0.09</b>	<b>0.10</b>
<b>Blue Japanese Oak</b>	<b>0.05</b>	<b>0.06</b>	<b>0.09</b>	<b>0.12</b>	<b>0.14</b>

<b>Other non-conifers</b>	<b>45.30</b>	<b>57.82</b>	<b>95.09</b>	<b>118.15</b>	<b>144.36</b>
<b>Sub-total(non-conifers)</b>	<b>100</b>	<b>128</b>	<b>210</b>	<b>261</b>	<b>319</b>
<b>TOTAL</b>		<b>320</b>	<b>527</b>	<b>655</b>	<b>800</b>

**Biomass stock**

<b>Forest type</b>	<b>Basic Wood Density (tonnes d.w. per m<sup>3</sup> f.w.)</b>	<b>BEF</b>	<b>Root-Shoot Ratio</b>
<b>Conifers</b>	<b>0.49</b>	<b>1.3</b>	<b>0.32</b>
<b>Non-conifers</b>	<b>0.58</b>	<b>1.4</b>	<b>0.26</b>

(Source: National GHG Inventory Reporting Guidelines of Korea 2013 based on default values from GPG-LULUCF)

Note: These national factors will be updated in the future through new research projects.

<b>Forest/ Biomass types</b>	<b>Biomass (million tonnes)</b>				
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>
<b>Conifers</b>	<b>162</b>	<b>266</b>	<b>331</b>	<b>404</b>	<b>465</b>
<b>Above-ground biomass</b>	<b>123</b>	<b>202</b>	<b>251</b>	<b>306</b>	<b>352</b>
<b>Below-ground biomass</b>	<b>39</b>	<b>65</b>	<b>80</b>	<b>98</b>	<b>113</b>
<b>Non-conifers</b>	<b>130</b>	<b>214</b>	<b>266</b>	<b>325</b>	<b>374</b>
<b>Above-ground biomass</b>	<b>103</b>	<b>170</b>	<b>211</b>	<b>258</b>	<b>297</b>

<b>Below-ground biomass</b>	<b>27</b>	<b>44</b>	<b>55</b>	<b>67</b>	<b>77</b>
<b>TOTAL</b>	<b>292</b>	<b>480</b>	<b>597</b>	<b>729</b>	<b>839</b>

### Carbon stock

<b>Carbon pools</b>	<b>Carbon fraction</b>
<b>Carbon in above-ground biomass</b>	<b>0.5</b>
<b>Carbon in below-ground biomass</b>	<b>0.5</b>

(Source: National GHG Inventory Reporting Guidelines of Korea 2013 based on default values from GPG-LULUCF)

<b>Carbon pools</b>	<b>Carbon (million tonnes)</b>				
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>
<b>Conifers</b>	<b>81</b>	<b>133</b>	<b>165</b>	<b>202</b>	<b>232</b>
<b>Above-ground biomass</b>	<b>61</b>	<b>101</b>	<b>125</b>	<b>153</b>	<b>176</b>
<b>Below-ground biomass</b>	<b>20</b>	<b>32</b>	<b>40</b>	<b>49</b>	<b>56</b>
<b>Non-conifers</b>	<b>65</b>	<b>107</b>	<b>133</b>	<b>163</b>	<b>187</b>
<b>Above-ground biomass</b>	<b>52</b>	<b>85</b>	<b>106</b>	<b>129</b>	<b>148</b>
<b>Below-ground biomass</b>	<b>13</b>	<b>22</b>	<b>27</b>	<b>34</b>	<b>39</b>



<b>TOTAL</b>	<b>146</b>	<b>240</b>	<b>299</b>	<b>365</b>	<b>419</b>
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### 3.3.3 Reclassification

<p><b>Growing and biomass stock</b></p> <p>This step is not needed.</p>
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## 3.4 Data

Table 3a




Category		Growing stock volume (million m <sup>3</sup> over bark)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Total growing stock	320	526	654	799	918	N/A	N/A	N/A	N/A	N/A
	... of which coniferous	193	316	393	480	552	N/A	N/A	N/A	N/A	N/A
	... of which broadleaved	127	210	261	319	366	N/A	N/A	N/A	N/A	N/A

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 densiflora</i> S. et Z.	Red pine	127.31	209.36	260.14	317.84
2 nd	<i>Quercus mongolica</i> Fisch.	Mongolian oak	39.23	64.52	80.17	97.95
3 rd	<i>Quercus variabilis</i> Bl.	Oriental cork oak	19.11	31.43	39.05	47.71
4 th	<i>Larix leptolepis</i> (S. et Z.) Gordon	Japanese larch	17.75	29.18	36.26	44.3
5 th	<i>Pinus rigida</i> Mill.	Pitch pine	16.05	26.39	32.79	40.07
6 th	<i>Pinus koraiensis</i> S. et Z.	Korean white pine	10.11	16.63	20.66	25.24
7 th	<i>Pinus thunbergii</i> Parl.	Japanese black pine	7.7	12.66	15.73	19.22

8 th	Quercus acutissima Carruth.	Oriental chestnut oak	3.12	5.14	6.38	7.8
9 th	Robinia pseudoacacia	False acacia	2.9	4.77	5.93	7.24
10 th	Castanea crenata S.et Z.	Chestnut	2.62	4.31	5.35	6.54
Remaining			74.55	122.59	152.33	186.12
TOTAL			320.45	526.98	654.79	800.03

**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)	6	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	Branches are not included in growing stock
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 <sup>3</sup> per hectare and year)				
		Forest				
		1990	2000	2005	2010	2015
	Net annual increment	2.94	4.47	4.11	4.93	N/A
	... of which coniferous	3.01	4.56	4.2	5.03	N/A
	... of which broadleaved	2.86	4.33	3.99	4.78	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











	Above ground biomass	226	371	462	564	649	N/A	N/A	N/A	N/A	N/A
	Below ground biomass	66	109	135	165	190	N/A	N/A	N/A	N/A	N/A
	Dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		292.00	480.00	597.00	729.00	839.00	.00	.00	.00	.00	.00

Table 3e

Category		Carbon (Million metric tonnes)									
		Forest					Other wooded land				
		1990	2000	2005	2010	2015	1990	2000	2005	2010	2015
	Carbon in above ground biomass	113	186	231	282	324	N/A	N/A	N/A	N/A	N/A
	Carbon in below ground biomass	33	54	68	83	95	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Living biomass</i>	146	240	299	365	419	N/A	N/A	N/A	N/A	N/A
	Carbon in dead wood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Carbon in litter	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	<i>Subtotal Dead wood and litter</i>	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Soil carbon	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
TOTAL		146.00	240.00	299.00	365.00	419.00	.00	.00	.00	.00	.00

## Tiers

Variable/category	Tier for status	Tier for trend
Total growing stock	Tier 3	Tier 3
Net annual increment	Tier 3	Tier 3
Above ground biomass	Tier 1	Tier 1

Below ground biomass	Tier 1	Tier 1
Dead wood	N/A	N/A
Carbon in above-ground biomass	Tier 1	Tier 1
Carbon in below ground biomass	Tier 1	Tier 1
Carbon in dead wood and litter	N/A	N/A
Soil carbon	N/A	N/A

## Tier criteria

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

## 3.5 Comments on growing stock biomass and carbon

Category	Comments related to data definitions etc	Comments on the reported trend
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Total growing stock	No data available for reporting on Other wooded land in Table 6a.	The growing stock per hectare has increased substantially during this 20-year reporting period. It is mainly due to the large areas planted since the 1970s.
Growing stock of broadleaved coniferous	N/A	N/A
Growing stock composition	N/A	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	N/A
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

Final data for growing stock composition are subject to change in the future because the base year of the data sources are different from the reference year. The above results are only estimate based on the existing data sources available at this moment. From the 5th NFI(2006-2010), the inventory program has been improved, moving from periodic to annual inventory system to meet increasing demands for reliable forest information from international processes and conventions. The new NFI design focuses on assessing and monitoring the extent and state of forest resources in Korea on accurate and timely manner. Core changes include annual inventory at 5 year intervals, new systematic layout of 4,000 permanent sample plots, new ground plot design, addition of new variables related to forest carbon estimation and biodiversity, etc. According to the annual inventory system, all permanent sample plots are divided into five panels, and each panel will be remeasured every five years. It is commonly recognized that growing stock has been underestimated so far. Analysis of 3-year(2006-2008) NFI data revealed that average growing stock volume is more than 120 m<sup>3</sup> per ha, whereas the present(2007) is 97.8 m<sup>3</sup>/ha. The final result of the 5th NFI will come out in 2010. Based on the new result, all the previous statistics of growing volume will be recalculated in 2011 to keep consistency in internal and international reporting. Biomass conversion factors are still being developed in research projects, and will be further developed with more data in the future.

## 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	Statistical Yearbook of Forestry, Korea Forest Service	Designation	1991-2011	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

#### 4.2.2 Classification and definitions

National class	Definition
Conservation forest	Forestry use, Public use

Semi-conservation forest	N/A
N/A	N/A
N/A	N/A

## 4.2.3 Original data

<b>Production and multiful use forest</b>						
<b>National forest land classification</b>	<b>Forest area (1,000 hectares)</b>					
	<b>1985</b>	<b>1991</b>	<b>1997</b>	<b>2008</b>	<b>2009</b>	<b>2010</b>
<b>TOTAL of forest land</b>	<b>6,531</b>	<b>6,493</b>	<b>6,452</b>	<b>6,441</b>	<b>6,431</b>	<b>6,432</b>
<b>Conservation forest</b>	<b>5,220</b>	<b>4,901</b>	<b>4,977</b>	<b>4,961</b>	<b>4,957</b>	<b>4,947</b>
Forestry use	n.a.	4,901	3,548	3,258	3,257	3,276
Public use	n.a.	n.a.	1,429	1,703	1,700	1,671
<b>Semi-conservation forest</b>	<b>1,311</b>	<b>1,592</b>	<b>1,475</b>	<b>1,480</b>	<b>1,474</b>	<b>1,486</b>
<b>Non wood forest product (NWFP)</b>						
<b>FRA2010 Categories</b>	<b>National categories</b>	<b>Value</b>				
		<b>(1,000 Korean Won)</b>				
<b>Plant products / raw material</b>						
<b>1. Food</b>	<b>Bamboo shoot</b>	310,226				
	<b>Nuts and Fruits</b>					

Chestnut	135,268,758	
Jujube	67,547,863	
Pinenut	49,794,211	
Bitter persimmon	196,915,313	
Walnut	15,763,037	
Gingko nut	9,726,972	
Acorn	2,560,920	
Raspberry	230,443,799	
Wild grapes	5,473,898	
Tara vine	1,560,376	
Prickly ash	467,476	
Anise pepper	373,902	
Others	484,370	
<b>Wild vegetable</b>		
Fernbrake	35,166,150	
Chinese bellflower	99,182,607	
Lance asiabell	101,573,398	
Angelica	22,977,103	
Aster scaber	58,421,609	
Osmunda	2,184,832	
Others	13,440,239	
<b>Mushroom</b>		
Pine mushroom	64,470,734	
Dry oak mushroom	62,911,963	
Raw oak mushroom	160,082,765	
Black fungus	246,240	



	Manna lichen	6,630	
	Others	10,549,590	
	<b>Sap</b>		
	Painted maple	15,583,445	
	Chinese birch	2,883	
	Ribbed birch	14,972	
	White birch	660,118	
	Others	384	
	<b>Kudzu root</b>	2,268,810	
<b>2. Fodder</b>	<b>Farm materials</b>		
	Forage	11,312,340	
<b>3. Raw material for medicine and aromatic products</b>	<b>Medicinal herbs</b>		
	Cornelian cherry fruit	7,768,802	
	Kad sura	95,346,027	
	Acanthopanax	20,928,213	
	Atractylodes	329,457	
	White atractylodes	2,177,719	
	Poria	1,351,568	
	Manchurian spikenard	15,695,735	
	Papoose root	278,952	
	Cultivated mountain ginseng	37,991,616	
	Solomon's seal	4,723,461	
	Others	194,030,599	
<b>4. Raw material for colorants and dyes</b>	n.a.	n.a.	

<b>5. Raw material for utensils, handicrafts &amp; construction</b>	<b>Fibre</b>		
	Paper mulberry	66,346	
<b>6. Ornamental plants</b>	<b>Material for landscape</b>		
	Garden tree	697,666,987	
	Dwarfed plant material	26,475,569	
	Dwarfed bred potted plant	9,729,149	
	Wild flower	25,151,449	
	<b>Native orchid</b>	46,182	
<b>7. Exudates</b>	<b>Resin</b>		
	Oriental lacquer	180,600	
	Yellow lacquer	179	
	<b>Wood vinegar</b>	8,542,997	
<b>8. Other plant products</b>	<b>Saw dust</b>	28,344,048	
	<b>Farm materials</b>		
	Green manure	6,424,624	
	Compost	24,199,344	
	<b>Gingko leaves</b>	25,030	
	<b>Other by-products</b>	40,640	
<b>TOTAL (2010)</b>		<b>2,585,263,226</b>	

**Total wood removals**

<b>Year</b>	<b>Volume of domestic timber supply (1,000 cubic meters)</b>			
	<b>TOTAL</b>	<b>Pit prop</b>	<b>Pulp wood</b>	<b>General use</b>

<b>1990</b>	1,138	512	410	216
<b>1991</b>	1,286	465	463	358
<b>1992</b>	1,123	343	378	402
<b>1993</b>	1,184	227	346	611
<b>1994</b>	1,173	176	385	612
<b>1995</b>	1,055	139	405	511
<b>1996</b>	1,195	109	392	694
<b>1997</b>	1,062	104	367	591
<b>1998</b>	1,428	110	406	912
<b>1999</b>	1,694	117	410	1,167
<b>2000</b>	1,592	112	552	928
<b>2001</b>	1,533	140	366	1,027
<b>2002</b>	1,605	58	373	1,174
<b>2003</b>	1,740	63	449	1,228
<b>2004</b>	2,037	62	478	1,497
<b>2005</b>	2,350	55	400	1,895
<b>2006</b>	2,444	47	522	1,875
<b>2007</b>	2,680	45	667	1,968
<b>2008</b>	2,702	45	838	1,819

<b>2009</b>	3,176	39	797	2,340
<b>2010</b>	3,715	29	892	2,794
<b>2011</b>	4,210	32	1,022	3,156
<b>Production of fuel wood (metric tonnes)</b>				
<b>Year</b>	<b>TOTAL</b>	<b>Bituminous coal</b>	<b>Charcoal</b>	<b>Firewood</b>
<b>1990</b>	271,794	n.a.	737	271,057
<b>1991</b>	199,700	n.a.	357	199,343
<b>1992</b>	159,836	n.a.	519	159,317
<b>1993</b>	120,494	n.a.	260	120,234
<b>1994</b>	99,246	n.a.	508	98,738
<b>1995</b>	76,762	n.a.	1,316	75,446
<b>1996</b>	54,843	n.a.	650	54,193
<b>1997</b>	66,134	n.a.	881	65,253
<b>1998</b>	89,344	n.a.	1,956	87,388
<b>1999</b>	93,385	395	4,091	88,899
<b>2000</b>	184,443	25,641	7,065	151,737
<b>2001</b>	171,260	16,764	5,791	148,705
<b>2002</b>	145,419	1,544	6,217	137,658

<b>2003</b>	206,109	1,781	4,536	199,792
<b>2004</b>	140,997	2,662	3,538	134,797
<b>2005</b>	160,115	2,195	7,674	150,246
<b>2006</b>	164,452	21,683	4,937	137,832
<b>2007</b>	145,036	3,238	8,686	133,112
<b>2008</b>	137,946	3,059	5,149	129,738
<b>2009</b>	150,306	3,024	7,765	139,517
<b>2010</b>	63,618	3,140	6,390	54,088
<b>2011</b>	67,298	2,913	7,184	57,201

### 4.3 Analysis and processing of national data

#### 4.3.1 Adjustment

<b>Production and multifunctional use forest</b>				
<b>National forest land classification</b>	<b>Forest area (1,000 hectares)</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
<b>TOTAL of forest land</b>	<b>6,499</b>	<b>6,449</b>	<b>6,444</b>	<b>6,432</b>
<b>Conservation forest</b>	<b>4,954</b>	<b>4,973</b>	<b>4,966</b>	<b>4,947</b>
Forestry use	n.a.	3,469	3,337	3,276
Public use	n.a.	1,504	1,628	1,671

<b>Semi-conservation forest</b>	<b>1,545</b>	<b>1,476</b>	<b>1,478</b>	<b>1,486</b>
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**Non wood forest product (NWFP)**

This step is not needed.

**Total wood removals**

This step is not needed.

## 4.3.2 Estimation and forecasting

<b>Production and multifunctional use forest</b>					
The reclassification provides the following area under primary functions. The areas for 2015 have been estimated through linear extrapolation.					
<b>National forest land classification</b>	<b>Forest area (1,000 hectares)</b>				
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>
<b>TOTAL of forest land</b>	<b>6,499</b>	<b>6,449</b>	<b>6,444</b>	<b>6,432</b>	<b>6,425</b>
<b>Conservation forest</b>	<b>4,954</b>	<b>4,973</b>	<b>4,966</b>	<b>4,947</b>	<b>4,935</b>
Forestry use	n.a.	3,469	3,337	3,276	3,171
Public use	n.a.	1,504	1,628	1,671	1,764
<b>Semi-conservation forest</b>	<b>1,545</b>	<b>1,476</b>	<b>1,478</b>	<b>1,486</b>	<b>1,490</b>

**Non wood forest product (NWFP)**

This step is not needed.

### Total wood removals

National statistics gives woodfuel figures in tonnes, thus it is necessary to use conversion factors. For instance, the conversion factors of 6.0 and 1.37931 are used for charcoal, and a conversion factor of 1.37931 for firewood, respectively, as instructed in the FRA2010 guidelines.

Year	Volume of fuel wood products (1,000 cubic meters)			
	TOTAL	Bituminous coal	Charcoal	Firewood
1990	380	n.a.	6	374
1991	278	n.a.	3	275
1992	224	n.a.	4	220
1993	168	n.a.	2	166
1994	140	n.a.	4	136
1995	115	n.a.	11	104
1996	80	n.a.	5	75
1997	97	n.a.	7	90
1998	137	n.a.	16	121
1999	156	3	34	123
2000	268	212	58	209
2001	253	139	48	205

<b>2002</b>	241	13	51	190
<b>2003</b>	313	15	38	276
<b>2004</b>	215	22	29	186
<b>2005</b>	271	18	64	207
<b>2006</b>	231	179	41	190
<b>2007</b>	255	27	72	184
<b>2008</b>	222	25	43	179
<b>2009</b>	257	25	64	192
<b>2010</b>	127	26	53	75
<b>2011</b>	138	24	59	79

## 4.3.3 Reclassification

<b>Production and multiful use forest</b>		
	<b>Production forest</b>	<b>Multiful use forest</b>
<b>Conservation forest</b>		
Forestry use	100%	
Public use		100%



FRA2015 categories	Forest area in 1,000 hectares			
	1990	2000	2005	2010
Production forest	n.a.	3,469	3,337	3,276
Multifunctional use forest	n.a.	1,504	1,628	1,671
<b>TOTAL</b>	<b>4,954</b>	<b>4,973</b>	<b>4,966</b>	<b>4,947</b>

#### Non wood forest product (NWFP)

This step is not needed.

#### Total wood removals

	Industrial roundwood removals	Woodfuel removals
Domestic timber supply		
Pit prop	100%	
Pulp wood	100%	
General use	100%	
Fuel wood products		
Bituminous coal		100%
Charcoal		100%
Firewood		100%

#### 4.4 Data

Table 4a

Categories	Forest area (000 hectares)
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		1990	2000	2005	2010	2015
	Production forest	N/A	3469	3337	3276	3171
	Multiple use forest	N/A	1504	1628	1671	1764

Table 4b

Rank	Name of product	Key species	Commercial value of NWFP removals 2010 (value 1000 local currency)	NWFP category
1 st	Raspberry	Rubus crataegifolius Bunge	230443799	1
2 nd	Bitter persimmon	Diospyros kaki Thunb	196915313	1
3 rd	Raw oak mushroom	Lentinus edodes Berk.	160082765	1
4 th	Chestnut	Castanea crenata	135268758	1
5 th	Lance asiabell	Codonopsis lanceolata (Siebold & Zucc.) Trautv.	101573398	1
6 th	Chinese bellflower	Platycodon grandiflorum (Jacq.) A. DC.	99182607	1
7 th	Kad sura	Schisandra chinensis (Turcz.) Baill	95346027	3
8 th	Jujube	Zizyphus jujuba	67547863	1
9 th	Pine mushroom	Tricholoma matsutake	64470734	1
10 th	Dry oak mushroom	Lentinus edodes Berk.	62911963	1
TOTAL			1213743227.00	

2010	
Name of local currency	Korean Won

Category
<b>Plant products / raw material</b>
1 Food
2 Fodder
3 Raw material for medicine and aromatic products

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

Table 4c Pre-filled data from FAOSTAT

Year	FRA 2015 category (1000 m <sup>3</sup> u.b.)	
	Total wood removals	...of which woodfuel
1990	1518	380
1991	1564	278
1992	1347	224
1993	1352	168
1994	1313	140
1995	1170	115
1996	1275	80
1997	1159	97
1998	1565	137
1999	1850	156

2000	1860	268
2001	1786	253
2002	1846	241
2003	2053	313
2004	2252	215
2005	2621	271
2006	2675	231
2007	2935	255
2008	2924	222
2009	3433	257
2010	3842	127
2011	4348	138

## Tiers

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

## Tier Criteria

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

## 4.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Production forest	All forests in Korea are administratively and legally designated as Production or Non-production forest. The country does not consider it necessary to go further to classify "non-production forests".	N/A
Multiple use forest	N/A	N/A

Total wood removals	N/A	N/A
Commercial value of NWFP	N/A	N/A

<b>Other general comments to the table</b>		
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	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

## 5.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

## 5.2.3 Original data

National categories	Forest area in hectares			
	1990	2000	2005	2010
<b>Forest protected areas</b>	<b>176,900</b>	<b>292,195</b>	<b>313,582</b>	<b>277,044</b>
<b>Disaster prevention</b>	<b>16,232</b>	<b>7,880</b>	<b>6,924</b>	<b>4,702</b>
Prevention of soil erosion and run-off	8,968	2,780	2,127	n.a.
Prevention of shifting sand dune	1,059	1,015	891	n.a.
Landslide prevention	178	54	54	n.a.
Fish habitat	6,027	4,031	3,852	n.a.
<b>Watershed conservation</b>	<b>160,634</b>	<b>284,288</b>	<b>306,647</b>	<b>272,330</b>
First class	140,631	137,009	135,669	104,829
Second class	20,003	16,295	15,711	11,603
Third class	n.a.	130,984	155,267	155,898

<b>Livelihood environment</b>	<b>34</b>	<b>27</b>	<b>11</b>	<b>12</b>
<b>National categories</b>	<b>Forest area in hectares</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
<b>Forest protected area for landscape</b>	<b>30,047</b>	<b>28,035</b>	<b>27,833</b>	<b>19,831</b>
<b>Recreational forest</b>	<b>n.a.</b>	<b>127,012</b>	<b>115,416</b>	<b>107,221</b>

### 5.3 Analysis and processing of national data

#### 5.3.1 Adjustment

	<b>Forest area in hectares</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
<b>Forest area-national data</b>	<b>6,476,030</b>	<b>6,422,128</b>	<b>6,393,949</b>	<b>6,368,843</b>
<b>New forest area for FRA2015</b>	<b>6,370,055</b>	<b>6,288,214</b>	<b>6,255,428</b>	<b>6,221,141</b>
<b>Calibration factor for forest</b>	<b>0.9836</b>	<b>0.9791</b>	<b>0.9783</b>	<b>0.9768</b>
<b>National categories</b>	<b>Forest area in hectares</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
<b>Forest protected areas</b>	<b>174,005</b>	<b>286,102</b>	<b>306,788</b>	<b>270,619</b>



<b>Disaster prevention</b>	<b>15,966</b>	<b>7,716</b>	<b>6,774</b>	<b>4,593</b>
Prevention of soil erosion and run-off	8,821	2,722	2,081	n.a.
Prevention of shifting sand dune	1,042	994	872	n.a.
Landslide prevention	175	53	53	n.a.
Fish habitat	5,928	3,947	3,769	n.a.
<b>Watershed conservation</b>	<b>158,005</b>	<b>278,360</b>	<b>300,004</b>	<b>266,014</b>
First class	138,330	134,152	132,730	102,398
Second class	19,676	15,955	15,371	11,334
Third class	n.a.	128,253	151,903	152,283
<b>Livelihood environment</b>	<b>33</b>	<b>26</b>	<b>11</b>	<b>12</b>

	<b>Forest area in hectares</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
<b>Forest area-national data</b>	<b>6,476,030</b>	<b>6,422,128</b>	<b>6,393,949</b>	<b>6,368,843</b>
<b>New forest area for FRA2015</b>	<b>6,370,055</b>	<b>6,288,214</b>	<b>6,255,428</b>	<b>6,221,141</b>
<b>Calibration factor for forest</b>	<b>0.9836</b>	<b>0.9791</b>	<b>0.9783</b>	<b>0.9768</b>

<b>National categories</b>	<b>Forest area in hectares</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>

<b>Forest protected area for landscape</b>	<b>29,555</b>	<b>27,450</b>	<b>27,230</b>	<b>19,371</b>
<b>Recreational forest</b>	<b>n.a.</b>	<b>124,364</b>	<b>112,916</b>	<b>104,734</b>

## 5.3.2 Estimation and forecasting

<b>National categories</b>	<b>Forest area in hectares</b>				
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>
<b>Forest protected areas</b>	<b>174,005</b>	<b>286,102</b>	<b>306,788</b>	<b>270,619</b>	<b>262,886</b>
<b>Disaster prevention</b>	<b>15,966</b>	<b>7,716</b>	<b>6,774</b>	<b>4,593</b>	<b>3,032</b>
Prevention of soil erosion and run-off	8,821	2,722	2,081	1,522	1,005
Prevention of shifting sand dune	1,042	994	872	591	390
Landslide prevention	175	53	53	34	22
Fish habitat	5,928	3,947	3,769	2,446	1,614
<b>Watershed conservation</b>	<b>158,005</b>	<b>278,360</b>	<b>300,004</b>	<b>266,014</b>	<b>259,841</b>
First class	138,330	134,152	132,730	102,398	86,521
Second class	19,676	15,955	15,371	11,334	9,023
Third class	n.a.	128,253	151,903	152,283	164,297
<b>Livelihood environment</b>	<b>33</b>	<b>26</b>	<b>11</b>	<b>12</b>	<b>13</b>

National categories	Forest area in hectares				
	1990	2000	2005	2010	2015
Forest protected area for landscape	29,555	27,450	27,230	19,371	15,331
Recreational forest	n.a.	124,364	112,916	104,734	94,920







## 5.3.3 Reclassification


	Protection of soil and water					
	of which production of clean water	of which coastal stabilization	of which desertification control	of which avalanche control	of which erosion, flood protection or reducing flood risk	of which other
<b>Disaster prevention</b>						
Prevention of soil erosion and run-off					100%	
Prevention of shifting sand dune		100%				
Landslide prevention				100%		
Fish habitat		100%				
<b>Watershed conservation</b>						
First class					100%	
Second class					100%	

Third class	100%					
<b>Livelihood environment</b>						100%
	<b>Ecosystem services, cultural or spiritual values</b>					
	of which public recreation	of which carbon storage or sequestration	of which spiritual or cultural services	of which other		
<b>Forest protected area for landscape</b>			100%			
<b>Recreational forest</b>	100%					

## 5.4 Data

Table 5a

Categories		Forest area (1000 hectares)				
		1990	2000	2005	2010	2015
	Protection of soil and water	174.01	286.1	306.79	270.62	262.89
	... of which production of clean water	N/A	128.25	151.9	152.28	164.3
	... of which coastal stabilization	6.97	4.94	4.64	3.04	2
	... of which desertification control	0	0	0	0	0
	... of which avalanche control	0.18	0.05	0.05	0.03	0.02
	... of which erosion, flood protection or reducing flood risk	166.83	152.83	150.18	115.25	96.55

	... of which other (please specify in comments below the table)	0.03	0.03	0.01	0.01	0.01
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### Other

N/A

Table 5b

Categories	Forest area (1000 hectares)				
	1990	2000	2005	2010	2015
Ecosystem services, cultural or spiritual values	30	152	140	124	110
...of which public recreation	N/A	124	113	105	95
...of which carbon storage or sequestration	N/A	N/A	N/A	N/A	N/A
...of which spiritual or cultural services	30	27	27	19	15
...of which other (please specify in comments below the table)	N/A	N/A	N/A	N/A	N/A

## Tiers

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

## Tier criteria

Category	Tier for status	Tier for reported trend
Protection of soil and water	Tier 3: High reliability data derived either from high intensity sample survey or data obtained from national or state agencies responsible for regulations or legislation relating to soil and water protection. Tier 2: Approaches based on low intensity or incomplete sample-based surveys or studies that provide data for specific areas that is extrapolated through statistical analysis to national level estimates. Tier 1: Other	<b>Tier 3</b> : Estimate based on repeated compatible tiers 3 (tier for status) <b>Tier 2</b> : Estimate based on repeated compatible tier 2 or combination tier 3 and 2 or 1 (tier for status) <b>Tier 1</b> : Other

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

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

### Other general comments to the table

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	Statistical Yearbook of Forestry, Korea Forest Service	Designation	1991-2011	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
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

#### 6.2.3 Original data

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National categories	Area in hectares			
	1990	2000	2005	2010
Protected areas for forest genetic resources	11,052	16,979	33,804	116,606
National, provincial and county parks	743,018	764,999	780,510	786,064
Forest area	451,343	452,870	466,455	460,254
Non-forest area	291,675	312,129	314,055	325,810
Protected areas of Baekdu Daegan mountains	n.a.	n.a.	263,427	263,427
Forest area	n.a.	n.a.	262,252	262,252
Permanent forest	n.a.	n.a.	256,418	256,418
Non-permanent forest	n.a.	n.a.	5,834	5,834
Non-forest area	n.a.	n.a.	1,175	1,175

### 6.3 Analysis and processing of national data

#### 6.3.1 Adjustment

	Forest area in hectares			
	1990	2000	2005	2010
Forest area-national data	6,476,030	6,422,128	6,393,949	6,368,843
New forest area for FRA2015	6,370,055	6,288,214	6,255,428	6,221,141



<b>Calibration factor for forest</b>	<b>0.9836</b>	<b>0.9791</b>	<b>0.9783</b>	<b>0.9768</b>
<b>National categories</b>	<b>Forest area in hectares</b>			
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>
<b>Protected areas for forest genetic resources</b>	<b>10,871</b>	<b>16,625</b>	<b>33,072</b>	<b>113,902</b>
<b>Forest area of national, provincial and county parks</b>	<b>443,957</b>	<b>443,427</b>	<b>456,350</b>	<b>449,580</b>
<b>Forest area of protected areas of Baekdu Daegan mountains</b>	<b>n.a.</b>	<b>n.a.</b>	<b>256,570</b>	<b>256,170</b>

## 6.3.2 Estimation and forecasting

<b>National categories</b>	<b>Forest area (1,000 hectares)</b>				
	<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>
<b>Protected areas for forest genetic resources</b>	<b>11</b>	<b>17</b>	<b>33</b>	<b>114</b>	<b>140</b>
<b>Forest area of national, provincial and county parks</b>	<b>444</b>	<b>443</b>	<b>456</b>	<b>450</b>	<b>443</b>



<b>Forest area of protected areas of Baekdu Daegan mountains</b>	<b>n.a.</b>	<b>n.a.</b>	<b>257</b>	<b>256</b>	<b>256</b>
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### 6.3.3 Reclassification

	<b>Conservation of biodiversity</b>	<b>Forest area within protected areas</b>
<b>Protected areas for forest genetic resources</b>	100%	
<b>Forest area of national, provincial and county parks</b>		100%
<b>Forest area of protected areas of Baekdu Daegan mountains</b>		100%

## 6.4 Data

Table 6

<b>Categories</b>		<b>Forest area (000 hectares)</b>				
		<b>1990</b>	<b>2000</b>	<b>2005</b>	<b>2010</b>	<b>2015</b>
	Conservation of biodiversity	11	17	33	114	140
	Forest area within protected areas	444	443	713	706	699

### Tiers

<b>Category</b>	<b>Tier for status</b>	<b>Tier for reported trend</b>
Conservation of biodiversity	Tier 3	Tier 3
Forest area within protected areas	Tier 3	Tier 3

### Tier criteria

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

### 6.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Conservation of biodiversity	N/A	N/A
Forest area within protected areas	No data available for protected area.	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	Statistical Yearbook of Forestry, Korea Forest Service. Korea	Insects and diseases	1988- 2007	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
N/A	N/A
N/A	N/A
N/A	N/A

#### 7.2.3 Original data

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### 7.3 Analysis and processing of national data

#### 7.3.1 Adjustment

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7.3.2 Estimation and forecasting

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7.3.3 Reclassification

--

**7.4 Data**

Table 7

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

Tiers

Category	Tier for status	Tier for reported trend
Invasive species	N/A	N/A

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

Category	Comments related to data definitions etc	Comments on the reported trend
Invasive species	Woody invasive species are not reported in Korea, but it is reported that herbaceous plant species only disturb forest ecosystem. No data available for reporting on this table	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	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

#### 8.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A
N/A	N/A
N/A	N/A

#### 8.2.3 Original data

**Land area burned**

National categories	Area in hectares				
	2003	2004	2005	2006	2007
National land area burned	n.a.	n.a.	n.a.	n.a.	n.a.
Forest fire damages	133	1,588	2,067	254	230

National categories	Area in hectares				
	2008	2009	2010	2011	2012
National land area burned	n.a.	n.a.	n.a.	n.a.	n.a.
Forest fire damages	227	1,381	297	1,090	72

#### Number of fires

National categories	Number of cases				
	2003	2004	2005	2006	2007
Fire in land area	n.a.	n.a.	n.a.	n.a.	n.a.
Forest fire damages	271	544	516	405	418



National categories	Number of cases				
	2008	2009	2010	2011	2012
Fire in land area	n.a.	n.a.	n.a.	n.a.	n.a.
Forest fire damages	389	570	282	277	197

### Area of forest damages

#### A. Outbreak of insects and diseases

National categories	Area in hectares				
	1988	1989	1990	1991	1992
Outbreak of forest diseases and pests	462,977	420,607	386,411	366,782	358,655
Forest pests	459,540	417,519	384,485	366,013	357,378
Pine caterpillar	12,612	10,092	7,447	10,772	10,450
Pine gall midge	327,437	286,433	253,504	224,325	211,527
Fall webworm	42,665	40,256	41,474	43,770	41,758
Japanese alder leaf beetle	27,335	24,770	20,675	20,371	18,353
Others	49,491	55,968	61,385	66,775	75,290
<b>Forest diseases</b>	<b>3,437</b>	<b>3,088</b>	<b>1,926</b>	<b>769</b>	<b>1,277</b>
White pine blister rust	2,188	1,628	1,278	769	962
Others	1,249	1,460	648	0	315

National categories	Area in hectares				
	1993	1994	1995	1996	1997
<b>Outbreak of forest diseases and pets</b>	<b>359,543</b>	<b>354,498</b>	<b>371,641</b>	<b>370,147</b>	<b>377,765</b>
<b>Forest pets</b>	<b>358,813</b>	<b>353,886</b>	<b>371,288</b>	<b>369,796</b>	<b>377,220</b>
Pine caterpillar	8,480	4,479	7,934	5,599	3,470
Pine gall midge	210,597	212,220	214,627	209,290	208,492
Fall webworm	43,437	41,238	37,024	33,580	34,217
Japanese alder leaf beetle	16,713	15,569	13,770	13,143	11,633
Black pine bast scale	n.a.	n.a.	n.a.	n.a.	13,880
Pine wood nematode	n.a.	n.a.	n.a.	n.a.	763
Others	79,586	80,380	97,933	108,184	104,765
<b>Forest diseases</b>	<b>730</b>	<b>612</b>	<b>353</b>	<b>351</b>	<b>545</b>
White pine blister rust	467	176	113	50	30
Others	263	436	240	301	515

National categories	Area in hectares				
	1998	1999	2000	2001	2002
<b>Outbreak of forest diseases and pets</b>	<b>371,187</b>	<b>361,720</b>	<b>339,988</b>	<b>336,528</b>	<b>292,266</b>
<b>Forest pets</b>	<b>370,543</b>	<b>360,673</b>	<b>339,988</b>	<b>336,528</b>	<b>292,266</b>

Pine caterpillar	797	1,354	2,644	4,628	3,645
Pine gall midge	196,698	197,493	174,832	148,952	118,352
Fall webworm	33,075	28,511	29,529	27,742	26,067
Japanese alder leaf beetle	8,421	9,212	n.a.	n.a.	n.a.
Black pine bast scale	15,645	15,286	14,952	13,462	12,277
Pine wood nematode	272	365	1,677	2,575	3,186
Others	115,635	108,452	116,354	139,169	128,739
<b>Forest diseases</b>	<b>644</b>	<b>1,047</b>	<b>n.a.</b>	<b>n.a.</b>	<b>n.a.</b>
White pine blister rust	n.a.	n.a.	n.a.	n.a.	n.a.
Others	644	1,047	n.a.	n.a.	n.a.

National categories	Area in hectares				
	2003	2004	2005	2006	2007
<b>Outbreak of forest diseases and pets</b>	<b>254,190</b>	<b>243,035</b>	<b>315,607</b>	<b>389,955</b>	<b>371,539</b>
<b>Forest pets</b>	<b>254,190</b>	<b>243,035</b>	<b>315,607</b>	<b>389,955</b>	<b>371,539</b>
Pine caterpillar	2,468	2,464	2,008	1,980	3,722
Pine gall midge	91,166	73,206	148,846	195,759	179,585
Fall webworm	25,550	25,500	25,209	23,308	22,107
Black pine bast scale	10,280	10,971	11,988	45,146	47,207
Pine wood nematode	3,369	4,961	7,811	7,871	6,855

Others	121,357	125,933	119,745	115,891	112,063
<b>National categories</b>					
<b>National categories</b>	<b>Area in hectares</b>				
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Outbreak of forest diseases and pets</b>	<b>353,125</b>	<b>290,404</b>	<b>225,345</b>	<b>167,084</b>	<b>137,399</b>
<b>Forest pets</b>	<b>353,125</b>	<b>290,404</b>	<b>225,345</b>	<b>167,084</b>	<b>137,399</b>
Pine caterpillar	4,355	5,198	1,267	1,461	1,799
Pine gall midge	183,229	155,897	113,123	82,125	68,031
Fall webworm	19,687	15,478	13,325	13,016	10,842
Black pine bast scale	41,210	32,497	21,855	12,524	8,945
Pine wood nematode	6,015	5,633	3,547	5,123	5,286
Others	98,629	75,701	72,228	52,835	42,496

## B. Outbreak of severe weather events

<b>National categories</b>	<b>Area in hectares</b>				
	<b>1998</b>	<b>1999</b>	<b>2000</b>	<b>2001</b>	<b>2002</b>
<b>Natural damages</b>	<b>n.a.</b>	<b>354</b>	<b>146</b>	<b>161</b>	<b>2,651</b>
<b>Snow</b>	<b>n.a.</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>1</b>
<b>Wind</b>	<b>n.a.</b>	<b>62</b>	<b>55</b>	<b>1</b>	<b>375</b>

<b>Flood</b>	<b>n.a.</b>	<b>292</b>	<b>91</b>	<b>156</b>	<b>2,275</b>
<b>National categories</b>	<b>Area in hectares</b>				
	<b>2003</b>	<b>2004</b>	<b>2005</b>	<b>2006</b>	<b>2007</b>
<b>Natural damages</b>	<b>1,111</b>	<b>443</b>	<b>612</b>	<b>1,213</b>	<b>500</b>
<b>Snow</b>	<b>2</b>	<b>0</b>	<b>7</b>	<b>0</b>	<b>0</b>
<b>Wind</b>	<b>71</b>	<b>25</b>	<b>413</b>	<b>12</b>	<b>6</b>
<b>Flood</b>	<b>1,038</b>	<b>418</b>	<b>192</b>	<b>1,201</b>	<b>494</b>
<b>National categories</b>	<b>Area in hectares</b>				
	<b>2008</b>	<b>2009</b>	<b>2010</b>	<b>2011</b>	<b>2012</b>
<b>Natural damages</b>	<b>144</b>	<b>54</b>	<b>494</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Snow</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Wind</b>	<b>11</b>	<b>0</b>	<b>430</b>	<b>n.a.</b>	<b>n.a.</b>
<b>Flood</b>	<b>133</b>	<b>54</b>	<b>64</b>	<b>n.a.</b>	<b>n.a.</b>

### 8.3 Analysis and processing of national data

#### 8.3.1 Adjustment

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#### 8.3.2 Estimation and forecasting

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## 8.3.3 Reclassification

## 8.4 Data

Table 8a

Category		000 ha, number of fires									
		2003		2004		2005		2006		2007	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which forest area burned	0.13	271	1.59	544	2.07	516	0.25	405	0.23	418
Category		2008		2009		2010		2011		2012	
		000 ha	#	000 ha	#	000 ha	#	000 ha	#	000 ha	#
	Total land area burned	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	... of which forest area burned	0.23	389	1.38	570	0.3	282	1.09	277	0.07	197

Table 8b

Outbreak category	Description/name	Year(s) of latest outbreak	Area damaged (000 hectares)
Insects	Pine gall midge - <i>Thecodiplosis japonensis</i> Uchida et Inouye	1988	327.44
Insects	Black pine bast scale - <i>Matsucoccus thunbergianae</i> Miller et Park	2007	47.21
Insects	Fall webworm - <i>Hyphantria</i> <i>cunea</i> Drury	1991	43.77
Insects	Japanese alder leaf beetle - <i>Agelastica coerulea</i> Baly	1988	27.34
Insects	Pine caterpillar - <i>Dendrolimus</i> <i>spectabilis</i> Butler	1988	12.61
Insects	Pine wood nematode - <i>Aphelenchoides xylophilus</i> Steiner & Buhner)	2006	7.8

Diseases	White pine blister rust - Cronartium ribicola J. C. Fisch. ex Rabenh	1988	2.19
Severe weather events	Flood	2002	2.28
Severe weather events	Wind	2010	0.01
Severe weather events	Snow	2005	0.43

### 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"> <li>• Insects</li> <li>• Diseases</li> <li>• Severe weather events</li> </ul>	Tier 2	Tier 2

### Tier criteria

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

### 8.5 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Burned area	N/A	N/A
Insects	N/A	N/A
Diseases	N/A	N/A

Severe weather events	N/A	N/A
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<b>Other general comments to the table</b>
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N/A
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## 9. What is the forest area with reduced canopy cover?

Documents for this question:

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

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

Table 9

Category	Area of forest with reduced canopy cover (000 ha)
Reduction in canopy cover	N/A

Tiers

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

Tier criteria

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

Comments

Category	Comments related to data definitions etc
Reduction in canopy cover	N/A

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	The 4th National Forest Plan	related to Category 1	1998-2007	SFM was an ultimate goal of the plan
2	The 5th National Forest Plan	related to Category 1	2008-2017	SFM is a vision for the plan
3	Forest Basic Act	related to Category 2	2001	Articles 2(Principle for SFM), 3(definition of SFM), 5(Rational forest land use for SFM), 11(10-year National Forest Plan for SFM), 13(Introduction of C&I process for SFM) , 16(Local forest management for SFM)
4	Forestry and Forest Village Promotion Act	related to Category 2	2007	Article 11(Public procurement for SFM forest products)
5	Forest Resource Management Act	related to Category 2	2011	Article 7(Development and assessment of forest sustainability index)

#### 10.2.2 Classification and definitions

National class	Definition
N/A	N/A
N/A	N/A

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

## 10.2.3 Original data

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## 10.3 Data

Table 10

Category				
	National	Sub-national		
		Regional	Provincial/State	Local
Policies supporting sustainable forest management	yes		yes	
... of which, in <u>publicly</u> owned forests	yes		yes	
... of which, in <u>privately</u> owned forests	yes		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	Forest area under sustainable forest management Intensive management forests were designated in 2008 and are included in this category because they are managed according to national guideline of SFM. Areas certified by FSC are also included here.
Legislation and regulations supporting sustainable forest management	Sustainable Timber Use Act enacted in 2012

## 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?

### 11.3 Comments

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

Other general comments

--

## 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	Statistical Yearbook of Forestry, Korea Forest Service	Designation	2011	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

#### 12.2.2 Classification and definitions

National class	Definition
Conservation forest	Forest area designated for the conservation purpose
...of which production forest	Forest area designated for forest resources and management purpose
...of which public welfare forest	Forest area designated for public welfare purpose
N/A	N/A

#### 12.2.3 Original data

--

<b>National categories</b>	<b>Forest area in hectares</b>
	<b>2010</b>
<b>National forest</b>	<b>1,543,352</b>
<b>Under Korea Forest Service</b>	<b>1,409,879</b>
Indispensable	1,353,985
Dispensable	55,894
<b>Under other governmental authorities</b>	<b>133,473</b>

## 12.3 Analysis and processing of national data

### 12.3.1 Adjustment

	<b>Forest area in hectares</b>
	<b>2010</b>
<b>Forest area-national data</b>	<b>6,368,843</b>
<b>New forest area for FRA2015</b>	<b>6,221,141</b>
<b>Calibration factor for forest</b>	<b>0.9768</b>

<b>National categories</b>	<b>Forest area in hectares</b>
	<b>2010</b>
<b>National forest</b>	<b>1,507,546</b>
<b>Under Korea Forest Service</b>	<b>1,377,170</b>
Indispensable	1,322,573
Dispensable	54,597



<b>Under other governmental authorities</b>	<b>130,376</b>
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## 12.3.2 Estimation and forecasting

## 12.3.3 Reclassification

## 12.4 Data

Table 12

Categories		Forest area 2010 (000 ha)
	Forest area intended to be in permanent forest land use	4947
	... of which permanent forest estate	4947

## Tiers

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

## Tier Criteria

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

## 12.5 Comments

Category	Comments related to data definitions etc
Forest area intended to be in permanent forest land use	By the law of the Forest Land Management Act
Permanent forest estate	Some of forests are not allowed to convert to other land use. But it also has exceptional case.

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	Forest Resource Management Act	related to Category 2	2011	Article 7(Development and assessment of forest sustainability index)
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
Forest Sustainability Index	Index indicating the extent of forest sustainability at the local government level
N/A	N/A
N/A	N/A
N/A	N/A

#### 13.3 Data

Table 13a

Category	% of total forest area	Most recent year	Check all boxes that apply					
			Continuous	Periodic	Permanent ground plots	Temporary ground plots	Aerial/remote sensing sample based	Aerial/remote sensing full coverage
Forest inventory	100	2012	yes	yes	yes			yes
Other field assessments	N/A	N/A						
Updates to other sources	N/A	N/A						
Expert estimate	N/A	N/A						

Table 13b

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

#### Other type of forest reporting

Reporting of the forest sustainability index

### 13.4 Comments

Category	Comments
Forest area monitored under a national forest monitoring framework	N/A
Forest reporting at national scale	5-year National Forest Inventory and occasional report of the Forest Sustainability Index
N/A	N/A

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	Statistical Yearbook of Forestry, Korea Forest Service	Designation	2011	N/A
2	N/A	N/A	N/A	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

### 14.3 Data

Table 14a

Forest plan type	Forest area 2010 (000 ha)
Forest area with management plan	3182
... of which for production	1300
... of which for conservation	1882

Table 14b

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

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

Table 14c

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

<b>Category</b>	<b>Tier for status</b>
Forest area with management plan	Tier 3
Percent of area under forest management plan that is monitored annually	Tier 3

## Tier criteria

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

## 14.4 Comments

<b>Category</b>	<b>Comments</b>
Forest area with management plan	In extensive definition, all forests can be regarded as "Forest area with management plan", because there are activities for forest fire and insects & diseases prevention in the entire forests in Korea. But T3b includes only forests which have specified management plan.
Forest area with management plan	Writing-up of the forest management plan is mandatory for the National Forest and non-mandatory for the Private Forest
N/A	N/A

## Other general comments

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## 15. How are stakeholders involved in the management decision making for publicly owned forests?

Documents for this question:

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

### 15.1 Categories and definitions

Category	Definition
Stakeholder involvement	Stakeholder involvement is defined as significant inputs into at least one aspect of forest management at the operational scale

Table 15

Please indicate the type of stakeholder involvement in forest management decision making required in your country	
1. Planning phase	
2. Operations phase	
3. Review of operations	

Tiers

Category	Tier for status
Type of stakeholder inputs	N/A

Tier criteria

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

### 15.2 Comments

Category	Comments
N/A	N/A
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	0	0	0	0	36.47
	PEFC	0	0	0	0	0	0	0
	Other	0	0	0	0	0	0	0
		2007	2008	2009	2010	2011	2012	
	FSC	155.8	155.8	219.58	220.53	295.85	295.85	
	PEFC	0	0	0	0	0	0	
	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
<b>International</b> forest management certification	Tier 3: International forest management scheme records maintained by the certifying organization for the reporting year Tier 2: International forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other
<b>Domestic</b> forest management certification	Tier 3: National registry reports for domestic forest management certification maintained by the certifying organization for the reporting year Tier 2: Domestic forest management scheme records reported by the certifying organization for a period 2 years prior to the reporting year Tier: 1 Other

## Tiers

Category	Tier for status
<b>International</b> forest management certification	Tier 3
<b>Domestic</b> forest management certification	Tier 1

## 16.3 Comments

Category	Comments related to data definitions etc
Certified forest area using an international forest management certification scheme	Forest management certified area by FSC as of 2013 is 380,499.24ha
Domestic forest management certification	None

## 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"> <li>• <u>Goods</u> : roundwood; sawnwood; biomass; woodbased panels; pulp and paper and non-wood forest products.</li> <li>• <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.</li> </ul>
Public expenditure on forestry	All government expenditure on forest related activities.

### 17.2 National data

#### 17.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	Statistical Yearbook of Forestry, Korea Forest Service. Korea.	Forest revenue Public expenditure	2001-2011	N/A
2	Data from KFS	Transfer payments	2001-2011	N/A
3	N/A	N/A	N/A	N/A
4	N/A	N/A	N/A	N/A

### 17.3 Data

Table 17

Category	Revenues / expenditures (000 local currency)		
	2000	2005	2010
Forest revenue	306174000	496710000	822366000
Public expenditure on forestry	734320000	879531000	2058278000
	2000	2005	2010
Name of Local Currency	Korean won	N/A	N/A



**17.4 Comments**

<b>Category</b>	<b>Comments related to data definitions etc</b>
Forest revenue	No clear definition of forest revenue, but the table 17 is filled in with original data.
Public expenditure on forestry	N/A
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	Statistical Yearbook of Forestry, Korea Forest Service. Korea.	Forest ownerships	1991-2011	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

## 18.2.2 Classification and definitions

National class	Definition
Private forest	Land owned by individuals, families etc, that is not included in Public forest and National forest.
Public forest	Land owned by the regional governments, Provinces or Counties.
National forest	Land owned by the national government or government-owned institutions or corporations.
N/A	Note: Korea consists of 9 Provinces, and County is sub-administrative district under the Province.

## 18.2.3 Original data

- Forest ownership				
National categories	Area (1,000 hectares)			
	1990	2000	2005	2010
National forest	1,346	1,433	1,484	<b>1,543</b>
Public ownership	489	493	490	<b>488</b>
Private ownership	4,625	4,496	4,420	<b>4,338</b>
...of which owned by individuals	n.a.	n.a.	n.a.	n.a.

...of which owned by private business entities and institutions	n.a.	n.a.	n.a.	n.a.
...of which owned by local communities	n.a.	n.a.	n.a.	n.a.
...of which owned by indigenous / tribal communities	n.a.	n.a.	n.a.	n.a.
Other types of ownership	16	0	0	0
<b>TOTAL</b>	<b>6,476</b>	<b>6,422</b>	<b>6,394</b>	<b>6,369</b>

- Holder of management rights of public forests

National categories	Area in hectares			
	1990	2000	2005	2010
-Mining	2,186	1,409	1,205	1,187
-Industrial	2,914	2,386	3,530	4,224
-Experimental forest of colleges	13,970	5,305	4,922	4,742
-others	-	2,138	2,076	1,049
-Individuals	43,576	11,402	6,002	2,546
-reforestation of Village forestry Associates	65,823	34,042	14,352	4,733
-Pasture	6,984	5,025	3,858	3,557
-Corporations	28,000	37,144	19,213	16,566
<b>Total</b>	<b>163,453</b>	<b>98,851</b>	<b>55,158</b>	<b>38,604</b>

## 18.3 Analysis and processing of national data

### 18.3.1 Adjustment

	1990	2000	2005	2010
Forest area-national data	6,476,030	6,422,128	6,393,949	6,368,843
New forest area for FRA2015	6,370,055	6,288,214	6,255,428	6,221,141
Calibration factor for forest	0.9836358	0.979148	0.9783356	0.9768086

- Forest ownership

National categories	Area (1,000 hectares)			
	1990	2000	2005	2010
National forest	1,324	1,403	1,452	1,507
Public ownership	481	483	479	477
Private ownership	4,549	4,402	4,324	4,237
...of which owned by individuals				
...of which owned by private business entities and institutions				
...of which owned by local communities				
...of which owned by indigenous / tribal communities				

Other types of ownership	16	0	0	<b>0</b>
<b>TOTAL</b>	<b>6,370</b>	<b>6,288</b>	<b>6,255</b>	<b>6,221</b>

- Holders of management rights of public forests

National categories	Area in hectares			
	1990	2000	2005	2010
-Mining	2,150	1,380	1,179	1,159
-Industrial	2,866	2,336	3,454	4,126
-Experimental forest of colleges	13,741	5,194	4,815	4,632
-others	0	2,093	2,031	1,025
-Individuals	42,863	11,164	5,872	2,487
-reforestation of Village forestry Associates	64,746	33,332	14,041	4,623
-Pasture	6,870	4,920	3,774	3,475
-Corporations	27,542	36,369	18,797	16,182
<b>Total</b>	<b>160,778</b>	<b>96,790</b>	<b>53,963</b>	<b>37,709</b>

### 18.3.2 Estimation and forecasting






This step is not needed.




### 18.3.3 Reclassification

National Class	Percentage allocation to FRA2015 Categories				
	Public Administration	Individuals	Private corporations and institutions	Communities	Other
-Mining			100		
-Industrial			100		
-Experimental forest of colleges					100
-others					100
-Individuals		100			
-reforestation of Village forestry Associates				100	
-Pasture				100	
-Corporations			100		

## 18.4 Data

Table 18a

Categories		Forest area (1000 hectares)			
		1990	2000	2005	2010
	Public ownership	1805	1886	1931	1984
	... of which owned by the state at national scale	1324	1403	1452	1507
	... of which owned by the state at the sub-national government scale	481	483	479	477
	Private ownership	4549	4402	4324	4237
	... of which owned by individuals	N/A	N/A	N/A	N/A

	... of which owned by private business entities and institutions	N/A	N/A	N/A	N/A
	... of which owned by local, tribal and indigenous communities	N/A	N/A	N/A	N/A
	Unknown ownership	16	0	0	0
TOTAL		6370.00	6288.00	6255.00	6221.00

## Tiers

Category	Tier for status	Tier for reported trend
Public ownership	Tier 2	Tier 2
Private ownership	Tier 2	Tier 2
Unknown ownership	N/A	N/A

## Tier criteria

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

Table 18b - Holder of management rights of public forests

Categories	Forest area (000 hectares)			
	1990	2000	2005	2010
Public Administration	1.64	1.79	1.88	1.95
Individuals	0.04	0.01	0.01	0
Private companies	0.03	0.04	0.02	0.02
Communities	0.07	0.04	0.02	0.01
Other	0.01	0.01	0.01	0.01
TOTAL	1.79	1.89	1.94	1.99



Category	Tier for reported trend	Tier for status
Public Administration	N/A	N/A
Individuals	N/A	N/A
Private companies	N/A	N/A
Communities	N/A	N/A
Other	N/A	N/A

### 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

There are no national data for subcategories of private ownership

## 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	Statistical Yearbook of Forestry, Korea Forest Service. Korea.	1991-2006	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

#### 19.2.2 Classification and definitions

National class	Definition
Employment in forestry	Employment related to forestry activities such as reforestation, tending, thinning, tree cutting, prevention of insects and diseases, construction of forest road and erosion control dam, etc
N/A	N/A
N/A	N/A
N/A	N/A

#### 19.2.3 Original data



Temporary Employment status in forestry (Unit : 1,000 persons)
----------------------------------------------------------------

National Category	Employment (000 persons days)		
	1990	2000	2005
<b>Total</b>	n.a	<b>3,122</b>	<b>6,200</b>
Temporary Employment in forestry	n.a	3,119	6,196
Local Forestry Cooperatives	1.280	1.579	1.701
Devoted forest managers and forest successors	0.443	1.268	1.922

Note. Staff of public forest agencies is excluded.

### 19.3 Data

Table 19

Category		Employment (000 years FTE)			
		1990	2000	2005	2010
	Employment in forestry	N/A	12	24	N/A
	... of which female	N/A	N/A	N/A	N/A

### 19.4 Comments

Category	Comments related to data definitions etc	Comments on the reported trend
Employment in forestry	Temporary labours hired by public forest agencies.	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)	1364400	Korean won	2012

### 20.3 Comments

Category	Comments
Gross value added from forestry (at basic prices)	N/A

Other general comments

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

Documents for this question:

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

### 21.1 Categories and definitions

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

### 21.2 National data

#### 21.2.1 Data sources

	References to sources of information	Variables	Years	Additional comments
1	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

### 21.3 Data

Table 21a

Category	Forest area (000 ha)	
	2020	2030
Government target/aspiration for forest area	N/A	N/A

Table 21b

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

### 21.4 Comments

Category	Comments
Government target/aspiration for forest area	N/A

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Forests earmarked for conversion	N/A
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Other general comments

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