Planted Forests and Trees Working Paper FP38E






Global planted forests thematic study

Results and analysis

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Comments and feedback are welcome.

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Forestry Department

Food and Agriculture Organization of the United Nations

Planted Forests and Trees Working Papers

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Forest Resources Division
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Contents

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Foreword

The new concept of 'planted forests' unites two forest characteristics formerly considered separately: plantation forests and planted semi-natural forests. Together they make up the planted forest subset. The reason for this aggregation is that planted semi-natural forests have more in common with plantation forests than with the class of semi-natural forests established by natural regeneration. They are managed more intensively than other types of semi-natural forests and, in particular, they:

- use similar types of planting stock, frequently derived from improved germplasm;
- use similar methods of establishment and tending;
- use thinning and pruning; and
- produce outputs that are uniform in size and technical specifications and are frequently intended for the harvesting of wood and fibre for industrial use.

The starting point for the present thematic study was the data provided by countries for the Global Forest Resources Assessment 2005 (FRA 2005). In order to supplement that data, a questionnaire was sent in April 2005 to selected countries covering most of the global area of plantation forests and semi-natural forests. The countries selected included those with the 30 largest plantation forest areas as reported in FRA 2000, as well as certain countries in Europe and North America believed to have significant planted semi-natural forest area. The questionnaire and background and guidelines for its completion were sent to national correspondents for FRA 2005, as well as to other planted forests specialists.

For countries that responded to the questionnaire, *Global planted forests thematic study: results and analysis* also provides detailed data on end use, ownership, species, area, growth rates (mean annual increment), rotation lengths, harvest yields and age class distribution for the productive and protective functions of both planted semi-natural and plantation forests.

The thematic study has been reported in working papers that detail the survey, responses, an associated desk study and the main results and analysis of the state of planted forests.

No.	Title	Description
35	*Global planted forests thematic study: supplement to forest resources assessment 2005 – guidelines for national reporting tables for planted forests*	Guidelines for national correspondents for completion of reporting tables in the planted forests survey
35a	*Global planted forests thematic study: country responses to reporting tables for planted forests survey*	Country reporting tables for 36 countries with major planted forest areas
35b	*Global planted forests thematic study: supplementary desk study on planted forests*	Supplementary desk study for 25 countries with significant areas of planted forests
38	*Global planted forests thematic study: results and analysis*	Main results, analysis, summary tables, figures, conclusions, recommendations and full data tables

These working papers are aimed at a target audience of forestry planners and policy-makers as well as other interested parties at national, regional and global levels. The present paper (Working Paper 38) contains the main results, analysis, summary tables and figures for planted forests in 61 countries, inclusive of 36 country responses to the questionnaire and the 25 countries included in the desk study.

This exercise is a 'work in progress', given that the planted forests concept is new to global forest assessments and country data is still being collected and refined. Consequently, a less-formal working paper format was chosen. Readers are encouraged to send comments and, particularly, new information, which will contribute towards an authoritative FAO forestry paper on planted forests to be published in mid-2007.

Introduction

Planted forests concept

Since 1980 the Global Forest Resources Assessment (FRA) programme has been collecting statistical information on the classes of 'natural forests' and 'plantations'.

Global Forest Resources Assessment 2005 (FRA 2005) introduced two additional forest classes: 'modified natural forests'[1] and 'semi-natural forests'[2].

The new classification included primary, modified, semi-natural and plantation forests, based on the different degrees of human intervention and method of regeneration. However, while it is easy to classify primary forests and plantation forests, the modified forests, despite human intervention, can be considered as naturally regenerated. Semi-natural forests are a wider class that includes components of naturally regenerated and planted forests, the latter similar to plantation forests in their use, silvicultural practices and intensity of management.

Within these FRA categories, the table below presents those that are the focus of the present thematic study: the planted forests subgroup, including planted semi-natural forests plus productive and protective plantation forests.

FRA 2005 forest categories and focus of subgroup 'planted forests'

<table>
<tr><th></th><th></th><th></th><th colspan="3">Planted forests subgroup</th></tr>
<tr><th rowspan="2">Primary</th><th rowspan="2">Modified natural</th><th rowspan="2">Semi-natural</th><th rowspan="2">Natural</th><th colspan="2">Plantation</th></tr>
<tr><th>Productive</th><th>Protective</th></tr>
<tr><td rowspan="2">Forest of native species, where there are no clearly visible indications of human activities and the ecological processes are not significantly disturbed</td><td rowspan="2">Forest of naturally regenerated native species where there are clearly visible indications of human activities</td><td>Assisted natural regeneration through silvicultural practices for intensive management</td><td>Planted component</td><td rowspan="2">Forest of introduced species and in some cases native species, established through planting or seeding mainly for production of wood or non wood forest products</td><td rowspan="2">Forest of native or introduced species, established through planting or seeding mainly for provision of services</td></tr>
<tr><td>Weeding
Fertilizing
Thinning
Selective logging</td><td>Forest of native species, established through planting, seeding, coppice</td></tr>
</table>

This study is a first attempt to extract the planted semi-natural forests class and to compile this information with the plantation forests class to provide an estimate of global planted forest area.

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[1] **Modified forest:** "Forest ... of naturally regenerated native species where there are clearly visible indications of human activities". This definition includes selectively logged-over areas, areas regenerating naturally following agricultural land use, areas recovering from human-induced fires; and areas where it is not possible to distinguish whether the regeneration has been natural or assisted.

[2] **Semi-natural forest:** "Forest ... of native species, established through planting, seeding or assisted natural regeneration". This definition includes areas under intensive management where native species are used and deliberate efforts are made to increase/optimize the proportion of desirable species, thus leading to changes in the structure and composition of the forest, with possible presence of naturally regenerated trees from other species than those planted/seeded. May include areas with naturally regenerated trees of introduced species and areas under intensive management where deliberate efforts, such as thinning or fertilizing, are made to improve or optimize desirable functions of the forest.

Questionnaire and desk study

Preparation for the Global Planted Forests Thematic Study started in December 2004, prior to the final release of FRA 2005, with the identification of the information to be collected, the number of countries to include in the sample, the design of a database and of the related questionnaire.

The questionnaire was sent to a sample of 61 selected countries with significant areas of plantation or semi-natural forests. Because of the unavailability of more recent information, countries were included in the sample according to the area of plantation forests reported to FRA 2000 or the area of semi-natural forests reported in the *State of Europe's forests 2003*.

TABLE 1
Countries Included in the Global Planted Forests Thematic Study ranked by size of forest plantation area reported by FRA 2000

Country	Ranking	Country	Ranking
China	01	Ireland	32
India	02	Sweden	33
Russian Federation	03	Denmark	34
United States	04	Estonia	35
Japan	05	Norway	36
Indonesia	06	Lithuania	37
Brazil	07	Georgia	38
Thailand	08	Belarus	39
Ukraine	09	Latvia	40
Iran, Islamic Republic of	10	Hungary	41
Chile	11	Italy	42
United Kingdom	12	Greece	43
Spain	13	Albania	44
Turkey	14	Netherlands	45
Malaysia	15	Romania	46
Viet Nam	16	Bosnia and Herzegovina	47
South Africa	17	Croatia	48
New Zealand	18	Poland	49
Australia	19	Slovakia	50
Pakistan	20	Switzerland	51
Bulgaria	21	Republic of Moldova	52
France	22	Slovenia	53
Argentina	23	Austria	54
Venezuela, Bolivarian Republic of	24	Belgium	55
Portugal	25	Czech Republic	56
Myanmar	26	Finland	57
Philippines	27	Germany	58
Algeria	28	Canada	59
Nigeria	29	Democratic Republic of the Congo	60
Sudan	30	Cameroon	61
Uruguay	31		

Of the 61 countries, 36 (in boldface in Table 1) responded to the questionnaire; their responses were published in Working Paper FP/35a. The remaining 25 countries were included in an additional desk study that supplemented the data collected. Sources and methodologies adopted to extract planted forests data for the desk study were reported in Working Paper FP35/b.

The present working paper presents the data, summarizes results and provides a short analysis of the Global Planted Forests Thematic Study. The first part focuses on an analysis of 61 countries, providing global estimates of planted forest area for the years 1990, 2000 and 2005. The second part provides preliminary analysis and summaries of the responses of the 36 countries to the questionnaire on selected parameters of planted forests, such as species composition, mean annual increment (MAI), rotation lengths, harvested volumes, age class distribution, ownership and end use.

It was calculated that the total area reported by both the countries that responded to the questionnaire and the countries included in the desk study accounted for 93.9 percent of total FRA plantation forest area in 1990, 94.5 percent in 2000 and 94.5 percent in 2005, although there were significant regional and subregional variations between and within years (discussed below).

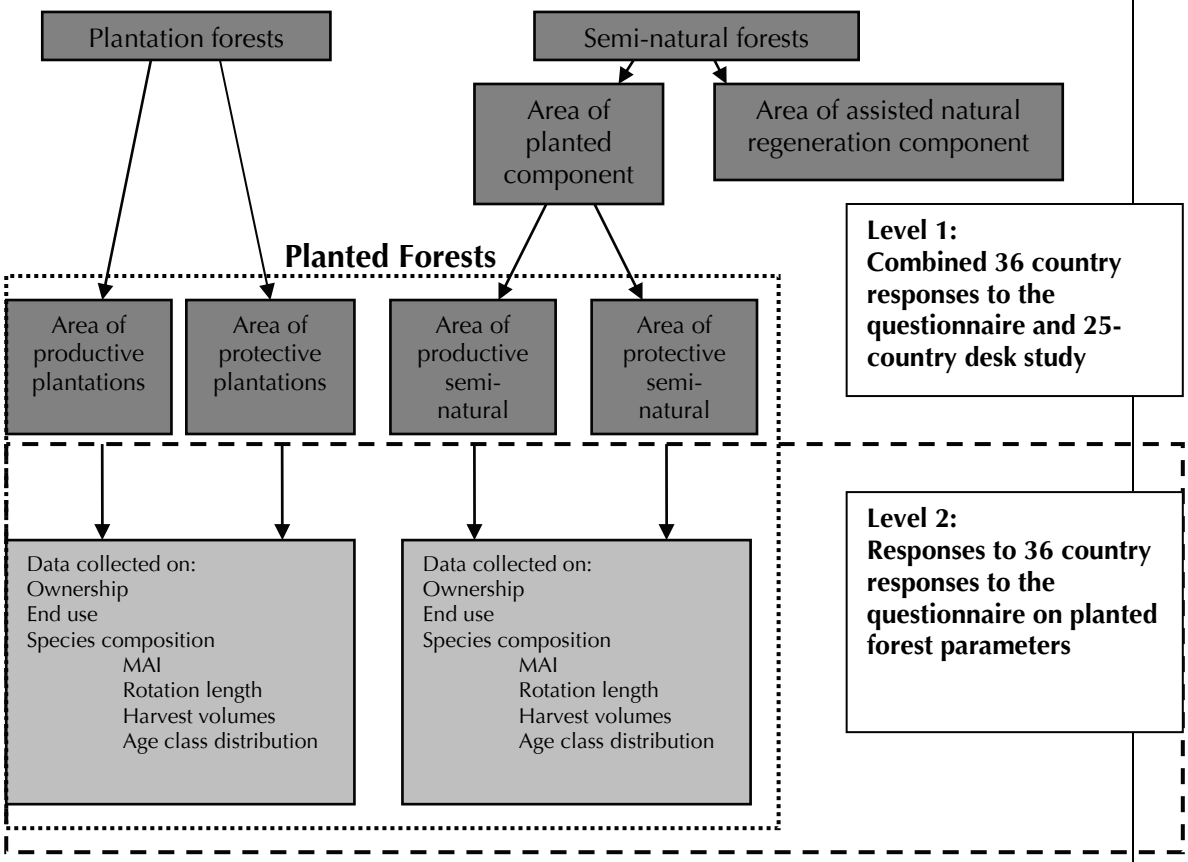
Results and preliminary analysis

The process of data collection and further data analysis was undertaken at two levels.

At Level 1, planted forests information and data were collected to enable disaggregation of the semi-natural forests class into its assisted and planted components. The resulting planted semi-natural forests were then classified into productive and protective functions and added to the productive and protective plantation forests classes to produce an estimate of global planted forests with productive and protective functions.

Working Papers 35a and 35b report the data collected, and Figure 1 illustrates the process of data collection.

FIGURE 1
Information requested and collected in the questionnaire and the desk study



Level 2 contains results and summary analysis of data collected in the questionnaire in order to describe planted forests by ownership, end use, species composition, MAI, harvested volumes and age class distribution.

Species, MAI, age class distribution, rotation and harvest volumes were also requested for planted forests classified as having primarily protective functions, because in some instances, these can be harvested for production of wood, fibre and non-wood forest products.

Planted forest area

This section reports the results of the first level of the study (Figure 1) and includes:

- information on plantation forests and planted semi-natural forests for 1990, 2000 and 2005, reported in Working Paper FP/35a;
- information derived from the desk study reported in Working Paper FP/35b;
- estimates of the small area not covered by the questionnaire response or the desk study.

The area of planted forests is divided into planted semi-natural forests and plantation forests. Figure 2 clarifies the flow of data used to obtain the planted forest area. The dark green colour represents planted forests. The light grey colour indicates semi-natural forests established by assisted natural regeneration through silvicultural practices. This part is not defined as planted forests and is hence excluded from the analyses.

Planted semi-natural forests

Data reported to FRA 2005 showed that the total area of semi-natural forests as of 2005 was 272 million hectares (Table 2).

TABLE 2
FRA 2005, area of semi-natural forests (1 000 ha)

Region	1990	2000	2005
Africa	2 081	2 474	2 862
Asia	130 607	128 554	133 782
Europe	113 724	118 010	117 067
North and Central America	8 077	14 937	18 264
Oceania	0	29	29
South America	31	31	31
World	**254 519**	**264 034**	**272 034**

The total area of semi-natural forests for the 61 sampled countries of the 2005 thematic study on planted forests (Table 3) was 259 million hectares (95 percent of semi-natural forests reported in FRA 2005), of which 50.4 percent were planted and 49.6 percent had been established through assisted natural regeneration. However, considerable variations exist among regions, as reported in Table 3. Large differences also exist among countries within regions.

The total area of semi-natural forests also includes figures for Canada for the three given years: 1990, 2000 and 2005, and for Austria and Bulgaria for 2005. These were assessed through the desk study reported in Working Paper FP/35b, as the three countries did not report semi-natural forests to FRA 2005 for those years.

FIGURE 2
Data flow to obtain planted forest area

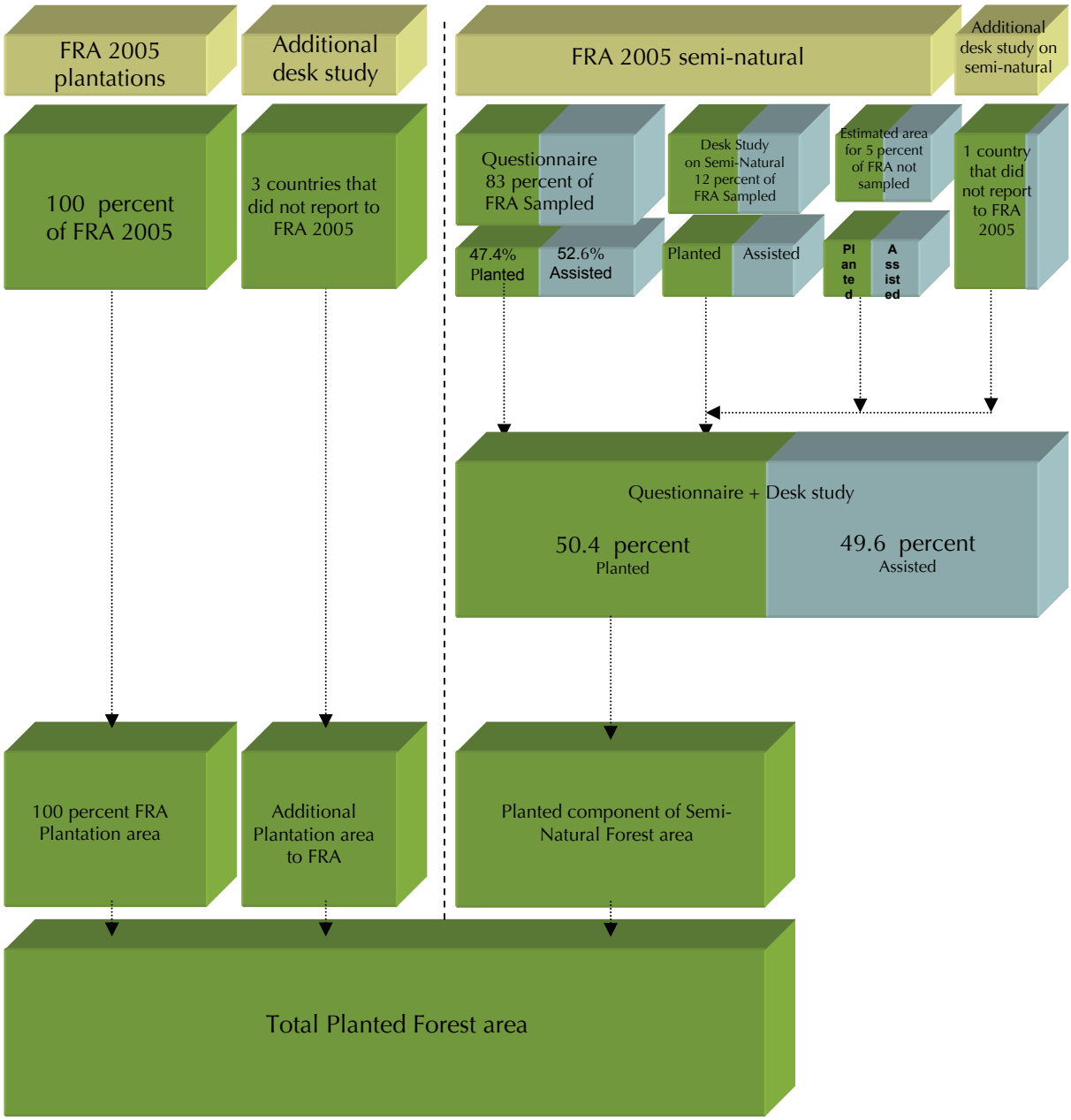


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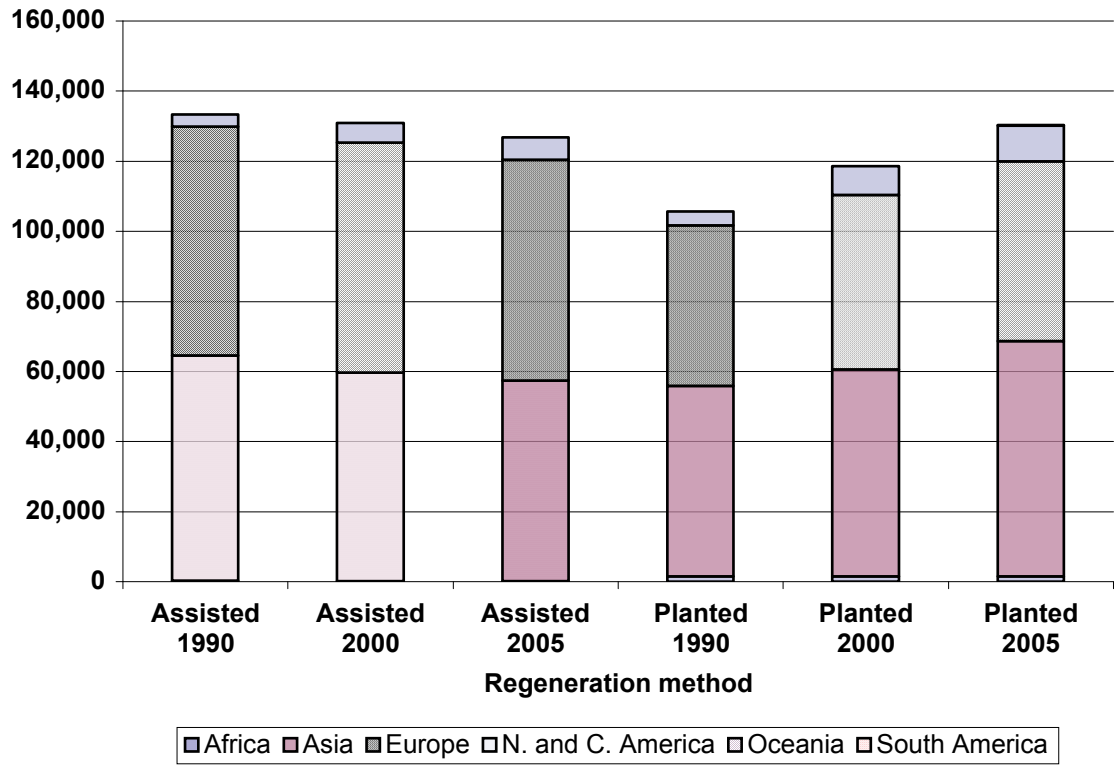
TABLE 3
Semi-natural forest area, estimated assisted and planted components (1 000 ha)

Region	1990				2000				2005			
	Assisted		Planted		Assisted		Planted		Assisted		Planted	
	Area	%	Area	%	Area	%	Area	%	Area	%	Area	%
Africa	289	15.8	1 538	84.2	216	12.5	1 507	87.5	167	10.0	1 500	90.0
Asia	64 195	54.2	54 304	45.8	59 417	50.1	59 155	49.9	57 250	46.0	67 096	54.0
Europe	65 375	58.8	45 871	41.2	65 711	56.9	49 740	43.1	64 735	55.6	51 700	44.4
N. & C. America	3 490	46.7	3 976	53.3	5 514	40.4	8 147	59.6	6 323	38.3	10 206	61.7
Oceania	0	-	0	-	0	-	0	-	0	-	0	-
South America	1	3.0	25	97.0	1	3.0	25	97.0	1	3.0	25	97.0
World	**133 349**	**55.8**	**105 714**	**44.2**	**130 859**	**52.5**	**118 574**	**47.5**	**128 476**	**49.6**	**130 527**	**50.4**

Figure 3 shows the regional variation for the years 1990, 2000 and 2005.

FIGURE 3
Semi-natural forests by regeneration method by region, 1990-2005: 'assisted' and 'planted' components



Source: DB report "Table 3 WP35c Semi-Natural Forest Area Final-AbsoluteRelative" and xls file "T:\FORM\Planted Forest\Database\FRA 2005\DATA-ANALYSIS\Planted Forest Data Analysis\Working Papers\FP 35C\ Figure 3 WP35c Semi-Natural Forests by Regeneration Method by Subregion, 1990-2005.xls".

Figure 3 illustrates a decreasing trend for assisted semi-natural forests 1990-2005, whilst the planted semi-natural forests show a progressive increase for the same period.

In year 2005 most semi-natural forests, whether established by assisted natural regeneration or by planting, were found in Asia (124 million hectares) and Europe (114 million hectares). Of the sample, Indonesia contributed 36.4 million hectares, India 31.5 million hectares while China alone contributed 40 million hectares to the East Asian region. In Europe, Sweden contributed 22.1 million hectares, Finland 21.1 million hectares and France 13.5 million hectares.

Finally it is important to highlight that total semi-natural forests reported include Canada for the three years and Bulgaria and Austria, at year 2005, which were not reported as semi-natural forests in the Global Forest Resource Assessment 2005.

Productive and protective functions

Productive functions, described in detail in FP/35, refer to the functions of those stands established primarily for the production of wood or non-wood forests products, while protective functions refer to those stands of native or introduced species established through planting or seeding mainly for the provision of services.

For planted semi-natural forests, the productive function represented 73.5 percent in 1990, 73.2 percent in 2000 and 72.4 percent in 2005 (Table 4). No major changes in the division between productive and protective have appeared during the last 15 years. The Asia region has the greatest area of protective semi-natural forests. The area has increased from 65 percent in 1990 to 70.5 percent in 2005 of the global protective planted semi-natural forest area.

TABLE 4
Areas of planted semi-natural forests by productive and protective functions: questionnaire and desk study (1 000 ha)

Region	Semi-natural forests 1990		Semi-natural forests 2000		Semi-natural forests 2005	
	Productive	Protective	Productive	Protective	Productive	Protective
Africa (6 countries)	1 044	494	1 003	504	963	538
Asia (13 countries)	36 027	18 277	37 822	21 333	41 758	25 338
Europe (33 countries)	36 652	9 218	39 820	9 919	41 638	10 062
North and Central America (2 countries)	3 976	0	8 147	0	10 206	0
Oceania (2 countries)	0	0	0	0	0	0
South America (5 countries)	25	0	25	0	25	0
World	**77 724**	**27 990**	**86 817**	**31 756**	**94 590**	**35 938**
	105 714		**118 573**		**130 528**	

Plantation forests

FRA 2005 obtained information from 229 countries, but the estimated area of plantation forests came from responses from 150 countries for productive plantation forests and 95 countries for protective plantation forests. Many countries responded that data was not available. Moreover,

the data for some other countries that did respond are believed to be unreliable in the absence of recent inventories.

Additional information on the area of plantation forests in Cameroon, the Democratic Republic of the Congo and the Bolivarian Republic of Venezuela was obtained from the desk study (FP/35B).

TABLE 5
Area of plantation forest[a] (1 000 ha)

Region and subregions	Total plantation forests[3]				
	Area			Change %	
	1990	2000	2005	1990-2000	2000-2005
Africa	12 245	12 865	13 338	0.5	0.7
Asia	46 591	55 665	64 888	1.8	3.1
Europe	22 530	26 588	27 694	1.7	0.8
North and Central America	10 782	17 937	18 844	5.2	1.0
Oceania	2 447	3 491	3 865	3.6	2.1
South America	9 132	11 437	12 189	2.3	1.3
World	103 728	127 984	140 818	2.1	1.9

[a] Total area of plantation forests reported to FRA 2005 plus data for Cameroon, the Democratic Republic of the Congo and the Bolivarian Republic of Venezuela, which did not report to FRA 2005.

Rapid growth has occurred worldwide in the area of plantation forests, especially between 1990 and 2000 (Table 5). Exceptionally fast increases in area were reported in North and Central America, Oceania and South America between 1990 and 2000, and in Asia between 2000 and 2005.

Most plantation forests were located in Asia, and the largest subregional total was in East Asia, where there has been fast growth in plantation forests programmes and also a rapid increase in planted semi-natural forests. The 2005 area of plantation forests in East Asia was dominated by China, whose plantation forests programme not only accounted for nearly three-quarters of the subregional total, but was also the largest area of plantation forests in the world (31.4 million hectares). Contributions to South and Southeast Asia subregional totals for plantation forests were mainly made by Indonesia (3.4 million hectares), India (3.2 million hectares), Thailand (3.1 million hectares)), Viet Nam (2.7 million hectares) and Malaysia (1.6 million hectares), while Western and Central Asia was dominated by Turkey (2.5 million hectares).

The next largest regional total for plantation forests in 2005 was in Europe, although less than half that of Asia. Nearly two-thirds was contributed by the Russian Federation (17 million hectares), with significant areas in France (2 million hectares), the United Kingdom (1.9 million hectares), Spain (1.5 million hectares) and Portugal (1.2 million hectares).

The North and Central American subregional total was contributed overwhelmingly by the United States (17 million hectares). The subregional total for South America was largely made up of the plantation forests programmes of Brazil (5.4 million hectares), Chile (2.7 million hectares), Argentina (1.2 million hectares) and the Bolivarian Republic of Venezuela (0.8 million hectares). The largest contributions to the African total came from the Sudan (5.4 million hectares) and South Africa (1.4 million hectares).

[3] Data for 2005 also include Bulgaria, obtained by extrapolation from original data received for 1990 and 2000.

Productive and protective functions

Estimates of productive and protective plantation forest areas as of 1990, 2000 and 2005 are reported in Table 6.

TABLE 6
Plantation forest area allocated to productive and protective functions[a] (1 000 ha)

Region	Plantation forests 1990		Plantation forests 2000		Plantation forests 2005	
	Productive	Protective	Productive	Protective	Productive	Protective
Africa (58 countries)	10 163	2 083	10 581	2 283	10 876	2 462
Asia (47 countries)	28 925	17 666	36 206	19 459	44 414	20 474
Europe (47 countries)	17 942	4 588	20 997	5 591	21 651	6 027
North and Central America (37 countries)	10 595	187	16 711	1 227	17 653	1 190
Oceania (24 countries)	2 447	1	3 477	14	3 833	32
South America (15 countries)	9 094	39	11 383	54	12 132	57
World	**79 165**	**24 562**	**99 356**	**28 628**	**110 560**	**30 259**
	103 727		**127 984**		**140 819**	

Source: FRA 2005.

[a] Total FRA countries plus Cameroon, the Democratic Republic of the Congo and the Bolivarian Republic of Venezuela.

In 1990 the productive proportion represented 76.3 percent of plantation forests, which increased to 77.3 percent in 2000 and to 78.5 percent in 2005. Most of the global protective plantation forest area, 67.7 percent, was situated in Asia in 2005. Table 8 estimates the areas of productive and protective plantation forests reported in FRA 2005 and, additionally, the area of plantation forests in Cameroon, the Democratic Republic of the Congo and the Bolivarian Republic of Venezuela, which were not reported in FRA 2005.

There are several countries in which plantation forests appear to make a significant contribution to the provision of forest goods and services, apparently because those countries have relatively little natural forest. They have arbitrarily been defined by this study as countries where plantation forests exceed 1 million hectares and constitute more than 10 percent of the total national forest area. There are, on the other hand, a number of countries, also with significant plantation forests of more than 1 million hectares, but where the plantation forests constitute less than 10 percent of the forest area.

Whatever the proportion of plantation forests in the total forest area, nearly all countries in Table 7 seem to establish plantation forests for productive purposes, generally for the production of industrial roundwood for which plantation-grown trees are best suited. In Brazil, planted forests managed for productive functions account for only 1 percent of total forest area, but cover an area of 5.4 million hectares and provide a valuable supply of industrial roundwood for the pulp and paper industry. Among the high-proportion countries, an exception is Japan, which has evidently established plantation forests for primarily protective purposes. But the rigid divisions of 'productive' and 'protective' may mask more subtle distinctions.

TABLE 7
Plantation forests: highest and lowest proportions of national plantation forest area

Highest proportion of national forest				Lowest proportion of national forest			
Country	%	Purpose		Country	%	Purpose	
		Prod	Prot			Prod	Prot
UK	68	98%	2%	Malaysia	8	0%	100%
Japan	42	0%	100%	Spain	8	100%	0%
Portugal	33	86%	14%	Sudan	8	88%	12%
Turkey	25	76%	24%	USA	6	100%	0%
New Zealand	22	100%	n.s.	India	5	33%	67%
Rep. of Korea	22	100%	0%	Indonesia	4	100%	0%
Thailand	21	64%	26%	Argentina	4	100%	0%
Viet Nam	21	66%	24%	Mexico	2	7%	93%
Chile	17	100%	0%	Russian Federation	2	70%	30%
China	16	91%	9%	Australia	1	100%	0%
South Africa	16	100%	0%	Brazil	1	100%	0%
France	13	100%	0%				

Source: FRA 2005 Tables 8 and 10.

The increasing subregional totals in plantation forest area between 1990, 2000 and 2005 conceal a few decreases. The most recent decreases during 2000-2005 include:

- Northern Africa – Sudan (-47 123 ha);
- Eastern and Southern Africa – Kenya (-2 600 ha) and Swaziland (-1 400 ha);
- East Asia – Japan (-2 000 ha);
- South and Southeast Asia – Cambodia (-2 600 ha), Malaysia (-17 200 ha) and Philippines (-46 400 ha);
- Western and Central Asia – Kazakhstan (-29 400 ha);
- Europe – Albania (-1 640 ha), Belgium (-1 700 ha), United Kingdom (-2 000 ha).

These changes were probably due to reassessments or adjustments, although in Kenya the reduction was due to an excision.

Total planted forest area

The area of planted semi-natural forests (Table 3) was combined with the area of plantation forests (Table 5) to give the total planted forest area in Table 8.

The combined areas of plantation and planted semi-natural forests report a total for planted forests of over 271 million hectares, or 6.9 percent of the global forest total of FRA 2005. Despite the low percentage, the importance of this category is increasing progressively.

While attention has focused on plantation forests in the past, the area of planted semi-natural forests was actually larger than that of plantation forests in 1990; only in 2000 and 2005 was total area of plantation forests (slightly) greater than that of planted semi-natural forests. Plantation forests now represent 52 percent of the total area of planted forests.

Nearly half (49 percent) the 2005 global area of planted forests lies in the Asian region, which is also increasing at the fastest rate. While Europe accounted for the next-largest area of planted forests in 2005 (29 percent), it is not increasing as fast as North and Central America and Oceania. Although the global area of planted forests has increased faster in the period 2000-2005 than in 1990-2000, this growth has been driven largely by Asia. Europe, North and

Central America, Oceania and South America all showed slower annual growth rates in 2000-2005 than in 1990-2000.

TABLE 8
Total planted forest area by region – 1990, 2000 and 2005 (1 000 ha)

Region	Total planted forests				
	Area			Change (%)	
	1990	2000	2005	1990–2000	2000–2005
Africa	13 783	14 371	14 838	0.4	0.6
Asia	100 896	114 820	131 984	1.3	2.8
Europe	68 400	76 328	79 394	1.1	0.8
North and Central America	14 758	26 084	29 050	5.9	2.2
Oceania	2 447	3 491	3 865	3.6	2.1
South America	9 157	11 462	12 215	2.3	1.3
World	**209 441**	**246 558**	**271 346**	**1.6**	**1.9**

Productive and protective functions

Table 9 combines the areas of planted semi-natural forests (Table 4) and plantation forests (Table 6) for a global estimate of planted forests. The productive proportion of total planted forest area was 74.9 percent in 1990, 75.5 percent in 2000 and 75.6 percent in 2005.

TABLE 9
Total planted forests by productive and protective functions (1 000 ha)

Region	Total planted 1990		Total planted 2000		Total planted 2005	
	Productive	Protective	Productive	Protective	Productive	Protective
Africa	11 207	2 577	11 585	2 787	11 838	3 000
Asia	64 952	35 943	74 028	40 793	86 172	45 812
Europe	54 594	13 806	60 817	15 511	63 014	16 106
North and Central America	14 571	187	24 858	1 227	27 859	1 190
Oceania	2 447	1	3 477	14	3 833	32
South America	9 119	39	11 408	54	12 158	57
Total	156 890	52 553	186 172	60 384	205 149	66 197
Grand total	**209 443**		**246 556**		**271 346**	

Table 9 illustrates that both productive and protective categories increased during the 1990-2005 period. Productive forests are increasing at a greater rate than protective forests especially in the period 2000 – 2005.

Analysis of the parameters collected in the questionnaire

This section contains a more in-depth analysis and reports the results of the second level of the study (Figure 1). It refers only to the data collected from the 36 counties that responded to the second part of the questionnaire.

A more detailed set of parameters was requested in this second part to enable disaggregation for both productive and protective planted forests of species composition, growth (mean annual increment and rotation length), age class distribution, ownership and end use. The responses, and thus the reliability, varied widely, with more information available on productive functions.

Productive functions

Area of planted forests with productive function

The productive functions of planted forests – both plantation forests and planted semi-natural forests – refer to those stands established primarily for the production of wood or non-wood forest products. Such goods may include timber, panel products, pulp and paper, fuelwood or a very wide range of non-wood forest products. FRA 2005 notes that "a designated function is considered to be primary when it is significantly more important than other functions", and the questionnaire submitted to the sampled countries followed this concept. But the study only gave two choices – the primary function was either production or protection – which did cause some countries difficulties, since they considered their planted forests to have a multiple purpose function. Indeed, FRA 2005 recognized that for forest functions "the category 'multiple purpose' is considered a primary function when legal prescriptions and/or landowner decisions explicitly assign functions that correspond to two or more of the [FRA] designation categories and where none of them is significantly more important than the others". FRA did however, recognize 'characteristics' of forests, and here a direct comparison can be made with the area of productive plantation forests (FRA 2005, Annex 3, Table 8). The purpose of the sample was thus to gain more information on the FRA Table 8.

This section considers the areas of planted forests assigned to productive functions, as well as ownership, age classes, species and growth rates. These last three parameters will contribute in particular to an outlook study to determine future availability and trends in industrial roundwood production from planted forests.

Table 10 shows the global shift from planted semi-natural forests to plantation forests in the provision of productive functions from 1990 to 2005, already noted in the comparison of Tables 3 and 4. But this trend has not been followed in Europe.

The proportion of planted forests with primarily productive functions has remained steady at three-quarters of the total since 1990, and has increased by 1.7 percent yearly between 1990 and 2000 and 1.9 percent yearly from 2000 to 2005 (Table 11).

TABLE 10
Planted forests with productive function (1 000 ha)

Region	1990		2000		2005	
	Productive plantations	Productive semi-natural	Productive plantations	Productive semi-natural	Productive plantations	Productive semi-natural
Africa	10 163	1 044	10 581	1 003	10 876	963
Asia	28 925	36 027	36 206	37 822	44 414	41 758
Europe	17 942	36 652	20 997	39 820	21 651	41 638
N. & C. America	10 595	3 976	16 711	8 147	17 653	10 206
Oceania	2 447	0	3 477	0	3 833	0
South America	9 094	25	11 383	25	12 132	25
Total	79 166	77 724	99 355	86 817	110 559	94 590
Grand total	**156 890**		**186 172**		**205 149**	

TABLE 11
Total planted forest area and rates of change, productive function (1 000 ha)

Region	Total productive planted forests				
	Area			Change (%)	
	1990	2000	2005	1990–2000	2000–2005
Africa	11 207	11 584	11 839	0.3	0.4
Asia	64 952	74 028	86 172	1.3	3.1
Europe	54 594	60 817	63 288	1.1	0.7
North and Central America	14 571	24 858	27 859	5.5	2.3
Oceania	2 447	3 477	3 833	3.6	2.0
South America	9 119	11 408	12 157	2.3	1.3
World	**156 890**	**186 172**	**205 149**	**1.7**	**1.9**

Most of the planted forests with productive function are in Asia (42 percent in 2005), and the area has grown fastest in this region between 2000 and 2005.

Thirty-one percent of the global planted forest area for productive purposes in 2005 was in Europe, but the rate of increase has apparently slowed considerably in the most recent period. The balance of the global area lay mainly in North and Central America, followed by South America, Africa and Oceania. All, except Africa, have shown rapid increases in the two recent periods – especially the North and Central American region. Because of the distribution of the sample among the regions, described in the Introduction, it must be repeated that the data in absolute terms may not be wholly reliable, but the proportions among regions and among components are believed to be acceptably accurate.

Species composition

The sampled countries were asked for information on the species composition of their planted forests. The response was high, as for the area figures; overall information came from 34 countries representing 93 percent of the global total sampled. All subregions reported a total sampled area higher than 90 percent, except Europe, with 75 percent, and Western and Central Asia with 18 percent.

Table 12, derived from the sample, lists the main species used, defined as those species representing more than 3 percent of the subregional total.

TABLE 12
Main species established for productive purposes in plantation forests and planted semi-natural forests

Region/subregion (No. countries in sample)	Plantation forests		Planted semi-natural forests	
	Species	%	Species	%
E. & S. Africa	Pinus patula	25	–	
(1 country)	Eucalyptus grandis	23		
	Eucalyptus nitens	16		
	Pinus elliottii	15		
	Acacia spp from Australia	9		
N. Africa	Acacia senegal	25	Acacia Senegal	39
(2 countries)	Acacia nilotica	20	Acacia seyal	25
	Acacia seyal	15	Acacia nilotica	15

	Eucalyptus spp	10	Acacia mellifera	8
	Acacia mellifera	10	Acacia tortilis	3
	Khaya spp	6		
E. Asia	Cunninghamia lanceolata	23	Cunninghamia lanceolata	34
(1 country)	Unspecified	21	Pinus massoniana	24
	Castanea mollissima	17	Unspecified	13
	Eucalyptus spp	8	Larix spp	9
	Morus alba	8	Populus spp	7
	Pinus tabulaeformis	6	Pinus tabulaeformis	5
	Populus spp	5		
S. & S.E. Asia	Acacia mangium	24	Unspecified	42
(7 countries)	Tectona grandis	24	Tectona grandis	22
	Eucalyptus spp.	10	Eucalyptus spp	20
	Unspecified	8	Pinus roxburghii	5
	Pinus merkusii	8		
W. & C. Asia	Populus spp	95	Acer insigne	20
(1 country)	Eucalyptus spp	5	Alnus subcordata	20
			Quercus persica	10
			Amygdalus scoparia	10
Oceania	Pinus radiata	67		
(2 countries)	Eucalyptus globulus	12		
Europe	Pinus pinaster	17	Pinus sylvestris	44
(18 countries)	Picea abies	15	Picea abies	24
	Pinus contorta	15	Larix decidua	10
	Picea sitchensis	14	Quercus robur	5
	Pseudotsuga menziesii	7	Fagus sylvatica	4
N. America	Pinus taeda	65	-	
(1 country)	Pinus elliottii	16		
	Unspecified	7		
S. America	Eucalyptus spp	40	Prosopis tamarugo	80
(3 countries)	Pinus spp	20	Prosopis chilensis	17
	Pinus radiata	20	Unspecified	4
	other broadleaves	4		
	Hevea brasilensis	2		

The interpretation of the table on species used for productive purposes in either plantation forests or planted semi-natural forests must be approached with some caution. First, the sample size in all regions is quite small – and as already noted, two important countries, Canada and Germany did not provide information. Second, certain countries with significant areas of plantation forests have not been covered by the sample; they include, for example, Kenya, Uganda and the United Republic of Tanzania in Eastern and Southern Africa, Fiji and Papua New Guinea in Oceania, and Peru, Uruguay and the Bolivarian Republic of Venezuela in South America. Nor was information provided by the sampled countries on areas of rubber (*Hevea brasiliensis*), oil palm (*Elaeis*) or coconut palm plantations, although bamboo was included.

The species established under the two main components in Table 12, plantation forests and planted semi-natural forests, have few genera common between regions. They include the *Pinus* between all regions, and the *Eucalyptus* and *Acacia* in tropical and subtropical regions.

In order to supplement the information on species established for production purposes the following discussion has also considered information on Plantation Forest species (that is, with both productive and protective purposes) from FRA 2000, obtained from 213 countries but covering only eight broadleaved and two coniferous species – although the broadleaves species included rubber.

Reviewing the sampled subregions, the main species appear to be:

Eastern and Southern Africa (South Africa). *Pinus* and *Eucalyptus* spp. are very important in the plantation forests programme, of this counyry whose main plantations reported are composed of *Pinus patula, Eucalyptus grandis, Eucalyptus nitens, Pinus eliottii* and *Pinus radiata*.

Northern Africa (Algeria and the Sudan). The main species in both plantation forests and semi-natural forests are *Acacia Senegal* and *Acacial seyal*, used for gum arabic (*talh* gum) in Sudan. *Acacia nilotica* is an important timber species, while all the *Acacia* and *Eucalyptus* spp. are used for firewood and charcoal.

East Asia (China). The main species in either category is *Cunninghamia lanceolata*. The information from FRA 2000 for China shows the importance of *Acacia* spp. (Australian species), *Eucalyptus* spp. (often for pulp), *Hevea* brasiliensis (rubber), *Tectona grandis* (teak) and – among the "other broadleaves" – *Populus* (poplar) and *Casuarina* spp. *Pinus* spp. (mainly *Pinus massoniana*) were among the important conifers.

South and Southeast Asian countries are better represented in the sample. In plantation forests, *Acacia mangium* is the main species, grown for timber, panel products and pulp and paper mainly in Indonesia and Malaysia. It is closely followed by *Tectona grandis*, grown in India, Indonesia, Myanmar and Thailand. *Tectona grandis* and *Eucalyptus* spp. are grown also in semi-natural forests.

Western and Central Asia was only represented by one country. *Populus* spp. are widely used for plantation forests throughout the subregion, with significant areas of *Eucalyptus* spp.

In Oceania, represented by Australia and New Zealand, the main species used for plantation forests was *Pinus radiata*, followed by *Eucalyptus globulus*. Had Fiji and Papua New Guinea been included in the sample, then the FRA 2000 results suggest that *Eucalyptus*, *Hevea brasiliensis* and *Pinus* spp. and *Swietenia* (mahogany) would also have figured.

Europe. Eighteen countries reported, covering a wide range of ecoregions. Not surprisingly, the main species planted represent that range. The largest areas reported for species were from Poland, Finland, Ukraine, the Czech Republic, France and the United Kingdom.

- In productive plantation forests, the main species is *Pinus pinaster* (Maritime pine), all of which was reported from France, where it is used for dune stabilization in the Landes. *Picea abies*

(Norway spruce) is the next most widely planted species in France, Norway, and Belgium. Three exotic species from the Pacific coast of North America are important in production plantation forests in Europe: most of the area of *Pinus contorta* is in Sweden, but also in the United Kingdom; *Picea sitchensis* (Sitka spruce) is grown mainly in the United Kingdom; and *Pseudotsuga menziesii* (Douglas Fir) is reported mainly from France.

- The main species in planted semi-natural forests is the indigenous *Pinus sylvestris* (Scots pine); nearly half of the area reported by sample countries is in Finland with the next largest areas in Poland, Ukraine and the Czech Republic. *Picea abies* is the next most common species, planted mainly in the Czech Republic, Norway and Finland. *Larix decidua* (European larch) has been planted mostly in Poland. Broadleaved species have also been established in planted semi-natural forests. They include *Quercus robur* (oak), largely in Ukraine, *Fagus sylvatica* (beech) in Slovakia and Poland, and *Betula pendula* (pendulous birch) in Finland (with an area almost as large as other unspecified birches in Poland).
- The foregoing text refers to species reported in the sample. As has been noted, Germany did not report, and Austria (for example) was not included in the sample. The Russian Federation, which was included in the sample, is known to have significant areas of plantation forests – nearly 17 million hectares were reported to FRA 2005 – but did not report on species in planted forests. These omissions imply that species representation may not reflect fully the actual situation: *Pinus sylvestris* and *Pinus nigra* would have been even more important had these data been included.

North America is represented only by the United States. *Pinus taeda* is by far the most frequently planted species, followed by *P. elliottii*. Had Canada responded, *Populus tremuloides* would have been an important North American species.

South America reflects the main production species planted in Argentina, Brazil and Chile. The main genera are exotic *Eucalyptus* and *Pinus*, with the main species being *Pinus radiata*, *Pinus taeda* and *Pinus eliottii*. In planted semi-natural forests, the main production species are *Prosopis tamarugo* and *Prosopis chilensis*, which are established for fodder.

Hevea brasilensis (rubber), whose utilization as saw timber was pioneered by Malaysia, is included in the FRA 2005 definition of plantation forests. But unfortunately, only two of the sampled countries reported it as an important species of their plantation forests programmes, although it is known to be present in many countries. Two other sources were consulted to obtain an estimate of the area of rubber plantations: the species breakdown from FRA 2000 (derived from country responses) and a detailed study of rubber (and coconut and oil palm[4]) done in 1995, which was derived from a literature search. The former estimated that in 2000 there were 9.9 million hectares of rubber, while the latter estimated 9.5 million hectares in 1995. A figure of around 9 million hectares of rubber plantations is probably correct for the contribution of rubber to productive plantation forests in 2005 – or about 6 percent of the global plantation forest area and 4 percent of the area of productive planted forests. Both samples show that about 90 percent of the rubber plantations were in Asia (Indonesia, the Philippines and Malaysia) with the rest mainly in Africa (Nigeria and Liberia) and South America (Brazil).

Bamboo was only mentioned as a component of plantation forests in Northern Africa (5 percent) and South and Southeast Asia (1 percent); it was not included in any of the lists of productive planted semi-natural forests – although of course it could be part of the 'unspecified' areas in either category.

[4] In 1995 the area of coconut palms was estimated at 11.3 million hectares and the area of oil palm at 5.8 million hectares, both mainly in Asia. The former has been used primarily as sawn timber, the latter as reconstituted panel board.

Mean annual increment and rotation length

The sampled countries were asked for information on the top ten species plus a class of 'other', on MAI in m^3/ha/year overbark, rotation length in years, and yield at rotation length in m^3/ha overbark, all with minimum, maximum and mean values. Very few countries provided means, most likely due to the difficulty of weighting the figure for the distribution of each species under different growing conditions. Thus Table 13 and this analysis quote only the range of minimum and maximum values. It is suggested that for modelling purposes the minimum values (or midpoint of the minimum values where there are more than one) be used as an indicative, reliable minimum estimate.

Information was provided on all species over 3 percent of the area of the subregion, although some species were better represented than others in the responses to the questionnaire. Table 13 shows the growth and yield of the main species for the minimum and maximum values of the three parameters for the two categories of plantation forests and planted semi-natural forests. Entries such as "unspecified" were not included.

TABLE 13
Growth parameters by region/subregion for selected species, productive function

Species	Subregion	Cat[a]	MAI m^3/ha/year		Rotation years		Harvest volume[b] m^3/ha	
			Min	Max	Min	Max	Min	Max
Acacia spp (Australia)	E. & S. Africa	P	10	12	9	12	90	120
Acacia mangium	S. & S.E.Asia	P	19.0–20.0	24.0–40.0	6	14	35–184	165–235
Acacia nilotica	N Africa	P	15.0	20.0	14	30	100	120
		S	12.5	20.0	15	30	90	104
Acacia senegal	N Africa	P	1.4	2.6	25	30	50	70
		S	1.1	2.4	25	30	30	55
Acacia seyal	N Africa	P	2.0	6.0	15	25	75	95
		S	1.8	3.2	15	25	68	88
Castanea mollissima	E. Asia	P	1.0	6.0	30	40	30	240
Cunninhamia lanceolata	E. Asia	P	2.5	13.5	15	30	38	405
		S	2.5	13.5	20	30	50	405
Eucalyptus globulus	Oceania	P	15.6	25.0	10	27	204	228
Eucalyptus grandis	E. & S. Africa	P	18.0	24.0	7	9	160	240
Eucalyptus nitens	E. & S. Africa	P	22.0	28.0	7	9	160	240
Eucalyptus spp.	N Africa[c]	P	12.0	14.0	8	15		
	E. Asia	P	1.6	8.7	5	15	8	131
	S. & S.E.Asia	P	7.0–8.0	10–12	6–10	8–20	42	80
		S	8.0	12.0	10	20	–	–
	W. & C. Asia	P	4.0	10.0	10	25	–	–
	S. America	P	15.0–20.0	36.0–70.0	6–8	12–16	120–130	400
Fagus sylvatica	Europe	P	4.0–6.0	10.0–14.0	100	140	210	490
		S	2.0–7.6	4.9–14.0	75–110	120–150	210–260	490–590
Larix decidua	Europe	P	7.0	13.0	60	150	450	650
		S	2.0–8.4	6.8–11.0	60–140	120–220	460	820
Picea abies	Europe	P	3.5–6.0	12.0–22.0	50–80	70–130	200–600	650–1330
		S	1.5–11.0	5.7–15.0	50–100	100–141	250–375	800–915
Pinus elliottii	E. & S. Africa	P	12.0	18.0	25	35	300	450

	N. & C. America	P	7.0	8.0	20	30	158	249
Pinus halapensis	N Africa	S	1	2	50	100	-	-
Pinus massoniana	E. Asia	S	2.8	16.3	15	30	42	489
Pinus patula	E. & S. Africa	P	12	18	25	35	300	450
Pinus pinaster	N Africa	S	1	2	50	100	-	-
	Europe	P	4.7	13.8	40	70	-	-
Pinus radiata	E. & S. Africa	P	12	16	28	35	280	450
	Oceania	P	15.7–17.0	20.0–21.0	25	30–32	440–470	620–630
	S. America	P	14.0	34.0	18	28	260	580
Pinus sylvestris	Europe	P	2.5–4.0	3.5–14.0	55–101	75–150	120–140	240–350
		S	1.0–6.5	4.9–10.0	60–111	101–150	150–160	600–715
Pinus taeda	N. & C. America	P	9.0	10.0	20	30	202	293
Populus spp. and cultivars	E. Asia	P	3.7	18.5	8	15	30	278
		S	3.7	17.7	10	20	37	354
	W. & C. Asia	P	5.0	12.0	10	25	-	-
Quercus robur	Europe	P	3.0	9.0	121	-	-	-
		S	1.5–4.3	2.6–10.0	80–121	140–200	230	420
Tectona grandis	S. & S.E.Asia	P	4.0–7.3	6.0–17.3	20–50	30–80	80–277	100–320
		S	4.0	6.0	50	80	-	-

[a] Category P = plantation forests, S = planted semi-natural forests.

[b] Under yield, some highly aberrant numbers were omitted.

[c] Irrigated.

The criteria for inclusion in Table 13 specified that the species had been planted in significant areas within the subregion and that, in some cases, they were of interest outside the subregion. As may be expected, the greater the number of inputs, the wider the difference, often with overlap between the highest minimum and the lowest maximum of MAI, for example teak.

The species have been grouped by approximate ecozone. Interpretation should bear in mind that some species that are widely planted within several ecozones may be poorly represented in the sample and that the figures – even the range of minimum estimates – may thus not be representative of the whole distribution.

The Mediterranean zone is only represented by *Pinus halapensis* and *Pinus pinaster* from the returns of Algeria (Northern Africa) and France (Europe). Growth is generally slow.

Dry-zone Africa is represented by a return from the Sudan. It shows the dominance of indigenous *Acacia* spp. such as *Acacia nilotica*, *Acacia senegal* and *Acacia seyal*, grown in both plantation and planted semi-natural forests. Growth is slow, except where irrigated *Eucalyptus* spp. are grown.

The dry zones of the Middle East are represented only by a sample from Iran (Western and Central Asia. Growth rates are quoted for *Eucalyptus* and *Populus* spp., which are grown in rain-fed plantation forests. *Pinus halapensis* is also grown in this zone.

East Asia is represented by China, which has a wide range of ecozones for the main species planted for productive purposes. *Cunninghamia lanceolata* is the dominant species and the figures quoted are probably for growth in conventional industrial plantation forests. However, the *Eucalyptus* and *Populus* spp. are probably grown, at least in part, in smallholder schemes (see Table 15 on ownership). The wide distribution of *Pinus massoniana* is reflected in the wide range of growth and yield figures.

South and Southeast Asia are well represented in the sample, but they also cover a wide range of growing conditions, shown by the wide range of figures. *Tectona grandis* and *Acacia mangium*, which are largely grown in plantation forest conditions, illustrate this range. Smallholders grow much of the *Eucalyptus* and *Populus* spp., particularly in India.

Europe represents largely temperate conditions. Although there are relatively few species, several countries contributed multiple inputs, giving a good sample with good reliability. The species with the largest area is *Pinus sylvestris*, followed by *Picea abies* and *Larix decidua*, all grown under both plantation forests and planted semi-natural forests. Figures for two broadleaved species, which are being increasingly planted in Europe, are also quoted: *Quercus robur* and *Fagus sylvatica* are also grown under both plantation and semi-natural forest conditions.

North America is represented only by the United States, and by *Pinus taeda* and *P. elliottii*, grown in plantation forests.

Oceania is represented by Australia and New Zealand, and by *Eucalyptus globulus* and *Pinus radiata*, grown in plantation forests.

South America is represented by Argentina, Brazil and Chile, and by *Eucalyptus* spp., *Pinus radiata* and *P. taeda*, grown in plantation forests.

Age class distribution

The sampled countries were asked for information on the age class distribution of the ten main species of their planted forests. The age classes were 0-5 and 5-9 years, by ten-year intervals to fifty years, by twenty-year intervals to 99 years, and over 100 years.

Thirty countries responded to this question for both the productive and protective functions, with 15 of the responses coming from Europe. Overall coverage was 78 percent of the sampled area, but there was poor representation of South and Southeast Asia (47 percent of the sample). One country (Japan) responded regarding the protective function alone.

Extrapolation of the proportions to subregional or regional levels should be done with caution, given the relatively low overall response and the incomplete responses in some cases.

The global distribution of the proportions of age classes was in the form of a reverse-J curve, with most of the area of planted forests being in the younger age classes, showing the high rate of planting that has occurred since the 1980s. There is a higher proportion of younger age classes in plantation forests, while planted semi-natural forests are proportionally greater over the age of about 40 years, suggesting a shift towards the establishment of planted forests as plantation forests. This is especially apparent in East Asia, but the trend has not been followed by Europe.

The following subregional analysis is based on analysis of the questionnaire (FP/35A) and on the species details given in Table 14.

TABLE 14
Productive function, regional age class distribution, all species, percentage of global productive total (%)

	Cat1	Age classes (years)									
Region/ subregion		0-5	5-9	10-19	20-29	30-39	40-49	50-69	70-89	90-99	100+
Africa	P	1.0	1.2	1.2	1.2	0.3	0.1	0.0	0.0	0.0	0.0
	S	0.1	0.2	0.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
	P + S	1.1	1.3	1.3	1.5	0.3	0.1	0.0	0.0	0.0	0.0

Asia	P	5.0	4.1	6.2	2.9	1.2	0.6	0.1	0.0	0.0	0.0
	S	4.2	4.2	9.0	3.6	2.4	2.4	1.8	0.8	0.1	0.1
	P + S	9.1	8.3	15.2	6.6	3.7	3.1	1.8	0.8	0.2	0.1
Europe	P	0.3	0.4	0.9	1.0	0.7	0.5	0.4	0.2	0.0	0.1
	S	1.0	1.2	2.3	2.5	2.6	1.8	2.3	1.3	0.5	0.7
	P + S	1.3	1.6	3.2	3.5	3.3	2.3	2.6	1.5	0.6	0.8
N. & C. America	P	2.8	2.6	4.2	2.2	0.9	0.5	0.5	0.1	0.1	0.0
Oceania	P	0.5	0.8	0.7	0.6	0.2	0.0	0.0	0.0	0.0	0.0
S. America	P	3.2	2.0	1.6	0.6	0.2	0.0	0.0	0.0	0.0	0.0
Overall %	P	12.8	11.1	14.8	8.5	3.5	1.7	1.0	0.3	0.1	0.0
Overall %	S	5.3	5.6	11.5	6.4	5.0	4.2	4.1	2.1	0.6	0.8
Global %		**18.0**	**16.6**	**26.2**	**15.1**	**8.7**	**6.1**	**5.0**	**2.5**	**0.8**	**1.0**

[a] Category plantation forests (P) or planted semi-natural forests (S).
Inconsistencies in totals are due to rounding.

Africa

The figures for Eastern and Southern Africa are derived from the response from South Africa, which is only establishing planted forests as plantation forests (not semi-natural forests), possibly at a higher rate than in neighbouring countries, and is thus not typical of the subregion. No plantation forests are older than 39 years. The main species of the plantation forests programme is *Pinus patula*. The planting programme is continuing vigorously, with nearly 30 percent aged 0-5 years. The rotation age is given as 25-35 years, but only 11 percent are older than 20 years suggesting a shortage of this species, which is exploitable. *Eucalyptus grandis* and *E. nitens* are also important components of the plantation forests programme, with active planting programmes, but with significant areas older than the quoted rotation age of 7-9 years. The annual planting rate has been declining in South Africa, due, in part, to the new water regulations that restrict use of water for seedlings and young stands.

For Northern Africa, the information was obtained from Algeria and the Sudan. Regionally there seem to have been high rates of establishment in both plantation forests (the bulk of the planting) and semi-natural forests, between five and 30 years ago, while recent planting (0-5 years) has slowed. The two main timber species were *Pinus halapensis* (Algeria), which shows a distribution with a lower proportion in the age class 10-19 years, and *Acacia nilotica* (the Sudan), which has most of the plantation forests distribution in the age classes 0-9 and 20-29 years. Rotation is quoted as between 15 and 30 years, but the area of 10-19 years is less than the others, suggesting a fall in log supplies in the near future. Most of the *Acacia senegal* and *A. seyal* plantation forest area is in the age class 20-29 years, although planting is continuing. In semi-natural forests, more *Acacia senegal* has been planted, but with a fall in the 0-5 year class, possibly reflecting a reduction in food for work and other aid programmes, which concentrated on gum arabic rehabilitation.

Asia

East Asia. The information was provided by China. The overall age class distribution shows that there has been a large programme of establishment in both plantation forests and semi-natural forests for at least 30 years, with the recent emphasis slightly favouring plantation forests. There was a reduction in plantation forest area between 40 and 70 years ago, while planted semi-natural forest areas, although reduced, were greater at that time. The species in the oldest age classes (over 50 years) are *Larix* spp., and *Pinus tabulaeformis* in plantation forests and planted semi-natural forests, and *Pinus sylvestris* in planted semi-natural forests. The establishment programme is continuing for *Cunninghamia lanceolata*, the main species, and the distribution conforms to the quoted rotation of 15-30 years in plantation forests (20-30 in semi-natural forests). *Pinus massoniana* is only grown in semi-natural forests; the establishment programme is being maintained but there are significant areas older than the quoted rotation of 15-30 years. *Populus*, other important species of the plantation forests programme, show a distribution with continuing planting, with the least area in the 20-29 age class and exploitation mainly occurring before age 20.

South and Southeast Asia. Information was provided by India, Indonesia, Myanmar and Viet Nam. The planted forests programme, which is heavily weighted to the younger age classes, up to 50 years ago was largely in the semi-natural forests; the older records are for small areas of plantation forests composed largely of *Tectona grandis*. *T. grandis* is the main species of the planted forests of this subregion, with recent establishment programmes (0-10 years) almost equally divided between plantation forests and semi-natural forests; rotation was quoted as 20 (the lowest minimum) to 80 years (the highest maximum), so it would appear that although there are relatively small areas of rotation age, some, evidently in Indonesia, are a good deal older. The short-rotation *Eucalyptus* spp. has been grown largely in plantation forests; vigorous establishment programmes are continuing. *Acacia mangium*, another important species for the provision of industrial roundwood, has been grown in plantation forests, but there were no records of its age class distribution.

Western and Central Asia. Iran was the only country providing information. In plantation forests, both the *Eucalyptus* and *Populus* spp. are concentrated solely in the two youngest age classes. In semi-natural forests, small areas of other species were quoted, but also in the two youngest age classes.

Europe

Information was provided by Belgium, Croatia, the Czech Republic, Finland, France, Italy, Latvia, Lithuania, the Netherlands, Norway, Poland, Slovakia, Slovenia, Sweden, Ukraine and the United Kingdom. Overall, the distribution is similar to the reverse-J curve, but with anomalous low figures 40 to 50 years ago (possibly because little planting was done in the immediate post-war years), and in the 90 to 100 year class (which may possibly have been over-exploited in post-war reconstruction).

The data refer largely to planted semi-natural forests where planting is continuing strongly, mainly with *Pinus sylvestris* and *Picea abies,* but also with *Betula* spp., *Fagus sylvatica*, *Larix decidua*, *Quercus robur* and other *Quercus* spp., which are mainly indigenous species. The recent rate of establishment in plantation forests appears to have slowed. It consists of some indigenous species such as *Pinus sylvestris* and *Picea abies*, but with large areas of *Picea sitchensis*, *Pseudotsuga menziesii* and *Populus* spp.

There are significant areas of semi-natural forests older than 50 years and even 100 years, with a broad range of broadleaved species such as *Quercus* spp. and *Fagus sylvatica*, and even conifers such as *Pinus sylvestris*, *Abies alba* and *Larix decidua*. There are rather smaller areas of plantation forests older than 50 years, but the age class over 100 years is well represented, with *Quercus* spp., *Fagus sylvatica* and *Pinus sylvatica*.

In summary, the age class distribution shows that the trend in Europe is that establishment will continue to take place mainly in semi-natural forests, with indigenous species, but programmes for the production of roundwood from introduced species continue, although at a lower level.

North and Central America

Information came from the United States and was confined to plantation forests. Overall, the distribution of age classes in plantation forests is concentrated in the two youngest age classes, showing continuing programmes of establishment. The main species reported, *Pinus taeda*, followed by *P. elliottii*, both follow this trend. The oldest age classes are represented by 'unspecified' and by small areas of *Pinus strobus*.

Oceania

Information was provided by Australia and New Zealand on plantation forest species. Most of the area of the six *Eucalyptus* spp. quoted was concentrated in age classes up to 29 years. Only *Eucalyptus grandis*, *E. pilularis* and *E. regnans* had areas up to 89 years, and they were small. The planting of *Pinus radiata*, which is mainly grown in New Zealand, has slowed in that country within the past five years.

South America

Information was provided by Argentina, Brazil and Chile, mainly for plantation forests, but also for small areas of planted semi-natural forests. Most of the area is in the two youngest age classes, 0-5 and 5-9 years, showing that planting is continuing, as in other regions. The largest area is of *Eucalyptus* spp. in Brazil and Chile, with large areas in the youngest age class. *Eucalyptus grandis* has been established in Argentina, but the recent planting appears to have slowed, as the area of age class 0-5 is less than 5-9 and 10-19 years. *Pinus radiata* is grown in Chile, where the planting programme appears to be continuing and there is little over the age of 30 years. Other pines such as *Pinus caribaea*, *P. elliottii* and *P. taeda* are grown over small areas in Argentina; their establishment programmes appear to be slowing with smaller areas in the 0-5 than in the 5-9 age class. Brazil quotes *Pinus* spp., which appear to have been established over very large areas (1.9 million hectares).

Ownership

Recent policy trends in decentralization and devolution by the promotion of privatization (with or without increased participation) have meant that the ownership of planted forests has been moving increasingly to the private sector. This section aims to determine the extent and location of any changes in ownership of planted forests.

The definitions of ownership used in the questionnaire to the sampled countries were as follows:

1. Private ownership

Private ownership includes land owned by individuals, families, private cooperatives, corporations, industries, private religious and educational institutions, pension or investment funds, and other private institutions. Private owners may be engaged in agriculture or other occupations including forestry.

Private ownership was further disaggregated into:

- corporate – land owned by private companies, cooperatives, corporations, industries, private religious and educational institutions, pension or investment funds (generally large scale);
- smallholders – land owned by individuals or families (generally small scale).

2. Public ownership

Public ownership includes land owned by the State (national, state and regional governments) or government-owned institutions or corporations or other public bodies, including cities, municipalities and villages.

3. Other ownership

This category covers land not classified as public or private ownership, including land for which ownership is not defined or unknown.

Thirty-one countries responded to the questionnaire on this topic, to which the Russian Federation and Thailand were added from alternative sources. The sample represented 94 percent of the total of the planted forest area sampled. In Europe, data were reported for Belgium, Croatia, Finland, France, Italy, Poland, the Russian Federation, Slovakia, Slovenia, Ukraine and the United Kingdom. Sweden only provided information for a planted forest area corresponding to 7 percent of the total area. Overall, the area of ownership reported by Europe corresponded to 77 percent of the total planted forest area reported in this region. It was the lowest area reported compared with the other regions that reported ownership information corresponding to100 percent of their total sampled area.

Table 15 and the analysis below have aggregated the plantation forests and planted semi-natural forests categories.

Globally, the sample suggests that the absolute area of productive planted forests in public ownership has decreased slightly since 1990, while the area in corporate ownership has increased by nearly one-third and the area in smallholder ownership has increased three-fold. Proportionately, the area in public ownership in 1990 formed 70 percent of the total area of planted forests, but by 2000 it had fallen to 54 percent and by 2005 it was 50 percent. Corporate ownership accounted for 17 percent of the total area in 1990, 19 percent in 2000 and 18 percent in 2005. Smallholder ownership, on the other hand, increased from 12 percent in 1990, to 27 percent in 2000 and 32 percent in 2005. The area classified by sampled countries as 'Other' ownership was very small in all three periods – 0.3 percent in 2005.

The figures for regions and subregions more or less follow the global trend of decreasing public ownership and increasing private ownership, especially by smallholders. Specific comments are:

East Asia, represented by China, shows a reduction in public ownership and a dramatic increase in smallholder ownership. Since East Asia accounted for 40 percent of the global total of publicly-owned productive planted forests in 1990, and 58 percent in 2005, changes in this subregion have strongly affected the global total for this type of ownership.

TABLE 15
Ownership of productive planted forests (1 000 ha)

Region/ Subregion	Public			Corporate			Smallholder			Other		
	1990	2000	2005	1990	2000	2005	1990	2000	2005	1990	2000	2005
E. & S. Africa	367	155	90	837	1 036	1 124	0	155	207	0	5	6
N. Africa	6 281	5 838	5 600	10	9	9	105	99	95	0	0	0
E. Asia	34 075	24 149	24 953	0	230	159	0	17 509	28 990	0	0	0
S. & S.E. Asia	18 568	18 645	18 270	3 664	3 606	3 448	4 899	5 005	5 114	22	154	65
W. & C. Asia	2 131	2 486	2 554	0	0	10	31	31	72	0	0	0

Europe	22 823	23 084	24 014	2 140	2 545	2 592	6 218	7 306	7 611	0	30	62
N. America	515	976	1 024	7 214	9 602	9 895	2 576	5 696	6 142	0	0	0
Oceania	1 142	827	782	801	1 658	2 178	340	562	531	0	205	106
S. America	69	64	65	6 369	7 303	7 760	1 008	1 146	1 219	159	223	254
Total productive	**85 972**	**76 223**	**77 352**	**21 033**	**25 988**	**27 176**	**15 178**	**37 509**	**49 980**	**181**	**617**	**492**

South and Southeast Asia has shown little change in any of the ownership categories. But its components, represented by India, Indonesia, Malaysia, Myanmar, the Philippines, Thailand and Viet Nam, demonstrate wide differences in ownership between countries. India showed no change in public ownership (70 percent) between 1990 and 2005, and did not distinguish between corporate and smallholders. Indonesia and Myanmar reported 100 percent public ownership and Thailand also reported 100 percent public ownership of planted forests, except those destined for rubber production. Malaysia shows slow growth in public ownership reaching 16 percent in 2005, matched by a slow decline in corporate (14 percent) and smallholder (69 percent) ownership. In the Philippines, on the other hand, there was a decline in public ownership from 80 percent in 1990 to 61 percent in 2005, with rapid increases in corporate ownership (from 2 to 14 percent) and smallholder (from 17 to 25 percent). Viet Nam also demonstrated a fall in public ownership, from 48 percent in 1990 to 27 percent in 2005, matched by an increase in smallholder ownership from 46 to 64 percent.

Western and Central Asia (Iran and Turkey) have no planted forests in corporate ownership and little owned by smallholders; most is owned by the public sector, and the area has been slowly increasing.

North America, represented by the United States, shows slow increases in both public and corporate ownership, with rapidly increasing smallholder ownership.

Oceania was represented by Australia and New Zealand. Ownership by the public sector decreased in New Zealand, but corporate ownership increased much more than that of smallholders.

South America (Brazil and Chile[5]) never had a large area of productive planted forests in public ownership. Brazil reported over 90 percent corporate ownership in all three periods, with little change in public or smallholder ownership. Chile reported corporate ownership increasing to 70 percent by 2005, while smallholder ownership actually decreased from 35 percent in 1990 to 28 percent in 2005.

The trend from public to private ownership is clear, especially by smallholders, and given the wide coverage of the sample both in area and in terms of the main planted forest countries, it is likely to reflect the global situation. But the global figures conceal variations among regions and subregions, and even wider differences among countries making up the sample.

End use

Information was requested from the sampled countries on the area of productive planted forests that is devoted to the following predominant industrial end uses. They were defined according

[5] Argentina gave no information on this parameter.

to Working Paper FP/35 (April 2005), which accompanied the questionnaire to the sampled countries.

- pulpwood/fibre: chips, pulpwood and fibre for cellulose and paper;
- sawlogs. solid roundwood, used as sawn timber, veneer and panel products;
- bioenergy: wood for use as bioenergy on a large scale;
- non-wood products: large-scale production of items such as gum arabic, rubber, palm fibres, cork, etc.;
- unspecified: wood for industrial but unspecified use.

This area referred to the predominant end use and to large-scale uses. Small-scale end uses for bioenergy and non-wood forest products were included in protective functions.

Twenty-six of the 36 countries responded, representing 96 percent of the total planted forest area reported by the countries. The regional representation was as follows:

- Africa – 100% of the sampled planted forest area;
- Asia – 98%, with information absent from Malaysia, Myanmar and the Philippines;
- Europe – 90%; information was provided by Belgium, Bulgaria, Croatia, the Czech Republic, Finland, France, Italy, Poland, Sweden, Ukraine and the United Kingdom;
- North America – 100%;
- Oceania – 51%, with information absent from Australia;
- South America – 100%.

TABLE 16
Planted forests – industrial end use (1 000 ha)

End use	1990	2000	2005
Pulpwood/fibre	18 826	24 880	26 843
Sawlogs	57 296	61 958	67 334
Bioenergy	7 116	7 368	8 614
Non-wood products	10 645	17 320	23 376
Unspecified	19 156	19 531	19 586
Global	**113 039**	**131 057**	**145 754**

All end uses have shown absolute increases in area, but some of the proportions have changed since 1990 (Tables 16-16E). The main features of the global area devoted to different types of planted forests for end use at industrial-scale are:

- The increase since 1990 in the area planted for pulpwood/fibre, with the proportion amounting to nearly one fifth of the total in 2005;
- The strong increase in the proportion of sawlogs for years 2000 – 2005;
- The small increase in the proportion of planted forest area for bioenergy;
- The increase in the proportion of the global total of non-wood products;
- The relatively large, and constant, area of the industrial-scale planted forests with "unspecified" end use.

The regional/subregional breakdown from the response to the questionnaire was as follows.

Pulpwood/fibre

TABLE 16A
Productive planted forests – end use pulpwood/fibre (1 000 ha)

Region/subregion	1990	2000	2005
Africa	765	756	761

Asia	3 378	4 606	6 531
Europe	1 256	1 275	1 289
N & C America	9 790	13 833	13 649
Oceania	0	18	18
S America	3 637	4 393	4 594
Total pulpwood/fibre	**18 826**	**24 880**	**26 843**

The global totals illustrate the rapid growth in the demand for industrial pulpwood and fibre, especially between 1990 and 2000, in response to the growth in demand for reconstituted wood panels and probably to rapid economic growth in Asia.

The region with the largest area of planted forests devoted to the large-scale production of industrial pulpwood and fibre in 1990, 2000 and 2005 is North America, represented by the United States, the only country sampled in that region. But although the area of industrial pulpwood and fibre in the United States increased rapidly between 1990 and 2000, it had decreased slightly in 2005. Asia, principally East Asia and South and Southeast Asia – the region with the second largest area of pulpwood and fibre in all three years – showed very rapid growth in this field in all three periods. South America stands in third place, with more modest growth, while Europe reflects the trend in the United States.

There has been a shift in investment from European and North American multinational companies into Asia (particularly China) and South America (particularly Brazil), in short-rotation planted forests for pulpwood/fibre production.

It should be noted that a significant proportion of the residues arising from utlization of sawlogs are chipped and used for pulpwood and board production. As the data in Tables 16A and 16B do not reflect this, there is a tendency to underestimate the proportion used for pulpwood and fibre.

Sawlogs

TABLE 16B
Productive planted forests – end use sawlogs (1 000 ha)

Region/subregion	1990	2000	2005
Africa	3 820	4 063	3 843
Asia	37 257	33 725	37 429
Europe	16 280	16 934	17 457
N. & C. America	515	2 441	3 412
Oceania	1 261	1 749	1 814
S. America	2 663	3 046	3 380
Total sawlogs	**57 296**	**61 958**	**67 334**

The global area of planted forests devoted to sawlogs is the largest of all the end uses, and the sample of all five regions showed an increase between 1990 and 2000.

However, the global figures conceal some wide regional, subregional and periodic variations. Asia had the largest area of planted forests devoted to sawlog production in the world in all three periods, and East Asia, which accounted for 44 percent of the global area, is the predominant subregion. But there was little growth in this area between 1990 and 2000, whereas North and Central America, represented by the United States, show an enormous increase in that period. Growth in the planted forests sawlog area in Europe and in Oceania

showed small, but regular increases between 1990 and 2005, while in South America, there was a very rapid increase over 1990-2005.

Bioenergy

The global area of industrial planted forests with bioenergy as end use has increased only slowly since 1990, while its proportion of the total fell to below 6 percent in 2005 (Table 16C). This may seem surprising, given the widespread interest in renewable forms of energy.

TABLE 16C
Productive planted forests – end use bioenergy (1 000 ha)

Region/subregion	1990	2000	2005
Africa	1 500	1 342	1 137
Asia	4 977	5 342	6 714
Europe	131	102	118
N. & C. America	0	0	0
Oceania	0	0	0
S. America	507	581	646
Total bioenergy	**7 116**	**7 368**	**8 614**

The regional and subregional breakdown of the sample shows that only the Asian region has planted trees for bioenergy on an industrial-scale (especially East and South and Southeast Asia), with South America showing a slow rate of increase. The area has decreased in Africa and Europe, while no industrial-scale bioenergy planted forests have been reported from the Americas or Oceania. However Bioenergy from planted forests continues to depend on forests and industrial residues, rather than as the predominant end use of planted forests.

Non-wood forest products

This category included rubber trees, which are used not only for latex, but increasingly for sawlogs. Indeed, there are reports that some countries, such as Malaysia, are breeding rubber trees for wood production, and even planting those trees for sole use as sawlogs.

TABLE 16D
Productive planted forests – end use non-wood products (1 000 ha)

Region/subregion	1990	2000	2005
Africa	832	603	790
Asia	9 553	16 568	22 436
Europe	134	18	17
N. & C. America	0	0	0
Oceania	0	0	0
S. America	127	131	133
Total non-wood products	**10 645**	**17 320**	**23 376**

The rapid growth in the area of industrial planted forests devoted to non-wood products in East and South and Southeast Asia was not explained in the returns from the sampled countries, but is likely to be due to the inclusion of rubber (in India, Indonesia and Viet Nam). It is not known how much of the rubber is grown only for rubber latex, how much for both latex and sawlogs, and how much, if any, for timber alone.

The response to the questionnaire (FP/35a) suggests that the area of non-wood products in Northern Africa refers to gum arabic, but it is not known what crops compose the increase in the area in Western and Central Asia (Iran, Turkey) and South America (Brazil), nor what crops are grown in Europe (represented by Bulgaria).

Unspecified

The area of large-scale planted forests devoted to unspecified end uses – in some sampled countries in the questionnaire – represented those that did not fit into the categories requested.

The response to the questionnaire (FP/35a) shows that the main countries with unspecified end uses of industrial-scale planted forests included Sweden (10 million hectares in 2005), India (3.9 million hectares), Czech Republic (2.4 million hectares), Turkey (2.0 million hectares), and Sudan (0.6 million hectares). No explanations were offered of what crop or purpose the unspecified category might represent, although it is possible that countries may have reported areas with multiple end uses in this category.

TABLE 16E
Productive planted forests – end use unspecified (1 000 ha)

Region/subregion	1990	2000	2005
Africa	674	515	598
Asia	7 461	7 026	5 955
Europe	10 350	11 405	12 478
N. & C. America	0	0	0
Oceania	0	0	0
S. America	671	586	546
Total unspecified	**19 156**	**19 531**	**19 586**

Protective functions

Planted forests – both plantation forests and planted semi-natural forests – with predominantly protective functions refer to those stands of native or introduced species established through planting or seeding mainly for the provision of services or non-industrial purposes. Such services were defined to include the following purposes:

- environmental;
- recreation;
- fuelwood on a small scale;
- other unspecified.

This section considers the areas of planted forests assigned to protective functions by category of plantation forests or semi-natural forests (Table 17), as well as by ownership, age classes, species and growth rates.

TABLE 17
Protective functions, by plantation forest and planted semi-natural forests (1 000 ha)

Region	1990		2000		2005	
	Protective plantations	Protective semi-natural	Protective plantations	Protective semi-natural	Protective plantations	Protective semi-natural
Africa	2 083	494	2 283	504	2 462	538
Asia	17 666	18 277	19 459	21 333	20 474	25 338
Europe	4 588	9 218	5 591	9 919	6 044	10 062
N & C America	187	0	1 227	0	1 190	0
Oceania	1	0	14	0	32	0
S America	39	0	54	0	57	0
Total	24 564	27 989	28 628	31 756	30 259	35 938
Grand total	**52 553**		**60 384**		**66 197**	

Area of planted forests with protective function

In all three periods, more area of planted forests with protective functions was found in planted semi-natural forests than in plantation forests – and has consistently been 53-54 percent of the global total. Only in Africa and North and Central America, and to a much lesser extent, Oceania and South America, were there more plantation forests established for this function.

The global area of planted forests established for protective functions has gradually increased over 1990-2005 (Table 18). The annual change rate has also been increasing at 1.4 percent between 1990 and 2000 and 1.9 percent between 2000 and 2005. The proportion of planted forests with protective functions is roughly 24 percent.

By far the largest area of planted forests established for both productive and protective functions – for all three reporting periods – is in Asia, which accounted for 69 percent of the total of protective functions in 2005 (and 42 percent of the productive function).

Species composition

Information from the sampled countries was used to estimate the main species for protective purposes (Table 19). Only 16 countries (Algeria, China, the Czech Republic, India, Japan, Latvia, Lithuania, Myanmar, the Netherlands, New Zealand, the Philippines, Poland, Slovakia, Sudan, Ukraine and Viet Nam) reported information for productive purposes.

TABLE 18
Planted forests with protective function (1 000 ha)

Region	Total planted forests protective				
	Area			Change (%)	
	1990	2000	2005	1990-2000	2000-2005
Africa	2 577	2 787	3 000	0.8	1.5
Asia	35 943	40 792	45 812	1.3	2.3
Europe	13 806	15 510	16 106	1.2	0.8
North & Central America	187	1 227	1 190	20.7	-0.6
Oceania	1	14	32	39.4	18.1
South America	39	54	57	3.4	1.1
World	**52 553**	**60 384**	**66 197**	**1.4**	**1.9**

TABLE 19
Main species established for protective purposes in plantation forests and planted semi-natural forests

Region/subregion No. countries in sample	Plantation Forest		Planted semi-natural forests	
	Species	%	Species	%
E. & S. Africa				
N. Africa	Acacia Senegal	30	Pinus halepensis	20
(1)	Acacia seyal	20	Acacia senegal	14
	Acacia nilotica	10	Acacia seyal	12
	Eucalyptus spp.	10	Acacia mellifera	12
	Acacia mellifera	7		
E. Asia (1)	Cryptomeria japonica	35	Populus spp.	28
	Chamaecyparis obtusa	20	Unspecified	19
	Larix kaempheri	8	Pinus massoniana	17
	Populus spp.	7	Cunninghamia lanceolata	9
S. & S.E. Asia	Unspecified	51		
	Pinus spp	7		
W. & C. Asia			Unspecified	78
Oceania	Pinus radiata	95		
Europe	Robinia pseudoacacia	57	Pinus sylvestris	36
	Pinus sylvestris	8	Larix decidua	21
	Populus spp	8	Picea abies	10
			Quercus robur	8
N. America				
S. America				

On the whole the species used for protective purposes in both the plantation forests and the planted semi-natural forests appear (from the sample) to be indigenous species, with some exceptions such as the *Eucalyptus* spp. in Northern Africa and *Pinus radiata* in Oceania.

TABLE 20
Growth parameters by region/subregion for selected species, protective function

Species	Subregion	Cat[a]	MAI m^3/ha/year		Rotation years		Harvest volume[b] m^3/ha	
			min	max	min	max	min	max
Acacia nilotica	N. Africa	P	13	21	15	40	87	100
		S	12	15	15	40	50	75
	S. & S.E. Asia	P	3	4	20	25	-	-
		S	3	4	20	25	-	-
Acacia senegal	N. Africa	P	1	3	25	35	30	40
		S	1	2	25	35	28	45
Acacia seyal	N. Africa	P	2	4	25	50	55	75

		S	2	3	25	50	50	85
Chamaecyparis obtusa	E. Asia	P	–	–	40	55	–	–
Cryptomeria japonica	E. Asia	P	–	–	30	60	–	–
Cunninhamia lanceolata	E. Asia	P	2	8	20	30	30	240
		S	2	8	20	30	30	240
Eucalyptus spp.	N. Africa[b]	P	10	14	10	30	400	–
		S	6	8	40	100	10	15
Fagus sylvatica	Europe	S	3.2–6.0	4.9–14.0	81–140	121–200	260	590
Larix decidua	Europe	S	6	7	120	160	–	–
Picea abies	Europe	P	–	–	81	–	–	–
		S	3.0–7.8	4.5–5.7	80–120	130–160	250	800
Pinus halapensis	N. Africa	S	1	2	50	100	3	5
Pinus massoniana	E. Asia	S	2	7	30	40	45	280
Pinus radiata	Oceania	P	–	–	30	60	–	–
Pinus sylvestris	Europe	P	–	–	111	–	–	–
		S	2–5	5–9	60–120	130–180	–	–
Populus spp. and cultivars	E. Asia	P	2	11	15	20	30	228
		S	2	12	15	20	33	246
	Europe	P	8	10	26	41	200	400
		S	8	20	20–41	50	–	–
Quercus robur	Europe	P	–	–	141	–	–	–
		S	2–4.3	2.6–9.0	111–141	161	230	420
Robinia pseuoacacia	Europe	P	2	5	26	41	40	200

[a] Category P = plantation forests, S = planted semi-natural forests. The number of observations contributing was one unless stated otherwise, but multiple observations may not have been supplied for all parameters.
[b] Probably irrigated.

Mean annual increment and rotation length

As described in the chapter on productive function, the sampled countries were asked for information on the top ten species and 'other', on MAI in m^3/ha/year overbark, rotation length in years, and yield at rotation length in m^3/ha overbark. all with minimum, maximum and mean values. Information was provided on all species over 3 percent of the area of the subregion. As with the data on productive function, very few countries provided means, thus Table 20 and the analysis quote only the range of minimum and maximum values. Entries such as 'unspecified' were not included.

A total of 15 countries responded:

- Northern Africa – Algeria and Sudan;
- East Asia – China and Japan;
- South and Southeastern Asia – India, the Philippines and Viet Nam;
- Europe – the Czech Republic, Latvia, Lithuania, the Netherlands, Poland, Slovakia, Ukraine;
- Oceania – New Zealand.

There was no representation from Eastern and Southern Africa, Western and Central Asia or North or South America.

Table 20 shows growth and yield of the main species for the minimum and maximum values of the three parameters for the two categories of plantation and planted semi-natural forests.

Several countries, logically, gave the MAI or the final yield as zero for planted forests with protective function, since it was apparently assumed that these areas were no longer growing (except to replace dead trees), and although a rotation might be quoted, there was no final yield in terms of roundwood. However, this may complicate modelling for carbon sequestration, for example, since while there may be no net increment, the standing trees obviously represent carbon that has been sequestered.

Age class distribution

Fourteen countries provided information on the age class distribution of planted forests with protective functions, with seven of the responses coming from Europe. Southern Africa, Western and Central Asia, North America and South America were not represented.

The global distribution of the age classes of planted forests with protective function is closer to a 'normal' distribution, with areas distributed evenly between age classes – at least up to the age of 50 years. Most of the planted forests with protective function, according to the sample, have been established in planted semi-natural forests, except for the two age classes 30-39 and 40-49. But the figures are dominated by the returns from East Asia and from South and Southeastern Asia, so the global totals of the sample may not represent the true situation.

It is difficult to analyse the figures by region or subregion due to the low response. Representation in the sample was best for Asia, reflecting the derived subregional totals of Table 21, where Asia accounted for nearly three-quarters of the total in 2005. But the sample did not fully reflect the breakdown into plantation forests and planted semi-natural forests.

The response to the questionnaire (FP/35a) shows that East Asia was the subregion with the largest area of protective planted forests (44 percent of the global total in 2005), followed by South and Southeast Asia (24 percent). In the former, Japan dominates the plantation forests category and China the planted semi-natural forests. Most of the area in Japan falls in the age classes between 20 and 50, possibly reflecting post-war replanting of degraded land, and the main species are *Cryptomeria japonica* and *Chamaecyparis obtusa*. China's area distribution to age classes is more or less equal up to the age of 20 years, with *Populus* spp., *Cunninghamia lanceolata* and *Pinus massoniana*.

TABLE 21
Protective function, regional age class distribution (all species) as percentage of global productive total (%)

Region/ subregion	Cat[a]	Age classes (years)									
		0-5	5-9	10-19	20-29	30-39	40-49	50-69	70-89	90-99	100 +
N. Africa	P	<1	<1	<1	<1	<1	<1	ns	ns	ns	0
	S	<1	<1	<1	<1	<1	<1	0	0	0	0
E. Asia	P	1.8	2.1	4.9	6.8	9.0	6.8	2.4	0.8	ns	ns
	S	5.8	5.7	11.1	6.9	2.6	3.1	2.0	0.6	ns	ns
S. & S.E. Asia	P	1.6	0.9	0.6	0.3	ns	ns	0	0	0	0
	S	1.7	1.3	1.9	0.4	0.4	0.5	0	0	0	0
Asia	P	3.5	2.9	5.6	7.1	9.1	6.9	2.4	0.8	ns	ns
	S	7.5	7.0	13.0	7.3	3.0	3.6	2.0	0.6	ns	ns

Europe	P	ns	ns	ns	ns	0.4	ns	ns	ns	ns	ns
	S	0.4	0.7	0.9	1.6	2.1	1.8	2.7	1.6	0.6	0.9
Oceania	P	ns	ns	ns	0	0	0	0	0	0	0
Overall	P	3.8	3.2	5.9	7.7	9.8	7.2	2.4	0.8	ns	ns
Overall	S	8.1	7.9	14.1	9.2	5.3	5.4	4.7	2.3	0.7	1.0
Global		**11.9**	**11.2**	**20.1**	**16.9**	**15.1**	**12.7**	**7.1**	**3.1**	**0.9**	**1.1**

[a] Category: P = plantation forests and S = planted semi-natural forests.

In South and Southeast Asia, India and Viet Nam provided data for plantation forests, where the main species are *Pinus roxburghii* (India) and *Pinus* spp., *Acacia* spp and *Rhizophora* spp. (Viet Nam), and younger age classes are predominant. Only India provided data for planted semi-natural forests, where most of the area is less than 20 years and is largely composed of *Acacia nilotica* and *Dalbergia sissoo*.

Europe had 20 percent of the 2005 total of protective planted forests, with slightly more in the planted semi-natural forests than plantation forests. The main species of the plantation forests is *Robinia pseudoacacia*, but the only return for this species was by Ukraine, which certainly does not reflect the true situation. In semi-natural forests, *Pinus sylvestris* was represented by seven returns (the largest area being reported by Poland) showing that most of the area is in the age classes between 20 and 70. *Quercus robur* (four returns) showed similar dominance of middle age classes.

The other regions have little reported protective planted forests, either in this sample or in the overall figures.

Ownership

The definitions of ownership used in the questionnaire to the sampled countries were the same as for productive function.

A total of 19 countries out of 36 responded to the question on ownership of planted forests with protected function:

- N. Africa – Algeria, the Sudan;
- E. Asia – China, Japan;
- N. & S.E.Asia – India, Myanmar, the Philippines, Thailand, Viet Nam;
- W. & C. Asia – Turkey;
- Europe – Bulgaria, the Czech Republic, France, Lithuania, Poland, Slovakia, Ukraine, the United Kingdom;
- Oceania – New Zealand.

The response on protective functions was much less than on productive, although all the subregions with important areas of planted forests with protective functions were represented.

It appears that planted forests with protective functions are mainly owned publicly or roughly three-quarters of the annual total. This proportion now appears to be decreasing, with a recent trend – since 2000 and in East Asia especially – for more area to be established under smallholder ownership (Table 22). Most publicly owned forests were located in Asia, and within Asia mainly in East Asia, due to the influence of the large areas of planted forests with protective function in China and Japan.

Most of the publicly owned forests have been established as semi-natural forests, while corporate ownership with protective functions has mainly been established as plantation forests. The response to the questionnaire shows that the Japanese programmes have been divided almost equally between public, corporate and smallholder ownership in all three reporting years, while China has recently seen a strong trend towards smallholder ownership, although maintaining the publicly-owned area.

Europe was represented largely by the Russian Federation, Poland and Ukraine. The plantation forests programme in all three reporting years was in Russia, while the semi-natural forests programme was in Poland and Ukraine. Most planted forests with protective function are owned publicly, although there is a recent small trend towards smallholder ownership in Poland and Slovakia.

Based on this relatively small sample, it would appear that some 70 percent of planted forests with protective function were still publicly owned in 2005, with the balance in corporate ownership, although there was an upward trend in China and to a much smaller extent in Europe towards smallholder ownership. This trend is very much less here than it is in planted forests with productive functions.

End use

Only 13 of the 36 sampled countries responded to this question:

- Algeria and the Sudan responded in Northern Africa;
- China and Japan responded in East Asia;
- India and Viet Nam responded in South and Southeast Asia, and Turkey in Western and Central Asia;
- Bulgaria, the Czech Republic, France, Poland and Ukraine responded in Europe.

There was no response from Southern Africa nor from any country in Oceania or North or South America.

Information was requested from the sampled countries on the area of protective planted forests. They were defined as areas devoted to the provision of the following end uses.

- protective services, for soil, water, biological diversity – including the harvesting of non-wood forest products on a small scale;
- social and cultural services, such as recreation, religion, amenity etc;
- wood for fuel on a small scale, for farmers, villages or other rural communities; and
- unspecified services.

The sample is small, so interpretation should be carried out with caution. Nevertheless, the highest proportion of protective services end use in all three years and in all three regions represented is notable (Table 23). The relatively low proportion allocated to an 'unspecified' end use is also remarkable, especially when compared with a proportion of unspecified end use more than double this in the productive function.

TABLE 22
Ownership of protective planted forests (1 000 ha)

Subregion	Public			Corporate			Smallholder			Other		
	1990	2000	2005	1990	2000	2005	1990	2000	2005	1990	2000	2005
Northern Africa												
P	1 307	1 276	1 335	3	3	3	55	57	65	12	13	15
S	466	473	506	0	0	0	24	25	27	5	5	5
Total	1 773	1 749	1 841	3	3	3	79	82	92	17	18	20

East Asia												
P	4 935	5 332	5 375	3 343	3 358	3 354	3 343	3 800	4 430	0	0	0
S	8 345	8 241	8 904	0	0	0	0	2 125	5 481	0	0	0
Total	13 281	13 573	14 279	3 343	3 358	3 354	3 343	5 925	9 911	0	0	0
South and Southeast Asia												
P	3 199	3 624	4 038	94	138	169	404	429	435	46	102	5
S	9 297	10 225	10 185	245	269	268	245	269	268	0	0	0
Total	12 496	13 849	14 222	339	407	437	649	698	703	46	102	5
Western and Central Asia												
P	380	541	621	0	0	0	0	0	0	0	0	0
S	146	203	232	0	0	0	0	0	0	0	0	0
Total	526	744	853	0	0	0	0	0	0	0	0	0
Europe												
P	3 676	4 961	5 394	3	4	5	5	7	7	0	0	0
S	4 794	5 097	4 668	13	86	95	62	263	295	0	4	9
Total	8 470	10 058	10 062	16	90	100	67	270	302	0	4	9
Oceania												
P	0	0	0	0	0	0	0	2	20	0	0	0
Total protective												
P	13 498	15 734	16 763	3 443	3 503	3 531	3 807	4 295	4 957	58	115	20
S	23 048	24 240	24 495	258	355	363	330	2 683	6 071	5	10	14
Overall	**36 546**	**39 975**	**41 258**	**3 701**	**3 858**	**3 894**	**4 137**	**6 978**	**11 028**	**63**	**125**	**34**

P = plantation forests; S = planted semi-natural forests.

China reported a higher proportion than Japan of protective function allocated to protective services, while Japan reported a much higher (and consistent) proportion for recreation services. In fact, Japan reported the highest proportion devoted to recreation of any country, followed by Poland.

The small proportion reported by any country for small-scale fuelwood end use is surprising. Perhaps some of the sampled countries had reported it under the productive function.

TABLE 23
Planted forests, non-industrial and small-scale end use (1 000 ha)

End use services	Region/subregion	1990	2000	2005
Protective	N. Africa	637	653	1 576
	E. Asia	14 399	17 102	21 835
	S. & S.E. Asia	6 889	8 345	8 414
	W. & C. Asia	228	379	528
	Asia	21 515	25 825	30 777
	Europe	2 150	3 441	3 759
Social & cultural	N. Africa	66	57	155
	E. Asia	5 569	5 755	5 709
	S. & S.E. Asia	474	700	992

	W. & C. Asia	152	162	93
	Asia	6 196	6 617	6 795
	Europe	2 544	1 967	1 733
Fuelwood (small-scale)	N. Africa	194	143	107
	S. & S.E. Asia	1 681	2 058	2 366
	Asia	1 681	2 058	2 366
Unspecified	N. Africa	125	100	117
	S. & S.E. Asia	2 362	2 218	2 024
	W. & C. Asia	146	203	232
	Asia	2 507	2 421	2 257
	Europe	214	205	192
Total non-industrial		**37 830**	**43 487**	**49 834**

Conclusions

Global trends

This study estimates that in 2005 there were over 271 million hectares of planted forests in the world, divided almost equally between plantation forests and planted semi-natural forests. The rate of increase, which was 1.6 percent yearly between 1990 and 2000, rose slightly between 2000 and 2005 to 1.9 percent.

Most planted forests were in Asia (49 percent in 2005), where there was also the fastest regional rate of area increase of 2.8 percent yearly between 2000 and 2005. Europe, the next largest area, had 29 percent of the 2005 total planted forests total area, but the increase was only 0.7 percent yearly between 2000 and 2005. The other regions account for the remainder of the estimated area: Africa 5.5 percent; Oceania, 1.4 percent; North and Central America 10.7 percent; South America 4.5 percent – with growth rates of 0.6 percent, 2.1 percent, 2.2 percent and 1.3 percent respectively.

The area of plantation forests has shown an upward trend since 1990, and has now overtaken the planted semi-natural forests. The rate of global increase of plantation forests slowed slightly in 2000-2005, to 1.9 percent yearly, from 2.1 percent yearly in the period 1990-2000, while the rate of growth in the planted semi-natural forests increased to 1.2 percent yearly from 0.7 percent yearly in the same two periods. In developing global and regional policies for planted forests, the continuing importance and the particular character of planted semi-natural forests must not be neglected in comparison with plantation forests.

It was estimated that about three-quarters of planted forests have been established for productive functions since 1990, and the balance for protective functions (Table 24).

TABLE 24
Global area of planted forests by function (1 000 ha)

Function	Area			% per year	
	1990	2000	2005	1990–2000	2000–2005
Productive	156 889	186 173	205 149	1.7	1.9
Protective	52 552	60 385	66 196	1.4	1.9
World	**209 441**	**246 558**	**271 346**	**1.6**	**1.9**

Planted forests for production

The trend in the establishment of planted forests for productive functions is increasing slightly, from 1.7 percent yearly in 1990-2000, to 1.9 percent yearly in 2000-2005. Forty-two percent of the world's planted forests with productive function are in Asia, where the growth rate was 3.1 percent yearly in 2000-2005; 31 percent are in Europe, but the rate of growth has slowed considerably in the most recent period to 0.7 percent yearly. The rapid growth of other regions in establishing planted forests with productive function should be noted as well: 2.0 percent yearly in Oceania, 1.3 percent yearly in South America and 2.3 percent yearly in North and Central America, all in the most recent period. While the planted semi-natural forests component was still larger in Asia and Europe, the global area of plantation forests with productive function is now just larger than the planted semi-natural forests, and the trend (even in Asia) is clearly towards plantation forests. Policy-making and planning – as well as the

allocation of funds for protection (fire, pests and disease[6]), research and maintenance – must take into account the rapid increase in planted forests in general and the move towards plantation forests.

A relatively restricted range of species are being established for productive purposes in both tropical/subtropical and temperate regions. Several subregions in the tropical/subtropical regions plant the same species, and there would appear to be scope for improved collaborative work on species selection and genetic and silvicultural improvement of *Acacia mangium*, *Acacia nilotica*, *Eucalyptus* spp. (especially *Eucalyptus grandis* and *Eucalyptus globulus*), *Tectona grandis*, *Populus* spp. (and hybrids) and *Pinus radiata*. Some species that formerly provided non-forest products, such as *Hevea brasiliensis (*rubber), are being used as wood or fibre for industrial products, but they rarely featured in the priority species identified in response to the questionnaire. Rubber, in fact, has been established in large areas over the past 15 years in some countries of South and Southeast Asia, and it is another species suitable for collaborative work. The definition of planted semi-natural forests is that they should be established predominantly with native species and this is reflected in the returns, while exotics have been established in plantation forests.

Information was provided on the growth rates of the main species established for productive purposes. While the growth rates and yields reported were high for most species, especially in the tropics and subtropics, for planning and outlook studies it is suggested that the minimum values (or midpoint of the minimum values where there are more than one) be used as an indicative, reliable minimum estimate. Information on age class distribution showed that global distribution was in the form of a reverse-J curve, with most of the area of planted forests being in the younger age classes, established since the 1980s. There are more of the younger age classes in plantation forests, while in planted semi-natural forests they are proportionally greater over the age of about 40 years, confirming the shift towards the establishment of more plantation forests. This is especially apparent in East Asia, while the trend has not been followed in Europe.

Recent trends in decentralization and devolution by the promotion of privatization (with or without increased participation) have been reflected in the ownership of planted forests with productive function. The area under public ownership in 1990 formed 70 percent of the total area, but by 2000 it had fallen to 54 percent and by 2005 to 50 percent. Corporate ownership (generally large-scale) accounted for 17 percent of the total area in 1990, 19 percent in 2000 and 18 percent in 2005. Smallholder ownership, on the other hand, increased from 12 percent in 1990 to 27 percent in 2000 and to 32 percent in 2005. There are large differences among regions and among countries, but the trend from public to private ownership is clear, especially by smallholders. There are opportunities to encourage this trend through facilitating policies, but planning wood supplies for industry is likely to become more difficult and the danger of smallholders moving to another form of land use that may be more profitable could be great, unless care is taken to consider all sectors in policy-making.

Nearly half of all planted forests with productive function have an end use defined as saw- or veneer-logs, but that proportion has been decreasing since 1990. Since then, the area planted for pulpwood/fibre has increased, with the proportion amounting to nearly one-fifth of the total in 2005. There has also been an increase in the proportion of the global total of non-wood products, possibly due to the inclusion of rubberwood, but there has also been a small increase in the proportion of planted forest area for bioenergy.

The estimates of the area of planted forests and their growth rates highlight their importance not only in a productive function, but also in a protective function in the provision of services. The

[6] A thematic study on forest pests and disease will be published in early 2007.

upward trends in the establishment of plantation forests and planted semi-natural forests for both functions identified in this study point to their even greater role in the future.

Forecasting the impact of planted forests production on industrial wood and fibre supplies will therefore becoming increasingly important for planning and policy-making[7], but there will have to be improvements in the reliability and coverage of data provided by countries. For example, while the response of European countries to the questionnaire was high, it was less so from North America (where only the United States responded) and some subregions such as Central America or Western and Central Africa and Eastern Africa were not covered in the sample at all. Future studies of planted forests must increase coverage of all the major regions and subregions where there are such forests and must take steps to improve the quality of the data through institution building and training.

Planted forests for protection

The global area of planted forests established for protective functions has gradually increased, between 1990 and 2005, to over 66 million hectares at a rate of from 1.4 percent yearly between 1990 and 2000 to 1.9 percent yearly between 2000 and 2005 – the latter being the same as the increase of planted forests established in the same period for productive functions. Slightly more planted semi-natural forests than plantation forests have been established in all three periods.

As with planted forests established for productive functions, the largest area in all three reporting years was in Asia, which accounted for 69 percent of the total of protective functions in 2005 (compared with 42 percent of total productive functions). China and Japan are the major countries establishing planted forests with protective functions.

The response from countries to the questionnaire on protective functions was low, and the returns were dominated by East Asia and South and Southeast Asia, rendering regional or global conclusions less reliable than for productive functions. The species used were more often native species than for productive planted forests, while the global distribution of age classes of planted forests with protective function was closer to a 'normal' distribution, i.e. with areas distributed evenly among age classes – at least up to the age of 50 years. Most of the planted forests with protective function, according the sample, have been established in planted semi-natural forests, except for the two age classes 30-39 and 40-49 years.

From a relatively small sample, it appeared that about 70 percent of planted forests with protective function were still publicly owned in 2005, with the balance under corporate ownership, although there was an upward trend in China and to a much smaller extent in Europe towards smallholder ownership, reflecting the same trend in planted forests with productive function – although very much less.

Most publicly owned planted forests with protective function were located in Asia, and within Asia mainly in East Asia, due to the influence of the large areas in China and Japan. Most have been established in semi-natural forests, while corporate planted forests with protective functions have mainly been established in plantation forests. Europe was represented by returns from the Russian Federation, Poland and Ukraine. The plantation forests programme in all three reporting years was nearly all in Russia, while the planted semi-natural forests programme was in Poland and Ukraine. Most planted forests with protective function are owned publicly, although there is a recent small trend towards smallholder ownership in Poland and Slovakia.

[7] A survey of industrial wood and fibre availability from planted forests will be prepared by FAO in early 2007, based on figures in this study.

The response to the questionnaire on end use was limited; the highest response was on protective end use (the protection of soil, water and biological diversity – including the small-scale harvesting of non-wood forest products) in all three reporting years and in all three regions represented. The relatively low proportion allocated to an 'unspecified' end use is also remarkable, especially when compared with a proportion of unspecified more than double this in the productive function.

China reported a higher proportion than Japan of protective function allocated to protective services, while Japan reported a much higher (and consistent) proportion for recreation services; in fact Japan reported the highest proportion devoted to recreation of any country, followed by Poland.

Impact of planted forests

When considering the impact of planted forests on the world's forest resources and even on the global forestry sector, it appears that:

- The area of planted semi-natural forests has been as large as that of plantation forests, and their environmental impact may possibly have been greater in terms of the conservation of biological diversity, protection of soils and slopes and the provision of shelter.
- The study has distinguished between planted forests established primarily for productive functions and those established mainly for protection, but the impact of productive planted forests may, in fact, be nearly as great on environmental protection, and protective planted forests may provide economic and social benefits, especially to rural people. Achievement of these multiple objectives will depend on management that considers all economic, social and environmental aspects.
- Although the area of planted forests with protective function is smaller than that with productive function, the rate of increase of planted forests with protective function has been larger in both periods (1990-2000 and 2000-2005) than for productive functions. It may be that the impact of protective planted forests on social and economic, as well as environmental benefits is increasingly appreciated by policy-makers and planners.
- Dry zones were relatively unrepresented, except for the Sudan, the Islamic Republic of Iran and parts of China and India. From the response to the questionnaire, it appears that the role of planted forests in providing environmental as well as economic and social benefits is well appreciated. Although the sample was small, it appears that there is a trend towards plantation forest establishment in these zones.
- Planted forests will have a major impact on industrial roundwood supplies in the near future, and especially on supplies of fibre for different types of reconstituted wood. Outlook studies are urgently required to quantify this.
- The impact on markets in the near future of large volumes of certain species and size classes, which have within the past twenty years been widely established for productive purposes, must be considered by planners – and by technologists, who may, for example, have to develop ways of utilizing large quantities of industrial roundwood of a different size and quality from past harvesting and utilization practices.
- All regions have significant areas of plantation forests established for productive functions, which now appear to be increasing slightly faster than planted semi-natural forests.

- Certain countries will greatly affect the global impact of planted forests due to the scale of their plantation forests resources: China (31 million hectares), the Russian Federation (17 million hectares) and the United States (17 million hectares).
- The impact on the quantity and quality of wood supply as well as on the provision of environmental and social services as a result of the rapid move to private ownership of planted forests, especially by smallholders, should be considerable. Studies are required, however, to quantify outputs and returns and to recommend policy-related measures to ensure appropriate enabling policies, technical support systems and monitoring of compliance.
- Some countries have established plantation forests primarily for protective functions; they include Japan (100 percent), Mexico (93 percent) and India (67 percent).

Annexes

Annex 1: Main tables

Table 1 – Plantation forest area: productive and protective – source FRA 2005

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Africa														
Eastern and Southern Africa														
Country/area														
Angola	140	134	131	-1	-0.4	-1	-0.4	0	0	0	-	-	-	-
Botswana	-	-	-	-	-	-	-	0	0	0	-	-	-	-
British Indian Ocean Territory	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Comoros	2	2	1	0	0.0	0	-6.2	0	0	0	-	-	-	-
Kenya	238	212	202	-3	-1.2	-2	-1.0	0	0	0	-	-	-	-
Lesotho	4	6	7	0	3.8	0	2.9	0	0	0	-	-	-	-
Madagascar	234	234	234	0	0.0	0	0.0	59	59	59	0	0.0	0	0.0
Malawi	132	180	204	5	3.2	5	2.5	0	0	0	-	-	-	-
Mauritius	12	11	11	0	-0.9	0	0.0	4	4	4	0	0.0	0	0.0
Mayotte	0	0	0	0	0.0	0	0.0	0	0	0	-	-	-	-
Mozambique	38	38	38	0	0.0	0	0.0	0	0	0	-	-	-	-
Namibia	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Réunion	3	3	3	0	0.0	0	-0.8	3	3	3	0	0.0	0	-0.8
Seychelles	5	5	5	0	0.0	0	0.0	0	0	0	-	-	-	-
South Africa	1,204	1,352	1,426	15	1.2	15	1.1	0	0	0	-	-	-	-
Swaziland	135	121	114	-1	-1.1	-1	-1.2	0	0	0	-	-	-	-
Uganda	33	35	36	0	0.6	0	0.6	0	0	0	-	-	-	-
United Republic of Tanzania	150	150	150	0	0.0	0	0.0	0	0	0	-	-	-	-
Zambia	60	75	75	2	2.3	0	0.0	0	0	0	-	-	-	-
Zimbabwe	154	154	154	0	0.0	0	0.0	0	0	0	-	-	-	-
Total Eastern and Southern Africa (20 countries)	**2,544**	**2,712**	**2,792**	**17**	**0.6**	**16**	**0.6**	**66**	**66**	**66**	**0**	**0.0**	**0**	**0.0**

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (1 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	1990-2000 %	2000-2005 1,000 ha/year	2000-2005 %	1990	2000	2005	1990-2000 1,000 ha/year	1990-2000 %	2000-2005 1,000 ha/year	2000-2005 %
Northern Africa														
Country/area														
Algeria	6	8	12	0	2.9	1	8.4	614	644	742	3	0.5	20	2.9
Burkina Faso	33	58	71	3	5.8	3	4.1	0	5	5	1	-	0	0.0
Chad	-	-	-	-	-	-	-	11	14	15	0	2.5	0	2.1
Djibouti	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Egypt	-	0	1	0	-	0	26.6	44	59	66	1	2.9	1	2.3
Eritrea	5	11	14	1	8.2	1	4.8	5	11	14	1	8.2	1	4.8
Ethiopia	491	491	491	0	0.0	0	0.0	0	0	0	-	-	-	-
Libyan Arab Jamahiriya	-	-	-	-	-	-	-	217	217	217	0	0.0	0	0.0
Mali	-	60	-	6	-	-	-100.0	0	0	0	-	-	-	-
Mauritania	-	-	-	-	-	-	-	0	10	0	1	-	-	-100.0
Morocco	478	523	563	5	0.9	8	1.5	0	0	0	-	-	-	-
Niger	-	-	-	-	-	-	-	0	73	110	7	-	8	8.7
Somalia	3	3	3	0	0.0	0	0.0	0	0	0	-	-	-	-
Sudan	5,347	4,934	4,728	-41	-0.8	-41	-0.8	764	705	675	-6	-0.8	-6	-0.8
Tunisia	41	129	150	9	12.1	4	3.1	185	294	348	11	4.7	11	3.4
Western Sahara	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Total Northern Africa (16 countries)	**6,404**	**6,218**	**6,033**	**-19**	**-0.3**	**-37**	**-0.6**	**1840**	**2031**	**2192**	**19**	**1.0**	**32**	**1.5**
Western and Central Africa														
Country/area														
Benin	98	109	114	1	1.1	1	0.9	0	0	0	-	-	-	-
Burundi	-	86	86	9	-	0	0.0	0	0	0	-	-	-	-
Cameroon	10	9	8	0	-0.9	0	-2.3	78	71	63	-1	-0.9	-2	-2.3
Cape Verde	46	66	67	2	3.6	0	0.4	12	16	17	0	3.6	0	0.4
Central African Republic	2	4	5	0	8.9	0	4.6	0	0	0	-	-	-	-

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (2 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Congo	51	51	51	0	0.0	0	0.0	0	0	0	-	-	-	-
Côte d'Ivoire	154	261	337	11	5.4	15	5.2	0	0	0	-	-	-	-
Democratic Republic of the Congo	70	68	67	0	-0.4	0	-0.2	30	29	29	0	-0.4	0	-0.2
Equatorial Guinea	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Gabon	36	36	36	0	0.0	0	0.0	0	0	0	-	-	-	-
Gambia	0	0	0	0	0.0	0	0.0	0	0	0	-	-	-	-
Ghana	50	60	160	1	1.8	20	21.7	0	0	0	-	-	-	-
Guinea	15	20	30	1	2.9	2	8.4	2	2	3	0	2.1	0	1.6
Guinea-Bissau	0	0	1	0	5.8	0	7.4	0	0	0	0	7.2	0	14.9
Liberia	8	8	8	0	0.0	0	0.0	0	0	0	-	-	-	-
Nigeria	251	316	349	7	2.3	7	2.0	0	0	0	-	-	-	-
Rwanda	217	248	367	3	1.3	24	8.2	31	35	52	0	1.2	3	8.2
Saint Helena	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Sao Tome and Principe	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Senegal	185	280	332	10	4.2	10	3.5	20	26	33	1	2.7	1	4.9
Sierra Leone	2	3	3	0	2.7	0	2.9	0	0	0	-	-	-	-
Togo	19	27	30	1	3.6	1	2.1	5	7	8	0	3.4	0	2.7
Total Western and Central Africa (22 countries)	**1,215**	**1,651**	**2,051**	**44**	**3.1**	**80**	**4.4**	**177**	**187**	**204**	**1**	**0.5**	**3**	**1.8**
Total Africa (58 Countries)	**10,163**	**10581**	**10,876**	**42**	**0.4**	**59**	**0.6**	**2083**	**2283**	**2462**	**20**	**0.9**	**36**	**1.5**
Asia														
East Asia														
Country/area														
China	17,131	21,765	28,530	463	2.4	1,353	5.6	1335	2159	2839	82	4.9	136	5.6
Democratic People's Republic of Korea	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Japan	-	-	-	-	-	-	-	10287	10331	10321	4	0.0	-2	0.0
Mongolia	30	75	112	5	9.6	7	8.4	0	0	0	-	-	-	-

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (3 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Republic of Korea	748	1,188	1,364	44	4.7	35	2.8	0	0	0	-	-	-	-
Total East Asia (5 countries)	**17,909**	**23,028**	**30,006**	**512**	**2.5**	**1,396**	**5.4**	**11622**	**12490**	**13160**	**87**	**0.7**	**134**	**1.1**
South and Southeast Asia														
Country/area														
Bangladesh	173	195	195	2	1.2	0	0.0	66	81	84	2	2.1	1	0.7
Bhutan	1	1	2	0	0.0	0	14.9	0	0	0	-	-	-	-
Brunei Darussalam	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Cambodia	67	72	59	1	0.7	-3	-3.9	0	0	0	-	-	-	-
India	637	915	1,053	28	3.7	28	2.8	1317	1890	2173	57	3.7	57	2.8
Indonesia	2,209	3,002	3,399	79	3.1	79	2.5	0	0	0	-	-	-	-
Lao People's Democratic Republic	3	98	223	10	41.7	25	17.9	1	1	1	0	0.0	0	0.0
Malaysia	1,956	1,659	1,573	-30	-1.6	-17	-1.1	0	0	0	-	-	-	-
Maldives	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Myanmar	323	571	696	25	5.9	25	4.1	71	125	153	5	5.8	6	4.1
Nepal	40	42	43	0	0.5	0	0.5	9	10	10	0	1.1	0	0.0
Pakistan	234	296	318	6	2.4	4	1.4	0	0	0	-	-	-	-
Philippines	389	321	304	-7	-1.9	-3	-1.1	1391	531	316	-86	-9.2	-43	-9.9
Singapore	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Sri Lanka	221	198	171	-2	-1.1	-5	-2.8	21	23	24	0	0.9	0	0.7
Thailand	1,979	1,996	1,997	2	0.1	0	0.0	661	1081	1102	42	5.0	4	0.4
Timor-Leste	-	-	-	-	-	-	-	29	43	43	1	4.0	0	0.0
Viet Nam	664	1,384	1,792	72	7.6	82	5.3	303	666	903	36	8.2	47	6.3
Total South and Southeast Asia (18 countries)	**8,896**	**10,750**	**11,825**	**185**	**1.9**	**215**	**1.9**	**3869**	**4451**	**4809**	**58**	**1.4**	**71**	**1.6**
Western and Central Asia														
Country/area														
Armenia	-	-	-	-	-	-	-	14	11	10	0	-2.4	0	-1.9

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (4 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Azerbaijan	-	-	-	-	-	-	-	20	20	20	0	0.0	0	0.0
Bahrain	-	-	-	-	-	-	-	0	0	0	0	5.3	0	4.0
Cyprus	-	-	-	-	-	-	-	3	3	5	0	0.0	0	10.8
Georgia	-	-	-	-	-	-	-	54	60	61	1	1.1	0	0.2
Iran (Islamic Republic of)	616	616	616	0	0.0	0	0.0	0	0	0	-	-	-	-
Iraq	-	-	-	-	-	-	-	15	15	13	0	0.0	0	-2.8
Israel	-	-	-	-	-	-	-	84	94	101	1	1.1	1	1.4
Jordan	-	-	-	-	-	-	-	40	40	40	0	0.0	0	0.0
Kazakhstan	-	-	-	-	-	-	-	1034	1056	909	2	0.2	-29	-3.0
Kuwait	-	-	-	-	-	-	-	3	5	6	0	3.5	0	2.7
Kyrgyzstan	19	22	24	0	1.5	0	1.4	26	37	42	1	3.5	1	2.7
Lebanon	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Oman	-	-	-	-	-	-	-	2	2	2	0	0.0	0	0.0
Palestine, Occupied Territories	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Qatar	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Saudi Arabia	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Syrian Arab Republic	-	-	-	-	-	-	-	175	234	264	6	3.0	6	2.4
Tajikistan	22	22	22	0	0.0	0	0.0	54	44	44	-1	-2.0	0	0.0
Turkey	1,459	1,763	1,916	30	1.9	31	1.7	380	541	621	16	3.6	16	2.8
Turkmenistan	-	-	-	-	-	-	-	0	0	0	-	-	-	-
United Arab Emirates	-	-	-	-	-	-	-	245	310	312	7	2.4	0	0.1
Uzbekistan	4	5	5	0	2.3	0	0.0	26	46	56	2	5.9	2	4.0
Yemen	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Total Western and Central Asia (24 countries)	**2,120**	**2,428**	**2,583**	**31**	**1.4**	**31**	**1.2**	**2175**	**2518**	**2505**	**34**	**1.5**	**-3**	**-0.1**
Total Asia (47 Countries)	**28,925**	**36206**	**44,414**	**728**	**2.3**	**1,642**	**4.2**	**17666**	**19459**	**20474**	**179**	**1.0**	**203**	**1.0**
Oceania														

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (5 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Oceania														
Country/area														
American Samoa	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Australia	1,023	1,485	1,766	46	3.8	56	3.5	0	0	0	-	-	-	-
Cook Islands	-	-	-	-	-	-	-	1	1	1	0	8.2	0	0.0
Fiji	80	101	101	2	2.4	0	0.0	0	0	0	-	-	-	-
French Polynesia	10	10	10	0	0.0	0	0.0	0	0	0	-	-	-	-
Guam	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Kiribati	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Marshall Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Micronesia (Federated States of)	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Nauru	-	-	-	-	-	-	-	0	0	0	-	-	-	-
New Caledonia	10	10	10	0	0.0	0	0.0	0	0	0	-	-	-	-
New Zealand	1,261	1,767	1,832	51	3.4	13	0.7	0	2	20	0	-	4	58.5
Niue	0	0	0	0	40.0	0	0.0	0	0	0	-	-	-	-
Northern Mariana Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Palau	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Papua New Guinea	63	82	92	2	2.8	2	2.3	0	0	0	-	-	-	-
Pitcairn	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Samoa	-	21	21	2	-	0	0.0	0	11	11	1	-	0	0.0
Solomon Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Tokelau	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Tonga	0	0	0	0	0.0	0	0.0	0	0	0	-	-	-	-
Tuvalu	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Vanuatu	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Wallis and Futuna Islands	0	1	1	0	9.6	0	1.2	0	0	0	-	-	-	-

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (6 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	1990-2000 %	2000-2005 1,000 ha/year	2000-2005 %	1990	2000	2005	1990-2000 1,000 ha/year	1990-2000 %	2000-2005 1,000 ha/year	2000-2005 %
Total Oceania (24 countries)	**2,447**	**3,477**	**3,833**	**103**	**3.6**	**71**	**2.0**	**1**	**14**	**32**	**1**	**39.4**	**4**	**18.1**
Total Oceania (24 Countries)	**2,447**	**3477**	**3,833**	**103**	**3.6**	**71**	**2.0**	**1**	**14**	**32**	**1**	**39.4**	**4**	**18.1**
Europe														
Europe														
Country/area														
Albania	11	5	3	-1	-8.0	0	-11.2	93	92	86	0	-0.1	-1	-1.4
Andorra	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Austria	988	1,003	-	2	0.2	-	-100.0	0	0	0	-	-	-	-
Belarus	2	2	2	0	1.6	0	0.0	0	0	0	-	-	-	-
Belgium	303	284	275	-2	-0.7	-2	-0.6	0	0	0	-	-	-	-
Bosnia and Herzegovina	-	142	142	14	-	0	0.0	0	0	0	-	-	-	-
Bulgaria	22	31	35	1	3.4	1	2.7	19	17	16	0	-0.9	0	-1.0
Channel Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Croatia	56	60	61	0	0.7	0	0.3	0	0	0	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Denmark	257	271	281	1	0.5	2	0.7	34	34	34	0	0.0	0	0.0
Estonia	-	1	1	0	-	0	0.0	0	0	0	-	-	-	-
Faeroe Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Finland	-	-	-	-	-	-	-	0	0	0	-	-	-	-
France	1,842	1,936	1,968	9	0.5	6	0.3	0	0	0	-	-	-	-
Germany	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Gibraltar	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Greece	-	-	-	-	-	-	-	118	129	134	1	0.9	1	0.8
Holy See	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Hungary	39	439	455	40	27.3	3	0.7	392	89	91	-30	-13.8	0	0.5
Iceland	4	12	17	1	11.4	1	7.6	4	10	12	1	10.2	0	4.1

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (7 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Ireland	350	519	579	17	4.0	12	2.2	0	0	0	-	-	-	-
Isle of Man	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Italy	289	144	146	-15	-6.7	0	0.3	0	0	0	-	-	-	-
Latvia	-	0	1	0	-	0	90.1	0	0	0	-	-	-	-
Liechtenstein	0	0	0	0	4.1	0	0.0	0	0	0	-	-	-	-
Lithuania	84	95	100	1	1.2	1	1.0	40	42	41	0	0.5	0	-0.5
Luxembourg	28	28	28	0	0.0	0	0.0	0	0	0	-	-	-	-
Malta	-	-	-	-	-	-	-	0	0	0	0	0.0	0	0.0
Monaco	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Netherlands	4	4	4	0	0.0	0	0.0	0	0	0	-	-	-	-
Norway	222	255	262	3	1.4	1	0.5	0	0	0	-	-	-	-
Poland	32	32	32	0	0.0	0	0.0	0	0	0	-	-	-	-
Portugal	383	867	1,067	48	8.5	40	4.2	167	167	167	0	0.0	0	0.0
Republic of Moldova	1	1	1	0	0.0	0	0.0	0	0	0	-	-	-	-
Romania	92	92	92	0	0.0	0	0.0	57	57	57	0	0.0	0	0.0
Russian Federation	9,244	10,712	11,888	147	1.5	235	2.1	3407	4648	5075	124	3.2	85	1.8
San Marino	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Serbia and Montenegro	39	39	39	0	0.0	0	0.0	0	0	0	-	-	-	-
Slovakia	21	18	17	0	-1.5	0	-1.1	2	2	2	0	0.0	0	0.0
Slovenia	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Spain	1,126	1,356	1,471	23	1.9	23	1.6	0	0	0	-	-	-	-
Sweden	523	619	667	10	1.7	10	1.5	0	0	0	-	-	-	-
Switzerland	3	4	4	0	2.9	0	0.0	0	0	0	-	-	-	-
The former Yugoslav Republic of Macedonia	30	30	30	0	0.0	0	0.0	0	0	0	-	-	-	-
Ukraine	84	82	81	0	-0.2	0	-0.2	241	285	307	4	1.7	4	1.5
United Kingdom	1,862	1,914	1,902	5	0.3	-2	-0.1	15	20	22	1	2.9	0	1.9

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (8 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Total Europe (47 countries)	**17,942**	**20,997**	**21,651**	**306**	**1.6**	**131**	**0.6**	**4588**	**5591**	**6044**	**100**	**2.0**	**90**	**1.6**
Total Europe (47 Countries)	**17,942**	**20997**	**21,651**	**306**	**1.6**	**131**	**0.6**	**4588**	**5591**	**6044**	**100**	**2.0**	**90**	**1.6**
North and Central America														
North America														
Country/area														
Canada	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Greenland	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Mexico	-	11	72	1	-	12	45.6	0	1047	986	105	-	-12	-1.2
Saint Pierre and Miquelon	-	-	-	-	-	-	-	0	0	0	-	-	-	-
United States of America	10,305	16,274	17,061	597	4.7	157	0.9	0	0	0	-	-	-	-
Total North America (5 countries)	**10,305**	**16,285**	**17,133**	**598**	**4.7**	**170**	**1.0**	**0**	**1047**	**986**	**105**	**-**	**-12**	**-1.2**
Central America														
Country/area														
Belize	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Costa Rica	-	1	1	0	-	0	0.0	0	2	3	0	-	0	8.4
El Salvador	6	6	6	0	0.0	0	0.0	0	0	0	-	-	-	-
Guatemala	32	88	122	6	10.6	7	6.8	0	0	0	-	-	-	-
Honduras	-	-	-	-	-	-	-	31	26	30	-1	-1.7	1	2.9
Nicaragua	4	46	51	4	27.7	1	2.1	0	0	0	-	-	-	-
Panama	9	42	60	3	16.5	4	7.7	1	1	1	0	-6.7	0	14.9
Total Central America (7 countries)	**51**	**183**	**240**	**13**	**13.6**	**12**	**5.6**	**32**	**29**	**34**	**0**	**-1.2**	**1**	**3.6**
Caribbean														
Country/area														
Anguilla	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Antigua and Barbuda	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Aruba	-	-	-	-	-	-	-	0	0	0	-	-	-	-

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (9 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Bahamas	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Barbados	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Bermuda	-	-	-	-	-	-	-	0	0	0	-	-	-	-
British Virgin Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Cayman Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Cuba	198	197	230	0	-0.1	7	3.1	149	145	164	0	-0.3	4	2.5
Dominica	-	0	0	0	-	0	0.0	0	0	0	-	-	-	-
Dominican Republic	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Grenada	0	0	0	0	0.0	0	0.0	0	0	0	-	-	-	-
Guadeloupe	3	1	1	0	-10.4	0	0.0	0	0	0	-	-	-	-
Haiti	12	20	24	1	5.2	1	3.7	0	0	0	-	-	-	-
Jamaica	9	8	8	0	-0.8	0	0.0	6	6	6	0	0.5	0	0.3
Martinique	1	1	1	0	0.0	0	0.0	0	0	0	-	-	-	-
Montserrat	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Netherlands Antilles	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Puerto Rico	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Saint Kitts and Nevis	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Saint Lucia	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Saint Vincent and the Grenadines	0	0	0	0	7.6	0	5.1	0	0	0	-	-	-	-
Trinidad and Tobago	15	15	15	0	0.0	0	0.0	0	0	0	-	-	-	-
Turks and Caicos Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
United States Virgin Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Total Caribbean (25 countries)	**239**	**243**	**280**	**0**	**0.2**	**7**	**2.9**	**155**	**151**	**170**	**0**	**-0.2**	**4**	**2.4**
Total North and Central America (37 Countries)	**10,595**	**16711**	**17,653**	**612**	**4.7**	**189**	**1.1**	**187**	**1227**	**1190**	**104**	**20.7**	**-7**	**-0.6**
South America														

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (10 of 11)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
South America														
Country/area														
Argentina	769	1,078	1,229	31	3.4	30	2.7	0	0	0	-	-	-	-
Bolivia	20	20	20	0	0.0	0	0.0	0	0	0	-	-	-	-
Brazil	5,070	5,279	5,384	21	0.4	21	0.4	0	0	0	-	-	-	-
Chile	1,741	2,354	2,661	61	3.1	61	2.5	0	0	0	-	-	-	-
Colombia	130	241	312	11	6.4	14	5.3	7	13	16	1	7.2	1	4.2
Ecuador	-	162	164	16	-	1	0.3	0	0	0	-	-	-	-
Falkland Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
French Guiana	1	1	1	0	0.0	0	0.0	0	0	0	-	-	-	-
Guyana	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Paraguay	23	36	43	1	4.6	1	3.6	0	0	0	-	-	-	-
Peru	263	715	754	45	10.5	8	1.1	0	0	0	-	-	-	-
South Georgia and the South Sandwich Islands	-	-	-	-	-	-	-	0	0	0	-	-	-	-
Suriname	7	7	7	0	0.0	0	0.0	0	0	0	-	-	-	-
Uruguay	197	655	751	46	12.8	19	2.8	4	14	15	1	13.3	0	1.4
Venezuela (Bolivarian Republic of)	873	836	806	-4	-0.4	-6	-0.7	28	27	26	0	-0.4	0	-0.8
Total South America (15 countries)	**9,094**	**11,383**	**12,132**	**229**	**2.3**	**150**	**1.3**	**39**	**54**	**57**	**2**	**3.4**	**1**	**1.1**
Total South America (15 Countries)	**9,094**	**11383**	**12,132**	**229**	**2.3**	**150**	**1.3**	**39**	**54**	**57**	**2**	**3.4**	**1**	**1.1**
WORLD	**79,165**	**99,356**	**110,560**	**2,019**	**2.3**	**2,241**	**2.2**	**24562**	**28628**	**30259**	**407**	**1.5**	**326**	**1.1**

Annex Table 1 - Plantation Forest area: productive and protective - source FRA 2005 (11 of 11)

Table 2 – Semi-natural forest area – 61 sampled countries

	1990			2000			2005		
	Total FRA	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*
		Components of Total FRA Semi-Natural			*Components of Total FRA Semi-Natural*			*Components of Total FRA Semi-Natural*	
					Area (1,000 ha)				
Africa									
Eastern and Southern Africa									
Country/area									
South Africa	0	0	0	0	0	0	0	0	0
Total Eastern and Southern Africa	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Northern Africa									
Country/area									
Algeria	299	60	239	313	47	266	316	32	284
Sudan	1,528	229	1,298	1,410	169	1,241	1,351	135	1,216
Total Northern Africa	**1,827**	**289**	**1,538**	**1,723**	**216**	**1,507**	**1,667**	**167**	**1,500**
Western and Central Africa									
Country/area									
Cameroon	0	0	0	0	0	0	0	0	0
Democratic Republic of the Congo	0	0	0	0	0	0	0	0	0
Nigeria	0	0	0	0	0	0	0	0	0
Total Western and Central Africa	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Africa	**1,827**	**289**	**1,538**	**1,723**	**216**	**1,507**	**1,667**	**167**	**1,500**
Asia									
East Asia									
Country/area									
China	25,289	0	25,289	30,489	0	30,489	39,957	0	39,957
Japan	0	0	0	0	0	0	0	0	0
Total East Asia	**25,289**	**0**	**25,289**	**30,489**	**0**	**30,489**	**39,957**	**0**	**39,957**

Table 2 - Semi-natural forest area - 61 sampled countries (1 of 5)

	1990			2000			2005		
	Total FRA	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*
		Components of Total FRA Semi-Natural			*Components of Total FRA Semi-Natural*			*Components of Total FRA Semi-Natural*	
					Area (1,000 ha)				
South and Southeast Asia									
Country/area									
India	31,981	3,198	28,783	32,188	3,863	28,325	31,532	4,730	26,802
Indonesia	43,939	43,939	0	38,909	38,909	0	36,394	36,394	0
Malaysia	16,600	16,600	0	16,112	16,112	0	15,497	15,497	0
Myanmar	0	0	0	0	0	0	0	0	0
Pakistan	0	0	0	0	0	0	0	0	0
Philippines	0	0	0	0	0	0	0	0	0
Thailand	0	0	0	0	0	0	0	0	0
Viet Nam	0	0	0	0	0	0	0	0	0
Total South and Southeast Asia	**92,520**	**63,737**	**28,783**	**87,209**	**58,884**	**28,325**	**83,423**	**56,621**	**26,802**
Western and Central Asia									
Country/area									
Georgia	0	0	0	0	0	0	0	0	0
Iran (Islamic Republic of)	228	204	24	228	178	50	228	223	5
Turkey	462	254	208	646	355	291	738	406	332
Total Western and Central Asia	**690**	**458**	**232**	**874**	**533**	**341**	**966**	**629**	**337**
Total Asia	**118,499**	**64,195**	**54,304**	**118,572**	**59,417**	**59,155**	**124,346**	**57,250**	**67,096**
Europe									
Europe									
Country/area									
Albania	0	0	0	0	0	0	0	0	0
Austria	1,933	1,662	271	1,963	1,688	275	1,963	1,688	275
Belarus	1,570	240	1,330	1,691	259	1,432	1,780	272	1,508
Belgium	374	217	157	384	223	161	392	243	149

Table 2 - Semi-natural forest area - 61 sampled countries **(2 of 5)**

	1990			2000			2005		
	Total FRA	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*
		Components of Total FRA Semi-Natural			*Components of Total FRA Semi-Natural*			*Components of Total FRA Semi-Natural*	
					Area (1,000 ha)				
Bosnia and Herzegovina	1,047	121	926	857	99	758	857	99	758
Bulgaria	992	0	992	885	0	885	832	0	832
Croatia	0	0	0	0	0	0	0	0	0
Czech Republic	2,616	105	2,511	2,623	131	2,492	2,634	132	2,502
Denmark	154	20	134	175	23	152	179	23	156
Estonia	0	0	0	687	225	462	751	246	505
Finland	20,703	16,769	3,934	21,057	16,214	4,843	21,081	15,811	5,270
France	12,666	12,539	127	13,385	13,251	134	13,556	13,420	136
Germany	10,741	4,296	6,445	11,076	4,430	6,646	11,076	4,430	6,646
Greece	0	0	0	0	0	0	0	0	0
Hungary	519	237	282	979	447	531	1,016	464	552
Ireland	90	0	90	90	0	90	90	0	90
Italy	0	0	0	0	0	0	0	0	0
Latvia	0	0	0	632	0	632	644	0	644
Lithuania	308	0	308	342	0	342	384	0	384
Netherlands	341	61	280	356	78	278	361	87	274
Norway	8,658	7,532	1,126	8,796	7,477	1,319	8,875	7,455	1,420
Poland	8,819	335	8,484	8,976	368	8,608	9,107	382	8,725
Portugal	2,494	2,095	399	2,494	2,095	399	2,494	2,095	399
Republic of Moldova	0	0	0	0	0	0	0	0	0
Romania	5,339	123	5,216	5,334	224	5,110	5,339	230	5,109
Russian Federation	0	0	0	0	0	0	0	0	0
Slovakia	937	112	825	938	113	825	940	113	827
Slovenia	35	1	34	37	1	36	38	1	37
Spain	2,867	2,511	356	3,656	3,210	446	4,050	3,556	494
Sweden	22,496	15,297	7,199	22,255	14,021	8,234	22,135	12,838	9,297

Table 2 - Semi-natural forest area - 61 sampled countries **(3 of 5)**

	1990			2000			2005		
	Total FRA	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*
		Components of Total FRA Semi-Natural			*Components of Total FRA Semi-Natural*			*Components of Total FRA Semi-Natural*	
					Area (1,000 ha)				
Switzerland	1,146	1,098	48	1,182	1,132	50	1,188	1,138	50
Ukraine	4,312	0	4,312	4,388	0	4,388	4,399	0	4,399
United Kingdom	88	0	88	213	2	211	275	11	264
Total Europe	**111,245**	**65,375**	**45,871**	**115,451**	**65,711**	**49,740**	**116,435**	**64,735**	**51,700**
Total Europe	**111,245**	**65,375**	**45,871**	**115,451**	**65,711**	**49,740**	**116,435**	**64,735**	**51,700**
North and Central America									
North America									
Country/area									
Canada	3,976	0	3,976	8,147	0	8,147	10,206	0	10,206
United States of America	3,490	3,490	0	5,514	5,514	0	6,323	6,323	0
Total North America	**7,466**	**3,490**	**3,976**	**13,661**	**5,514**	**8,147**	**16,529**	**6,323**	**10,206**
Total North and Central America	**7,466**	**3,490**	**3,976**	**13,661**	**5,514**	**8,147**	**16,529**	**6,323**	**10,206**
Oceania									
Oceania									
Country/area									
Australia	0	0	0	0	0	0	0	0	0
New Zealand	0	0	0	0	0	0	0	0	0
Total Oceania	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Total Oceania	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
South America									
South America									
Country/area									
Argentina	0	0	0	0	0	0	0	0	0
Brazil	0	0	0	0	0	0	0	0	0
Chile	26	1	25	26	1	25	26	1	25

Table 2 - Semi-natural forest area - 61 sampled countries **(4 of 5)**

	1990			2000			2005		
	Total FRA	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*	*Total FRA*	*Assisted*	*Planted*
		Components of Total FRA Semi-Natural			*Components of Total FRA Semi-Natural*			*Components of Total FRA Semi-Natural*	
					Area (1,000 ha)				
Uruguay	0	0	0	0	0	0	0	0	0
Venezuela (Bolivarian Republic of)	0	0	0	0	0	0	0	0	0
Total South America	**26**	**1**	**25**	**26**	**1**	**25**	**26**	**1**	**25**
Total South America	**26**	**1**	**25**	**26**	**1**	**25**	**26**	**1**	**25**
Grand Total	**239,063**	**133,349**	**105,714**	**249,432**	**130,859**	**118,574**	**259,003**	**128,476**	**130,527**

Table 2 - Semi-natural forest area - 61 sampled countries (5 of 5)

Table 3 – Planted semi-natural forests area: productive and protective – 61 sampled countries

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
				1990-2000		2000-2005					1990-2000		2000-2005	
	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%
Africa														
Eastern and Southern Africa														
Country/area														
South Africa	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Eastern and Southern Africa (1 Country)	**0**	**0**	**0**	**-**	**-**	**-**	**-**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
Northern Africa														
Country/area														
Algérie	5	11	14	1	8.3	1	6.0	234	255	270	2	0.9	3	1.1
Sudan	1,039	993	948	-5	-0.5	-9	-0.9	260	248	267	-1	-0.5	4	1.5
Total Northern Africa (2 Countries)	**1,044**	**1,003**	**963**	**-4**	**0.0**	**-8**	**-0.8**	**494**	**504**	**538**	**1**	**0.0**	**7**	**1.3**
Western and Central Africa														
Country/area														
Cameroun	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Congo, Rép dém du	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Nigeria	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Western and Central Africa (3 Countries)	**0**	**0**	**0**	**-**	**-**	**-**	**-**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
Total Africa (6 Countries)	**1,044**	**1003**	**963**	**-4**	**0.0**	**-8**	**-0.8**	**494**	**504**	**538**	**1**	**0.0**	**7**	**1.3**
Asia														
East Asia														
Country/area														
China	16,944	20,123	25,572	318	1.7	1,090	4.9	8,345	10,366	14,385	202	2.2	804	6.8
Japan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total East Asia (2 Countries)	**16,944**	**20,123**	**25,572**	**318**	**0.0**	**1,090**	**4.9**	**8,345**	**10,366**	**14,385**	**202**	**0.0**	**804**	**6.8**
South and Southeast Asia														
Country/area														

Table 3 - Planted semi-natural forests area: productive and protective – 61 sampled countries (1 of 5)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
				1990-2000		2000-2005					1990-2000		2000-2005	
	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%
India	18,997	17,562	16,081	-143	-0.8	-296	-1.7	9,786	10,764	10,721	98	1.0	-9	-0.1
Indonesia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malaysia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Myanmar	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Pakistan	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Philippines	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Thailand	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Viet Nam	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total South and Southeast Asia (8 Countries)	**18,997**	**17,562**	**16,081**	**-143**	**0.0**	**-296**	**-1.7**	**9,786**	**10,764**	**10,721**	**98**	**0.0**	**-9**	**-0.1**
Western and Central Asia														
Country/area														
Georgia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Iran	24	50	5	3	7.5	-9	-38.1	-	-	-	-	-	-	-
Turkey	62	87	100	2	3.4	2	2.7	146	203	232	6	3.4	6	2.7
Total Western and Central Asia (3 Countries)	**87**	**137**	**104**	**5**	**0.0**	**-7**	**-5.4**	**146**	**203**	**232**	**6**	**0.0**	**6**	**2.7**
Total Asia (13 Countries)	**36,027**	**37822**	**41,758**	**179**	**0.0**	**787**	**2.0**	**18,277**	**21,333**	**25,338**	**306**	**0.0**	**801**	**3.5**
Europe														
Europe														
Country/area														
Albania	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Austria	271	275	275	0	0.2	0	0.0	-	-	-	-	-	-	-
Belarus	1,330	1,432	1,508	10	0.7	15	1.0	-	-	-	-	-	-	-
Belgium	157	161	149	0	0.3	-2	-1.6	-	-	-	-	-	-	-
Bosnia and Herzegovina	926	758	758	-17	-2.0	0	0.0	-	-	-	-	-	-	-
Bulgaria	526	425	399	-10	-2.1	-5	-1.2	466	460	432	-1	-0.1	-6	-1.2
Croatia	-	-	-	-	-	-	-	-	-	-	-	-	-	-

Table 3 - Planted semi-natural forests area: productive and protective – 61 sampled countries (2 of 5)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
				1990-2000		2000-2005					1990-2000		2000-2005	
	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%
Czech Republic	2,449	2,405	2,415	-4	-0.2	2	0.1	63	87	88	2	3.3	0	0.1
Denmark	118	135	139	2	1.4	1	0.5	16	17	17	0	0.8	0	-0.1
Estonia	-	462	505	46	-	9	1.8	-	-	-	-	-	-	-
Finland	3,934	4,843	5,270	91	2.1	85	1.7	-	-	-	-	-	-	-
France	119	127	129	1	0.7	0	0.3	8	7	7	0	-1.3	0	0.3
Germany	4,540	4,513	4,441	-3	-0.1	-14	-0.3	1,904	2,133	2,204	23	1.1	14	0.7
Greece	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hungary	26	442	459	42	32.9	3	0.8	256	89	92	-17	-10.0	1	0.6
Ireland	90	90	90	0	0.0	0	0.0	-	-	-	-	-	-	-
Italy	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Latvia	-	563	567	56	-	1	0.2	-	69	77	7	-	2	2.2
Lithuania	231	257	288	3	1.1	6	2.3	77	86	96	1	1.1	2	2.3
Netherlands	224	222	206	0	-0.1	-3	-1.5	56	56	69	0	-0.1	3	4.3
Norway	1,126	1,319	1,420	19	1.6	20	1.5	-	-	-	-	-	-	-
Poland	5,769	5,595	5,584	-17	-0.3	-2	0.0	2,715	3,013	3,141	30	1.0	26	0.8
Portugal	278	334	345	6	1.9	2	0.6	121	65	54	-6	-6.1	-2	-3.6
Republic of Moldova	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Romania	3,220	3,155	3,155	-7	-0.2	0	0.0	1,996	1,955	1,955	-4	-0.2	0	0.0
Russian Federation	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovakia	665	666	668	0	0.0	0	0.0	159	159	160	0	0.0	0	0.0
Slovenia	34	36	37	0	0.6	0	0.5	-	-	-	-	-	-	-
Spain	356	446	494	9	2.3	10	2.1	-	-	-	-	-	-	-
Sweden	7,199	8,234	9,297	104	1.4	212	2.5	-	-	-	-	-	-	-
Switzerland	48	50	50	0	0.3	0	0.1	-	-	-	-	-	-	-
Ukraine	3,018	2,874	2,991	-14	-0.5	23	0.8	1,294	1,514	1,408	22	1.6	-21	-1.4
United Kingdom	-	-	-	-	-	-	-	88	211	264	12	9.1	11	4.6

Table 3 - Planted semi-natural forests area: productive and protective – 61 sampled countries (3 of 5)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
				1990-2000		2000-2005					1990-2000		2000-2005	
	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%
Total Europe (33 Countries)	**36,652**	**39,820**	**41,638**	**317**	**0.0**	**364**	**0.9**	**9,218**	**9,919**	**10,062**	**70**	**0.0**	**29**	**0.3**
Total Europe (33 Countries)	**36,652**	**39820**	**41,638**	**317**	**0.0**	**364**	**0.9**	**9,218**	**9,919**	**10,062**	**70**	**0.0**	**29**	**0.3**
North and Central America														
North America														
Country/area														
Canada	3,976	8,147	10,206	417	7.4	412	4.6	-	-	-	-	-	-	-
United States of America	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total North America (2 Countries)	**3,976**	**8,147**	**10,206**	**417**	**0.0**	**412**	**4.6**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
Total North and Central America (2 Countries)	**3,976**	**8147**	**10,206**	**417**	**0.0**	**412**	**4.6**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
Oceania														
Oceania														
Country/area														
Australia	-	-	-	-	-	-	-	-	-	-	-	-	-	-
New Zealand	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total Oceania (2 Countries)	**0**	**0**	**0**	**-**	**-**	**-**	**-**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
Total Oceania (2 Countries)	**0**	**0**	**0**	**-**	**-**	**-**	**-**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
South America														
South America														
Country/area														
Argentina	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brazil	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chile	25	25	25	0	0.0	0	0.0	-	-	-	-	-	-	-
Uruguay	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Venezuela	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Total South America (5 Countries)	**25**	**25**	**25**	**0**	**0.0**	**0**	**0.0**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
Total South America (5 Countries)	**25**	**25**	**25**	**0**	**0.0**	**0**	**0.0**	**0**	**0**	**0**	**-**	**-**	**-**	**-**

Table 3 - Planted semi-natural forests area: productive and protective – 61 sampled countries (4 of 5)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
				1990-2000		2000-2005					1990-2000		2000-2005	
	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%	1990	2000	2005	1,000 ha/year	%	1,000 ha/year	%
WORLD	77,724	86,817	94,590	909	0.0	1,554	1.7	27,990	31,756	35,938	377	0.0	836	2.5

Table 3 - Planted semi-natural forests area: productive and protective – 61 sampled countries (5 of 5)

Table 4 – Total planted forest area: productive and protective – 61 sampled countries

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Africa														
Eastern and Southern Africa														
Country/area														
South Africa	1,204	1,352	1,426	15	1.2	15	1.1	-	-	-	-	-	-	-
Total Eastern and Southern Africa (1 Country)	**1,204**	**1,352**	**1,426**	**15**	**0.0**	**15**	**1.1**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
Northern Africa														
Country/area														
Algeria	11	19	26	1	5.6	2	7.1	848	899	1,012	5	0.6	23	2.4
Sudan	6,385	5,927	5,677	-46	-0.7	-50	-0.9	1,024	953	943	-7	-0.7	-2	-0.2
Total Northern Africa (2 Countries)	**6,396**	**5,946**	**5,703**	**-45**	**0.0**	**-49**	**-0.8**	**1,872**	**1,852**	**1,955**	**-2**	**0.0**	**21**	**1.1**
Western and Central Africa														
Country/area														
Cameroon	10	9	8	0	-0.9	0	-2.3	78	71	63	-1	-0.9	-2	-2.3
Democratic Republic of the Congo	70	68	67	0	-0.4	0	-0.2	30	29	29	0	-0.4	0	-0.2
Nigeria	251	316	349	7	2.3	7	2.0	-	-	-	-	-	-	-
Total Western and Central Africa (3 Countries)	**332**	**393**	**424**	**6**	**0.0**	**6**	**1.5**	**108**	**100**	**92**	**-1**	**0.0**	**-2**	**-1.7**
Total Africa (6 Countries)	**7,932**	**7691**	**7,553**	**-24**	**0.0**	**-28**	**-0.4**	**1,980**	**1,952**	**2,047**	**-3**	**0.0**	**19**	**1.0**
Asia														
East Asia														
Country/area														
China	34,075	41,888	54,102	781	2.1	2,443	5.3	9,680	12,525	17,224	284	2.6	940	6.6
Japan	-	-	-	-	-	-	-	10,287	10,331	10,321	4	0.0	-2	0.0
Total East Asia (2 Countries)	**34,075**	**41,888**	**54,102**	**781**	**0.0**	**2,443**	**5.3**	**19,967**	**22,856**	**27,545**	**289**	**0.0**	**938**	**3.8**

Table 4 - Total planted forest area: productive and protective - 61 sampled countries (1 of 5)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
South and Southeast Asia														
Country/area														
India	19,634	18,477	17,134	-116	-0.6	-268	-1.5	11,103	12,654	12,894	155	1.3	48	0.4
Indonesia	2,209	3,002	3,399	79	3.1	79	2.5	-	-	-	-	-	-	-
Malaysia	1,956	1,659	1,573	-30	-1.6	-17	-1.1	-	-	-	-	-	-	-
Myanmar	323	571	696	25	5.9	25	4.1	71	125	153	5	5.8	6	4.1
Pakistan	234	296	318	6	2.4	4	1.4	-	-	-	-	-	-	-
Philippines	389	321	304	-7	-1.9	-3	-1.1	1,391	531	316	-86	-9.2	-43	-9.9
Thailand	1,979	1,996	1,997	2	0.1	0	0.0	661	1,081	1,102	42	5.0	4	0.4
Viet Nam	664	1,384	1,792	72	7.6	82	5.3	303	666	903	36	8.2	47	6.3
Total South and Southeast Asia (8 Countries)	**27,388**	**27,705**	**27,214**	**32**	**0.0**	**-98**	**-0.4**	**13,529**	**15,057**	**15,368**	**153**	**0.0**	**62**	**0.4**
Western and Central Asia														
Country/area														
Georgia	-	-	-	-	-	-	-	54	60	61	1	1.1	0	0.2
Iran (Islamic Republic of)	640	666	621	3	0.4	-9	-1.4	-	-	-	-	-	-	-
Turkey	1,521	1,850	2,016	33	2.0	33	1.7	526	744	853	22	3.5	22	2.8
Total Western and Central Asia (3 Countries)	**2,162**	**2,516**	**2,636**	**35**	**0.0**	**24**	**0.9**	**580**	**804**	**914**	**22**	**0.0**	**22**	**2.6**
Total Asia (13 Countries)	**63,624**	**72110**	**83,952**	**849**	**0.0**	**2,369**	**3.1**	**34,076**	**38,718**	**43,826**	**464**	**0.0**	**1,022**	**2.5**
Europe														
Europe														
Country/area														
Albania	11	5	3	-1	-8.0	0	-11.2	93	92	86	0	-0.1	-1	-1.4
Austria	1,259	1,278	1,278	2	0.2	0	0.0	-	-	-	-	-	-	-
Belarus	1,331	1,434	1,510	10	0.7	15	1.0	-	-	-	-	-	-	-
Belgium	460	445	424	-2	-0.3	-4	-1.0	-	-	-	-	-	-	-

Table 4 - Total planted forest area: productive and protective - 61 sampled countries (2 of 5)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	1990-2000 %	2000-2005 1,000 ha/year	2000-2005 %	1990	2000	2005	1990-2000 1,000 ha/year	1990-2000 %	2000-2005 1,000 ha/year	2000-2005 %
Bosnia and Herzegovina	926	900	900	-3	-0.3	0	0.0	-	-	-	-	-	-	-
Bulgaria	548	456	434	-9	-1.8	-4	-1.0	485	477	449	-1	-0.2	-6	-1.2
Croatia	56	60	61	0	0.7	0	0.3	-	-	-	-	-	-	-
Czech Republic	2,449	2,405	2,415	-4	-0.2	2	0.1	63	87	88	2	3.3	0	0.1
Denmark	375	406	420	3	0.8	3	0.7	50	51	51	0	0.2	0	0.0
Estonia	-	463	506	46	-	9	1.8	-	-	-	-	-	-	-
Finland	3,934	4,843	5,270	91	2.1	85	1.7	-	-	-	-	-	-	-
France	1,961	2,063	2,097	10	0.5	7	0.3	8	7	7	0	-1.3	0	0.3
Germany	4,540	4,513	4,441	-3	-0.1	-14	-0.3	1,904	2,133	2,204	23	1.1	14	0.7
Greece	-	-	-	-	-	-	-	118	129	134	1	0.9	1	0.8
Hungary	65	881	914	82	29.8	6	0.7	648	178	183	-47	-12.1	1	0.6
Ireland	440	609	669	17	3.3	12	1.9	-	-	-	-	-	-	-
Italy	289	144	146	-15	-6.7	0	0.3	-	-	-	-	-	-	-
Latvia	-	563	569	56	-	1	0.2	-	69	77	7	-	2	2.2
Lithuania	315	352	388	4	1.1	7	2.0	117	128	137	1	0.9	2	1.4
Netherlands	228	226	210	0	-0.1	-3	-1.5	56	56	69	0	-0.1	3	4.3
Norway	1,348	1,574	1,682	23	1.6	22	1.3	-	-	-	-	-	-	-
Poland	5,801	5,627	5,616	-17	-0.3	-2	0.0	2,715	3,013	3,141	30	1.0	26	0.8
Portugal	661	1,201	1,412	54	6.2	42	3.3	288	232	221	-6	-2.2	-2	-0.9
Republic of Moldova	1	1	1	0	0.0	0	0.0	-	-	-	-	-	-	-
Romania	3,312	3,247	3,247	-7	-0.2	0	0.0	2,053	2,012	2,012	-4	-0.2	0	0.0
Russian Federation	9,244	10,712	11,888	147	1.5	235	2.1	3,407	4,648	5,075	124	3.2	85	1.8
Slovakia	686	684	685	0	0.0	0	0.0	161	161	162	0	0.0	0	0.0
Slovenia	34	36	37	0	0.6	0	0.5	-	-	-	-	-	-	-
Spain	1,482	1,802	1,965	32	2.0	33	1.7	-	-	-	-	-	-	-

Table 4 - Total planted forest area: productive and protective - 61 sampled countries (3 of 5)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%	1990	2000	2005	1990-2000 1,000 ha/year	%	2000-2005 1,000 ha/year	%
Sweden	7,722	8,853	9,964	113	1.4	222	2.4	-	-	-	-	-	-	-
Switzerland	51	54	54	0	0.5	0	0.1	-	-	-	-	-	-	-
Ukraine	3,102	2,956	3,072	-15	-0.5	23	0.8	1,535	1,799	1,715	26	1.6	-17	-1.0
United Kingdom	1,862	1,914	1,902	5	0.3	-2	-0.1	103	231	286	13	8.4	11	4.4
Total Europe (33 Countries)	**54,492**	**60,708**	**64,177**	**622**	**0.0**	**694**	**1.1**	**13,802**	**15,501**	**16,094**	**170**	**0.0**	**119**	**0.8**
Total Europe (33 Countries)	**54,492**	**60708**	**64,177**	**622**	**0.0**	**694**	**1.1**	**13,802**	**15,501**	**16,094**	**170**	**0.0**	**119**	**0.8**
North and Central America														
North America														
Country/area														
Canada	3,976	8,147	10,206	417	7.4	412	4.6	-	-	-	-	-	-	-
United States of America	10,305	16,274	17,061	597	4.7	157	0.9	-	-	-	-	-	-	-
Total North America (2 Countries)	**14,281**	**24,421**	**27,267**	**1,014**	**0.0**	**569**	**2.2**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
Total North and Central America (2 Countries)	**14,281**	**24421**	**27,267**	**1,014**	**0.0**	**569**	**2.2**	**0**	**0**	**0**	**-**	**-**	**-**	**-**
Oceania														
Oceania														
Country/area														
Australia	1,023	1,485	1,766	46	3.8	56	3.5	-	-	-	-	-	-	-
New Zealand	1,261	1,767	1,832	51	3.4	13	0.7	-	2	20	0	-	4	58.5
Total Oceania (2 Countries)	**2,284**	**3,252**	**3,598**	**97**	**0.0**	**69**	**2.0**	**0**	**2**	**20**	**0**	**-**	**4**	**58.5**
Total Oceania (2 Countries)	**2,284**	**3252**	**3,598**	**97**	**0.0**	**69**	**2.0**	**0**	**2**	**20**	**0**	**-**	**4**	**58.5**
South America														
South America														
Country/area														
Argentina	769	1,078	1,229	31	3.4	30	2.7	-	-	-	-	-	-	-
Brazil	5,070	5,279	5,384	21	0.4	21	0.4	-	-	-	-	-	-	-

Table 4 - Total planted forest area: productive and protective - 61 sampled countries (4 of 5)

	Productive							Protective						
	Area (1,000 ha)			Annual change rate				Area (1,000 ha)			Annual change rate			
	1990	2000	2005	1990-2000 1,000 ha/year	1990-2000 %	2000-2005 1,000 ha/year	2000-2005 %	1990	2000	2005	1990-2000 1,000 ha/year	1990-2000 %	2000-2005 1,000 ha/year	2000-2005 %
Chile	1,766	2,379	2,686	61	3.0	61	2.5	-	-	-	-	-	-	-
Uruguay	197	655	751	46	12.8	19	2.8	4	14	15	1	13.3	0	1.4
Venezuela (Bolivarian Republic of)	873	836	806	-4	-0.4	-6	-0.7	28	27	26	0	-0.4	0	-0.8
Total South America (5 Countries)	**8,675**	**10,227**	**10,856**	**155**	**0.0**	**126**	**1.2**	**32**	**41**	**41**	**1**	**0.0**	**0**	**0.0**
Total South America (5 Countries)	**8,675**	**10227**	**10,856**	**155**	**0.0**	**126**	**1.2**	**32**	**41**	**41**	**1**	**0.0**	**0**	**0.0**
WORLD	**151,289**	**178,408**	**197,403**	**2,712**	**0.0**	**3,799**	**2.0**	**49,890**	**56,214**	**62,028**	**632**	**0.0**	**1,163**	**2.0**

Table 4 - Total planted forest area: productive and protective - 61 sampled countries (5 of 5)

Table 5 – Species reported by their area covered: productive and protective – 34 questionnaire countries

Category	*Genus*	*Species*	*Area (1,000 ha)*
Productive Planted Forests			
	Abies		
		alba	161
		grandis	20
		spp.	8
	Total Abies		***189***
	Acacia		
		mangium	2,116
		senegal	1,561
		nilotica	1,088
		seyal	946
		spp.	677
		mellifera	549
		mearnsii	171
		Australian species	123
		tortilis	28
		tortilis var siprocarpa	28
		albida	19
		saligna	17
		auriculiformis	15
		melanoxylon	10
		dealbata	7
		arabica	0
	Total Acacia		***7,357***
	Acer		
		pseudoplatanus	116
		platanoides	74
		spp.	44
		insigne	1
		laetum	0
		saccharinum	0
	Total Acer		***235***
	Agathis		
		spp.	102
	Total Agathis		***102***
	Ailanthus		
		excelsa	47
	Total Ailanthus		***47***
	Albizia		
		spp.	34
	Total Albizia		***34***
	Alnus		
		spp.	298

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (1 of 12)

Category	Genus	Species	Area (1,000 ha)
		glutinosa	112
		incana	3
		subcordata	1
	Total Alnus		***413***
	Amygdalus		
		scoparia	0
	Total Amygdalus		***0***
	Araucaria		
		spp.	53
		angustifolia	34
	Total Araucaria		***87***
	Azadirachta		
		excelsa	13
	Total Azadirachta		***13***
	Balanites		
		aegyptiaca	9
	Total Balanites		***9***
	Bamboo		
		Bamboo	326
	Total Bamboo		***326***
	Betula		
		spp.	321
		pendula	310
		pubescens	21
	Total Betula		***652***
	Bombax		
		ceiba	171
	Total Bombax		***171***
	Carpinus		
		betulus	51
	Total Carpinus		***51***
	Castanea		
		mollissima	4,964
	Total Castanea		***4,964***
	Cedrus		
		deodara	171
		atlantica	20
		spp.	0
	Total Cedrus		***191***
	Cinnamomum		
		spp.	685
	Total Cinnamomum		***685***
	Cunninghamia		

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (2 of 12)

Category	Genus	Species	Area (1,000 ha)
		lanceolata	15,393
	Total Cunninghamia		***15,393***
	Cupressus		
		funebris	767
		spp.	237
	Total Cupressus		***1,004***
	Dalbergia		
		sissoo	514
	Total Dalbergia		***514***
	Diospyros		
		kaki	542
	Total Diospyros		***542***
	Eucalyptus		
		spp.	10,648
		grandis	565
		globulus	442
		nitens	266
		pilularis	18
		dunnii	18
		regnans	18
		camaldulensis	7
	Total Eucalyptus		***11,981***
	Fagus		
		sylvatica	863
	Total Fagus		***863***
	Fraxinus		
		excelsior	234
		spp.	11
		pennsylvanica var. lanceolata	3
		americana	0
	Total Fraxinus		***248***
	Gleditsia		
		triacanthos	0
	Total Gleditsia		***0***
	Gmelina		
		arborea	332
	Total Gmelina		***332***
	Hevea		
		brasiliensis	223
	Total Hevea		***223***
	Juglans		
		regia	15
		nigra L.	1
	Total Juglans		***16***

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (3 of 12)

Category	Genus	Species	Area (1,000 ha)
	Khaya		
		spp.	284
	Total Khaya		***284***
	Larix		
		spp.	3,060
		decidua Mill.	2,030
		kaempheri	20
		sibirica	0
	Total Larix		***5,110***
	Leucaena		
		leucocephala	15
	Total Leucaena		***15***
	Manglietia		
		conifera	84
	Total Manglietia		***84***
	Melaleuca		
		cajuputi	253
	Total Melaleuca		***253***
	Melia		
		azaderach	14
	Total Melia		***14***
	Mimosa		
		scabrella	48
	Total Mimosa		***48***
	Morus		
		alba	2,311
	Total Morus		***2,311***
	Other Broadleaves		
			411
	Total Other Broadleaves		***411***
	Other Coniferous		
			388
	Total Other Coniferous		***388***
	Paraserianthes		
		falcataria	138
	Total Paraserianthes		***138***
	Picea		
		abies	5,506
		sitchensis	771
		spp.	7
	Total Picea		***6,284***
	Pinus		
		taeda	11,281

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (4 of 12)

Category	Genus	Species	Area (1,000 ha)
		sylvestris	8,962
		massoniana	6,035
		radiata	4,356
		elliottii	3,190
		tabulaeformis Carr.	2,974
		spp.	2,165
		pinaster	996
		roxburghii	857
		contorta	799
		resinosa	682
		merkusii	680
		sylvestris var mongolica Litv	409
		patula	359
		strobus	342
		palustris	341
		koraiensis	332
		yunnanensis	281
		caribaea	270
		banksiana	171
		clausa	171
		echinata	171
		nigra	103
		nigra (laricius) J.F. Arnold subsp. laricio	98
		halepensis	20
		kesiya	15
		pinea	4
		virginiana	0
	Total Pinus		***46,067***
	Pistacia		
		atlantica	0
	Total Pistacia		***0***
	Populus		
		spp.	4,092
		hybrids	83
		alba	23
		x euramericana	15
		tremula	10
		nigra	6
		x canadensis	4
		deltoides	4
		x I 63	4
	Total Populus		***4,241***
	Prosopis		
		tamarugo	20
		chilensis	4
		juliflora	0
	Total Prosopis		***24***
	Prunus		
		avium	10

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (5 of 12)

Category	Genus	Species	Area (1,000 ha)
	Total Prunus		***10***
	Pseudotsuga		
		menziesii	627
	Total Pseudotsuga		***627***
	Pterocarpus		
		macrocarpus	35
		indicus	15
	Total Pterocarpus		***50***
	Quercus		
		robur	946
		spp.	752
		petraea	96
		rubra	89
		suber	3
		persica	0
		canariensis	0
		afares	0
	Total Quercus		***1,888***
	Rizophora		
		apiculata	66
	Total Rizophora		***66***
	Robinia		
		pseudoacacia	197
	Total Robinia		***197***
	Salix		
		alba	26
		babylonica	23
		babylonica var. sacram enta	23
		hibrids	23
		spp.	14
		nigra	3
	Total Salix		***112***
	Sclerocarya		
		birrea	9
	Total Sclerocarya		***9***
	Shorea		
		robusta	514
	Total Shorea		***514***
	Styrax		
		tonkinensis	109
	Total Styrax		***109***
	Swietenia		
		macrophylla	117
	Total Swietenia		***117***

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (6 of 12)

Category	Genus	Species	Area (1,000 ha)
	Tectona		
		grandis	5,819
	Total Tectona		***5,819***
	Tilia		
		spp.	7
		cordata	0
	Total Tilia		***8***
	Ulmus		
		spp.	74
	Total Ulmus		***74***
	Unspecified		
		Unspecified	18,730
	Total Unspecified		***18,730***
	Xylia		
		xylocapa	70
	Total Xylia		***70***
	Ziziphus		
		jujuba	1,198
		mauritiana	19
	Total Ziziphus		***1,217***
Total area by species - Productive Planted Forests			***141,936***

Protective Planted Forests

	Abies		
		sachalinensis	722
		alba	55
	Total Abies		***777***
	Acacia		
		nilotica	609
		senegal	278
		seyal	199
		spp.	157
		mearnsii	129
		mellifera	111
		tortilis	25
		auriculiformis	24
		mangium	16
		albida	3
		tortilis var siprocarpa	3
	Total Acacia		***1,554***
	Acer		
		platanoides	41
		pseudoplatanus	41
		spp.	4

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (7 of 12)

Category	Genus	Species	Area (1,000 ha)
	Total Acer		***87***
	Ailanthus		
		spp.	34
	Total Ailanthus		***34***
	Alnus		
		spp.	166
		glutinosa	13
		incana	1
	Total Alnus		***180***
	Balanites		
		aegyptiaca	3
	Total Balanites		***3***
	Bamboo		
		Bamboo	184
	Total Bamboo		***184***
	Betula		
		spp.	105
		pendula	18
	Total Betula		***123***
	Bombax		
		ceiba	129
	Total Bombax		***129***
	Carpinus		
		betulus	15
	Total Carpinus		***15***
	Cassia		
		siamea	136
	Total Cassia		***136***
	Casuarina		
		equisetifolia	249
		spp.	16
	Total Casuarina		***265***
	Cedrus		
		deodara	129
		spp.	5
	Total Cedrus		***134***
	Chamaecyparis		
		obtusa	2,580
	Total Chamaecyparis		***2,580***
	Chukrasia		
		tabularis	20
	Total Chukrasia		***20***

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (8 of 12)

Category	Genus	Species	Area (1,000 ha)
	Cotinus		
		coggygria	3
	Total Cotinus		***3***
	Cryptomeria		
		japonica	4,541
	Total Cryptomeria		***4,541***
	Cunninghamia		
		lanceolata	1,693
	Total Cunninghamia		***1,693***
	Cupressus		
		funebris	561
		spp.	61
	Total Cupressus		***622***
	Dalbergia		
		sissoo	387
	Total Dalbergia		***387***
	Dipterocarpus		
		spp.	61
	Total Dipterocarpus		***61***
	Eucalyptus		
		spp.	770
	Total Eucalyptus		***770***
	Fagus		
		sylvatica	221
	Total Fagus		***221***
	Fraxinus		
		excelsior	67
		pennsylvanica var. lanceolata	22
		spp.	2
	Total Fraxinus		***91***
	Gleditsia		
		triacanthos	10
	Total Gleditsia		***10***
	Gmelina		
		arborea	384
	Total Gmelina		***384***
	Grevillea		
		robusta	3
	Total Grevillea		***3***
	Juglans		
		regia	10
	Total Juglans		***10***

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (9 of 12)

Category	Genus	Species	Area (1,000 ha)
	Khaya		
		spp.	34
	Total Khaya		***34***
	Larix		
		decidua Mill.	1,068
		kaempheri	1,032
		spp.	838
	Total Larix		***2,938***
	Leucaena		
		leucocephala	16
	Total Leucaena		***16***
	Metasequoia		
		glyptostroboides	68
	Total Metasequoia		***68***
	Millettia		
		macrostachya	2
	Total Millettia		***2***
	Other Broadleaves		
			104
	Total Other Broadleaves		***104***
	Other Coniferous		
			103
	Total Other Coniferous		***103***
	Paraserianthes		
		falcataria	32
	Total Paraserianthes		***32***
	Picea		
		abies	509
		asperata	253
		jezoensis	52
		jezoensis var hondoensis	52
		spp.	2
	Total Picea		***867***
	Pinus		
		massoniana	2,489
		sylvestris	1,846
		tabulaeformis Carr.	1,212
		thunbergiana	649
		yunnanensis	561
		roxburghii	516
		armandii	503
		densiflora	464
		spp.	251
		nigra var. pallasiana	138
		halepensis	108

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (10 of 12)

Category	Genus	Species	Area (1,000 ha)
		radiata	19
		kesiya	16
		pinaster	14
		mugo	11
		nigra	5
		banksiana	1
	Total Pinus		***8,802***
	Populus		
		spp.	4,934
		alba	9
		tremula	4
		x euramericana	1
	Total Populus		***4,949***
	Pseudotsuga		
		menziesii	46
	Total Pseudotsuga		***46***
	Pterocarpus		
		indicus	16
	Total Pterocarpus		***16***
	Quercus		
		robur	384
		spp.	280
		acutissima	103
		serrata	41
		dentata	31
		mongolica	31
		rubra	19
		petraea	7
	Total Quercus		***896***
	Rizophora		
		apiculata	89
	Total Rizophora		***89***
	Robinia		
		pseudoacacia	297
	Total Robinia		***297***
	Salix		
		alba	9
		spp.	6
		fragilis	2
	Total Salix		***17***
	Sclerocarya		
		birrea	3
	Total Sclerocarya		***3***
	Senna		
		siamea	24

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (11 of 12)

Category	Genus	Species	Area (1,000 ha)
	Total Senna		***24***
	Shorea		
		robusta	258
	Total Shorea		***258***
	Swietenia		
		macrophylla	16
	Total Swietenia		***16***
	Tamarix		
		spp.	8
	Total Tamarix		***8***
	Tectona		
		grandis	20
	Total Tectona		***20***
	Tilia		
		spp.	4
		cordata	2
	Total Tilia		***6***
	Ulmus		
		spp.	41
		pumila	10
	Total Ulmus		***51***
	Unspecified		
		Unspecified	13,751
	Total Unspecified		***13,751***
	Ziziphus		
		mauritiana	3
	Total Ziziphus		***3***
Total area by species - Protective Planted Forests			***48,430***
Total area by species (34 countries)			***190,367***

Table 5 - Species reported by their area covered: productive and protective - 34 questionnaire countries (12 of 12)

Table 6a – Reported tree species area and growth parameters by subregions (productive function)

Region and subregion	*Area in the Sub-Region*		*MAI*		*Rotation length*		*Harvested Vol.*		*Country*
	(000 ha)	*(%)*	*(m3/ha/y)*		*(years)*		*(m3/ha)*		
			min	*max*	*min*	*max*	*min*	*max*	
Africa									
Eastern and Southern Africa									
Pinus patula	359	25.2	12	18	25	35	300	450	South Africa
Eucalyptus grandis	335	23.5	21	27	21	22	213	357	South Africa
Eucalyptus nitens	231	16.2	19	26	10	25	190	234	South Africa
Pinus elliottii	207	14.5	13	17	23	31	207	289	South Africa
Acacia Australian species	123	8.6	10	12	9	12	90	120	South Africa
Pinus radiata	64	4.5	15	23	23	33	290	456	South Africa
Pinus spp.	51	3.6	9	17	29	48	130	304	South Africa
Pinus taeda	27	1.9	14	17	21	29	161	224	South Africa
Pinus pinaster	16	1.1	7	7	39	60	179	97	

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									South Africa
Northern Africa									
Acacia senegal	1561	27.4	1	3	25	30	40	63	Sudan
Acacia nilotica	1088	19.1	14	20	15	30	95	112	Sudan
Acacia seyal	946	16.6	2	5	15	25	72	92	Sudan
Acacia mellifera	549	9.6	2	4	20	35	75	98	Sudan
Eucalyptus spp.	473	8.3	8	21	7	15	100	295	Sudan
Khaya spp.	284	5.0	9	12	35	80	100	150	Sudan
Cupressus spp.	237	4.2	9	14	35	60	162	247	Algeria Sudan
Bamboo Bamboo	236	4.2	3	4	14	20	41	68	Sudan
Tectona grandis	142	2.5	5	11	34	58	127	268	Sudan
Ailanthus excelsa	47	0.8	7	9	15	35	110	140	

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(2 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									Sudan
Acacia tortilis	28	0.5	1	4	20	40	35	60	
									Sudan
Acacia tortilis var siprocarpa	28	0.5	2	2	20	40	33	58	
									Sudan
Acacia albida	19	0.3	4	6	30	50	65	75	
									Sudan
Ziziphus mauritiana	19	0.3	1	1	0	0	0	0	
									Sudan
Balanites aegyptiaca	9	0.2	1	2	0	0	0	0	
									Sudan
Sclerocarya birrea	9	0.2	2	2	0	0	0	0	
									Sudan
Pinus halepensis	7	0.1	2	3	55	50	52	103	
									Algeria
Asia									
East Asia									
Cunninghamia lanceolata	15393	28.5	3	14	18	30	44	405	
									China
Pinus massoniana	6035	11.2	3	16	15	30	42	489	
									China

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(3 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Castanea mollissima	4964	9.2	1	6	30	40	30	240	China
Populus spp.	3220	6.0	9	18	20	35	67	199	China
Pinus tabulaeformis Carr.	2974	5.5	3	7	35	45	107	325	China
Larix spp.	2898	5.4	4	9	53	49	143	335	China
Eucalyptus spp.	2397	4.4	8	21	7	15	100	295	China
Morus alba	2311	4.3	2	8	15	20	23	160	China
Ziziphus jujuba	1198	2.2	2	10	15	20	23	200	China
Cupressus funebris	767	1.4	1	4	60	80	54	312	China
Cinnamomum spp.	685	1.3	2	12	15	20	30	240	China
Diospyros kaki	542	1.0	2	12	15	20	30	240	China
Pinus sylvestris var mongolica Litv	409	0.8	2	9	40	50	88	435	China

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(4 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Quercus spp.	384	0.7	2	5	100	135	63	146	China
Pinus koraiensis	332	0.6	2	9	60	80	144	752	China
Pinus yunnanensis	281	0.5	2	9	30	40	63	340	China
South and Southeast Asia									
Tectona grandis	5629	22.6	5	11	34	58	127	268	Myanmar Viet Nam India Indonesia
Eucalyptus spp.	4047	16.3	8	21	7	15	100	295	Indonesia Viet Nam India
Acacia mangium	2116	8.5	20	32	6	12	110	200	Philippines Indonesia
Pinus roxburghii	857	3.4	3	5	80	100	0	0	India
Pinus merkusii	680	2.7	2	14	10	50	100	197	

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(5 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									Indonesia
Acacia spp.	525	2.1	6	11	10	20	43	138	
									Viet Nam
									Indonesia
Dalbergia sissoo	514	2.1	4	6	30	40	0	0	
									India
Shorea robusta	514	2.1	4	6	80	100	0	0	
									India
Gmelina arborea	332	1.3	15	23	18	30	119	201	
									Philippines
									India
Melaleuca cajuputi	253	1.0	3	4	12	15	36	60	
									Viet Nam
Pinus spp.	197	0.8	9	17	29	48	130	304	
									Viet Nam
									Myanmar
Acacia mearnsii	171	0.7	18	20	8	10	0	0	
									India
Bombax ceiba	171	0.7	8	10	25	40	0	0	
									India
Cedrus deodara	171	0.7	5	7	100	120	0	0	
									India
Populus spp.	171	0.7	9	18	20	35	67	199	

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(6 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									India
Paraserianthes falcataria	138	0.6	22	44	7	13	139	166	
									Indonesia
									Philippines
Swietenia macrophylla	117	0.5	5	10	29	50	111	154	
									Indonesia
									Philippines
Styrax tonkinensis	109	0.4	6	9	7	10	42	90	
									Viet Nam
Agathis spp.	102	0.4	0	0	25	35	200	250	
									Indonesia
Bamboo Bamboo	90	0.4	3	4	14	20	41	68	
									Viet Nam
Manglietia conifera	84	0.3	4	6	15	30	60	180	
									Viet Nam
Xylia xylocapa	70	0.3	3	9	60	80	110	155	
									Myanmar
Rizophora apiculata	66	0.3	3	4	12	15	36	60	
									Viet Nam
Albizia spp.	34	0.1	0	0	6	8	0	0	
									Indonesia
Western and Central Asia									

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(7 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Populus spp.	585	94.3	9	18	20	35	67	199	
									Iran (Islamic Republic of)
Eucalyptus spp.	31	5.0	8	21	7	15	100	295	
									Iran (Islamic Republic of)
Acer insigne	1	0.1	5	12	80	120	3	8	
									Iran (Islamic Republic of)
Alnus subcordata	1	0.1	5	12	80	120	3	8	
									Iran (Islamic Republic of)
Europe									
Europe									
Pinus sylvestris	8962	35.5	2	5	63	87	44	147	
									Norway
									Czech Republic
									France
									Netherlands
									Belgium
									Latvia
									Lithuania
									Ukraine
									Croatia
									Slovenia
									United Kingdom
									Poland

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(8 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									Finland
Picea abies	5506	21.8	3	8	66	86	137	393	
									Czech Republic
									Lithuania
									Norway
									Belgium
									Slovenia
									France
									Latvia
									United Kingdom
									Ukraine
									Finland
									Poland
									Croatia
Larix decidua Mill.	2030	8.0	4	7	90	129	153	247	
									Ukraine
									France
									Poland
									Czech Republic
									Croatia
									Slovenia
Quercus robur	946	3.7	2	4	81	93	33	61	
									Slovenia
									Lithuania
									Belgium

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(9 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									France
									Ukraine
									Latvia
									Netherlands
Pinus pinaster	945	3.7	7	7	39	60	179	97	
									France
Fagus sylvatica	863	3.4	3	7	79	114	59	137	
									Ukraine
									France
									United Kingdom
									Poland
									Belgium
									Slovenia
									Netherlands
									Czech Republic
Pinus contorta	799	3.2	2	7	58	80	65	355	
									United Kingdom
									Norway
Picea sitchensis	771	3.1	2	8	43	67	43	407	
									Norway
									France
									United Kingdom
Pseudotsuga menziesii	447	1.8	9	13	49	81	336	585	
									Poland
									Belgium

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(10 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									France
									Italy
									Netherlands
									Ukraine
Quercus spp.	369	1.5	2	5	100	135	63	146	
									United Kingdom
									Czech Republic
									Poland
Betula spp.	321	1.3	5	8	44	50	20	56	
									Czech Republic
									United Kingdom
									Netherlands
									Poland
									Belgium
Betula pendula	310	1.2	3	4	46	38	103	225	
									Lithuania
									Latvia
									Finland
									Ukraine
Alnus spp.	298	1.2	0	0	60	0	0	0	
									Poland
Fraxinus excelsior	234	0.9	3	5	71	76	53	107	
									Slovenia
									Poland
									Latvia

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(11 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									United Kingdom
									France
									Czech Republic
									Ukraine
									Lithuania
Robinia pseudoacacia	197	0.8	1	2	43	21	20	100	
									Ukraine
									Poland
Larix spp.	162	0.6	4	9	53	49	143	335	
									Netherlands
									Norway
									Belgium
									Latvia
									United Kingdom
Abies alba	161	0.6	3	7	83	135	175	224	
									Poland
									Slovenia
									Ukraine
									France
Acer pseudoplatanus	116	0.5	2	7	80	120	34	112	
									Poland
									United Kingdom
									Slovenia
Alnus glutinosa	112	0.4	4	5	59	54	28	92	
									Slovenia

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(12 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									Lithuania
									Latvia
									Czech Republic
									Ukraine
Pinus nigra	103	0.4	1	2	80	65	70	175	
									France
									Croatia
Pinus nigra (laricius) J.F. Arnold subsp.	98	0.4	0	0	80	200	0	0	
									France
Quercus petraea	96	0.4	2	4	94	124	80	213	
									Netherlands
									France
									Ukraine
Quercus rubra	89	0.4	4	6	44	57	140	200	
									Netherlands
									Ukraine
									France
Populus spp.	84	0.3	9	18	20	35	67	199	
									Belgium
									Netherlands
									Ukraine
									Latvia
Populus hybrids	83	0.3	16	21	10	11	170	220	
									Italy

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(13 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Acer platanoides	74	0.3	0	0	120	180	0	0	Poland
Ulmus spp.	74	0.3	0	0	120	180	0	0	Poland
Carpinus betulus	51	0.2	3	4	78	95	1	1	Poland Czech Republic
Acer spp.	44	0.2	4	4	80	95	1	1	France Czech Republic
Pinus spp.	38	0.2	9	17	29	48	130	304	Netherlands Belgium
North and Central America									
North America									
Pinus taeda	11090	65.0	14	17	21	29	161	224	United States of America
Pinus elliottii	2730	16.0	13	17	23	31	207	289	United States of America
Pinus resinosa	682	4.0	5	4	40	100	234	420	United States of America

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(14 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Pinus palustris	341	2.0	6	6	30	65	193	389	United States of America
Pinus strobus	341	2.0	8	12	43	35	241	485	United States of America
Pinus banksiana	171	1.0	2	2	40	70	90	183	United States of America
Pinus clausa	171	1.0	5	5	20	40	115	232	United States of America
Oceania									
Oceania									
Pinus radiata	2408	66.9	15	23	23	33	290	456	Australia New Zealand
Eucalyptus globulus	442	12.3	16	25	10	27	204	228	Australia
Pseudotsuga menziesii	110	3.1	9	13	49	81	336	585	New Zealand
Pinus elliottii	88	2.5	13	17	23	31	207	289	Australia
Pinus caribaea	71	2.0	17	21	24	29	185	228	Australia

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(15 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Araucaria spp.	53	1.5	13	0	50	50	670	0	Australia
Eucalyptus nitens	35	1.0	19	26	10	25	190	234	Australia
Pinus pinaster	35	1.0	7	7	39	60	179	97	Australia
Eucalyptus dunnii	18	0.5	16	18	12	40	216	0	Australia
Eucalyptus grandis	18	0.5	21	27	21	22	213	357	Australia
Eucalyptus pilularis	18	0.5	18	18	45	45	480	830	Australia
Eucalyptus regnans	18	0.5	18	20	40	40	800	0	Australia
South America									
South America									
Eucalyptus spp.	3678	39.5	8	21	7	15	100	295	Brazil Chile
Pinus spp.	1879	20.2	9	17	29	48	130	304	Brazil

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(16 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Pinus radiata	1879	20.2	15	23	23	33	290	456	Chile
Hevea brasiliensis	205	2.2	10	20	15	30	150	600	Brazil
Pinus caribaea	165	1.8	17	21	24	29	185	228	Argentina
Pinus elliottii	165	1.8	13	17	23	31	207	289	Argentina
Pinus taeda	165	1.8	14	17	21	29	161	224	Argentina
Acacia spp.	151	1.6	6	11	10	20	43	138	Brazil
Eucalyptus grandis	99	1.1	21	27	21	22	213	357	Argentina
Pseudotsuga menziesii	70	0.7	9	13	49	81	336	585	Chile
Mimosa scabrella	48	0.5	10	25	8	14	80	350	Brazil
Tectona grandis	48	0.5	5	11	34	58	127	268	Brazil
Araucaria angustifolia	34	0.4	17	25	10	18	150	525	Argentina

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(17 of 18)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									Brazil
Populus spp.	31	0.3	9	18	20	35	67	199	
									Brazil
									Chile
Salix alba	23	0.2	13	20	24	35	120	250	
									Argentina
Salix babylonica	23	0.2	20	25	8	10	0	0	
									Argentina
Salix babylonica var. sacramenta	23	0.2	20	25	8	10	0	0	
									Argentina
Salix hibrids	23	0.2	20	25	8	10	0	0	
									Argentina
Acacia melanoxylon	10	0.1	10	20	15	45	200	400	
									Chile

Table 6a - Reported tree species area and growth parameters by subregions (productive function) **(18 of 18)**

Table 6b – Reported tree species area and growth parameters by subregions (protective function)

Region and subregion	*Area in the Sub-Region*		*MAI*		*Rotation length*		*Harvested Vol.*		*Country*
	(000 ha)	*(%)*	*(m3/ha/y)*		*(years)*		*(m3/ha)*		
			min	*max*	*min*	*max*	*min*	*max*	
Africa									
Northern Africa									
Acacia senegal	278	100.0	1	3	25	35	29	43	Sudan
Acacia seyal	199	100.0	2	4	25	50	53	80	Sudan
Acacia mellifera	111	100.0	2	5	20	45	59	73	Sudan
Pinus halepensis	108	100.0	1	2	50	100	3	5	Algeria
Acacia nilotica	93	100.0	8	11	18	33	34	44	Sudan
Eucalyptus spp.	84	100.0	6	11	19	43	107	204	Algeria Sudan
Cupressus spp.	61	100.0	8	12	45	75	153	204	Algeria Sudan
Ailanthus spp.	34	100.0	6	12	15	50	100	120	Sudan

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Bamboo Bamboo	34	100.0	4	8	20	40	50	60	Sudan
Khaya spp.	34	100.0	7	16	40	100	90	110	Sudan
Acacia spp.	30	100.0	2	3	50	60	3	5	Algeria
Acacia tortilis	25	100.0	1	4	20	45	60	85	Sudan
Tectona grandis	20	100.0	5	8	40	70	80	110	Sudan
Casuarina spp.	16	100.0	4	6	50	100	6	10	Algeria
Pinus pinaster	14	100.0	1	2	70	120	4	6	Algeria
Populus spp.	8	100.0	4	9	30	42	48	129	Algeria
Tamarix spp.	8	100.0	3	5	60	100	5	8	Algeria
Cedrus spp.	5	100.0	2	2	80	120	4	6	Algeria
Fraxinus excelsior	5	100.0	3	2	97	89	58	101	Algeria

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(2 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Acacia albida	3	100.0	4	6	40	60	20	30	Sudan
Acacia tortilis var siprocarpa	3	100.0	2	2	20	45	25	45	Sudan
Balanites aegyptiaca	3	100.0	1	2	0	0	0	0	Sudan
Sclerocarya birrea	3	100.0	2	2	0	0	0	0	Sudan
Ziziphus mauritiana	3	100.0	1	1	0	0	30	50	Sudan
Asia									
East Asia									
Populus spp.	4896	100.0	4	9	30	42	48	129	China
Cryptomeria japonica	4541	100.0	0	0	30	60	0	0	Japan
Chamaecyparis obtusa	2580	100.0	0	0	40	55	0	0	Japan
Pinus massoniana	2489	100.0	2	7	30	40	45	280	China
Cunninghamia lanceolata	1662	100.0	2	8	20	30	30	240	

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(3 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									China
Pinus tabulaeformis Carr.	1212	100.0	1	4	35	45	29	190	
									China
Larix kaempheri	1032	100.0	0	0	30	45	0	0	
									Japan
Larix spp.	833	100.0	3	6	54	22	11	86	
									China
Abies sachalinensis	722	100.0	0	0	50	50	0	0	
									Japan
Pinus thunbergiana	649	100.0	0	2	30	53	16	100	
									Japan
									China
Cupressus funebris	561	100.0	1	3	60	80	30	216	
									China
Pinus yunnanensis	561	100.0	1	4	30	40	21	140	
									China
Pinus armandii	503	100.0	1	3	30	40	18	120	
									China
Pinus densiflora	464	100.0	0	0	20	55	0	0	
									Japan
Picea asperata	253	100.0	1	2	60	80	30	192	
									China

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(4 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Quercus spp.	221	100.0	1	3	103	145	8	66	China
Eucalyptus spp.	170	100.0	6	11	19	43	107	204	China
Casuarina equisetifolia	150	100.0	2	8	15	20	26	160	China
Quercus acutissima	103	100.0	0	0	10	15	0	0	Japan
Metasequoia glyptostroboides	68	100.0	3	11	20	30	50	321	China
Picea jezoensis	52	100.0	0	0	60	60	0	0	Japan
Picea jezoensis var hondoensis	52	100.0	0	0	60	60	0	0	Japan
Quercus serrata	41	100.0	0	0	10	65	0	0	Japan
Quercus dentata	31	100.0	0	0	10	65	0	0	Japan
Quercus mongolica	31	100.0	0	0	10	65	0	0	Japan
South and Southeast Asia									

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(5 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Acacia nilotica	516	100.0	8	11	18	33	34	44	India
Eucalyptus spp.	516	100.0	6	11	19	43	107	204	India
Pinus roxburghii	516	100.0	3	5	80	100	0	0	India
Dalbergia sissoo	387	100.0	4	6	30	40	0	0	India
Gmelina arborea	384	100.0	15	23	18	30	119	201	Philippines India
Shorea robusta	258	100.0	4	6	80	100	0	0	India
Acacia mearnsii	129	100.0	18	20	8	10	0	0	India
Bombax ceiba	129	100.0	8	10	25	40	0	0	India
Cedrus deodara	129	100.0	5	7	100	120	0	0	India
Paraserianthes falcataria	32	100.0	25	35	7	15	158	201	Philippines
Acacia auriculiformis	24	100.0	10	25	8	15	114	115	

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(6 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									Philippines
Acacia mangium	16	100.0	20	40	6	14	184	235	
									Philippines
Leucaena leucocephala	16	100.0	9	12	4	8	77	98	
									Philippines
Pinus kesiya	16	100.0	10	15	10	12	187	238	
									Philippines
Pterocarpus indicus	16	100.0	10	15	25	50	131	167	
									Philippines
Swietenia macrophylla	16	100.0	10	20	17	50	131	167	
									Philippines
Europe									
Europe									
Pinus sylvestris	1846	100.0	2	3	82	77	25	103	
									Lithuania
									Ukraine
									Latvia
									Czech Republic
									Poland
									Netherlands
Larix decidua Mill.	1068	100.0	3	3	90	155	0	0	
									Czech Republic

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(7 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									Poland
Picea abies	509	100.0	3	2	89	86	50	160	
									Latvia
									Lithuania
									Czech Republic
									Ukraine
									Poland
Quercus robur	384	100.0	2	3	91	40	58	105	
									Latvia
									Netherlands
									Ukraine
									Lithuania
Robinia pseudoacacia	297	100.0	1	2	43	21	20	100	
									Ukraine
									Poland
Fagus sylvatica	221	100.0	4	6	80	115	65	148	
									Czech Republic
									Netherlands
									Poland
									Ukraine
Alnus spp.	166	100.0	0	0	60	0	0	0	
									Poland
Pinus nigra var. pallasiana	138	100.0	1	4	81	121	100	450	
									Ukraine

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(8 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Betula spp.	105	100.0	3	4	47	40	0	0	
									Netherlands
									Czech Republic
									Poland
Fraxinus excelsior	62	100.0	3	2	97	89	58	101	
									Poland
									Latvia
									Czech Republic
									Lithuania
									Ukraine
Quercus spp.	58	100.0	1	3	103	145	8	66	
									Poland
									Czech Republic
Abies alba	55	100.0	4	5	86	141	350	440	
									Poland
									Ukraine
Pseudotsuga menziesii	45	100.0	4	9	45	70	0	0	
									Netherlands
									Poland
Acer platanoides	41	100.0	0	0	101	90	0	0	
									Latvia
									Poland
Acer pseudoplatanus	41	100.0	0	0	120	180	0	0	
									Poland

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(9 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Ulmus spp.	41	100.0	0	0	120	180	0	0	Poland
Populus spp.	30	100.0	4	9	30	42	48	129	Ukraine Netherlands Latvia
Fraxinus pennsylvanica var. lanceolata	22	100.0	2	3	31	46	50	150	Ukraine
Quercus rubra	19	100.0	6	9	36	46	210	300	Netherlands Ukraine
Betula pendula	18	100.0	3	2	61	24	40	110	Lithuania Ukraine Latvia
Carpinus betulus	15	100.0	2	3	90	80	0	0	Poland Czech Republic
Alnus glutinosa	13	100.0	3	1	64	27	67	110	Latvia Ukraine Lithuania
Pinus mugo	11	100.0	0	0	111	0	0	0	

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(10 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
									Lithuania
Ulmus pumila	10	100.0	2	3	31	41	50	135	
									Ukraine
Gleditsia triacanthos	10	100.0	2	5	26	41	40	200	
									Ukraine
Juglans regia	10	100.0	2	4	71	101	150	370	
									Ukraine
Populus alba	9	100.0	0	0	30	0	0	0	
									Poland
Salix alba	9	100.0	4	10	26	40	110	380	
									Ukraine
Quercus petraea	7	100.0	3	9	0	0	0	0	
									Netherlands
Salix spp.	6	100.0	4	10	30	25	0	0	
									Poland
									Netherlands
Larix spp.	5	100.0	3	6	54	22	11	86	
									Netherlands
									Latvia
Acer spp.	4	100.0	6	7	120	160	0	0	
									Czech Republic
Populus tremula	4	100.0	0	0	40	0	0	0	
									Poland

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(11 of 13)**

Region and subregion	Area in the Sub-Region (000 ha)	(%)	MAI (m3/ha/y) min	max	Rotation length (years) min	max	Harvested Vol. (m3/ha) min	max	Country
Tilia spp.	4	100.0	0	0	40	0	0	0	Poland
Pinus spp.	4	100.0	6	12	0	0	0	0	Netherlands
Cotinus coggygria	3	100.0	1	3	21	25	20	75	Ukraine
Picea spp.	2	100.0	8	16	0	0	0	0	Netherlands
Tilia cordata	2	100.0	2	2	81	40	0	0	Czech Republic Lithuania Latvia
Salix fragilis	2	100.0	4	10	26	40	110	380	Ukraine
Alnus incana	1	100.0	0	0	31	0	0	0	Lithuania
Pinus banksiana	1	100.0	1	4	81	121	100	450	Ukraine
Oceania									
Oceania									
Pinus radiata	19	100.0	0	0	30	60	0	0	

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(12 of 13)**

Region and subregion	*Area in the Sub-Region*		*MAI*		*Rotation length*		*Harvested Vol.*		*Country*
	(000 ha)	*(%)*	*(m3/ha/y)*		*(years)*		*(m3/ha)*		
			min	*max*	*min*	*max*	*min*	*max*	
									New Zealand

Table 6b - Reported tree species area and growth parameters by subregions (protective function) **(13 of 13)**

Table 7 – Age class distributions by country, forest category and species

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
Africa											
Eastern and Southern Africa											
	South Africa										
	Productive Plantation Forests										
	Eucalyptus nitens	109.7	99.3	19.4	0.7	1.8	0.0	0.0	0.0	0.0	0.0
	Acacia Australian species	59.5	51.8	9.3	0.2	1.8	0.0	0.0	0.0	0.0	0.0
	Pinus pinaster	0.8	0.3	2.2	7.1	5.3	0.0	0.0	0.0	0.0	0.0
	Pinus taeda	5.5	3.4	4.4	12.2	1.7	0.0	0.0	0.0	0.0	0.0
	Eucalyptus grandis	144.1	140.7	44.9	3.7	1.7	0.0	0.0	0.0	0.0	0.0
	Pinus elliottii	45.3	42.0	88.1	26.1	5.4	0.0	0.0	0.0	0.0	0.0
	Pinus radiata	16.7	12.4	19.4	10.1	5.5	0.0	0.0	0.0	0.0	0.0
	Pinus patula	102.1	86.6	129.7	35.6	5.4	0.0	0.0	0.0	0.0	0.0
	Pinus spp.	22.1	18.6	7.3	2.0	1.4	0.0	0.0	0.0	0.0	0.0
Northern Africa											
	Algeria										
	Productive Semi-Natural Planted Forests										
	Pinus pinaster	0.1	0.1	0.1	0.1	0.3	0.0	0.0	0.0	0.0	0.0
	Acacia spp.	0.4	0.3	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Quercus afares	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Quercus canariensis	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Cedrus spp.	0.2	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Populus spp.	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.0

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Pinus pinea	0.1	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus halepensis	1.1	1.1	1.4	2.1	1.4	0.0	0.0	0.0	0.0	0.0
	Cupressus spp.	0.1	0.1	0.0	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Protective Semi-Natural Planted Forests										
	Pinus halepensis	21.6	21.6	10.8	21.6	32.4	0.0	0.0	0.0	0.0	0.0
	Acacia spp.	8.9	5.9	5.9	3.0	5.9	0.0	0.0	0.0	0.0	0.0
Sudan											
	Productive Plantation Forests										
	Acacia mellifera	70.9	70.9	94.6	47.3	189.1	0.0	0.0	0.0	0.0	0.0
	Eucalyptus spp.	118.2	189.1	165.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tectona grandis	0.0	7.1	14.2	21.3	52.5	46.8	0.0	0.0	0.0	0.0
	Khaya spp.	14.2	14.2	70.9	42.6	56.7	42.6	28.4	14.2	0.0	0.0
	Ailanthus excelsa	9.5	4.7	4.7	7.1	21.3	0.0	0.0	0.0	0.0	0.0
	Bamboo Bamboo	35.5	70.9	35.5	94.6	0.0	0.0	0.0	0.0	0.0	0.0
	Cupressus spp.	35.5	47.3	23.6	23.6	47.3	59.1	0.0	0.0	0.0	0.0
	Acacia senegal	236.4	236.4	177.3	531.9	0.0	0.0	0.0	0.0	0.0	0.0
	Acacia seyal	70.9	106.4	248.2	283.7	0.0	0.0	0.0	0.0	0.0	0.0
	Acacia nilotica	189.1	189.1	236.4	331.0	0.0	0.0	0.0	0.0	0.0	0.0
	Productive Semi-Natural Planted Forests										
	Acacia nilotica	28.5	14.2	42.7	56.9	0.0	0.0	0.0	0.0	0.0	0.0
	Acacia seyal	11.9	19.0	52.2	154.1	0.0	0.0	0.0	0.0	0.0	0.0
	Acacia mellifera	8.3	19.0	25.0	23.5	0.0	0.0	0.0	0.0	0.0	0.0
	Acacia tortilis	2.8	4.6	11.4	9.7	0.0	0.0	0.0	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(2 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Acacia senegal	45.5	132.8	91.0	110.0	0.0	0.0	0.0	0.0	0.0	0.0
	Acacia albida	1.9	1.9	2.8	3.8	8.5	0.0	0.0	0.0	0.0	0.0
	Acacia tortilis var siprocarpa	2.0	2.6	7.4	5.1	11.4	0.0	0.0	0.0	0.0	0.0
	Protective Plantation Forests										
	Cupressus spp.	5.1	6.8	3.4	5.1	3.4	10.1	0.0	0.0	0.0	0.0
	Eucalyptus spp.	9.5	16.9	16.9	24.3	0.0	0.0	0.0	0.0	0.0	0.0
	Ailanthus spp.	6.8	6.1	4.1	8.4	5.1	3.4	0.0	0.0	0.0	0.0
	Acacia nilotica	12.2	6.8	6.8	14.9	13.5	13.5	0.0	0.0	0.0	0.0
	Acacia mellifera	2.4	4.7	9.5	8.5	8.0	14.2	0.0	0.0	0.0	0.0
	Acacia senegal	50.7	30.4	20.3	50.7	50.7	0.0	0.0	0.0	0.0	0.0
	Acacia seyal	27.0	13.5	20.3	20.3	20.3	33.8	0.0	0.0	0.0	0.0
	Bamboo Bamboo	5.1	5.4	7.4	7.1	8.8	0.0	0.0	0.0	0.0	0.0
	Khaya spp.	2.7	2.4	5.1	5.1	3.4	5.1	3.4	3.4	3.4	0.0
	Protective Semi-Natural Planted Forests										
	Acacia albida	0.2	0.3	0.5	0.5	0.5	0.4	0.3	0.0	0.0	0.0
	Acacia mellifera	9.6	6.4	19.3	12.8	16.0	0.0	0.0	0.0	0.0	0.0
	Acacia tortilis	1.3	3.8	3.8	3.8	5.6	7.1	0.0	0.0	0.0	0.0
	Acacia seyal	8.3	7.1	6.4	9.0	12.8	20.5	0.0	0.0	0.0	0.0
	Acacia nilotica	4.1	7.4	3.0	4.6	6.4	0.0	0.0	0.0	0.0	0.0
	Acacia senegal	9.0	9.0	4.5	26.2	26.2	0.0	0.0	0.0	0.0	0.0
	Acacia tortilis var siprocarpa	0.2	0.4	0.4	0.3	0.6	0.7	0.0	0.0	0.0	0.0
Asia											
East Asia											

Table 7 - Age class distributions by country, forest category and species **(3 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	China										
	Productive Plantation Forests										
	Cunninghamia lanceolata	953.9	953.9	3,330.4	1,126.7	236.0	46.5	0.0	0.0	0.0	0.0
	Pinus tabulaeformis Carr.	257.9	257.9	515.9	469.1	246.2	25.2	25.2	0.0	0.0	0.0
	Populus spp.	350.1	309.0	572.2	223.8	0.0	0.0	0.0	0.0	0.0	0.0
	Eucalyptus spp.	683.0	576.4	982.7	154.4	0.0	0.0	0.0	0.0	0.0	0.0
	Larix spp.	42.9	42.9	85.8	85.8	140.4	140.4	27.4	3.4	1.7	0.0
	Productive Semi-Natural Planted Forests										
	Cunninghamia lanceolata	1,255.0	1,255.0	4,381.6	1,482.4	310.5	61.2	0.0	0.0	0.0	0.0
	Pinus sylvestris var mongolica	22.7	22.7	45.3	45.3	45.3	50.7	101.5	70.0	1.4	4.3
	Pinus massoniana	370.2	370.2	740.3	740.3	1,185.9	1,185.9	1,074.2	368.1	0.0	0.0
	Quercus spp.	38.6	38.6	77.1	77.1	77.1	32.6	33.6	3.0	6.0	0.0
	Pinus tabulaeformis Carr.	55.4	55.4	110.9	110.9	110.9	194.1	388.2	121.2	7.4	22.1
	Populus spp.	346.3	341.9	776.0	300.4	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus yunnanensis	22.5	22.5	45.0	54.3	91.1	22.9	22.9	0.0	0.0	0.0
	Pinus koraiensis	31.7	31.7	63.4	63.4	63.4	63.4	10.2	5.1	0.0	0.0
	Larix spp.	133.3	133.3	266.7	266.7	266.7	266.7	406.5	362.6	159.4	65.2
	Cupressus funebris	57.7	57.7	115.3	115.3	188.7	188.7	36.8	6.9	0.0	0.0
	Protective Plantation Forests										
	Casuarina equisetifolia	30.9	32.0	83.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus thunbergiana	10.1	10.1	20.2	83.4	48.9	5.9	5.9	0.0	0.0	0.0
	Eucalyptus spp.	40.8	40.1	83.5	5.9	0.0	0.0	0.0	0.0	0.0	0.0
	Populus spp.	160.1	149.3	360.1	241.8	0.0	0.0	0.0	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(4 of 29)**

Region and subregion	Country		Total Forest Area reported by Age Class distribution (1,000 ha)									
			0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
		Cunninghamia lanceolata	58.3	58.3	144.8	31.7	4.2	12.1	0.0	0.0	0.0	0.0
		Pinus tabulaeformis Carr.	26.7	26.7	53.4	37.2	14.6	1.6	1.6	0.0	0.0	0.0
		Larix spp.	14.6	14.6	29.2	29.2	17.2	17.2	5.1	0.4	0.2	0.0
		Picea asperata	3.5	3.5	7.0	7.0	0.7	0.7	0.2	0.0	0.0	0.0
		Metasequoia glyptostroboides	13.2	13.2	32.4	9.4	0.0	0.0	0.0	0.0	0.0	0.0
		Quercus spp.	3.4	3.4	6.8	3.0	3.0	0.0	0.0	0.1	0.1	0.1
		Protective Semi-Natural Planted Forests										
		Cunninghamia lanceolata	254.9	254.9	632.8	138.6	18.3	52.7	0.0	0.0	0.0	0.0
		Populus spp.	699.8	653.0	1,574.5	1,057.2	0.0	0.0	0.0	0.0	0.0	0.0
		Pinus armandii	101.7	101.7	163.6	71.5	55.4	9.6	0.0	0.0	0.0	0.0
		Pinus massoniana	227.7	227.7	455.4	455.4	434.2	434.2	176.7	77.1	0.0	0.0
		Picea asperata	21.3	21.3	42.5	42.5	42.5	42.5	10.1	6.2	1.2	0.0
		Pinus yunnanensis	62.1	62.1	124.3	147.5	89.2	37.9	37.9	0.0	0.0	0.0
		Cupressus funebris	64.1	64.1	128.3	128.3	75.5	75.5	22.4	2.8	0.0	0.0
		Larix spp.	46.5	46.5	93.0	93.0	93.0	93.0	108.1	85.8	31.7	14.1
		Pinus tabulaeformis Carr.	66.7	66.7	133.4	133.4	133.4	140.4	280.7	69.3	5.8	20.5
		Quercus spp.	17.2	17.2	34.4	34.4	34.4	30.4	30.4	0.7	2.1	0.0
	Japan											
		Protective Plantation Forests										
		Other Broadleaves	5.2	6.2	12.4	13.4	23.7	22.7	12.4	6.2	0.5	0.5
		Other Coniferous	11.4	11.4	17.5	17.5	24.8	9.3	6.2	4.1	0.5	0.5
		Cryptomeria japonica	45.4	90.8	317.9	772.0	1,407.8	1,226.1	499.5	136.2	22.7	22.7
		Chamaecyparis obtusa	51.6	103.2	335.4	619.3	696.7	464.4	180.6	103.2	12.9	12.9

Table 7 - Age class distributions by country, forest category and species **(5 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Abies sachalinensis	7.2	7.2	86.7	231.2	245.6	115.6	21.7	7.2	0.0	0.0
	Pinus densiflora	0.0	0.0	9.3	69.7	204.4	125.4	37.2	13.9	2.3	2.3
	Larix kaempheri	10.3	10.3	51.6	144.5	381.9	361.2	61.9	10.3	0.0	0.0
	Picea jezoensis var hondoensis	1.0	2.1	10.3	19.1	11.9	4.6	1.5	1.0	0.0	0.0
	Picea jezoensis	1.0	2.1	10.3	19.1	11.9	4.6	1.5	1.0	0.0	0.0
	Quercus acutissima	3.1	7.2	42.3	23.7	12.4	11.4	3.1	0.0	0.0	0.0
	Quercus serrata	6.6	7.4	14.0	3.7	2.9	3.3	2.1	1.2	0.0	0.0
	Quercus dentata	5.0	5.6	10.5	2.8	2.2	2.5	1.5	0.9	0.0	0.0
	Pinus thunbergiana	0.0	0.0	9.3	69.7	204.4	125.4	37.2	13.9	2.3	2.3
	Quercus mongolica	5.0	5.6	10.5	2.8	2.2	2.5	1.5	0.9	0.0	0.0
South and Southeast Asia											
	India										
	Productive Plantation Forests										
	Dalbergia sissoo	10.4	6.9	7.3	2.4	2.0	2.6	0.0	0.0	0.0	0.0
	Cedrus deodara	1.1	1.7	2.6	2.1	1.9	1.0	0.0	0.0	0.0	0.0
	Pinus roxburghii	11.4	7.6	16.7	5.7	4.6	6.5	0.0	0.0	0.0	0.0
	Acacia mearnsii	3.5	2.3	4.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Bombax ceiba	1.8	1.2	2.3	1.6	1.3	2.3	0.0	0.0	0.0	0.0
	Shorea robusta	7.4	4.9	8.2	3.4	2.8	5.0	0.0	0.0	0.0	0.0
	Eucalyptus spp.	43.0	64.4	103.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Gmelina arborea	3.5	2.3	2.2	0.9	0.9	0.8	0.0	0.0	0.0	0.0
	Populus spp.	4.8	3.2	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tectona grandis	38.5	36.6	69.3	32.9	29.9	24.6	0.0	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(6 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Productive Semi-Natural Planted Forests										
	Cedrus deodara	17.0	26.4	40.2	32.3	29.8	15.1	0.0	0.0	0.0	0.0
	Eucalyptus spp.	656.1	984.2	1,576.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Gmelina arborea	52.9	35.4	33.1	14.2	13.2	12.1	0.0	0.0	0.0	0.0
	Tectona grandis	587.3	559.0	1,057.8	502.4	456.4	375.0	0.0	0.0	0.0	0.0
	Populus spp.	73.3	48.9	38.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Shorea robusta	112.4	74.8	124.5	52.6	42.5	75.7	0.0	0.0	0.0	0.0
	Bombax ceiba	27.7	18.5	35.2	24.1	20.1	35.2	0.0	0.0	0.0	0.0
	Acacia mearnsii	53.9	35.9	71.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Dalbergia sissoo	159.2	106.1	111.0	37.1	29.9	39.1	0.0	0.0	0.0	0.0
	Pinus roxburghii	174.5	116.6	254.9	87.6	70.8	99.7	0.0	0.0	0.0	0.0
	Protective Plantation Forests										
	Dalbergia sissoo	21.5	14.3	15.0	5.0	4.0	5.3	0.0	0.0	0.0	0.0
	Shorea robusta	10.1	6.7	11.2	4.7	3.8	6.8	0.0	0.0	0.0	0.0
	Bombax ceiba	3.7	2.5	4.8	3.3	2.7	4.8	0.0	0.0	0.0	0.0
	Acacia nilotica	32.6	21.7	22.3	3.1	2.6	4.6	0.0	0.0	0.0	0.0
	Acacia mearnsii	7.3	4.8	9.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus roxburghii	18.9	12.6	27.6	9.5	7.6	10.8	0.0	0.0	0.0	0.0
	Cedrus deodara	2.3	3.6	5.4	4.4	4.0	2.0	0.0	0.0	0.0	0.0
	Eucalyptus spp.	17.7	26.6	42.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Gmelina arborea	14.3	9.6	9.0	3.8	3.6	3.3	0.0	0.0	0.0	0.0
	Protective Semi-Natural Planted Forests										
	Eucalyptus spp.	87.5	131.2	210.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(7 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Cedrus deodara	11.4	17.6	26.8	21.5	19.8	10.1	0.0	0.0	0.0	0.0
	Pinus roxburghii	93.1	62.2	135.9	46.7	37.7	53.2	0.0	0.0	0.0	0.0
	Acacia mearnsii	35.9	23.9	47.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Acacia nilotica	160.8	107.2	109.8	15.4	12.9	22.7	0.0	0.0	0.0	0.0
	Bombax ceiba	18.4	12.3	23.5	16.1	13.4	23.5	0.0	0.0	0.0	0.0
	Gmelina arborea	70.5	47.2	44.2	18.9	17.6	16.1	0.0	0.0	0.0	0.0
	Dalbergia sissoo	106.1	70.8	74.0	24.8	19.9	26.1	0.0	0.0	0.0	0.0
	Shorea robusta	50.0	33.2	55.3	23.4	18.9	33.7	0.0	0.0	0.0	0.0
	Indonesia										
	Productive Plantation Forests										
	Agathis spp.	18.4	26.5	22.4	12.2	13.3	9.2	0.0	0.0	0.0	0.0
	Pinus merkusii	129.2	95.2	156.4	190.3	81.6	27.2	0.0	0.0	0.0	0.0
	Swietenia macrophylla	53.0	28.6	13.3	3.1	4.1	0.0	0.0	0.0	0.0	0.0
	Tectona grandis	540.8	188.6	201.2	113.2	100.6	50.3	25.2	12.6	12.6	12.6
	Myanmar										
	Productive Plantation Forests										
	Eucalyptus camaldulensis	1.1	2.1	2.2	1.1	0.5	0.0	0.0	0.0	0.0	0.0
	Xylia xylocapa	10.1	6.5	23.4	21.6	6.4	0.0	1.6	0.0	0.0	0.0
	Pterocarpus macrocarpus	1.6	4.7	19.0	9.5	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus spp.	3.7	2.6	3.9	2.3	1.3	0.0	0.1	0.0	0.0	0.0
	Tectona grandis	133.2	101.6	194.9	105.7	17.4	0.0	4.1	0.0	0.0	0.0
	Viet Nam										
	Productive Plantation Forests										

Table 7 - Age class distributions by country, forest category and species **(8 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Acacia spp.	185.8	78.9	17.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
	Manglietia conifera	54.1	15.0	10.0	5.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus spp.	70.5	33.8	39.7	28.8	9.9	0.0	0.0	0.0	0.0	0.0
	Melaleuca cajuputi	67.2	79.2	32.1	74.2	0.0	0.0	0.0	0.0	0.0	0.0
	Tectona grandis	14.8	4.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Bamboo Bamboo	27.2	59.4	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
	Eucalyptus spp.	222.4	286.5	67.1	7.0	3.0	0.0	0.0	0.0	0.0	0.0
	Styrax tonkinensis	45.1	49.1	12.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
	Melia azaderach	9.6	2.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Rizophora apiculata	36.6	9.9	7.9	9.9	2.0	0.0	0.0	0.0	0.0	0.0
	Protective Plantation Forests										
	Dipterocarpus spp.	56.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Senna siamea	20.3	4.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Chukrasia tabularis	15.9	0.0	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Bamboo Bamboo	47.0	77.9	0.0	18.0	7.0	0.0	0.0	0.0	0.0	0.0
	Rizophora apiculata	49.8	13.2	11.2	13.2	2.0	0.0	0.0	0.0	0.0	0.0
	Casuarina equisetifolia	60.3	27.1	9.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
	Acacia spp.	82.6	35.8	9.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus spp.	93.9	45.0	54.0	38.0	13.0	0.0	0.0	0.0	0.0	0.0
	Cunninghamia lanceolata	25.5	2.0	2.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0
Western and Central Asia											
	Iran (Islamic Republic of)										
	Productive Plantation Forests										

Table 7 - Age class distributions by country, forest category and species **(9 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Eucalyptus spp.	24.6	6.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Populus spp.	468.2	117.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Productive Semi-Natural Planted Forests										
	Acacia arabica	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pistacia atlantica	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Amygdalus scoparia	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Quercus persica	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Acer laetum	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Acer insigne	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alnus subcordata	0.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Juglans regia	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fraxinus excelsior	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Prosopis juliflora	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Europe											
Europe											
	Belgium										
	Productive Plantation Forests										
	Other Broadleaves	5.6	5.3	3.6	1.5	0.3	0.2	0.0	0.0	0.0	0.0
	Larix spp.	0.5	0.2	0.5	0.7	2.1	3.1	0.9	0.1	0.0	0.1
	Picea abies	0.0	11.9	15.3	17.1	22.2	32.4	27.3	30.7	11.9	1.7
	Pinus spp.	0.6	0.6	1.4	4.7	5.2	3.6	5.8	3.6	1.4	0.8
	Other Coniferous	0.2	0.3	0.3	0.5	0.8	0.5	0.1	0.0	0.0	0.0
	Populus spp.	2.7	2.4	4.5	9.1	8.5	1.2	1.8	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(10 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Pseudotsuga menziesii	2.9	2.9	3.5	3.9	3.9	1.5	0.2	0.4	0.2	0.0
	Productive Semi-Natural Planted Forests										
	Populus spp.	3.2	3.2	6.9	8.4	8.4	4.8	5.3	1.6	0.0	0.0
	Fagus sylvatica	0.1	0.1	0.2	0.5	0.5	0.7	1.3	1.2	0.5	0.9
	Betula spp.	1.1	1.1	2.4	0.6	0.5	0.2	0.1	0.0	0.0	0.0
	Pinus sylvestris	0.4	0.4	0.9	12.6	12.6	6.8	7.7	1.4	0.4	0.0
	Quercus robur	0.3	0.3	0.6	0.6	0.6	1.1	2.0	1.9	0.8	0.6
	Croatia										
	Productive Plantation Forests										
	Pinus sylvestris	0.2	0.2	0.4	0.4	0.4	0.1	0.1	0.1	0.0	0.0
	Pinus nigra	0.7	0.8	1.0	1.4	1.3	0.9	1.4	1.4	0.9	0.2
	Populus nigra	0.3	0.4	0.7	0.6	0.2	0.0	0.0	0.0	0.0	0.0
	Salix nigra	0.7	0.6	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0
	Picea abies	0.1	0.1	0.3	0.2	0.2	0.0	0.1	0.0	0.0	0.0
	Pinus strobus	0.0	0.1	0.1	0.2	0.2	0.0	0.1	0.0	0.0	0.0
	Larix decidua Mill.	0.0	0.0	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0
	Salix alba	0.7	0.6	0.9	0.5	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus halepensis	0.6	0.6	1.3	1.9	3.5	2.3	2.6	0.0	0.0	0.0
	Populus alba	0.3	0.4	0.7	0.6	0.2	0.0	0.0	0.0	0.0	0.0
	Populus x euramericana	2.3	1.5	3.0	2.6	0.6	0.0	0.0	0.0	0.0	0.0
	Czech Republic										
	Productive Semi-Natural Planted Forests										
	Fraxinus excelsior	1.1	1.1	1.7	2.1	2.4	3.0	6.9	4.5	1.4	2.4

Table 7 - Age class distributions by country, forest category and species **(11 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Pinus sylvestris	13.6	13.6	31.8	27.7	27.7	24.8	61.5	77.6	42.5	92.1
	Acer spp.	2.0	2.0	2.0	2.2	3.4	3.5	4.1	2.1	0.8	2.1
	Betula spp.	2.7	2.6	12.5	7.1	7.0	8.8	17.8	8.5	1.6	1.6
	Carpinus betulus	0.3	0.3	0.8	1.0	1.5	2.2	9.7	6.8	2.0	4.5
	Fagus sylvatica	9.4	9.2	9.6	10.8	11.8	8.8	23.3	20.1	11.3	45.1
	Quercus spp.	5.3	5.4	7.0	7.8	9.7	8.8	29.9	27.1	11.7	29.8
	Larix decidua Mill.	5.4	5.4	10.6	6.2	9.9	8.3	16.5	15.6	7.4	11.2
	Alnus glutinosa	1.1	1.1	2.2	2.8	6.8	8.6	8.7	3.3	0.8	0.9
	Picea abies	58.4	58.4	114.1	93.4	107.6	81.7	228.2	245.1	123.2	186.7
	Protective Semi-Natural Planted Forests										
	Pinus sylvestris	0.4	0.4	0.6	0.4	0.4	0.3	0.9	1.0	0.7	4.9
	Carpinus betulus	0.0	0.0	0.0	0.1	0.1	0.1	0.7	0.5	0.2	0.7
	Larix decidua Mill.	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.3
	Fagus sylvatica	0.2	0.2	0.2	0.2	0.2	0.2	0.6	0.6	0.3	2.8
	Betula spp.	0.1	0.1	0.3	0.2	0.2	0.2	0.7	0.4	0.1	0.1
	Tilia cordata	0.0	0.0	0.0	0.0	0.1	0.1	0.2	0.1	0.0	0.0
	Fraxinus excelsior	0.0	0.0	0.1	0.1	0.1	0.1	0.2	0.1	0.0	0.2
	Acer spp.	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.2
	Picea abies	2.1	2.1	2.9	1.9	2.0	1.3	4.6	4.3	2.8	13.9
	Quercus spp.	0.1	0.1	0.1	0.1	0.2	0.1	0.7	0.8	0.3	1.4
Finland											
	Productive Semi-Natural Planted Forests										
	Betula pendula	52.0	71.8	64.4	42.1	14.9	2.5	0.0	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(12 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Picea abies	170.8	170.8	246.6	151.8	161.3	28.5	19.0	0.0	0.0	0.0
	Pinus sylvestris	322.1	322.1	1,127.4	1,087.1	845.6	241.6	80.5	0.0	0.0	0.0
	Betula pubescens	2.1	6.7	8.0	0.8	2.7	0.6	0.0	0.0	0.0	0.0
	France										
	Productive Plantation Forests										
	Pinus nigra	4.7	10.2	21.3	26.8	15.7	0.0	0.0	0.0	0.0	0.0
	Quercus rubra	5.3	7.3	5.3	0.6	1.2	0.0	0.0	0.0	0.0	0.0
	Pseudotsuga menziesii	36.8	43.5	113.8	97.0	43.5	0.0	0.0	0.0	0.0	0.0
	Larix kaempheri	0.0	0.6	1.4	3.1	6.5	8.1	0.0	0.0	0.0	0.0
	Cedrus atlantica	3.3	5.9	7.9	1.8	0.8	0.0	0.0	0.0	0.0	0.0
	Pinus nigra (laricius) J.F.	15.7	17.7	30.5	22.6	11.8	0.0	0.0	0.0	0.0	0.0
	Picea sitchensis	1.2	2.4	10.6	18.5	6.7	0.0	0.0	0.0	0.0	0.0
	Picea abies	11.2	22.4	97.2	149.6	93.5	0.0	0.0	0.0	0.0	0.0
	Abies grandis	1.0	0.8	3.3	9.4	5.1	0.0	0.0	0.0	0.0	0.0
	Pinus pinaster	75.6	103.9	151.1	160.6	122.8	160.6	132.2	28.3	9.4	0.0
	Productive Semi-Natural Planted Forests										
	Prunus avium	1.6	1.2	0.9	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Acer spp.	1.5	0.6	0.3	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Quercus robur	2.9	3.4	3.2	0.5	0.3	0.0	0.0	0.0	0.0	0.0
	Fraxinus excelsior	2.1	2.5	1.7	0.0	0.2	0.0	0.0	0.0	0.0	0.0
	Fagus sylvatica	2.5	2.9	3.5	2.3	0.3	0.0	0.0	0.0	0.0	0.0
	Larix decidua Mill.	1.9	0.8	1.5	1.2	1.1	0.0	0.0	0.0	0.0	0.0
	Abies alba	0.6	1.5	7.4	13.0	7.1	0.0	0.0	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(13 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Quercus petraea	2.7	3.9	2.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus sylvestris	1.8	2.9	5.4	11.5	14.4	0.0	0.0	0.0	0.0	0.0
	Pinus pinea	0.8	1.2	1.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
	Italy										
	Productive Plantation Forests										
	Populus hybrids	34.1	49.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus radiata	0.0	0.0	0.6	3.5	1.8	0.0	0.0	0.0	0.0	0.0
	Eucalyptus spp.	7.0	8.2	8.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Prunus avium	1.3	1.5	1.3	0.2	0.0	0.0	0.0	0.0	0.0	0.0
	Juglans regia	2.9	3.7	2.9	1.5	1.5	1.5	0.7	0.0	0.0	0.0
	Latvia										
	Productive Plantation Forests										
	Pinus sylvestris	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Populus tremula	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Picea abies	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Betula pendula	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Quercus robur	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fraxinus excelsior	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alnus incana	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Productive Semi-Natural Planted Forests										
	Betula pendula	3.2	1.1	0.6	0.6	0.9	1.3	1.9	0.4	0.1	0.0
	Tilia cordata	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
	Quercus robur	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.3

Table 7 - Age class distributions by country, forest category and species **(14 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Picea abies	25.8	24.7	51.9	62.1	64.5	28.5	7.3	2.4	0.8	0.8
	Alnus glutinosa	0.0	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0
	Larix spp.	0.0	0.1	0.4	0.2	0.3	0.1	0.0	0.0	0.0	0.0
	Pinus sylvestris	15.1	18.2	17.9	14.8	20.7	32.7	94.6	50.6	11.4	8.2
	Populus spp.	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	Populus tremula	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fraxinus excelsior	0.0	0.0	0.1	0.2	0.3	0.3	0.1	0.0	0.0	0.1
	Protective Semi-Natural Planted Forests										
	Larix spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Acer platanoides	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tilia cordata	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
	Fraxinus excelsior	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Quercus robur	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2
	Picea abies	0.7	1.2	2.3	3.8	4.2	2.0	0.7	0.5	0.3	0.4
	Pinus sylvestris	0.5	1.2	1.6	2.8	4.6	6.3	20.8	13.4	3.0	4.4
	Populus spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Alnus glutinosa	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Betula pendula	0.1	0.1	0.0	0.0	0.1	0.2	0.2	0.1	0.0	0.0
Lithuania											
	Productive Plantation Forests										
	Quercus robur	0.4	0.4	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
	Picea abies	16.5	16.5	6.6	1.8	1.8	0.9	0.0	0.0	0.0	0.0
	Betula pendula	0.1	0.1	0.2	0.2	0.2	0.1	0.0	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(15 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Alnus glutinosa	0.6	0.6	0.6	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus sylvestris	4.9	4.9	4.2	6.8	13.5	11.4	5.2	1.0	0.0	0.0
	Productive Semi-Natural Planted Forests										
	Populus tremula	0.7	0.7	1.0	0.3	0.1	0.1	0.1	0.0	0.0	0.0
	Pinus sylvestris	4.4	4.4	10.1	11.4	29.1	38.0	22.8	5.1	1.3	0.0
	Picea abies	13.2	13.2	38.4	30.5	21.2	10.6	4.0	1.3	0.0	0.0
	Betula pendula	1.5	1.5	3.0	1.7	1.4	1.7	0.7	0.0	0.0	0.0
	Alnus incana	0.3	0.3	1.1	0.5	0.5	0.2	0.0	0.0	0.0	0.0
	Quercus robur	0.5	0.5	0.1	0.2	0.4	0.7	0.2	0.1	0.1	0.1
	Fraxinus excelsior	0.1	0.1	0.8	1.0	0.6	0.1	0.1	0.1	0.0	0.0
	Alnus glutinosa	0.3	0.3	2.6	1.3	0.8	0.2	0.1	0.0	0.0	0.0
	Protective Plantation Forests										
	Alnus glutinosa	0.1	0.1	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus mugo	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	1.3	0.2
	Tilia cordata	0.0	0.0	0.1	0.2	0.1	0.0	0.0	0.0	0.0	0.0
	Quercus robur	0.1	0.1	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0
	Betula pendula	0.0	0.0	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0
	Pinus sylvestris	1.4	1.4	2.3	4.3	8.9	6.6	2.6	0.9	0.3	0.0
	Picea abies	2.4	2.4	2.2	1.0	0.5	0.3	0.2	0.0	0.0	0.0
	Protective Semi-Natural Planted Forests										
	Alnus glutinosa	0.0	0.0	0.4	0.3	0.1	0.1	0.0	0.0	0.0	0.0
	Pinus sylvestris	1.5	1.5	4.8	6.7	16.3	17.5	9.1	1.8	0.6	0.6
	Quercus robur	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0	0.1

Table 7 - Age class distributions by country, forest category and species **(16 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Picea abies	2.7	2.7	7.8	6.2	4.0	1.9	1.3	0.3	0.0	0.0
	Fraxinus excelsior	0.0	0.0	0.3	0.2	0.1	0.1	0.1	0.1	0.0	0.0
	Tilia cordata	0.0	0.0	0.1	0.3	0.2	0.1	0.1	0.1	0.0	0.1
	Alnus incana	0.1	0.1	0.3	0.3	0.2	0.1	0.0	0.0	0.0	0.0
	Betula pendula	0.3	0.3	1.0	0.6	0.6	0.7	0.3	0.0	0.0	0.0
	Netherlands										
	Productive Plantation Forests										
	Pseudotsuga menziesii	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
	Quercus rubra	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fagus sylvatica	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Betula spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Quercus robur	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
	Quercus petraea	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
	Pinus sylvestris	0.0	0.0	0.1	0.1	0.1	0.1	0.3	0.2	0.1	0.1
	Salix spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Populus spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Picea spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Larix spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
	Productive Semi-Natural Planted Forests										
	Fagus sylvatica	0.1	0.4	0.7	1.0	1.3	1.4	2.7	1.9	0.6	0.7
	Quercus petraea	0.1	0.7	1.3	1.8	2.3	2.5	5.0	3.4	1.1	1.3
	Picea spp.	0.0	0.2	0.5	0.7	0.8	0.9	1.8	1.2	0.4	0.5

Table 7 - Age class distributions by country, forest category and species **(17 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Quercus robur	0.1	0.7	1.3	1.8	2.3	2.5	5.0	3.4	1.1	1.3
	Betula spp.	0.1	0.4	0.7	1.0	1.3	1.4	2.7	1.9	0.6	0.7
	Larix spp.	0.1	0.5	1.0	1.3	1.7	1.8	3.6	2.5	0.8	1.0
	Pinus sylvestris	0.3	1.9	3.8	5.3	6.7	7.3	14.5	9.8	3.1	3.8
	Pseudotsuga menziesii	0.1	0.6	1.2	1.7	2.1	2.3	4.6	3.1	1.0	1.2
	Salix spp.	0.0	0.2	0.5	0.7	0.8	0.9	1.8	1.2	0.4	0.5
	Populus spp.	0.0	0.2	0.5	0.7	0.8	0.9	1.8	1.2	0.4	0.5
	Pinus spp.	0.1	0.4	0.7	1.0	1.3	1.4	2.7	1.9	0.6	0.7
	Quercus rubra	0.0	0.2	0.5	0.7	0.8	0.9	1.8	1.2	0.4	0.5
	Protective Semi-Natural Planted Forests										
	Populus spp.	0.0	0.1	0.2	0.2	0.3	0.3	0.6	0.4	0.1	0.2
	Quercus petraea	0.0	0.2	0.4	0.6	0.8	0.8	1.7	1.1	0.4	0.4
	Quercus rubra	0.0	0.1	0.2	0.2	0.3	0.3	0.6	0.4	0.1	0.2
	Fagus sylvatica	0.0	0.1	0.2	0.3	0.4	0.5	0.9	0.6	0.2	0.2
	Betula spp.	0.0	0.1	0.2	0.3	0.4	0.5	0.9	0.6	0.2	0.2
	Quercus robur	0.0	0.2	0.4	0.6	0.8	0.8	1.7	1.1	0.4	0.4
	Larix spp.	0.0	0.2	0.3	0.4	0.6	0.6	1.2	0.8	0.3	0.3
	Pinus sylvestris	0.1	0.6	1.3	1.8	2.2	2.4	4.8	3.3	1.0	1.3
	Salix spp.	0.0	0.1	0.2	0.2	0.3	0.3	0.6	0.4	0.1	0.2
	Pinus spp.	0.0	0.1	0.2	0.3	0.4	0.5	0.9	0.6	0.2	0.2
	Picea spp.	0.0	0.1	0.2	0.2	0.3	0.3	0.6	0.4	0.1	0.2
	Pseudotsuga menziesii	0.0	0.2	0.4	0.6	0.7	0.8	1.5	1.0	0.3	0.4
Norway											

Table 7 - Age class distributions by country, forest category and species **(18 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Productive Plantation Forests										
	Abies spp.	0.0	0.0	0.0	2.1	3.2	1.5	1.0	0.0	0.0	0.0
	Picea abies	1.8	5.3	29.8	36.9	40.4	36.9	24.6	0.0	0.0	0.0
	Pinus contorta	0.0	0.0	6.1	7.9	3.1	1.3	0.0	0.0	0.0	0.0
	Larix spp.	0.0	0.0	1.5	1.5	0.0	0.7	1.5	0.0	0.0	0.0
	Picea sitchensis	0.0	0.0	3.3	23.6	10.8	5.7	3.8	0.0	0.0	0.0
	Productive Semi-Natural Planted Forests										
	Pinus sylvestris	11.9	17.9	41.7	39.8	43.7	37.8	6.0	0.0	0.0	0.0
	Picea abies	73.3	109.9	256.5	244.2	268.7	232.0	36.6	0.0	0.0	0.0
Poland											
	Productive Plantation Forests										
	Picea abies	0.2	0.1	0.1	0.2	0.2	0.2	0.3	0.3	0.1	0.1
	Acer pseudoplatanus	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	Abies alba	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
	Acer platanoides	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	Carpinus betulus	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Larix decidua Mill.	0.2	0.8	0.5	1.2	1.2	1.4	2.4	1.7	0.7	0.6
	Fagus sylvatica	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.3	0.1	0.2
	Betula spp.	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0
	Ulmus spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	Tilia spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Populus tremula	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus sylvestris	0.2	0.8	0.5	1.2	1.2	1.4	2.4	1.7	0.7	0.7

Table 7 - Age class distributions by country, forest category and species **(19 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Populus alba	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pseudotsuga menziesii	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0
	Salix spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Robinia pseudoacacia	0.0	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.0	0.0
	Quercus spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	Alnus spp.	0.1	0.2	0.1	0.3	0.3	0.2	0.4	0.2	0.1	0.0
	Fraxinus excelsior	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.1
	Productive Semi-Natural Planted Forests										
	Acer pseudoplatanus	2.9	8.4	5.6	5.5	5.5	6.3	11.8	9.6	4.1	14.0
	Picea abies	28.6	21.0	14.0	35.0	35.0	27.1	57.3	52.5	22.3	25.5
	Ulmus spp.	2.9	8.4	5.6	5.5	5.5	6.3	11.8	9.6	4.1	14.0
	Fraxinus excelsior	2.9	8.4	5.6	5.5	5.5	6.3	11.8	9.6	4.1	14.0
	Betula spp.	7.0	17.9	12.0	25.5	25.5	29.0	41.3	15.0	2.6	0.0
	Fagus sylvatica	50.9	14.5	9.6	13.4	13.4	18.8	41.5	45.6	22.8	37.5
	Larix decidua Mill.	37.8	136.1	90.8	208.0	208.0	245.8	425.4	302.5	122.9	113.4
	Carpinus betulus	2.2	0.4	0.3	2.2	2.2	4.4	6.4	2.7	0.7	0.9
	Salix spp.	0.4	0.5	0.3	1.3	1.3	0.8	1.3	0.7	0.2	0.3
	Tilia spp.	0.4	0.5	0.3	1.3	1.3	0.8	1.3	0.7	0.2	0.3
	Acer platanoides	2.9	8.4	5.6	5.5	5.5	6.3	11.8	9.6	4.1	14.0
	Abies alba	13.3	0.8	0.6	3.5	3.5	7.3	14.0	12.6	5.9	8.4
	Populus alba	2.5	5.0	3.4	1.9	1.9	0.8	0.9	0.3	0.1	0.0
	Populus tremula	0.4	0.5	0.3	1.3	1.3	0.8	1.3	0.7	0.2	0.3
	Quercus spp.	2.9	8.4	5.6	5.5	5.5	6.3	11.8	9.6	4.1	14.0

Table 7 - Age class distributions by country, forest category and species **(20 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Robinia pseudoacacia	7.0	17.9	12.0	25.5	25.5	29.0	41.3	15.0	2.6	0.0
	Pseudotsuga menziesii	13.3	0.8	0.6	3.5	3.5	7.3	14.0	12.6	5.9	8.4
	Pinus sylvestris	37.8	136.1	90.7	207.9	207.9	245.7	425.3	302.4	122.9	113.4
	Alnus spp.	11.8	26.6	17.8	45.9	45.9	38.5	62.1	32.6	8.9	5.9
	Protective Semi-Natural Planted Forests										
	Abies alba	7.5	0.5	0.3	2.0	2.0	4.1	7.9	7.1	3.3	4.7
	Acer pseudoplatanus	1.7	4.7	3.2	3.1	3.1	3.5	6.6	5.4	2.3	7.9
	Larix decidua Mill.	21.3	76.5	51.0	116.9	116.9	138.2	239.2	170.1	69.1	63.8
	Populus tremula	0.2	0.3	0.2	0.8	0.8	0.5	0.7	0.4	0.1	0.2
	Fagus sylvatica	28.6	8.1	5.4	7.5	7.5	10.6	23.4	25.6	12.8	21.1
	Betula spp.	4.0	10.1	6.7	14.3	14.3	16.3	23.2	8.4	1.5	0.0
	Fraxinus excelsior	1.7	4.7	3.2	3.1	3.1	3.5	6.6	5.4	2.3	7.9
	Ulmus spp.	1.7	4.7	3.2	3.1	3.1	3.5	6.6	5.4	2.3	7.9
	Picea abies	16.1	11.8	7.9	19.7	19.7	15.2	32.2	29.5	12.5	14.3
	Tilia spp.	0.2	0.3	0.2	0.8	0.8	0.5	0.7	0.4	0.1	0.2
	Carpinus betulus	1.3	0.2	0.2	1.3	1.3	2.4	3.6	1.5	0.4	0.5
	Pinus sylvestris	21.3	76.6	51.0	117.0	117.0	138.3	239.3	170.2	69.1	63.8
	Populus alba	1.4	2.8	1.9	1.1	1.1	0.4	0.5	0.1	0.0	0.0
	Pseudotsuga menziesii	7.5	0.5	0.3	2.0	2.0	4.1	7.9	7.1	3.3	4.7
	Salix spp.	0.2	0.3	0.2	0.8	0.8	0.5	0.7	0.4	0.1	0.2
	Robinia pseudoacacia	4.0	10.1	6.7	14.3	14.3	16.3	23.2	8.4	1.5	0.0
	Quercus spp.	1.7	4.7	3.2	3.1	3.1	3.5	6.6	5.4	2.3	7.9
	Acer platanoides	1.7	4.7	3.2	3.1	3.1	3.5	6.6	5.4	2.3	7.9

Table 7 - Age class distributions by country, forest category and species **(21 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Alnus spp.	6.7	15.0	10.0	25.8	25.8	21.6	35.0	18.3	5.0	3.3
	Slovakia										
	Productive Plantation Forests										
	Pinus sylvestris	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
	Abies alba	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Acer spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Picea abies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Populus x euramericana	0.7	0.7	0.9	1.2	1.1	0.2	0.0	0.0	0.0	0.0
	Pinus nigra	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
	Quercus spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Other Broadleaves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Robinia pseudoacacia	1.3	1.3	1.8	1.3	1.5	2.7	1.9	0.0	0.0	0.0
	Fraxinus spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Productive Semi-Natural Planted Forests										
	Pinus sylvestris	0.4	0.4	1.6	1.5	1.5	1.2	2.3	3.0	1.5	1.4
	Abies alba	1.6	1.6	3.9	2.6	1.4	1.0	2.8	5.5	4.0	7.1
	Larix decidua Mill.	1.1	1.2	4.0	2.5	1.7	1.0	1.7	1.1	0.5	0.6
	Fagus sylvatica	10.8	11.1	31.4	24.3	22.2	21.5	56.6	56.3	27.4	46.2
	Quercus robur	1.1	1.1	2.9	2.2	2.0	3.6	17.5	14.3	5.4	8.4
	Acer spp.	1.7	1.7	3.8	2.4	1.5	1.0	1.9	1.1	0.6	1.7
	Quercus petraea	1.1	1.1	2.9	2.2	2.0	3.6	17.5	14.3	5.4	8.4
	Fraxinus spp.	0.7	0.7	1.6	0.9	0.6	0.9	2.8	1.2	0.4	0.7
	Pinus nigra	0.4	0.4	1.6	1.5	1.5	1.2	2.3	3.0	1.5	1.4

Table 7 - Age class distributions by country, forest category and species **(22 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Picea abies	5.9	5.9	17.7	14.2	10.3	9.4	22.8	22.5	11.3	14.1
	Protective Plantation Forests										
	Quercus robur	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Acer spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Picea abies	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fraxinus spp.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Populus x euramericana	0.1	0.1	0.2	0.4	0.4	0.1	0.0	0.0	0.0	0.0
	Abies alba	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus nigra	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
	Other Broadleaves	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus sylvestris	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.0
	Quercus petraea	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Protective Semi-Natural Planted Forests										
	Picea abies	0.7	0.7	3.2	4.4	5.1	4.4	8.1	8.8	5.7	20.5
	Abies alba	0.1	0.1	0.3	0.3	0.3	0.2	0.4	1.1	1.0	3.2
	Larix decidua Mill.	0.1	0.1	0.3	0.3	0.5	0.3	0.7	0.5	0.3	0.9
	Fagus sylvatica	0.5	0.6	2.4	2.6	2.2	2.6	7.9	9.9	5.1	15.6
	Acer spp.	0.1	0.1	0.3	0.3	0.2	0.2	0.5	0.5	0.3	0.8
	Fraxinus spp.	0.1	0.1	0.2	0.2	0.1	0.1	0.5	0.5	0.2	0.4
	Pinus nigra	0.0	0.0	0.2	0.3	0.4	0.3	0.5	0.9	0.6	1.4
	Quercus spp.	0.1	0.1	0.2	0.2	0.2	0.5	3.3	3.3	1.6	3.5
	Pinus sylvestris	0.0	0.0	0.2	0.3	0.4	0.3	0.5	0.9	0.6	1.4
	Pinus mugo	0.0	0.0	0.6	0.7	0.6	0.2	0.4	1.4	1.1	4.1

Table 7 - Age class distributions by country, forest category and species **(23 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Sweden										
	Productive Plantation Forests										
	Pinus contorta	49.4	56.0	204.1	254.1	92.7	8.7	2.0	0.0	0.0	0.0
	Ukraine										
	Productive Plantation Forests										
	Populus spp.	0.0	0.0	0.3	0.9	3.1	0.3	0.0	0.0	0.0	0.0
	Acer saccharinum	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Robinia pseudoacacia	0.5	0.5	1.8	2.8	1.9	0.2	0.1	0.0	0.0	0.0
	Gleditsia triacanthos	0.0	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Fraxinus americana	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.0	0.0	0.0
	Fraxinus pennsylvanica var.	0.1	0.1	0.6	0.8	0.7	0.4	0.2	0.0	0.0	0.0
	Abies grandis	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Quercus rubra	1.7	1.7	14.4	20.0	18.8	5.0	0.7	0.1	0.0	0.0
	Larix sibirica	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pseudotsuga menziesii	0.1	0.1	1.6	0.0	0.0	0.1	0.0	0.0	0.1	0.0
	Productive Semi-Natural Planted Forests										
	Picea abies	5.9	5.9	37.5	43.0	118.4	53.8	39.1	18.3	3.3	1.0
	Pinus sylvestris	35.1	35.1	124.6	188.5	396.1	333.8	397.7	75.1	8.0	3.2
	Quercus petraea	0.2	0.2	1.3	1.2	1.7	1.9	0.4	0.6	1.0	0.4
	Betula pendula	1.6	1.6	8.9	14.5	9.6	1.6	1.2	0.0	0.0	0.0
	Quercus robur	21.4	21.4	85.7	98.3	191.6	169.0	197.5	42.0	9.2	4.2
	Fraxinus excelsior	0.5	0.5	2.9	4.4	4.3	4.3	4.6	1.8	0.4	0.2
	Alnus glutinosa	4.2	4.2	16.2	22.0	14.2	2.6	2.3	0.1	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(24 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Larix decidua Mill.	0.2	0.2	0.4	3.1	3.7	0.6	0.7	0.2	0.1	0.0
	Abies alba	2.3	2.3	11.2	5.9	3.5	1.7	1.7	1.2	0.0	0.1
	Fagus sylvatica	2.7	2.7	8.2	6.8	8.5	4.2	2.1	0.5	0.1	0.0
	Protective Plantation Forests										
	Fraxinus pennsylvanica var.	0.2	0.2	1.7	2.6	8.5	7.0	1.5	0.0	0.0	0.0
	Salix alba	0.3	0.3	0.9	1.4	1.6	2.3	1.9	0.0	0.0	0.0
	Populus spp.	0.3	0.3	2.2	6.7	14.7	2.3	1.0	0.1	0.0	0.0
	Robinia pseudoacacia	4.4	4.4	23.4	60.5	87.1	12.7	5.6	0.4	0.0	0.0
	Gleditsia triacanthos	0.3	0.3	1.1	1.1	5.3	1.0	0.4	0.0	0.0	0.0
	Salix fragilis	0.1	0.1	0.3	0.3	0.6	0.7	0.1	0.0	0.0	0.0
	Juglans regia	0.2	0.2	1.7	3.0	3.8	0.6	0.1	0.0	0.0	0.0
	Cotinus coggygria	0.0	0.0	0.3	1.1	1.2	0.1	0.0	0.0	0.0	0.0
	Pinus banksiana	0.0	0.0	0.0	0.1	0.3	0.1	0.0	0.0	0.0	0.0
	Quercus rubra	0.4	0.4	3.7	5.3	4.8	1.5	0.4	0.1	0.0	0.0
	Protective Semi-Natural Planted Forests										
	Alnus glutinosa	0.4	0.4	2.2	3.8	3.0	0.7	0.6	0.0	0.0	0.0
	Pinus sylvestris	6.6	6.6	35.5	87.2	169.5	113.6	130.4	40.3	8.4	3.0
	Picea abies	1.3	1.3	12.5	24.8	64.4	25.4	24.7	13.9	6.6	3.9
	Betula pendula	1.4	1.4	2.4	4.5	3.0	0.0	0.0	0.1	0.0	0.0
	Quercus robur	3.0	3.0	27.4	49.2	107.1	72.2	83.4	22.9	4.5	3.0
	Fraxinus excelsior	0.1	0.1	0.9	2.0	3.5	4.5	5.1	1.4	0.4	0.2
	Fagus sylvatica	0.3	0.3	2.0	2.0	3.3	1.9	1.0	0.2	0.1	0.1
	Abies alba	0.3	0.3	2.1	1.7	1.2	0.9	0.6	0.7	0.3	0.1

Table 7 - Age class distributions by country, forest category and species **(25 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Pinus nigra var. pallasiana	3.7	3.7	57.8	46.6	19.2	3.3	3.0	0.3	0.0	0.3
	Ulmus pumila	0.3	0.3	2.1	3.9	3.0	0.1	0.1	0.0	0.0	0.0
	United Kingdom										
	Productive Plantation Forests										
	Quercus spp.	4.6	4.6	4.6	3.0	3.0	9.1	21.3	35.0	9.1	57.8
	Pinus contorta	3.4	3.4	27.4	36.5	29.7	12.6	1.1	0.0	0.0	0.0
	Acer pseudoplatanus	0.8	0.8	1.5	3.4	4.2	6.8	10.7	5.7	0.4	3.8
	Fagus sylvatica	0.6	0.6	1.1	1.7	5.7	8.0	9.7	10.8	2.3	16.5
	Betula spp.	2.9	2.9	6.8	6.3	10.3	12.0	12.0	2.9	0.0	1.1
	Fraxinus excelsior	2.9	2.9	3.8	4.8	9.5	14.3	24.7	19.0	2.9	10.5
	Picea abies	2.3	2.3	3.8	9.1	22.8	19.8	13.7	2.3	0.0	0.0
	Larix spp.	6.6	6.6	6.6	4.4	4.4	13.1	39.3	50.2	0.0	2.2
	Pinus sylvestris	6.3	6.3	12.6	18.8	43.9	54.4	39.8	16.7	2.1	8.4
	Picea sitchensis	41.1	41.1	184.9	191.7	136.9	61.6	27.4	0.0	0.0	0.0
North and Central America											
North America											
	United States of America										
	Productive Plantation Forests										
	Other Coniferous	3.4	3.4	13.6	30.7	34.1	30.7	52.9	1.7	0.0	0.0
	Pinus elliottii	436.8	573.2	928.1	491.4	245.7	54.6	0.0	0.0	0.0	0.0
	Pinus taeda	2,439.7	2,217.9	3,659.6	1,885.2	554.5	221.8	110.9	0.0	0.0	0.0
	Pinus echinata	3.4	15.4	29.0	34.1	17.1	34.1	35.8	1.7	0.0	0.0
	Pinus strobus	10.2	23.9	47.8	44.4	47.8	68.2	75.1	17.1	3.4	3.4

Table 7 - Age class distributions by country, forest category and species **(26 of 29)**

Region and subregion	Country	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	> 100
	Pinus banksiana	8.5	13.6	39.2	25.6	23.9	25.6	32.4	1.7	0.0	0.0
	Pinus resinosa	13.6	13.6	88.7	102.4	150.1	157.0	143.3	6.8	6.8	0.0
	Pinus clausa	25.6	46.1	71.7	23.9	3.4	0.0	0.0	0.0	0.0	0.0
	Pinus palustris	136.5	68.2	68.2	27.3	17.1	17.1	6.8	0.0	0.0	0.0
Oceania											
Oceania											
	Australia										
	Productive Plantation Forests										
	Pinus pinaster	2.9	10.0	2.5	6.3	8.2	3.1	1.6	0.7	0.0	0.0
	Eucalyptus regnans	5.2	0.2	2.8	3.7	4.7	0.9	0.2	0.0	0.0	0.0
	Eucalyptus globulus	131.2	260.1	48.7	1.1	0.4	0.0	0.0	0.0	0.0	0.0
	Pinus radiata	65.4	116.7	208.6	228.3	135.5	13.8	7.1	1.6	0.0	0.0
	Pinus elliottii	7.3	17.9	13.2	29.2	18.8	1.2	0.6	0.0	0.0	0.0
	Eucalyptus nitens	11.4	13.9	9.6	0.4	0.0	0.0	0.0	0.0	0.0	0.0
	Araucaria spp.	4.4	3.8	5.0	8.2	14.0	8.4	8.1	1.1	0.0	0.0
	Eucalyptus pilularis	5.2	5.5	0.5	1.4	4.6	0.3	0.1	0.0	0.0	0.0
	Pinus caribaea	6.0	1.4	29.2	27.1	5.4	1.6	0.0	0.0	0.0	0.0
	Eucalyptus dunnii	5.3	12.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Eucalyptus grandis	5.2	5.5	0.5	1.4	4.6	0.3	0.1	0.0	0.0	0.0
	New Zealand										
	Productive Plantation Forests										
	Other Broadleaves	13.7	22.5	12.1	4.4	0.5	0.5	1.1	0.0	0.0	0.0
	Other Coniferous	5.9	7.0	8.4	7.0	3.7	1.8	2.9	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(27 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Pinus radiata	293.5	456.5	489.1	375.0	16.3	0.0	0.0	0.0	0.0	0.0
	Pseudotsuga menziesii	37.4	25.3	14.3	15.4	14.3	2.2	1.1	0.0	0.0	0.0
	Protective Plantation Forests										
	Pinus radiata	4.2	11.8	3.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
South America											
South America											
	Argentina										
	Productive Plantation Forests										
	Other Broadleaves	88.2	71.2	84.8	50.9	44.1	0.0	0.0	0.0	0.0	0.0
	Araucaria angustifolia	0.0	3.4	7.4	4.3	2.9	0.0	0.0	0.0	0.0	0.0
	Eucalyptus grandis	15.8	32.6	34.5	11.8	3.9	0.0	0.0	0.0	0.0	0.0
	Pinus elliottii	6.6	34.6	64.2	57.6	1.6	0.0	0.0	0.0	0.0	0.0
	Melia azaderach	0.2	0.1	0.7	0.3	0.0	0.0	0.0	0.0	0.0	0.0
	Salix	5.1	7.4	5.5	2.8	2.3	0.0	0.0	0.0	0.0	0.0
	Other Coniferous	101.2	14.9	34.8	5.0	10.0	0.0	0.0	0.0	0.0	0.0
	Populus deltoides	0.9	1.0	1.3	0.4	0.4	0.0	0.0	0.0	0.0	0.0
	Salix alba	5.1	7.4	5.5	2.8	2.3	0.0	0.0	0.0	0.0	0.0
	Populus nigra	0.9	1.0	1.3	0.4	0.4	0.0	0.0	0.0	0.0	0.0
	Pinus caribaea	6.6	34.6	64.2	57.6	1.6	0.0	0.0	0.0	0.0	0.0
	Salix babylonica	5.1	7.4	5.5	2.8	2.3	0.0	0.0	0.0	0.0	0.0
	Populus x canadensis	0.9	1.0	1.3	0.4	0.4	0.0	0.0	0.0	0.0	0.0
	Salix hibrids	5.0	7.3	5.5	2.7	2.3	0.0	0.0	0.0	0.0	0.0
	Populus x I 63	0.9	1.0	1.3	0.4	0.4	0.0	0.0	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(28 of 29)**

Region and subregion	*Country*	Total Forest Area reported by Age Class distribution (1,000 ha)									
		0-5	**5-10**	**10-20**	**20-30**	**30-40**	**40-50**	**50-70**	**70-90**	**90-100**	**> 100**
	Populus alba	0.9	1.0	1.3	0.4	0.4	0.0	0.0	0.0	0.0	0.0
	Pinus taeda	6.6	34.6	64.2	57.6	1.6	0.0	0.0	0.0	0.0	0.0
	Brazil										
	Productive Plantation Forests										
	Populus spp.	1.6	2.7	1.0	0.1	0.0	0.0	0.0	0.0	0.0	0.0
	Acacia spp.	105.5	30.2	13.6	1.5	0.0	0.0	0.0	0.0	0.0	0.0
	Eucalyptus spp.	2,118.1	756.5	121.0	30.3	0.0	0.0	0.0	0.0	0.0	0.0
	Hevea brasiliensis	51.1	71.6	51.1	20.5	10.2	0.0	0.0	0.0	0.0	0.0
	Pinus spp.	469.8	563.7	563.7	187.9	94.0	0.0	0.0	0.0	0.0	0.0
	Araucaria angustifolia	0.5	1.1	2.4	8.1	3.2	0.8	0.0	0.0	0.0	0.0
	Mimosa scabrella	24.2	19.4	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Tectona grandis	33.9	13.1	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Chile										
	Productive Plantation Forests										
	Eucalyptus spp.	353.4	204.1	85.4	7.2	2.0	0.0	0.0	0.0	0.0	0.0
	Populus spp.	4.9	11.1	10.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
	Pinus radiata	456.5	467.8	727.0	214.2	13.2	0.0	0.0	0.0	0.0	0.0
	Productive Semi-Natural Planted Forests										
	Prosopis tamarugo	0.0	0.0	0.0	0.0	18.9	0.0	0.2	0.8	0.0	0.0
	Prosopis chilensis	0.0	0.0	0.0	0.0	4.3	0.0	0.0	0.0	0.0	0.0

Table 7 - Age class distributions by country, forest category and species **(29 of 29)**

Table 8 – Ownership by country and planted forest category

	Area 1990				Area 2000				Area 2005			
	Public	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*
						(1,000 ha)						
Productive Plantation Forests												
South Africa	367	837	0	0	155	1,036	155	5	90	1,124	207	6
Eastern and Southern Africa	***367***	***837***	***0***	***0***	***155***	***1,036***	***155***	***5***	***90***	***1,124***	***207***	***6***
Algérie	6	0	0	0	8	0	0	0	12	0	0	0
Sudan	5,288	5	53	0	4,880	5	49	0	4,676	5	47	0
Northern Africa	***5,294***	***5***	***53***	***0***	***4,888***	***5***	***49***	***0***	***4,688***	***5***	***47***	***0***
Africa	***5,661***	***842***	***53***	***0***	***5,044***	***1,041***	***205***	***5***	***4,778***	***1,128***	***254***	***6***
China	17,131	0	0	0	9,620	109	12,036	0	10,556	57	17,917	0
East Asia	***17,131***	***0***	***0***	***0***	***9,620***	***109***	***12,036***	***0***	***10,556***	***57***	***17,917***	***0***
India	446	96	96	0	641	137	137	0	737	158	158	0
Indonesia	2,209	0	0	0	3,002	0	0	0	3,399	0	0	0
Malaysia	119	348	1,489	0	227	222	1,209	0	263	227	1,084	0
Myanmar	323	0	0	0	571	0	0	0	696	0	0	0
Philippines	312	8	68	1	253	25	44	0	186	43	75	0
Thailand	1,736	243	0	0	1,733	263	0	0	1,723	274	0	0

	Area 1990				Area 2000				Area 2005			
	Public	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*
						(1,000 ha)						
Viet Nam	315	25	303	21	453	61	717	154	491	93	1,143	65
South and Southeast Asia	***5,461***	***719***	***1,955***	***22***	***6,878***	***708***	***2,107***	***154***	***7,495***	***794***	***2,460***	***65***
Iran	585	0	31	0	585	0	31	0	554	0	62	0
Turkey	1,459	0	0	0	1,763	0	0	0	1,897	10	10	0
Western and Central Asia	***2,044***	***0***	***31***	***0***	***2,348***	***0***	***31***	***0***	***2,451***	***10***	***71***	***0***
Asia	***24,636***	***719***	***1,986***	***22***	***18,846***	***817***	***14,174***	***154***	***20,503***	***861***	***20,448***	***65***
Belgium	128	0	175	0	120	0	164	0	121	0	154	0
Bulgaria	22	0	0	0	31	0	0	0	0	0	0	0
Croatia	54	0	2	0	58	0	2	0	59	0	2	0
France	239	801	801	0	290	823	823	0	295	836	836	0
Italy	20	0	269	0	7	0	137	0	6	0	140	0
Poland	32	0	0	0	32	0	0	0	32	0	0	0
Russian	9,244	0	0	0	10,712	0	0	0	11,888	0	0	0
Slovakia	21	0	0	0	4	5	8	1	4	3	6	3
Sweden	113	351	59	0	34	517	68	0	107	486	73	0
Ukraine	84	0	0	0	82	0	0	0	81	0	0	0

Table 8 - Ownership by country and planted forest category **(2 of 9)**

	Area 1990				Area 2000				Area 2005			
	Public	Corporate	Smallholder	Other	Public	Corporate	Smallholder	Other	Public	Corporate	Smallholder	Other
					(1,000 ha)							
United Kingdom	763	298	801	0	689	325	900	0	647	342	913	0
Europe	***10,722***	***1,450***	***2,106***	***0***	***12,059***	***1,671***	***2,101***	***1***	***13,240***	***1,668***	***2,125***	***3***
Europe	***10,722***	***1,450***	***2,106***	***0***	***12,059***	***1,671***	***2,101***	***1***	***13,240***	***1,668***	***2,125***	***3***
United States of	515	7,214	2,576	0	976	9,602	5,696	0	1,024	9,895	6,142	0
North America	***515***	***7,214***	***2,576***	***0***	***976***	***9,602***	***5,696***	***0***	***1,024***	***9,895***	***6,142***	***0***
North and Central	***515***	***7,214***	***2,576***	***0***	***976***	***9,602***	***5,696***	***0***	***1,024***	***9,895***	***6,142***	***0***
Australia	726	297	0	0	686	527	67	205	636	1,024	0	106
New Zealand	416	504	340	0	141	1,131	495	0	147	1,154	531	0
Oceania	***1,142***	***801***	***340***	***0***	***827***	***1,658***	***562***	***205***	***782***	***2,178***	***531***	***106***
Oceania	***1,142***	***801***	***340***	***0***	***827***	***1,658***	***562***	***205***	***782***	***2,178***	***531***	***106***
Argentina	5	539	65	159	8	756	92	223	9	862	104	254
Brazil	30	4,700	340	0	24	4,890	364	0	24	4,980	380	0
Chile	9	1,130	602	0	7	1,657	690	0	8	1,919	734	0
South America	***44***	***6,369***	***1,008***	***159***	***39***	***7,303***	***1,146***	***223***	***40***	***7,760***	***1,219***	***254***
South America	***44***	***6,369***	***1,008***	***159***	***39***	***7,303***	***1,146***	***223***	***40***	***7,760***	***1,219***	***254***

Table 8 - Ownership by country and planted forest category **(3 of 9)**

	Area 1990				Area 2000				Area 2005			
	Public	Corporate	Smallholder	Other	Public	Corporate	Smallholder	Other	Public	Corporate	Smallholder	Other
	(1,000 ha)											
Total Productive Plantation Forests	***42,721***	***17,395***	***8,070***	***181***	***37,792***	***22,091***	***23,883***	***588***	***40,367***	***23,492***	***30,719***	***434***
Productive Semi-Natural Planted Forests												
Algérie	5	0	0	0	11	0	0	0	14	0	0	0
Sudan	983	4	52	0	939	4	50	0	897	4	47	0
Northern Africa	***987***	***4***	***52***	***0***	***950***	***4***	***50***	***0***	***911***	***4***	***47***	***0***
Africa	***987***	***4***	***52***	***0***	***950***	***4***	***50***	***0***	***911***	***4***	***47***	***0***
China	16,944	0	0	0	14,529	121	5,473	0	14,397	102	11,073	0
East Asia	***16,944***	***0***	***0***	***0***	***14,529***	***121***	***5,473***	***0***	***14,397***	***102***	***11,073***	***0***
India	13,108	2,944	2,944	0	11,766	2,898	2,898	0	10,774	2,653	2,653	0
South and Southeast Asia	***13,108***	***2,944***	***2,944***	***0***	***11,766***	***2,898***	***2,898***	***0***	***10,774***	***2,653***	***2,653***	***0***
Iran	24	0	0	0	50	0	0	0	5	0	0	0
Turkey	62	0	0	0	87	0	0	0	99	0	0	0
Western and Central Asia	***87***	***0***	***0***	***0***	***137***	***0***	***0***	***0***	***103***	***0***	***0***	***0***
Asia	***30,138***	***2,944***	***2,944***	***0***	***26,432***	***3,018***	***8,371***	***0***	***25,275***	***2,756***	***13,727***	***0***
Belgium	67	0	91	0	72	0	89	0	67	0	82	0

Table 8 - Ownership by country and planted forest category **(4 of 9)**

	Area 1990				Area 2000				Area 2005			
	Public	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*
						(1,000 ha)						
Bulgaria	526	0	0	0	425	0	0	0	0	0	0	0
Czech Republic	2,346	100	2	0	1,825	24	555	0	1,833	24	558	0
Finland	865	551	2,517	0	1,211	630	3,003	0	1,318	685	3,268	0
France	42	39	39	0	56	36	36	0	58	35	35	0
Lithuania	231	0	0	0	0	0	0	0	0	0	0	0
Poland	4,327	0	1,442	0	4,196	0	1,399	0	4,132	0	1,452	0
Slovakia	665	0	0	0	356	185	97	29	366	178	65	58
Slovenia	14	0	21	0	9	1	26	0	10	1	26	0
Ukraine	3,018	0	0	0	2,874	0	0	0	2,991	0	0	0
Europe	***12,101***	***690***	***4,112***	***0***	***11,024***	***874***	***5,205***	***29***	***10,774***	***924***	***5,486***	***58***
Europe	***12,101***	***690***	***4,112***	***0***	***11,024***	***874***	***5,205***	***29***	***10,774***	***924***	***5,486***	***58***
Chile	25	0	0	0	25	0	0	0	25	0	0	0
South America	***25***	***0***	***0***	***0***	***25***	***0***	***0***	***0***	***25***	***0***	***0***	***0***
South America	***25***	***0***	***0***	***0***	***25***	***0***	***0***	***0***	***25***	***0***	***0***	***0***
Total Productive Semi-Natural Planted Forests	***43,251***	***3,638***	***7,108***	***0***	***38,431***	***3,897***	***13,626***	***29***	***36,985***	***3,684***	***19,261***	***58***

Table 8 - Ownership by country and planted forest category **(5 of 9)**

	Area 1990				Area 2000				Area 2005			
	Public	Corporate	Smallholder	Other	Public	Corporate	Smallholder	Other	Public	Corporate	Smallholder	Other
	(1,000 ha)											
Protective Plantation Forests												
Algérie	553	0	49	12	580	0	52	13	668	0	59	15
Sudan	755	3	6	0	696	3	6	0	667	3	5	0
Northern Africa	***1,307***	***3***	***55***	***12***	***1,276***	***3***	***57***	***13***	***1,335***	***3***	***65***	***15***
Africa	***1,307***	***3***	***55***	***12***	***1,276***	***3***	***57***	***13***	***1,335***	***3***	***65***	***15***
China	1,335	0	0	0	1,716	0	443	0	1,763	0	1,076	0
Japan	3,600	3,343	3,343	0	3,616	3,358	3,358	0	3,612	3,354	3,354	0
East Asia	***4,935***	***3,343***	***3,343***	***0***	***5,332***	***3,358***	***3,800***	***0***	***5,375***	***3,354***	***4,430***	***0***
India	1,185	66	66	0	1,701	95	95	0	1,956	109	109	0
Myanmar	71	0	0	0	125	0	0	0	153	0	0	0
Philippines	1,117	27	243	4	418	41	73	0	193	45	78	0
Thailand	661	0	0	0	1,081	0	0	0	1,102	0	0	0
Viet Nam	164	1	95	42	299	3	262	102	634	15	248	5
South and Southeast Asia	***3,199***	***94***	***404***	***46***	***3,624***	***138***	***429***	***102***	***4,038***	***169***	***435***	***5***
Turkey	380	0	0	0	541	0	0	0	621	0	0	0
Western and Central Asia	***380***	***0***	***0***	***0***	***541***	***0***	***0***	***0***	***621***	***0***	***0***	***0***

Table 8 - Ownership by country and planted forest category **(6 of 9)**

		Area 1990				Area 2000				Area 2005			
		Public	Corporate	Smallholder	Other	Public	Corporate	Smallholder	Other	Public	Corporate	Smallholder	Other
						(1,000 ha)							
Asia		***8,514***	***3,437***	***3,747***	***46***	***9,497***	***3,496***	***4,229***	***102***	***10,034***	***3,523***	***4,865***	***5***
	Bulgaria	19	0	0	0	17	0	0	0	0	0	0	0
	France	0	0	0	0	0	0	0	0	0	0	0	0
	Russian	3,407	0	0	0	4,648	0	0	0	5,075	0	0	0
	Slovakia	2	0	0	0	1	0	1	0	1	0	1	0
	Ukraine	241	0	0	0	285	0	0	0	307	0	0	0
	United Kingdom	8	3	5	0	10	4	6	0	11	4	7	0
Europe		***3,676***	***3***	***5***	***0***	***4,961***	***4***	***7***	***0***	***5,394***	***5***	***7***	***0***
Europe		***3,676***	***3***	***5***	***0***	***4,961***	***4***	***7***	***0***	***5,394***	***5***	***7***	***0***
	New Zealand	0	0	0	0	0	0	2	0	0	0	20	0
Oceania		***0***	***0***	***0***	***0***	***0***	***0***	***2***	***0***	***0***	***0***	***20***	***0***
Oceania		***0***	***0***	***0***	***0***	***0***	***0***	***2***	***0***	***0***	***0***	***20***	***0***
Total Protective Plantation Forests		***13,498***	***3,443***	***3,807***	***58***	***15,734***	***3,503***	***4,295***	***115***	***16,763***	***3,531***	***4,957***	***20***
Protective Semi-Natural Planted Forests													
	Algérie	211	0	19	5	230	0	20	5	243	0	22	5

Table 8 - Ownership by country and planted forest category **(7 of 9)**

	Area 1990				Area 2000				Area 2005			
	Public	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*
						(1,000 ha)						
Sudan	255	0	5	0	243	0	5	0	262	0	5	0
Northern Africa	***466***	***0***	***24***	***5***	***473***	***0***	***25***	***5***	***506***	***0***	***27***	***5***
Africa	***466***	***0***	***24***	***5***	***473***	***0***	***25***	***5***	***506***	***0***	***27***	***5***
China	8,345	0	0	0	8,241	0	2,125	0	8,904	0	5,481	0
East Asia	***8,345***	***0***	***0***	***0***	***8,241***	***0***	***2,125***	***0***	***8,904***	***0***	***5,481***	***0***
India	9,297	245	245	0	10,225	269	269	0	10,185	268	268	0
South and Southeast Asia	***9,297***	***245***	***245***	***0***	***10,225***	***269***	***269***	***0***	***10,185***	***268***	***268***	***0***
Turkey	146	0	0	0	203	0	0	0	232	0	0	0
Western and Central Asia	***146***	***0***	***0***	***0***	***203***	***0***	***0***	***0***	***232***	***0***	***0***	***0***
Asia	***17,788***	***245***	***245***	***0***	***18,670***	***269***	***2,394***	***0***	***19,321***	***268***	***5,749***	***0***
Bulgaria	466	0	0	0	460	0	0	0	0	0	0	0
Czech Republic	63	0	0	0	83	0	4	0	83	0	4	0
France	8	0	0	0	7	0	0	0	7	0	0	0
Lithuania	77	0	0	0	0	0	0	0	0	0	0	0
Poland	2,715	0	0	0	2,922	0	90	0	3,047	0	94	0

Table 8 - Ownership by country and planted forest category **(8 of 9)**

	Area 1990				Area 2000				Area 2005			
	Public	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*	*Public*	*Corporate*	*Smallholder*	*Other*
						(1,000 ha)						
Slovakia	159	0	0	0	79	54	21	4	84	55	12	9
Ukraine	1,294	0	0	0	1,514	0	0	0	1,408	0	0	0
United Kingdom	13	13	62	0	32	32	148	0	40	40	185	0
Europe	***4,794***	***13***	***62***	***0***	***5,097***	***86***	***263***	***4***	***4,668***	***95***	***295***	***9***
Europe	***4,794***	***13***	***62***	***0***	***5,097***	***86***	***263***	***4***	***4,668***	***95***	***295***	***9***
Total Protective Semi-Natural Planted Forests	***23,048***	***258***	***330***	***5***	***24,240***	***355***	***2,683***	***10***	***24,495***	***363***	***6,071***	***14***
Overall	*122,518*	*24,735*	*19,315*	*245*	*116,198*	*29,847*	*44,487*	*742*	*118,610*	*31,069*	*61,008*	*527*

Table 8 - Ownership by country and planted forest category **(9 of 9)**

Table 9a – Planted forests productive, industrial purpose: area by end use

Region and subregion	*Country*	*End Use*	*Area (1 000 ha) 1990*	*2000*	*2005*
Africa					
Eastern and Southern Africa					
	South Africa				
		Bioenergy	23	7	10
		Pulpwood/Fiber	765	756	761
		Sawlog	330	519	615
		Unspecified	87	70	40
	Total country		1,204	1,352	1,426
	Total Eastern and Southern Africa		**1,204**	**1,352**	**1,426**
Northern Africa					
	Algérie				
		Non Wood Prod	0	0	24
		Sawlog	0	0	3
	Total country		0	0	26
	Sudan				
		Bioenergy	1,477	1,336	1,127
		Non Wood Prod	832	603	766
		Sawlog	3,490	3,544	3,225
		Unspecified	587	444	558
	Total country		6,385	5,927	5,677
	Total Northern Africa		**6,385**	**5,927**	**5,703**

Table 9a - Planted forests productive, industrial purpose: area by end use **(1 of 8)**

Region and subregion	*Country*	*End Use*	*Area (1 000 ha) 1990*	*2000*	*2005*
	Total Africa		***7,589***	***7,279***	***7,129***
Asia					
East Asia					
	China				
		Bioenergy	1,669	1,994	3,136
		Non Wood Prod	6,839	13,795	18,744
		Pulpwood/Fiber	818	1,253	2,671
		Sawlog	24,749	24,846	29,551
	Total country		34,075	41,888	54,102
	Total East Asia		**34,075**	**41,888**	**54,102**
South and Southeast Asia					
	India				
		Bioenergy	3,242	3,179	3,398
		Non Wood Prod	2,672	2,671	2,808
		Pulpwood/Fiber	2,027	1,570	1,444
		Sawlog	5,765	5,909	5,561
		Unspecified	5,927	5,148	3,923
	Total country		19,634	18,477	17,134
	Indonesia				
		Non Wood Prod	22	30	748
		Pulpwood/Fiber	0	751	1,190
		Sawlog	2,187	2,221	1,462
	Total country		2,209	3,002	3,399

Table 9a - Planted forests productive, industrial purpose: area by end use **(2 of 8)**

Region and subregion	Country	End Use	Area (1 000 ha) 1990	2000	2005
	Viet Nam				
		Bioenergy	66	138	179
		Non Wood Prod	20	42	54
		Pulpwood/Fiber	531	969	1,165
		Sawlog	33	208	358
		Unspecified	13	28	36
	Total country		664	1,384	1,792
	Total South and Southeast Asia		**22,507**	**22,863**	**22,325**
Western and Central Asia					
	Iran				
		Bioenergy	0	31	0
		Non Wood Prod	0	31	63
		Pulpwood/Fiber	1	64	62
		Sawlog	23	540	496
	Total country		24	666	621
	Turkey				
		Non Wood Prod	0	0	20
		Unspecified	1,521	1,850	1,995
	Total country		1,521	1,850	2,016
	Total Western and Central Asia		**1,546**	**2,516**	**2,636**
	Total Asia		***58,127***	***67,267***	***79,064***
Europe					

Table 9a - Planted forests productive, industrial purpose: area by end use **(3 of 8)**

Region and subregion	Country	End Use	Area (1 000 ha) 1990	2000	2005
Europe					
	Belgium				
		Pulpwood/Fiber	107	103	99
		Sawlog	353	342	325
	Total country		460	445	424
	Bulgaria				
		Bioenergy	131	98	112
		Non Wood Prod	18	17	16
		Pulpwood/Fiber	84	70	72
		Sawlog	163	130	132
		Unspecified	151	141	103
	Total country		548	456	434
	Croatia				
		Pulpwood/Fiber	34	36	37
		Sawlog	22	24	24
	Total country		56	60	61
	Czech Republic				
		Unspecified	2,449	2,405	2,415
	Total country		2,449	2,405	2,415
	Finland				
		Sawlog	3,934	4,843	5,270
	Total country		3,934	4,843	5,270

Table 9a - Planted forests productive, industrial purpose: area by end use **(4 of 8)**

Region and subregion	Country	End Use	Area (1 000 ha) 1990	2000	2005
	France				
		Pulpwood/Fiber	981	1,032	1,048
		Sawlog	981	1,032	1,048
	Total country		1,961	2,063	2,097
	Italy				
		Bioenergy	0	4	6
		Non Wood Prod	116	1	1
		Pulpwood/Fiber	43	29	29
		Sawlog	101	104	104
		Unspecified	29	6	6
	Total country		289	144	146
	Poland				
		Sawlog	5,769	5,595	5,584
	Total country		5,769	5,595	5,584
	Sweden				
		Unspecified	7,722	8,853	9,964
	Total country		7,722	8,853	9,964
	Ukraine				
		Pulpwood/Fiber	8	5	5
		Sawlog	3,095	2,951	3,067
	Total country		3,102	2,956	3,072
	United Kingdom				

Table 9a - Planted forests productive, industrial purpose: area by end use **(5 of 8)**

Region and subregion	*Country*	*End Use*	*Area (1 000 ha) 1990*	*2000*	*2005*
		Sawlog	1,862	1,914	1,902
	Total country		1,862	1,914	1,902
	Total Europe		**28,151**	**29,734**	**31,369**
	Total Europe		***28,151***	***29,734***	***31,369***
North and Central America					
North America					
	United States of				
		Pulpwood/Fiber	9,790	13,833	13,649
		Sawlog	515	2,441	3,412
	Total country		10,305	16,274	17,061
	Total North America		**10,305**	**16,274**	**17,061**
	Total North and Central America		***10,305***	***16,274***	***17,061***
Oceania					
Oceania					
	New Zealand				
		Pulpwood/Fiber	0	18	18
		Sawlog	1,261	1,749	1,814
	Total country		1,261	1,767	1,832
	Total Oceania		**1,261**	**1,767**	**1,832**

Table 9a - Planted forests productive, industrial purpose: area by end use **(6 of 8)**

Region and subregion	*Country*	*End Use*	*Area (1 000 ha) 1990*	*2000*	*2005*
	Total Oceania		***1,261***	***1,767***	***1,832***
South America					
South America					
	Argentina				
		Pulpwood/Fiber	278	398	377
		Sawlog	491	680	852
	Total country		769	1,078	1,229
	Brazil				
		Bioenergy	507	581	646
		Non Wood Prod	101	106	108
		Pulpwood/Fiber	3,042	3,220	3,284
		Sawlog	1,318	1,267	1,238
		Unspecified	101	106	108
	Total country		5,070	5,279	5,384
	Chile				
		Bioenergy	0	0	0
		Non Wood Prod	25	25	25
		Pulpwood/Fiber	317	775	932
		Sawlog	854	1,099	1,290
		Unspecified	570	480	439
	Total country		1,766	2,379	2,686
	Total South America		**7,605**	**8,736**	**9,299**

Table 9a - Planted forests productive, industrial purpose: area by end use **(7 of 8)**

Region and subregion	Country	End Use	Area (1 000 ha) 1990	2000	2005
	Total South America		**7,605**	**8,736**	**9,299**
Overall total			*113,039*	*131,057*	*145,754*

Table 9a - Planted forests productive, industrial purpose: area by end use **(8 of 8)**

Table 9b – Planted forests protective, non-industrial purpose: area by end use

Region and subregion	*Country*	*End Use*	*Area (1 000 ha) 1990*	*2000*	*2005*
Africa					
Northern Africa					
	Algérie				
		Environmental	0	0	911
		Recreation	0	0	81
		Unspecified	0	0	20
	Total country		0	0	1,012
	Sudan				
		Environmental	637	653	665
		Fuelwood	194	143	107
		Recreation	66	57	74
		Unspecified	125	100	97
	Total country		1,024	953	943
	Total Northern Africa		**1,024**	**953**	**1,955**
	Total Africa		***1,024***	***953***	***1,955***
Asia					
East Asia					
	China				
		Environmental	9,255	11,936	16,675
		Recreation	426	590	549
	Total country		9,680	12,525	17,224

Region and subregion	Country	End Use	Area (1 000 ha) 1990	2000	2005
	Japan				
		Environmental	5,144	5,166	5,161
		Recreation	5,144	5,166	5,161
	Total country		10,287	10,331	10,321
	Total East Asia		**19,967**	**22,856**	**27,545**
South and Southeast Asia					
	India				
		Environmental	6,662	7,845	7,736
		Fuelwood	1,665	2,025	2,321
		Recreation	444	633	903
		Unspecified	2,332	2,151	1,934
	Total country		11,103	12,654	12,894
	Viet Nam				
		Environmental	227	500	677
		Fuelwood	15	33	45
		Recreation	30	67	90
		Unspecified	30	67	90
	Total country		303	666	903
	Total South and Southeast Asia		**11,406**	**13,320**	**13,797**
Western and Central Asia					
	Turkey				
		Environmental	228	379	528

Table 9b - Planted forests protective, non-industrial purpose: area by end use **(2 of 4)**

Region and subregion	Country	End Use	Area (1 000 ha) 1990	2000	2005
		Recreation	152	162	93
		Unspecified	146	203	232
	Total country		526	744	853
	Total Western and Central Asia		**526**	**744**	**853**
	Total Asia		***31,899***	***36,920***	***42,195***
Europe					
Europe					
	Bulgaria				
		Environmental	163	168	156
		Recreation	107	104	101
		Unspecified	214	205	192
	Total country		485	477	449
	Czech Republic				
		Environmental	63	87	88
	Total country		63	87	88
	France				
		Environmental	8	7	7
	Total country		8	7	7
	Poland				
		Environmental	814	1,838	2,167
		Recreation	1,900	1,175	974
	Total country		2,715	3,013	3,141

Table 9b - Planted forests protective, non-industrial purpose: area by end use **(3 of 4)**

Region and subregion	Country	End Use	Area (1 000 ha) 1990	2000	2005
	Ukraine				
		Environmental	1,006	1,144	1,101
		Recreation	529	655	614
	Total country		1,535	1,799	1,715
	United Kingdom				
		Environmental	96	198	241
		Recreation	8	33	45
	Total country		103	231	286
	Total Europe		**4,908**	**5,614**	**5,684**
	Total Europe		***4,908***	***5,614***	***5,684***
Overall total			*37,830*	*43,487*	*49,834*

Table 9b - Planted forests protective, non-industrial purpose: area by end use **(4 of 4)**

Annex 2: FAO Working Paper series on planted forests

Note: In code "Working Paper FP/x", "x" indicates the WP series number and a suffix E, F or S indicates: E = English, F = French, S = Spanish, in case of multilingual papers. No suffix indicates English only.

Available at the Planted Forest Web site: www.fao.org/forestry/site/10368/en.

Working Paper FP/1:	*Mean Annual Volume Increment of Selected Industrial Species*. Ugalde L. and Perez O. April 2001.
Working Paper FP/2:	*Biological Sustainability of Productivity in Successive Rotations*. Evans J. March 2001.
Working Paper FP/3:	*Plantation Productivity*. Libby W.J. March 2001.
Working Paper FP/4:	*Promotion of Valuable Hardwood Plantations in the Tropics. A Global Overview*. Odoom F.K. March 2001.
Working Paper FP/5:	*Plantations and Wood Energy*. Mead D.J. March 2001.
Working Paper FP/6:	*Non-Forest Tree Plantations*. Killmann W. March 2001.
Working Paper FP/7:	*Role of Plantations as Substitutes for Natural Forests in Wood Supply – Lessons learned from the Asia-Pacific Region*. Waggener T. March 2001.
Working Paper FP/8:	*Financial and Other Incentives for Plantation Establishment*. Williams J. March 2001.
Working Paper FP/9:	*Impact of Forest Policies and Legislation on Forest Plantations*. Perley C.J.K. March 2001.
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Working Paper FP/16E	*Annotated Bibliography on Environmental, Social and Economic Impacts of Eucalyptus*. Compilation from English,

	French and Spanish Literature, 1985 to 1994. Revised (Combined) Edition, March 2002.
Working Paper FP/17S	*Bibliografía Anotada Sobre los Efectos Ambientales, Sociales y Económicos de los Eucaliptos*. Compilación de documentos elaborados en inglés, francés y español entre 1995 y 1999. Palmberg C., Marzo de 2002.
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Working Paper FP/28F	*Rôle des Plantations Forestières et des arbres hors forêts dans l'aménagement forestier durable: République du Mali – Raport par pays*. Thomas, I. and Samassekou, S. October 2003.
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Working Paper FP/29F	*Rôle des Plantations Forestières et des arbres hors forêts dans l'aménagement forestier durable: République d'Éthiopie – Raport par pays*. I. Thomas et M. Bekele. October 2003.
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Working Paper FP/31F	*Rôle des Plantations Forestières et des arbres hors forêts dans l'aménagement forestier durable: Sultanat d'Oman – Raport par pays*. S. Rouchiche. October 2003.
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Working Paper FP/35bE	*Global planted forests thematic: supplementary desk study on planted forests*. A. Del Lungo and J. Ball, 2006.

Working Paper FP/36E	*Management of wood properties in Planted Forests. A paradigm for global forest production*. R. Jagels. June 2006.
Working Paper FP/37aE	*Responsible Management of Planted Forests: Voluntary Guidelines – Volume A: Principles and Guidelines*. Forest Resources Development Service, FAO, December, 2006
Working Paper FP/37bE	*Responsible Management of Planted Forests: Voluntary Guidelines – Volume B: Implementation Considerations*. Forest Resources Development Service, FAO, December, 2006
Working Paper FP/37/cE	*Responsible Management of Planted Forests: Voluntary Guidelines – Volume C: Annexes*. Forest Resources Development Service, FAO, December, 2006
Working Paper FP/38E	*Global planted forests thematic: results and analysis*. A. Del Lungo, J. Ball, J. Carle, December, 2006.