

**Table 5b: Detailed Purpose Estimates for Plantation Forests by % of Area.** Your new data inputs

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 1 (000 ha)				%	%	%
<b>Productive</b>	4	4	4	Ind-Sawlog			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
				<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	0	0	0	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

**For transparency in referencing please list below all documents appropriate to completion of information and data for this questionnaire in conformity with the standard list provided in references section of Working Paper 35**

**References** (Your new references inputs) see all reference FRA 2005

## **CROATIA**



### **GLOBAL PLANTED FOREST THEMATIC SUPPLEMENT TO FOREST RESOURCES ASSESSMENT 2005**

### ***QUESTIONNAIRE ON PLANTED FORESTS: NATIONAL REPORTING TABLES***

To be read and filled in association with  
Working Paper 35  
to assist in definitions and explanatory notes

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**COUNTRY NAME:Croatia**

***Availability of FRA 2005 data on forest cover area***

(Refer to **Section 1**, Working Paper FP35<sup>\*</sup>)

**Forest type**

Table 1 has been derived from Table 4 (T4) of National Report for FRA 2005

Table 1: Area of Forest as reported in Table T4 of FRA 2005

FRA 2005 Categories	Surface (1000 ha)		
	Forest		
	1990	2000	2005
Primary	10	10	10
Modified Natural	2050	2060	2063
Semi-Natural	0	0	0
Productive Plantation	56	60	61
Protective Plantation	0	0	0

Source: Derived from T4, in FAO 2004/5, Global Forest Resources Assessment update 2005,  
National Country Report

According to the FRA 2005 definitions Planted Forests include the planted component of Semi-Natural Forests and both Productive and Protective Plantation Forests.

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\*FAO. 2005. Planted Forests and Trees Working Papers: Global Planted Forest Thematic Supplement to Forest Resources Assessment 2005. *Guidelines for National Reporting Tables for Planted Forests*, Working Paper FP35, Forest Resources Development Service, Forest Resources Division. FAO, Rome

**Estimate of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests**

(Refer to **Section 2**, Working Paper FP35)

Table 2a, in top rows, reports absolute figures provided in T4 of the National report for Semi-Natural Forests. Please provide the % planted component and % assisted natural regeneration component of Semi-Natural Forests for years 1990, 2000 and 2005<sup>76</sup> (Your new data inputs in yellow on table).

Table 2a: FRA 2005 area of Semi-Natural Forest classification and estimates of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests

Year	1990			2000			2005		
FRA Semi-Natural Forest				Absolute figures (1000 ha)					
	0			0			0		
Relative figures (%)									
Semi-Natural Forest components	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)
Estimates			100			100			100

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

<sup>76</sup> The bottom row of table 4a to be completed by the Planted Forests Specialist.

Estimates of planted and assisted natural regeneration components of Semi-Natural Forests must tally to 100%

**Estimation of Planted component of Semi-Natural Forests to Productive and Protective purposes**

(Refer to Section 3, Working Paper FP35)

**In Table 2b estimate in % the area of Planted component of Semi-Natural Forests<sup>77</sup> allocated to Production and Protection purposes for years 1990, 2000, 2005.** Your new data inputs

Table 2b: Planted component of Semi-Natural Forests to Productive and Protective purposes

Year	1990			2000			2005		
Semi-Natural Forests Planted component Estimates	<b>Relative figures (%)</b>								
	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)
			100			100			100

Source: Planted Forests Specialist to list reference documents in the references section

<sup>77</sup> Estimates of Productive and Protective purposes must tally to 100%

**Report MAI, rotation length, harvest volume yield, and age classes distribution for the top10 species in the Planted component of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective)**

(Refer to **Section 5**, Working Paper FP35)

In tables 3 (a, b, c, d), **for year 2005 only**, please provide percentages of the top ten species used in your country.

In table 3a: Provide the top 10 species for **Productive Planted component of Semi-Natural Forests**

In table 3b: Provide the top 10 species for **Protective Planted component of Semi-Natural Forests**

In table 3c: Provide the top 10 species for **Productive Plantation Forests**

In table 3d: Provide the top 10 species for **Protective Plantation Forests**

For each table, please group other remaining species in class 11 named “Other”.

**The total of percentages for the 11 classes must tally to 100%**

For each species reported please provide best absolute data for Mean Annual Increment, Rotation Length and Harvest Volume.

Finally provide an estimate of the age distribution in %.

**The Age distributions must tally to 100%.**

**Table 3a: Productive Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**  
 Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %										
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total
1)																		
2)																		
3)																		
4)																		
5)																		
6)																		
7)																		
8)																		
9)																		
10)																		
11) Other																		
<b>Total</b>	<b>100</b>																	

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3b: Protective Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**  
 Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %										
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total
1)																		
2)																		
3)																		
4)																		
5)																		
6)																		
7)																		
8)																		
9)																		
10)																		
11) Other																		
<b>Total</b>	<b>100</b>																	

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3c: Productive Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%).**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1) Pinus halepensis	21,2	2,5	3,5	60	-	100	200	5	5	10	15	27	18	20	-	-	-	100	
2) Pinus nigra	16,3	2,5	3,5	80	-	140	350	7	8	10	14	13	9	14	14	9	2	100	
3) Populus x euramericana	16,2	6	20	15	30	120	700	23	15	30	26	6	-	-	-	-	-	100	
4) Salix alba/nigra	8,9	6	15	40	60	240	500	25	23	33	18	1	-	-	-	-	-	100	
5) Populus alba/nigra	7,1	6	9	30	60	180	540	15	18	33	26	8	-	-	-	-	-	100	
6) Pinus sylvestris	2,9	2,5	3,5	80	-	140	350	10	10	21	22	21	5	7	3	1	-	100	
7) Picea abies	1,7	3,5	12	80	-	200	650	12	12	25	18	19	3	6	4	1	-		
8) Juglans nigra	1,6	4	8	80	-	250	350	-	-	-	-	-	-	-	-	-	-	100	
9) Pinus strobus	1,1	8	20	60	-	300	650	7	8	15	25	26	5	8	5	1	-	100	
10) Larix decidua	0,6	7	13	60	-	450	650	7	8	15	25	26	5	8	5	1	-	100	
11) Other	22,3	2,5	5	60	-	100	300	7	8	15	25	26	5	8	5	1	-	100	
<b>Total</b>	<b>100</b>																		

**Table 3d: Protective Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)																			
2)																			
3)																			
4)																			
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			
11) Other																			
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

## **Estimate of Ownership for Planted Forests**

(Refer to **Section 6**, Working Paper FP35)

We request you to provide in tables 4 (a,b,c,d), the breakdown of ownership in “%” for: Planted components of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective).

The total percentages of ownership categories must tally to 100%

**Table 4a: Planted component of Semi-Natural Forests Productive.** Your new data inputs

Reference year	1990					2000					2005				
Planted components of Semi-Natural Forests Productive	Calculated in Table 2b (%)														
	Figures calculated in table 2b					Figures calculated in table 2b					Figures calculated in table 2b				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100					100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4b: Planted component of Semi-Natural Forests Protective.** Your new data inputs

Reference year	1990					2000					2005				
Planted components of Semi-Natural Forests Protective	Calculated % in Table 2b (%)														
	Figures calculated in table 2b					Figures calculated in table 2b					Figures calculated in table 2b				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100					100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4c: Productive Plantation Forests.**

Reference year	1990					2000					2005				
Productive Plantation	Reported Area from Table 1 (1000 ha)														
	56					60					61				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	97	-	3	-	100	97	-	3	-	100	97	-	3	-	100

**Table 4d: Protective Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Protective Plantation	Reported Area from Table 1 (1000 ha)														
	0					0					0				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100					100

Source: Planted Forests Specialist to list reference documents in the references section

## **Estimate of Predominant purpose for Planted Forests**

(Refer to Section 7, Working Paper FP35)

In Questionnaire tables 5 (a, b), for productive and protective categories, please estimate, in %<sup>78</sup> of area, the **Predominant purpose** for:

Planted components of Semi-Natural Forests (table 5a), for figures calculated in table 2b

Plantation Forests (table 5b), for figures provided in table 1.

**Table 5a: Detailed Purpose Estimates for Planted component of Semi-Natural Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 2b (%)				%	%	%
<b>Productive</b>	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	Ind-Sawlog			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
				<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
				<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Source: Planted Forests Specialist to list reference documents in the references section

**Table 5b: Detailed Purpose Estimates for Plantation Forests by % of Area.**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 1 (000 ha)				%	%	%
<b>Productive</b>	56	60	61	Ind-Sawlog	40	40	40
				Ind-Pulpwood/Fiber	60	60	60
				Ind-Bioenergy	-	-	-
				Ind-Non Wood Prod	-	-	-
				Ind-Unspecified	-	-	-
				<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	0	0	0	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
				<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report

<sup>78</sup> Estimates of Predominant purpose must tally to 100% for each category

## **References**

**FAO** 2004/5, Global Forest Resources Assessment update 2005, National Country Report for Croatia, Forest Resources Assessment Programme, Forest Resources Development Service, Forest Resources Division. FAO, Rome

**FAO** 2005, Global Planted Forest Thematic Supplement to Forest Resources Assessment 2005 *Guidelines for National Reporting Tables for Planted Forests*. Based on the work of A. Del Lungo and J.B. Carle. Planted Forests and Trees Working Paper 35, Forest Resources Development Service, Forest Resources Division. FAO, Rome, 21 pp

Public enterprise "Hrvatske šume" 1993, Forest Management Plan of the Republic of Croatia (Valid from 1986 to 1995, updated to 01.01.1986.) Zagreb, 264 pp

Public enterprise "Hrvatske šume" 1996, Forest Management Plan of the Republic of Croatia (Valid from 1996 to 2005, updated to 01.01.1996.) Zagreb, part I pp 617, part II pp 843

## **POLAND**



### **GLOBAL PLANTED FOREST THEMATIC SUPPLEMENT TO FOREST RESOURCES ASSESSMENT 2005**

### ***QUESTIONNAIRE ON PLANTED FORESTS: NATIONAL REPORTING TABLES***

#### **POLAND**

To be read and filled in association with  
Working Paper 35  
to assist in definitions and explanatory notes

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**COUNTRY NAME: Poland**

***Availability of FRA 2005 data on forest cover area***

(Refer to **Section 1**, Working Paper FP35<sup>\*</sup>)

**Forest type**

Table 1 has been derived from Table 4 (T4) of National Report for FRA 2005

Table 1: Area of Forest as reported in Table T4 of FRA 2005

FRA 2005 Categories	Surface (1000 ha)		
	Forest		
	1990	2000	2005
Primary	30	51	53
Modified Natural	-	-	-
Semi-Natural	8819	8976	9107
Productive Plantation	32	32	32
Protective Plantation	-	-	-

Source: Derived from T4, in FAO 2004/5, Global Forest Resources Assessment update 2005,  
National Country Report

According to the FRA 2005 definitions Planted Forests include the planted component of Semi-Natural Forests and both Productive and Protective Plantation Forests.

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\*FAO. 2005. Planted Forests and Trees Working Papers: Global Planted Forest Thematic Supplement to Forest Resources Assessment 2005. *Guidelines for National Reporting Tables for Planted Forests*, Working Paper FP35, Forest Resources Development Service, Forest Resources Division. FAO, Rome

**Estimate of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests**

(Refer to Section 2, Working Paper FP35)

Table 2a, in top rows, reports absolute figures provided in T4 of the National report for Semi-Natural Forests. Please provide the % planted component and % assisted natural regeneration component of Semi-Natural Forests for years 1990, 2000 and 2005<sup>79</sup> (Your new data inputs in yellow on table).

Table 2a: FRA 2005 area of Semi-Natural Forest classification and estimates of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests

Year	1990			2000			2005		
FRA Semi-Natural Forest				Absolute figures (1000 ha)					
	8819			8976			9107		
Relative figures (%)									
Semi-Natural Forest components	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)
Estimates	96,2	3,8	100	95,9	4,1	100	95,8	4,2	100

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

<sup>79</sup> The bottom row of table 4a to be completed by the Planted Forests Specialist.

Estimates of planted and assisted natural regeneration components of Semi-Natural Forests must tally to 100%

### **Estimation of Planted component of Semi-Natural Forests to Productive and Protective purposes**

(Refer to Section 3, Working Paper FP35)

**In Table 2b estimate in % the area of Planted component<sup>80</sup> of Semi-Natural Forests<sup>81</sup> allocated to Production and Protection purposes for years 1990, 2000, 2005.** Your new data inputs

Table 2b: Planted component of Semi-Natural Forests to Productive and Protective purposes

Year	1990			2000			2005		
Semi-Natural Forests Planted component	Relative figures (%)								
Estimates	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)
	68	32	100	65	35	100	64	36	100

Source: Planted Forests Specialist to list reference documents in the references section

<sup>80</sup> For the lack of data information provided in this table refers to the all Semi-Natural Forests. According to the expert's opinion, presented information is highly relevant also for "Planted component" as planted forests consists prevailing part (~96%) of "Semi-natural Forests".

<sup>81</sup> Estimates of Productive and Protective purposes must tally to 100%

**Report MAI, rotation length, harvest volume yield, and age classes distribution for the top10 species in the Planted component of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective)**

(Refer to **Section 5**, Working Paper FP35)

In tables 3 (a, b, c, d), **for year 2005 only**, please provide percentages of the top ten species used in your country.

In table 3a: Provide the top 10 species for **Productive Planted component of Semi-Natural Forests**

In table 3b: Provide the top 10 species for **Protective Planted component of Semi-Natural Forests**

In table 3c: Provide the top 10 species for **Productive Plantation Forests**

In table 3d: Provide the top 10 species for **Protective Plantation Forests**

For each table, please group other remaining species in class 11 named “Other”.

**The total of percentages for the 11 classes must tally to 100%**

For each species reported please provide best absolute data for Mean Annual Increment, Rotation Length and Harvest Volume.

Finally provide an estimate of the age distribution in %.

**The Age distributions must tally to 100%.**

**Table 3<sup>82</sup>: Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Top 10 species planted	%	Mean Annual Increment	Predominant Rotation Length	Harvest Vol. Yield	Age class distribution %								
		m <sup>3</sup> /ha/year	years	m <sup>3</sup> /ha	0-20	21-40	41-60	61-80	81-100	> 100	regeneration phase		
		Average	Min	Max	Average	0-20	21-40	41-60	61-80	81-100	> 100	regeneration phase	Total
1) Pine + Larch	67,7	7,6	60	150	3,6	12	22	26	19	13	6	2	
2) Oak + Ash, Maple, Sycamore, Elm	6,6	6,1	120	180	1,8	19	15	17	15	11	19	4	
3) Birch	6,3	7,8	60		5,6	17	29	33	14	3	0	4	
4) Spruce	5,7	4,9	80	130	5,5	11	22	17	19	14	8	9	
5) Alder	5,3	5,3	60		2,9	15	31	26	16	6	2	4	
6) Beech	4,8	7,1	100	140	3,9	9	10	14	17	17	14	19	
7) Fir	2,5	6,8	90	140	2,2	2	10	21	19	17	12	19	
8) Hornbeam	0,4	7,7	60		3,1	3	20	39	18	6	4	10	
9) Aspen + Linden, Willow,	0,4	13,0	40		9,2	12	37	23	12	6	4	6	
10) Poplar	0,3	9,9	30		11,7	50	23	9	2	1	0	15	
11)													
<b>Total</b>	<b>100</b>	<b>7,2</b>			<b>3,7</b>								

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3a: Productive Planted<sup>83</sup> component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment	Predominant Rotation Length	Harvest Vol. Yield	Age class distribution %										
		m <sup>3</sup> /ha/year	years	m <sup>3</sup> /ha	0-20	21-40	41-60	61-80	81-100	>100	regeneration phase				
		Min	Max	Min	Max	Min	Max	0-20	21-40	41-60	61-80	81-100	>100	regeneration phase	Total
1)															
<b>Total</b>	<b>100</b>							<b>13</b>	<b>23</b>	<b>26</b>	<b>17</b>	<b>11</b>	<b>6</b>	<b>4</b>	

Source: Planted Forests Specialist to list reference documents in the references section

<sup>82</sup> Due to the lack of source data, providing information in separation to productive and protective components was impossible. For this reason new - aggregated table 3 for Semi-natural Forests (look at footnote 2) was elaborated. Information available for protective and productive semi-natural forests (age structure) as well as plantations was delivered in tables 3a, 3b and 3c.

<sup>83</sup> Look at footnote 2.

**Table 3b: Protective Planted<sup>84</sup> component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %							
		Min	Max	Min	Max	Min	Max	0-20	21-40	41-60	61-80	81-100	>100	regeneration phase	Total
		1)													
<b>Total</b>	<b>100</b>							11	20	21	20	13	10	5	

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3c: Productive Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %										
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total
		1) Robinia	26															
2) Eastern red oak	25																	
3) Poplar	23																	
4) Douglas fir	6																	
5) Black pine	6																	
6) Larch	5																	
7) Weymouth pine	2																	
8) Banksian pine	2																	
9) Scots Pine	1																	
10) Spruce	1																	
11) Other	3																	
<b>Total</b>	<b>100</b>																	

Source: Planted Forests Specialist to list reference documents in the references section

<sup>84</sup> Look at footnote 2.

## **Estimate of Ownership for Planted Forests**

(Refer to **Section 6**, Working Paper FP35)

We request you to provide in tables 4 (a,b,c,d), the breakdown of ownership in “%” for: Planted components of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective).

The total percentages of ownership categories must tally to 100%

**Table 4a: Planted component<sup>85</sup> of Semi-Natural Forests Productive.** Your new data inputs

Reference year	1990				2000				2005						
Planted components of Semi-Natural Forests Productive	Calculated in Table 2b (%)														
	Figures calculated in table 2b				Figures calculated in table 2b				Figures calculated in table 2b						
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	75	-	25	-	100	75	-	25	-	100	74	-	26	-	100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4b: Planted component<sup>86</sup> of Semi-Natural Forests Protective.** Your new data inputs

Reference year	1990				2000				2005						
Planted components of Semi-Natural Forests Protective	Calculated % in Table 2b (%)														
	Figures calculated in table 2b				Figures calculated in table 2b				Figures calculated in table 2b						
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	100	-	-	-	100	97	-	3	-	100	97	-	3	-	100

Source: Planted Forests Specialist to list reference documents in the references section

<sup>85</sup> Look at footnote 2

<sup>86</sup> Look at footnote 2

**Table 4c: Productive Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Productive Plantation	Reported Area from Table 1 (1000 ha)														
	32					32					32				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	100	-	-	-	100	100	-	-	-	100	100	-	-	-	100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4d: Protective Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Protective Plantation	Reported Area from Table 1 (1000 ha)														
	-					-					-				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100					100

Source: Planted Forests Specialist to list reference documents in the references section

## **Estimate of Predominant purpose for Planted Forests**

(Refer to Section 7, Working Paper FP35)

In Questionnaire tables 5 (a, b), for productive and protective categories, please estimate, in %<sup>87</sup> of area, the **Predominant purpose** for:

Planted components of Semi-Natural Forests (table 5a), for figures calculated in table 2b

Plantation Forests (table 5b), for figures provided in table 1.

**Table 5a: Detailed Purpose Estimates for Planted component of Semi-Natural Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 2b (%)				%	%	%
Productive	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	Ind-Sawlog <sup>88</sup>	100	100	100
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>
Protective	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	Non-ind-Environmental	30	61	69
				Non-ind-Recreation	70	39	31
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Source: Planted Forests Specialist to list reference documents in the references section

**Table 5b: Detailed Purpose Estimates for Plantation Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 1 (000 ha)				%	%	%
Productive	32	32	32	Ind-Sawlog			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>
Protective	-	-	-	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

<sup>87</sup> Estimates of Predominant purpose must tally to 100% for each category

<sup>88</sup> Industrial saw logs are the final assortment for stand, in the course of intermediate fellings and the final fellings all groups of products are (or could be) harvested as well.

**For transparency in referencing please list below all documents appropriate to completion of information and data for this questionnaire in conformity with the standard list provided in references section of Working Paper 35**

**References (*Your new references inputs*)**

BULiGL 1992, Wyniki aktualizacji stanu powierzchni leśnej i zasobów drzewnych w Lasach Państwowych na dzień 1 stycznia 1992 r. (Update of forest area and wood resources for State Forest Holding), Warsaw

BULiGL 1992, Wyniki wielkopowierzchniowej inwentaryzacji zdrowotnego i sanitarnego stanu lasu w Lasach Państwowych według stanu na 30 września 1991 r. (Results of large area forest unventory for State Forest Holding), Warsaw

BULiGL 1999, Ocena stanu powierzchni leśnej i zasobów drzewnych w lasach nie stanowiących własności skarbu państwa, stan na 1 stycznia 1997 r. i na 1 stycznia 1999 r. (Assessment of forest area and wood resources for private and municipal forests), Warsaw

BULiGL 2002, Wyniki wielkopowierzchniowej inwentaryzacji zdrowotnego i sanitarnego stanu lasu w Lasach Państwowych według stanu na 31 grudnia 2001 r. (Results of large area forest unventory for State Forest Holding), Warsaw

BULiGL 2002, Wyniki aktualizacji stanu powierzchni leśnej i zasobów drzewnych w Lasach Państwowych na dzień 1 stycznia 2002 r. (Update of forest area and wood resources for State Forest Holding), Warsaw

BULiGL 2004, Wyniki aktualizacji stanu powierzchni leśnej i zasobów drzewnych w Lasach Państwowych na dzień 1 stycznia 2004 r. (Update of forest area and wood resources for State Forest Holding), Warsaw

Official forestry statistical yearbooks – set of publications issued in years 1967-2004

Technical information of Forest Research Institute in Warsaw

## **SLOVAKIA**



### **GLOBAL PLANTED FOREST THEMATIC SUPPLEMENT TO FOREST RESOURCES ASSESSMENT 2005**

### ***QUESTIONNAIRE ON PLANTED FORESTS: NATIONAL REPORTING TABLES***

To be read and filled in association with  
Working Paper 35  
to assist in definitions and explanatory notes

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**COUNTRY NAME:** Slovakia

**Availability of FRA 2005 data on forest cover area**

(Refer to **Section 1**, Working Paper FP35<sup>\*</sup>)

**Forest type**

Table 1 has been derived from Table 4 (T4) of National Report for FRA 2005

Table 1: Area of Forest as reported in Table T4 of FRA 2005

FRA 2005 Categories	Surface (1000 ha)		
	Forest		
	1990	2000	2005
Primary	24	24	24
Modified Natural	938	939	946
Semi-Natural	937	938	940
Productive Plantation	21	18	17
Protective Plantation	2	2	2

Source: Derived from T4, in FAO 2004/5, Global Forest Resources Assessment update 2005,  
National Country Report

According to the FRA 2005 definitions Planted Forests include the planted component of Semi-Natural Forests and both Productive and Protective Plantation Forests.

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\*FAO. 2005. Planted Forests and Trees Working Papers: Global Planted Forest Thematic Supplement to Forest Resources Assessment 2005. *Guidelines for National Reporting Tables for Planted Forests*, Working Paper FP35, Forest Resources Development Service, Forest Resources Division. FAO, Rome

**Estimate of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests**

(Refer to **Section 2**, Working Paper FP35)

Table 2a, in top rows, reports absolute figures provided in T4 of the National report for Semi-Natural Forests. Please provide the % planted component and % assisted natural regeneration component of Semi-Natural Forests for years 1990, 2000 and 2005<sup>89</sup> (Your new data inputs in yellow on table).

Table 2a: FRA 2005 area of Semi-Natural Forest classification and estimates of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests

Year	1990			2000			2005		
FRA Semi-Natural Forest				Absolute figures (1000 ha)					
	937			938			940		
Relative figures (%)									
Semi-Natural Forest components	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)
Estimates	88	12	100	88	12	100	88	12	100

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

<sup>89</sup> The bottom row of table 4a to be completed by the Planted Forests Specialist.

Estimates of planted and assisted natural regeneration components of Semi-Natural Forests must tally to 100%

**Estimation of Planted component of Semi-Natural Forests to Productive and Protective purposes**

(Refer to Section 3, Working Paper FP35)

**In Table 2b estimate in % the area of Planted component of Semi-Natural Forests<sup>90</sup> allocated to Production and Protection purposes for years 1990, 2000, 2005.** Your new data inputs

Table 2b: Planted component of Semi-Natural Forests to Productive and Protective purposes

Year	1990			2000			2005		
Semi-Natural Forests Planted component	Relative figures (%)								
Estimates	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)
	80,7	19,3	100	80,7	19,3	100	80,7	19,3	100

Source: Planted Forests Specialist to list reference documents in the references section

<sup>90</sup> Estimates of Productive and Protective purposes must tally to 100%

**Report MAI, rotation length, harvest volume yield, and age classes distribution for the top10 species in the Planted component of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective)**

(Refer to **Section 5**, Working Paper FP35)

In tables 3 (a, b, c, d), **for year 2005 only**, please provide percentages of the top ten species used in your country.

In table 3a: Provide the top 10 species for **Productive Planted component of Semi-Natural Forests**

In table 3b: Provide the top 10 species for **Protective Planted component of Semi-Natural Forests**

In table 3c: Provide the top 10 species for **Productive Plantation Forests**

In table 3d: Provide the top 10 species for **Protective Plantation Forests**

For each table, please group other remaining species in class 11 named “Other”.

**The total of percentages for the 11 classes must tally to 100%**

For each species reported please provide best absolute data for Mean Annual Increment, Rotation Length and Harvest Volume.

Finally provide an estimate of the age distribution in %.

**The Age distributions must tally to 100%.**

**Table 3a: Productive Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years (average)		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1) Fagus sylvatica	46,1	6,20	6,20	115	115	4,9	4,9	3,5	3,6	10,2	7,9	7,2	7,0	18,4	18,3	8,9	15,0	100	
2) Picea abies	20,1	8,49	8,49	113	113	5,1	5,1	4,4	4,4	13,2	10,6	7,7	7,0	17,0	16,8	8,4	10,5	100	
3) Quercus	17,5	4,71	4,71	122	122	2,3	2,3	1,9	1,9	4,9	3,8	3,4	6,1	29,9	24,5	9,3	14,3	100	
4) Abies alba	4,7	6,92	6,92	112	112	7,5	7,5	5,0	5,0	12,3	8,2	4,5	3,3	8,9	17,6	12,7	22,5	100	
5) Pinus	4,4	6,17	6,17	110	110	3,2	3,2	2,9	2,9	11,0	10,1	9,9	7,9	15,6	20,3	10,0	9,4	100	
6) Acer	2,6	4,76	4,76	115	115	2,7	2,7	9,6	9,7	21,7	13,8	8,5	5,7	10,8	6,6	3,6	10,0	100	
7) Larix decidua	2,3	5,43	5,43	113	113	1,6	1,6	7,4	7,5	25,9	16,0	11,2	6,5	11,2	7,1	3,1	4,1	100	
8) Fraxinus	1,6	6,45	6,45	125	125	2,4	2,4	7,0	7,0	15,2	8,4	5,8	8,5	26,4	11,5	3,9	6,3	100	
9)																			
10)																			
11) Other	0,7	2,25	2,25			2,4	2,4	1,7	1,7	5,7	8,5	7,1	16,3	40,5	14,6	2,0	1,9	100	
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3b: Protective Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years (average)		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1) Picea abies	38,6	5,95	5,95	182	182	0,6	0,6	1,2	1,2	5,2	7,1	8,2	7,1	13,2	14,3	9,3	33,2	100	
2) Fagus sylvatica	31,0	5,06	5,06	205	205	0,5	0,5	1,1	1,2	4,9	5,3	4,5	5,2	15,9	20,0	10,3	31,6	100	
3) Quercus	8,1	3,23	3,23	211	211	0,1	0,1	0,5	0,5	1,5	1,4	1,5	3,8	25,7	25,7	12,1	27,2	100	
4) Pinus	5,9	4,19	4,19	190	190	0,3	0,3	0,6	0,7	3,8	6,3	8,8	5,9	11,1	19,0	13,6	30,2	100	
5) Pinus mugo	5,8	-	-	-	-	-	-	0,3	0,3	6,8	7,9	6,2	1,9	4,4	15,2	12,3	44,7	100	
6) Abies alba	4,4	6,00	6,00	182	182	0,7	0,7	1,6	1,7	3,9	4,4	3,6	2,7	5,8	15,9	14,3	46,1	100	
7) Larix decidua	2,5	4,19	4,19	188	188	0,3	0,3	1,8	1,8	6,6	8,2	13,2	7,6	16,9	11,9	8,3	23,7	100	
8) Acer	2,1	4,76	4,76	199	199	0,2	0,2	3,3	3,4	8,8	8,4	7,0	5,9	15,6	15,6	7,6	24,4	100	
9) Fraxinus	1,4	5,18	5,18	192	192	0,4	0,4	2,3	2,4	6,9	8,0	4,6	6,2	22,3	21,0	8,4	17,9	100	
10)																			
11) Other	0,2	-	-	195	195	0,4	0,4	0,6	0,7	4,0	9,9	15,9	9,3	9,2	12,0	14,7	23,7	100	
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3c: Productive Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years (average)		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1) Robinia pseudoacacia	69,60	3,20	3,20	45	45	5,2	5,2	11,4	11,4	15,1	10,6	12,4	22,9	16,1	0,1			100	
2) Populus x Euroamericana	27,92	7,38	7,38	30	30	15,3	15,3	14,2	14,1	18,4	26,3	23,0	3,5	0,4	0,1			100	
3) Pinus	1,46	4,46	4,46	110	110	3,5	3,5	8,1	8,2	5,4	0,9	1,6	1,9	9,9	47,1	12,3	4,6	100	
4) Quercus	0,35					2,9	2,9	14,5	14,6	17,3	5,7	9,3	4,4	12,4	21,8			100	
5) Fraxinus	0,21					1,0	1,0	2,7	2,7	9,5	29,5	1,4	16,6	37,6				100	
6) Acer	0,06							24,5	24,5	21,7	18,2	11,1						100	
7) Abies alba	0,04									11,6	12,5	16,3	14,6	4,7	40,3			100	
8) Picea abies	0,02							50,0	50,0									100	
9)																			
10)																			
11) Other broadleav.	0,34					1,3	1,3	13,8	13,7	15,2	11,1	15,0	21,5	7,2	1,0	1,5		100	
<b>Total</b>	<b>100</b>							12,2	12,1	15,8	14,9	15,1	17,1	11,6	0,9	0,2	0,1	100	

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3d: Protective Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years (average)		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1) Populus x Euroamericana	66,83	6,55	6,55	50	50	9,4	9,4	5,6	5,6	15,6	30,2	31,8	10,8	0,4				100	
2) Pinus	27,98	4,02	4,02	200	200	2,1	2,1	4,9	4,8	9,7	7,2	4,5	1,7	10,7	42,8	15,9	3,1	100	
3) Fraxinus	1,26	5,76	5,76	170	170	0,5	0,5	32,9	32,9	8,8	4,7		5,5	15,2				100	
4) Acer	0,57							21,7	21,7	34,2		15,8	6,6					100	
5) Quercus	0,55									74,3	25,7							100	
6) Abies alba	0,28										42,6				57,4			100	
7) Picea abies	0,08							50,0	50,0									100	
8)																			
9)																			
10)																			

11) Other broadleav.	2,45				1,4	1,4	12,4	12,3	5,7	10,7	19,9	10,7	8,1	2,8	10,7	6,7	100
Total	100						5,3	5,2	14,0	22,8	23,0	8,1	3,7	12,2	4,7	1,0	100

Source: Planted Forests Specialist to list reference documents in the references section

*Picea abies* / Norway spruce

*Fagus sylvatica* / European beech

*Quercus* / Oak including *Q. petraea* (sessile oak), *Q. robur* (pedunculate oak) and *Q. cerris* (Turkey oak)

Genus *Pinus* / Pine including *P. silvestris* (Scots pine) and *P. nigra* (Austrian black pine)

*Abies alba* / European silver fir

*Larix decidua* / European larch

Genus *Acer* / maple including *Acer platanoides* (Norway maple), *Acer pseudoplatanus* (sycamore maple) and *Acer campestre* (field maple)

Genus *Fraxinus* including *Fraxinus excelsior* (common ash), *Fraxinus angustifolia* (narrow-leaved ash)

*Robinia pseudoacacia* / black locust

Populus / Poplar including *Populus tremula*, *Populus alba*, *Populus nigra*, *Populus euroamericana*

## **Estimate of Ownership for Planted Forests**

(Refer to **Section 6**, Working Paper FP35)

We request you to provide in tables 4 (a,b,c,d), the breakdown of ownership in “%” for: Planted components of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective).

The total percentages of ownership categories must tally to 100%

**Table 4a: Planted component of Semi-Natural Forests Productive.** Your new data inputs

Reference year	1990					2000					2005				
Planted components of Semi-Natural Forests Productive	Calculated in Table 2b (%)														
	Figures calculated in table 2b					Figures calculated in table 2b					Figures calculated in table 2b				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	100	-	-	-	100	53,4	27,7	14,6	4,3	100	54,8	26,7	9,8	8,7	100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4b: Planted component of Semi-Natural Forests Protective.** Your new data inputs

Reference year	1990					2000					2005				
Planted components of Semi-Natural Forests Protective	Calculated % in Table 2b (%)														
	Figures calculated in table 2b					Figures calculated in table 2b					Figures calculated in table 2b				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	100	-	-	-	100	49,8	34,2	13,2	2,8	100	52,7	34,4	7,5	5,4	100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4c: Productive Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Productive Plantation	Reported Area from Table 1 (1000 ha)														
	21					18					17				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	100	-	-	-	100	20,5	27,2	46,8	5,5	100	24,6	20,5	35,1	19,8	100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4d: Protective Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Protective Plantation	Reported Area from Table 1 (1000 ha)														
	2					2					2				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	100	-	-	-	100	45,2	19,3	30,6	4,9	100	47,2	19,9	25,0	7,9	100

Source: Planted Forests Specialist to list reference documents in the references section

## **Estimate of Predominant purpose for Planted Forests**

(Refer to Section 7, Working Paper FP35)

In Questionnaire tables 5 (a, b), for productive and protective categories, please estimate, in %<sup>91</sup> of area, the **Predominant purpose** for:

Planted components of Semi-Natural Forests (table 5a), for figures calculated in table 2b

Plantation Forests (table 5b), for figures provided in table 1.

**Table 5a: Detailed Purpose Estimates for Planted component of Semi-Natural Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 2b (%)				%	%	%
<b>Productive</b>	80,7	80,7	80,7	<b>Ind-Sawlog</b>	37	31	38
				<b>Ind-Pulpwood/Fiber</b>	30	38	41
				<b>Ind-Bioenergy</b>	0,5	0	0
				<b>Ind-Non Wood Prod</b>	28	25	16
				<b>Ind-Unspecified</b>	4,5	6	5
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	19,3	19,3	19,3	<b>Non-ind-Environmental</b>	95	95	97
				<b>Non-ind-Recreation</b>	1	1	1
				<b>Non-ind-Unspecified</b>	2	2	1
				<b>Non-ind-Fuelwood</b>	2	2	1
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Source: Planted Forests Specialist to list reference documents in the references section

**Table 5b: Detailed Purpose Estimates for Plantation Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table (1 000 ha)				%	%	%
<b>Productive</b>	21	18	17	<b>Ind-Sawlog</b>	15	14	15
				<b>Ind-Pulpwood/Fiber</b>	40	42	36
				<b>Ind-Bioenergy</b>	17	24	35
				<b>Ind-Non Wood Prod</b>	21	15	9
				<b>Ind-Unspecified</b>	10	4	5
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	2	2	2	<b>Non-ind-Environmental</b>	50	55	58
				<b>Non-ind-Recreation</b>	10	10	11
				<b>Non-ind-Unspecified</b>	38	33	30
				<b>Non-ind-Fuelwood</b>	2	2	1
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

<sup>91</sup> Estimates of Predominant purpose must tally to 100% for each category

**For transparency in referencing please list below all documents appropriate to completion of information and data for this questionnaire in conformity with the standard list provided in references section of Working Paper 35**

**References (Your new references inputs)**

1. Summary information of Forest Information Centre of Lesoprojekt Zvolen, 1990, 2000, 2004
2. Report on Forestry in the Slovak Republic 2005 (Green Report). (To this date already approved in Government of the Slovak Republic)
3. Global Forest Resources Assessment 2005. Slovakia. Country Report. Draft, July 2005

## SLOVENIA



### GLOBAL PLANTED FOREST THEMATIC SUPPLEMENT TO FOREST RESOURCES ASSESSMENT 2005

### *QUESTIONNAIRE ON PLANTED FORESTS: NATIONAL REPORTING TABLES FOR SLOVENIA*

To be read and filled in association with  
Working Paper 35  
to assist in definitions and explanatory notes

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**COUNTRY NAME:** Slovenia

**Availability of FRA 2005 data on forest cover area**

(Refer to **Section 1**, Working Paper FP35<sup>\*</sup>)

**Forest type**

Table 1 has been derived from Table 4 (T4) of National Report for FRA 2005

Table 1: Area of Forest as reported in Table T4 of FRA 2005

FRA 2005 Categories	Surface (1000 ha)		
	Forest		
	1990	2000	2005
Primary	63	95	119
Modified Natural	1090	1107	1107
Semi-Natural	35	37	38
Productive Plantation	0	0	0
Protective Plantation	0	0	0

Source: Derived from T4, in FAO 2004/5, Global Forest Resources Assessment update 2005,  
National Country Report

According to the FRA 2005 definitions Planted Forests include the planted component of Semi-Natural Forests and both Productive and Protective Plantation Forests.

**Comments:** There are 35-38.000 ha of Semi-Natural Forests in Slovenia and negligible of (less than 1.000 ha of Productive / Protective Plantation Forests) in Slovenia. That's the reason why we deal only with Semi-Natural Forests in this report.

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\*FAO. 2005. Planted Forests and Trees Working Papers: Global Planted Forest Thematic Supplement to Forest Resources Assessment 2005. *Guidelines for National Reporting Tables for Planted Forests*, Working Paper FP35, Forest Resources Development Service, Forest Resources Division. FAO, Rome

**Estimate of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests**

(Refer to **Section 2**, Working Paper FP35)

Table 2a, in top rows, reports absolute figures provided in T4 of the National report for Semi-Natural Forests. Please provide the % planted component and % assisted natural regeneration component of Semi-Natural Forests for years 1990, 2000 and 2005<sup>92</sup> (Your new data inputs in yellow on table).

Table 2a: FRA 2005 area of Semi-Natural Forest classification and estimates of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests

Year	1990			2000			2005		
FRA Semi-Natural Forest	Absolute figures (1000 ha)								
	35			37			38		
	Relative figures (%)								
Semi-Natural Forest components	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)
Estimates	98	2	100	98	2	100	98	2	100

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section
- Rok Pisek (CE ZGS), Slovenian Forest Service database 1990-2004

*Comments:* % of planted tree species is based on real data; % of assisted planted tree species is estimated and is negligible.

<sup>92</sup> The bottom row of table 4a to be completed by the Planted Forests Specialist.

Estimates of planted and assisted natural regeneration components of Semi-Natural Forests must tally to 100%

### **Estimation of Planted component of Semi-Natural Forests to Productive and Protective purposes**

(Refer to Section 3, Working Paper FP35)

**In Table 2b estimate in % the area of Planted component of Semi-Natural Forests<sup>93</sup> allocated to Production and Protection purposes for years 1990, 2000, 2005.** Your new data inputs

Table 2b: Planted component of Semi-Natural Forests to Productive and Protective purposes

Year	1990			2000			2005		
Semi-Natural Forests Planted component	Relative figures (%)								
Estimates	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)
	100	0	100	100	0	100	100	0	100

Source:

Planted Forests Specialist to list reference documents in the references section

- Rok Pisek (CE ZGS), Slovenian Forest Service database 1990-2004

*Comments: All Semi Natural Forests in Slovenia are Productive. There are negligible of Protective Semi–Natural Forests in Slovenia.*

<sup>93</sup> Estimates of Productive and Protective purposes must tally to 100%

**Report MAI, rotation length, harvest volume yield, and age classes distribution for the top10 species in the Planted component of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective)**

(Refer to **Section 5**, Working Paper FP35)

In tables 3 (a, b, c, d), **for year 2005 only**, please provide percentages of the top ten species used in your country.

In table 3a: Provide the top 10 species for **Productive Planted component of Semi-Natural Forests**

In table 3b: Provide the top 10 species for **Protective Planted component of Semi-Natural Forests**

In table 3c: Provide the top 10 species for **Productive Plantation Forests**

In table 3d: Provide the top 10 species for **Protective Plantation Forests**

For each table, please group other remaining species in class 11 named “Other”.

**The total of percentages for the 11 classes must tally to 100%**

For each species reported please provide best absolute data for Mean Annual Increment, Rotation Length and Harvest Volume.

Finally provide an estimate of the age distribution in %.

**The Age distributions must tally to 100%.**

**Table 3a: Productive Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1) Picea abies	45	1,5	15	75	140	1	11											n.a	
2) Fagus sylvatica	13	2	13	75	130	1	8											n.a	
3) Acer pseudoplatanus	10	2	10	80	120	1	7											n.a	
4) Fraxinus excelsior	10	2	10	80	120	1	7											n.a	
5) Quercus robur	9	1,5	10	80	150	0,8	7											n.a	
6) Prunus avium	5	3	10	60	90	1,5	7											n.a	
7) Alnus glutinosa	4	3	11	40	90	2	8											n.a	
8) Larix decidua	2	2	11	90	160	1	7											n.a	
9) Pinus sylvestris	1	1	9	70	110	0,5	6											n.a	
10) Abies alba	1	2	17	80	130	1	15											n.a	
11) Other																		n.a	
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

- Rok Pisek (CE ZGS), Slovenian Forest Service database 1990-2004
- KOTAR, Marijan (ur.). *Gozdarski priročnik*. [7. izd.]. Ljubljana: Biotehniška fakulteta, Oddelek za gozdarstvo in obnovljive gozdne vire, 2003. 414 str.,

#### Comments:

% of planted tree species is based on real data.

Mean Annual Increment, Predominant Rotation Length, Harvest Vol. Yield are estimated for each tree species separately, based on Yield tables (Kotar 2003) according site index and production level (high/low). Estimations are based on Rotation Length those were defined by experts of Slovenian Forest Service. For tree species: *Picea abies*, *Fagus sylvatica*, *Quercus robur*, *Alnus glutinosa*, *Abies alba* Yield tables were used; but for tree species *Acer pseudoplatanus*, *Fraxinus excelsior*, *Larix decidua*, *Prunus avium*, *Pinus sylvestris*, those are not in Yield tables, subjective expert guesses were made by Rok Pisek.

Harvest Vol. Yield estimation is based on expert guess of 0.75% of mean annual increment for conifers and 0.60% for deciduous trees.

For age class distribution Slovenian Forest Service doesn't have appropriate data.

**Table 3b: Protective Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)																			
2)																			
3)																			
4)																			
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			
11) Other																			
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

*Comments: All Semi Natural Forests in Slovenia are Productive; there are negligible of Protective Semi-Natural Forests in Slovenia.*

**Table 3c: Productive Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %										
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total
1)																		
2)																		
3)																		
4)																		
5)																		
6)																		
7)																		
8)																		
9)																		
10)																		
11) Other																		
<b>Total</b>	<b>100</b>																	

Source: Planted Forests Specialist to list reference documents in the references section

*Comments:* There are negligible of Productive Plantation Forests in Slovenia.

**Table 3d: Protective Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %										
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total
1)																		
2)																		
3)																		
4)																		
5)																		
6)																		
7)																		
8)																		
9)																		
10)																		
11) Other																		
<b>Total</b>	<b>100</b>																	

Source: Planted Forests Specialist to list reference documents in the references section

*Comments:* There are negligible of Protective Plantation Forests in Slovenia.

## **Estimate of Ownership for Planted Forests**

(Refer to **Section 6**, Working Paper FP35)

We request you to provide in tables 4 (a,b,c,d), the breakdown of ownership in “%” for: Planted components of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective).

The total percentages of ownership categories must tally to 100%

**Table 4a: Planted component of Semi-Natural Forests Productive. Your new data inputs**

Reference year	1990				2000				2005						
Planted components of Semi-Natural Forests Productive	Calculated in Table 2b (%)														
	Figures calculated in table 2b				Figures calculated in table 2b				Figures calculated in table 2b						
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	40	0	60	0	100	25	2	72	1	100	26	2	71	1	100

Source: Planted Forests Specialist to list reference documents in the references section

- Rok Pisek (CE ZGS), Slovenian Forest Service database 1990-2004

*Comments:* % of planted components is estimated on the basis of % of area according the ownership.

**Table 4b: Planted component of Semi-Natural Forests Protective. Your new data inputs**

Reference year	1990				2000				2005						
Planted components of Semi-Natural Forests Protective	Calculated % in Table 2b (%)														
	Figures calculated in table 2b				Figures calculated in table 2b				Figures calculated in table 2b						
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100				100	

Source: Planted Forests Specialist to list reference documents in the references section

*Comments:* All Semi Natural Forests in Slovenia are Productive; there are negligible of Protective Semi-Natural Forests in Slovenia.

**Table 4c: Productive Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Productive Plantation	Reported Area from Table 1 (1000 ha)														
	0					0					0				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100					100

Source: Planted Forests Specialist to list reference documents in the references section

*Comments:* There are negligible of Productive Plantation Forests in Slovenia.

**Table 4d: Protective Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Protective Plantation	Reported Area from Table 1 (1000 ha)														
	0					0					0				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100					100

Source: Planted Forests Specialist to list reference documents in the references section

*Comments:* There are negligible of Protective Plantation Forests in Slovenia.

## **Estimate of Predominant purpose for Planted Forests**

(Refer to Section 7, Working Paper FP35)

In Questionnaire tables 5 (a, b), for productive and protective categories, please estimate, in %<sup>94</sup> of area, the **Predominant purpose** for:

Planted components of Semi-Natural Forests (table 5a), for figures calculated in table 2b

Plantation Forests (table 5b), for figures provided in table 1.

**Table 5a: Detailed Purpose Estimates for Planted component of Semi-Natural Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 2b (%)				%	%	%
<b>Productive</b>	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	<b>Ind-Sawlog</b>	50	50	50
				<b>Ind-Pulpwood/Fiber</b>	38	40	38
				<b>Ind-Bioenergy</b>	10	10	12
				<b>Ind-Non Wood Prod</b>			
				<b>Ind-Unspecified</b>	2		
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	<b>Non-ind-Environmental</b>			
				<b>Non-ind-Recreation</b>			
				<b>Non-ind-Unspecified</b>			
				<b>Non-ind-Fuelwood</b>			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Source: Planted Forests Specialist to list reference documents in the references section

Rok Pisek (CE ZGS), Slovenian Forest Service database 2001, estimation for years 1990 and 2005.

**Comments:** All Semi Natural Forests in Slovenia are Productive. There are negligible of Protective Semi-Natural Forests in Slovenia.

The area of Planted Forests is defined on the basis of the structure of wood removal (logs, pulpwood, other industrial wood, woodfuel, other wood)

<sup>94</sup> Estimates of Predominant purpose must tally to 100% for each category

**Table 5b: Detailed Purpose Estimates for Plantation Forests by % of Area.** Your new data inputs

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 1 (000 ha)				%	%	%
<b>Productive</b>	0	0	0	Ind-Sawlog			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
				<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	0	0	0	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

*Comments: There are negligible of Plantation Forests in Slovenia.*

**For transparency in referencing please list below all documents appropriate to completion of information and data for this questionnaire in conformity with the standard list provided in references section of Working Paper 35**

**References (Your new references inputs)**

- Slovenian Forest Service database, 1990-2004
- GFRA 2005 Slovenia, country report
- KOTAR, Marijan (ur.). *Gozdarski priročnik*. [7. izd.]. Ljubljana: Biotehniška fakulteta, Oddelek za gozdarstvo in obnovljive gozdne vire, 2003. 414 str

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## **BELGIQUE**



### **SUPPLÉMENT THÉMATIQUE SUR LES FORÊTS PLANTÉES MONDIALES À L'ÉVALUATION DES RESSOURCES FORESTIÈRES 2005**

### ***QUESTIONNAIRE SUR LES FORÊTS PLANTÉES: TABLEAUX NATIONAUX D'INFORMATIONS***

Pour remplir le questionnaire veuillez consulter le Document de travail 35 afin de compter sur l'assistance des définitions et des notes explicatives fournies par ce document

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NOM DU PAYS: Belgique

**Disponibilité des données de FRA 2005 sur la superficie du couvert forestier**

(Veuillez consulter la **Section 1**, du Document de travail FP35<sup>\*</sup>)

**Type de forêt**

Le tableau 1 a été tiré du Tableau 4 (T4) du Rapport par pays de FRA 2005

Tableau 1: superficie de la forêt d'après le tableau T4 de FRA 2005

Catégories de FRA 2005	Superficie (1000 ha)		
	Forêt		
	1990	2000	2005
Forêts primaires	0	0	0
Forêts naturelles modifiées	0	0	0
Forêts semi-naturelles	374,2	383,8	392
Plantation de production	303,2	283,5	275
Plantation de protection	0	0	0

Source: tableau T4, de la Mise à jour de l'Évaluation des ressources forestières mondiales 2005, FAO 2004/5,  
Rapport par pays

Selon les définitions fournies par FRA 2005, les forêts plantées comprennent le composant planté des forêts semi-naturelles, et les plantations forestières destinées à la production ou à la protection.

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\*FAO. 2005. Documents de travail sur les forêts et les arbres plantés: Supplément thématique sur les forêts plantées mondiales à l'Évaluation des Ressources forestières 2005. Directives pour l'élaboration des tableaux nationaux d'informations sur les forêts plantées, Document de travail FP35, Service de la mise en valeur des ressources forestières, Division des ressources forestières. FAO, Rome.

## **Estimation du composant “planté” et du composant de “régénération naturelle assistée” des forêts semi-naturelles**

(Veuillez consulter la **Section 2** du Document de travail FP35)

Les premières lignes du tableau 2a, montrent les chiffres absous fournis par le tableau T4 du rapport par pays sur les forêts semi-naturelles. Veuillez fournir le pourcentage (%) du composant planté et celui du composant de régénération naturelle assistée des forêts semi-naturelles au cours des années 1990, 2000 et 2005<sup>95</sup> (Vos données doivent figurer dans la section jaune du tableau).

Tableau 2a de FRA 2005 : pourcentage de la superficie des forêts semi-naturelles et estimations des composants “plantés” et de “régénération naturelle assistée” des forêts semi-naturelles

Année	1990			2000			2005		
<b>Forêts semi-naturelles selon FRA</b>				<b>Chiffres absous (1000 ha)</b>					
	<b>374,2</b>			<b>383,8</b>			<b>392</b>		
<b>Chiffres relatifs (%)</b>									
<b>Composants des forêts semi-naturelles</b>	<b>Plantés (%)</b>	<b>Assistés (%)</b>	<b>Total (%)</b>	<b>Plantés (%)</b>	<b>Assistés (%)</b>	<b>Total (%)</b>	<b>Plantés (%)</b>	<b>Assistés (%)</b>	<b>Total (%)</b>
<b>Estimations</b>	<b>42</b>	<b>58</b>	<b>100</b>	<b>42</b>	<b>58</b>	<b>100</b>	<b>38</b>	<b>62</b>	<b>100</b>

Sources:

- Mise à jour de l’ Évaluation des ressources forestières 2005, FAO 2004/5, Rapport par pays.
- L’expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

<sup>95</sup> La dernière ligne du tableau 4a doit être complétée par l’expert en forêts plantées.

Les estimations du composant planté et du composant de régénération naturelle assistée des forêts semi-naturelles doivent totaliser 100%.

### **Estimation du composant planté des forêts semi-naturelles de production et de protection**

(Veuillez consulter la **Section 3** du Document de travail FP35)

**Dans le tableau 2b veuillez faire une estimation du pourcentage de la superficie occupée par le composant planté des forêts semi-naturelles<sup>96</sup> destinées à la production et à la protection au cours de 1990, 2000 et 2005.** Vos données doivent figurer dans la section jaune.

Tableau 2b: composant planté des forêts semi-naturelles destinées à la production et à la protection

Année	1990			2000			2005		
Composant planté des forêts semi- naturelles  Estimations	Chiffres relatifs (%)								
	De production (%)	De protection (%)	Total (%)	De production (%)	De protection (%)	Total (%)	De production (%)	De protection (%)	Total (%)
	100	0	100	100	0	100	100	0	100

Source : l'expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

<sup>96</sup> Les estimations respectives des forêts de production et des forêts de protection doivent totaliser 100%.

**Rapport AMA (Accroissement Moyen Annuel), durée du cycle de rotation, rendement du volume de récolte, et distribution par classe d'âge des 10 espèces principales du composant planté des forêts semi-naturelles (de production et de protection) et des plantations forestières (de production et de protection).**

(Veuillez consulter la **Section 5**, du Document de travail FP35)

Veuillez fournir les pourcentages correspondant aux 10 espèces principales utilisées dans votre pays **en 2005** dans les tableaux 3 (a, b,c,d).

Veuillez fournir les 10 espèces principales du **composant planté des forêts semi-naturelles de production** dans le tableau 3a.

Veuillez fournir les 10 espèces principales du **composant planté des forêts semi-naturelles de protection** dans le tableau 3b.

Veuillez fournir les 10 espèces principales des **plantations forestières destinées à la production** dans le tableau 3c.

Veuillez fournir les 10 espèces principales des **plantations forestières destinées à la protection** dans le tableau 3d.

Dans chaque tableau, veuillez inscrire les espèces restantes dans la classification 11 “Autres”.

**Le total du pourcentage de chacune des 11 classifications doit totaliser 100%.**

Veuillez fournir les meilleures données possibles sur chacune des espèces en ce qui concerne: l'accroissement moyen annuel (AMA), la durée du cycle de rotation et le rendement du volume de récolte.

Finalement, veuillez fournir une estimation des pourcentages de distribution par classe d'âge. **La distribution par âge doit totaliser 100%.**

**Tableau 3a: composant planté des forêts semi-naturelles de production. Composition des espèces (%), Accroissement Moyen Annuel (m<sup>3</sup>/ha/année), Durée du cycle de rotation (années), rendement du volume de récolte (m<sup>3</sup>/ha) et distribution par classe d'âge (%). Vos données doivent figurer dans la section jaune**

Année de référence: 2005

Total		Accroisse-ment Moyen Annuel m <sup>3</sup> /ha/année		Durée prédominante du cycle de rotation (années)		Rendement du volume de récolte m <sup>3</sup> /ha		Distribution par classe d'âge %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Ind	Tot
1) Pinus sylvetris	29,	5	10	60	120			1	1	2	28	28	15	17	3	1	0	4	100
2) Quercus robur	6	2	5	100	200			2	2	4	4	4	7	13	12	5	4	43	100
3) Fagus sylvatica	4	3	7	75	150			1	1	2	6	7	9	17	15	7	12	23	100
4) Betula spp	3	10	15	50	90			13	13	28	7	6	2	1	0	0	0	30	100
5) Autres peup purs	28	4	6	50	200			6	6	13	16	16	9	10	3	0	0	21	100
6) Peuplements mél.	29	4	6	50	200			5	4	8	10	11	7	8	3	0	0	44	100
7)																			
8)																			
9)																			
10)																			
11) Autres																			
<b>Total</b>	<b>100</b>																		

Source: l'expert en forêts plantés fera une liste des documents de référence dans la section bibliographique.

**Tableau 3b: composant planté des forêts semi-naturelles de protection. Composition des espèces (%), Accroissement Moyen Annuel (m<sup>3</sup>/ha/année), Durée du cycle de rotation (années), rendement du volume de récolte (m<sup>3</sup>/ha) et distribution par classe d'âge (%). Vos données doivent figurer dans la section jaune.**

Année de référence: 2005

10 principales espèces plantées	%	Accroisse-ment Moyen Annuel m <sup>3</sup> /ha/année		Durée prédominante du cycle de rotation (années)		Rendement du volume de récolte m <sup>3</sup> /ha		Distribution par classe d'âge %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)																			
2)																			
3)																			
4)																			
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			
11) Autres																			
<b>Total</b>	<b>100</b>																		

Source: l'expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

Tableau 3c: plantations forestières de production. Composition des espèces (%), Accroissement Moyen Annuel (m<sup>3</sup>/ha/année), Durée du cycle de rotation (en années), rendement du volume de récolte (m<sup>3</sup>/ha) et distribution par classe d'âge (%). Vos données doivent figurer dans la section jaune.

Année de référence: 2005

10 principales espèces plantées	%	Accroissement Moyen Annuel m <sup>3</sup> /ha/année		Durée prédominante du cycle de rotation (en années)		Rendement du volume de récolte M <sup>3</sup> /ha		Distribution par classe d'âge %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)Picea abies	62	6	16	50	100	600	1000	7	9	10	13	19	16	18	7	1	0		
2)Pseudotsuga menz.	7	15	21	50	90	700	1000	15	15	18	20	20	8	1	2	1	0		
3)Larix sp	3	8	16	40	70	600	1000	6	3	6	9	25	38	11	1	0	1		
4)Pinus sp	10	8	17	60	120			2	2	5	17	19	13	21	13	5	3		
5)Populus	11	10	20	15	30			9	8	15	30	28	4	6	0	0	0		
6)Autres résineux	1							7	11	11	18	29	18	5	1	0	0		
7)Feuillus	6	4	10					34	32	22	9	2	1	0	0	0	0		
8)																			
9)																			
10)																			
11) Autres																			
<b>Total</b>	<b>100</b>																		

Source: l'expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

Tableau 3d: plantations forestières de protection. Composition des espèces (%), Accroissement Moyen Annuel ( $m^3/ha/année$ ), Durée du cycle de rotation (en années), Rendement du volume de récolte ( $m^3/ha$ ) et distribution par classe d'âge (%). Vos données doivent figurer dans la section jaune.

Année de référence: 2005

10 principales espèces plantées	%	Accroissement Moyen Annuel $m^3/ha/année$		Durée prédominante du cycle de rotation (années)		Rendement du volume de récolte $m^3/ha$		Distribution par classe d'âge %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)																			
2)																			
3)																			
4)																			
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			
11) Autres																			
<b>Total</b>	<b>100</b>																		

Source: l'expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

## **Estimation de la propriété des forêts plantées**

(Veuillez consulter la **Section 6** du Document de travail FP35)

Vous êtes prié de fournir les pourcentages (“%”) concernant la propriété des composants plantés des forêts semi-naturelles (de production et de protection) et des plantation forestières (de production et de protection) dans les tableaux 4 (a, b, c, d).

Le pourcentage total de chaque catégorie de propriété doit totaliser 100%

**Tableau 4a: Composant planté des forêts semi-naturelles de production.** Vos données doivent figurer dans la section jaune.

Année de référence	1990					2000					2005				
Composants plantés des forêts semi-naturelles de production	Calculé dans le Tableau 2b (%)														
	Chiffres calculés dans le tableau 2b					Chiffres calculés dans le tableau 2b					Chiffres calculés dans le tableau 2b				
	Propriété (%)														
Propriété	Publique	Privée	Petits propriétaires	Autres	Total	Publique	Privée	Petits propriétaires	Autres	Total	Publique	Privée	Petits propriétaires	Autres	Total
	42,4		57,6		100	44,7		55,3		100	44,9		55,1		100

Source: l' expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

**Tableau 4b: Composant planté des forêts semi-naturelles de protection.** Vos données doivent figurer dans la section jaune.

Année de référence	1990					2000					2005				
Composants plantés des forêts semi-naturelles de protection	Calculé en % dans le tableau 2b (%)														
	Chiffres calculés dans le tableau 2b					Chiffres calculés dans le tableau 2b					Chiffres calculés dans le tableau 2b				
	Propriété (%)														
Propriété	Publique	Privée	Petits propriétaires	Autres	Total	Publique	Privée	Petits propriétaires	Autres	Total	Publique	Privée	Petits propriétaires	Autres	Total
					100					100					100

Source: l'expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

**Tableau 4c: plantations forestières de production.** Vos données doivent figurer dans la section jaune.

Année de référence	1990				2000				2005							
Plantation de production	Superficie indiquée dans le Tableau 1 (1000 ha)															
	303,2				283,5				275							
	Propriété (%)															
Propriété	Publique	Privée Entreprise	Petits propriétaires	Autres	Total	Publique	Entreprise	Privée Entreprise	Petits propriétaires	Autres	Total	Publique				
	42,3		57,7		100	42,3		57,7		100	100	43,9		56,1		100

Source: l'expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

**Tableau 4d: plantations forestières de protection.** Vos données doivent figurer dans la section jaune.

Année de référence	1990				2000				2005						
Plantation de protection	Superficie indiquée au tableau 1 (1000 ha)														
	0				0				0						
	Propriété (%)														
Propriété	Publique	Privée Entreprise	Petits propriétaires	Autres	Total	Publique	Entreprise	Privée Entreprise	Petits propriétaires	Autres	Total	Publique			
					100						100				100

Source: l'expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

## **Estimation de la finalité prédominante des forêts plantées**

(Veuillez consulter la Section 7 du Document de travail FP35)

Dans les tableaux 5 (a, b) du questionnaire concernant les catégories destinées à la production et à la protection, veuillez estimer en %<sup>97</sup> la superficie des composants plantés des forêts semi-naturelles, (tableau 5<sup>a</sup>) **destinées à une finalité prédominante**, celle-ci sera en rapport avec les chiffres calculées dans le tableau 2b.

Veuillez calculer aussi la superficie des plantations forestières (tableau 5b), celle-ci sera en rapport avec les chiffres fournis dans le tableau 1.

**Tableau 5a: Estimations détaillées de la superficie du composant planté des forêts semi-naturelles selon leur finalité prédominante.**

Vos données doivent figurer dans la section jaune.

Finalité selon FRA	1990	2000	2005	Finalité prédominante	1990	2000	2005
	Estimations tirées du tableau 2b (%)				%	%	%
de production	Donnée du Tableau 2b	Donnée du Tableau 2b	Donnée du tableau 2b	Grume de sciage industriel	80	80	80
				Pâte/fibre industrielle	20	20	20
				Bioénergie industrielle			
				Produit Forestier non ligneux industriel			
				Non spécifié industriel			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>
de protection	Donnée du tableau 2b	Donnée du tableau 2b	Donnée du tableau 2b	Environnement non industriel			
				Récréation non industrielle			
				Non spécifié non industriel			
				Bois de feu non industriel			
					<b>100</b>	<b>100</b>	<b>100</b>

Source: l'expert en forêt s plantées fera une liste des documents de référence dans la section bibliographique.

<sup>97</sup> L'estimation de la finalité prédominante de chaque catégorie doit totaliser 100%.

**Tableau 5b: Estimation détaillée de la superficie des plantations forestières selon leur finalité prédominante.**

Vos données doivent figurer dans la section jaune.

Finalité selon FRA	1990	2000	2005	Finalité prédominante	1990	2000	2005
	<b>Estimations tirées du Tableau 1 (000 ha)</b>				%	%	%
de production	303,2	283,5	275	<b>Grume de sciage industriel</b>	75	75	75
				<b>Pâte/Fibre industrielle</b>	25	25	25
				<b>Bioénergie industrielle</b>			
				<b>Produit forestier non ligneux industriel</b>			
				<b>Non spécifié industriel</b>			
				<b>Total</b>	<b>100</b>	<b>100</b>	<b>100</b>
de protection	0	0	0	<b>Environnement non industriel</b>			
				<b>Récréation non industrielle</b>			
				<b>Non spécifié, non industriel</b>			
				<b>Bois de feu non industriel</b>			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Sources

- Mise à jour de l'Évaluation des ressources forestières mondiales 2005, FAO 2004/5, Rapport par pays
- L'expert en forêts plantées fera une liste des documents de référence dans la section bibliographique.

**Pour faciliter la transparence en matière de références, veuillez faire une liste de tous les documents dont vous avez tiré les informations et les données utiles pour le complètement du questionnaire suivant le modèle fourni dans la section bibliographique du Document de travail 35.**

**Bibliographie (*nouvelles données bibliographiques*)**

J. Rondeux, H. Lecomte, J. Fagot, C. Laurent et A. Toussaint. 1986. Quelques données statistiques récentes sur la forêt wallonne. Bull. Soc. Roy. De Belgique – 93 – 1. pp1-21.

Ministère de la Région wallonne, Direction Générale des Ressources naturelles et de l'Environnement, Division de la Nature et des Forêts, Base de données de l'Inventaire permanent des Ressources forestières de Wallonie (1994-1999)

Ministerie van de Vlaamse Gemeenschap, Departement Leefmilieu en Infrastructuur, Administratie Milieu-, Natuur-, Land- en Waterbeheer, Afdeling Bos en Groen, Databank van de Bosinventarisatie van het Vlaamse Gewest (1996-1999)

P. Dagnelie, R. Palm, J.Rondeux, A. Thill, 1988 : Tables de production relatives à l'épicéa commun. Les Presses Agronomiques de Gembloux, 122 p.

J.Rondeux, A. Thibaut, 1996 : Tables de production relatives au Douglas. Les Presses Agronomiques de Gembloux, 151 p.

Ministère de la Région wallonne, 2001. Les mélèzes. Division de la Nature et des Forêts, Fiche technique n°11, 23 p.

## **CZECH REPUBLIC**



### **GLOBAL PLANTED FOREST THEMATIC SUPPLEMENT TO FOREST RESOURCES ASSESSMENT 2005**

### ***QUESTIONNAIRE ON PLANTED FORESTS: NATIONAL REPORTING TABLES***

To be read and filled in association with  
Working Paper 35  
to assist in definitions and explanatory notes

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**COUNTRY NAME: Czech Republic**

**Availability of FRA 2005 data on forest cover area**

(Refer to **Section 1**, Working Paper FP35<sup>\*</sup>)

**Forest type**

Table 1 has been derived from Table 4 (T4) of National Report for FRA 2005

Table 1: Area of Forest as reported in Table T4 of FRA 2005

FRA 2005 Categories	Surface (1000 ha)		
	Forest		
	1990	2000	2005
Primary	0	0	0
Modified Natural	14	14	14
Semi-Natural	2616	2623	2634
Productive Plantation	0	0	0
Protective Plantation	0	0	0

Source: Derived from T4, in FAO 2004/5, Global Forest Resources Assessment update 2005,  
National Country Report

According to the FRA 2005 definitions Planted Forests include the planted component of Semi-Natural Forests and both Productive and Protective Plantation Forests.

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\*FAO. 2005. Planted Forests and Trees Working Papers: Global Planted Forest Thematic Supplement to Forest Resources Assessment 2005. *Guidelines for National Reporting Tables for Planted Forests*, Working Paper FP35, Forest Resources Development Service, Forest Resources Division. FAO, Rome

**Estimate of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests**

(Refer to **Section 2**, Working Paper FP35)

Table 2a, in top rows, reports absolute figures provided in T4 of the National report for Semi-Natural Forests. Please provide the % planted component and % assisted natural regeneration component of Semi-Natural Forests for years 1990, 2000 and 2005<sup>98</sup> (Your new data inputs in yellow on table).

Table 2a: FRA 2005 area of Semi-Natural Forest classification and estimates of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests

Year	1990			2000			2005		
FRA Semi-Natural Forest				Absolute figures (1000 ha)					
	2616			2623			2634		
Relative figures (%)									
Semi-Natural Forest components	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)
Estimates	96	4	100	95	5	100	95	5	100

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

<sup>98</sup> The bottom row of table 4a to be completed by the Planted Forests Specialist.

Estimates of planted and assisted natural regeneration components of Semi-Natural Forests must tally to 100%

**Estimation of Planted component of Semi-Natural Forests to Productive and Protective purposes**

(Refer to Section 3, Working Paper FP35)

**In Table 2b estimate in % the area of Planted component of Semi-Natural Forests<sup>99</sup> allocated to Production and Protection purposes for years 1990, 2000, 2005.** Your new data inputs

Table 2b: Planted component of Semi-Natural Forests to Productive and Protective purposes

Year	1990			2000			2005		
Semi-Natural Forests Planted component	Relative figures (%)								
Estimates	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)
	97.5	2.5	100	96.5	3.5	100	96.5	3.5	100

Source: Planted Forests Specialist to list reference documents in the references section

<sup>99</sup> Estimates of Productive and Protective purposes must tally to 100%

**Report MAI, rotation length, harvest volume yield, and age classes distribution for the top10 species in the Planted component of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective)**

(Refer to **Section 5**, Working Paper FP35)

In tables 3 (a, b, c, d), **for year 2005 only**, please provide percentages of the top ten species used in your country.

In table 3a: Provide the top 10 species for **Productive Planted component of Semi-Natural Forests**

In table 3b: Provide the top 10 species for **Protective Planted component of Semi-Natural Forests**

In table 3c: Provide the top 10 species for **Productive Plantation Forests**

In table 3d: Provide the top 10 species for **Protective Plantation Forests**

For each table, please group other remaining species in class 11 named “Other”.

**The total of percentages for the 11 classes must tally to 100%**

For each species reported please provide best absolute data for Mean Annual Increment, Rotation Length and Harvest Volume.

Finally provide an estimate of the age distribution in %.

**The Age distributions must tally to 100%.**

**Table 3a: Productive Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)Norway spruce	53.7	11.0	12.0	100	120	8.7	10.0	4.5	4.5	8.8	7.2	8.3	6.3	17.6	18.9	9.5	14.4	100	
2)Scots pine	17.1	6.5	7.1	110	120	3.3	4.0	3.3	3.3	7.7	6.7	6.7	6.0	14.9	18.8	10.3	22.3	100	
3)European beech	6.6	7.6	8.3	110	140	5.3	6.0	5.9	5.8	6.0	6.8	7.4	5.5	14.6	12.6	7.1	28.3	100	
4)Oaks	5.9	6.3	6.9	1100	140	2.1	2.3	3.7	3.8	4.9	5.5	6.8	6.2	21.0	19.0	8.2	20.9	100	
5)European larch	4.0	8.4	9.2	110	120	4.1	4.6	5.6	5.6	11.0	6.4	10.3	8.6	17.1	16.1	7.7	11.6	100	
6)Birches	2.9	6.5	7.1	70	100	1.8	2.1	3.8	3.7	17.8	10.1	10.0	12.5	25.4	12.1	2.3	2.3	100	
7)Alders	1.5	7.0	7.7	70	100	0.8	0.9	2.9	2.9	6.0	7.7	18.9	23.7	24.0	9.2	2.1	2.6	100	
8)European hornbeam	1.2	6.4	7.0	80	120	1.6	1.8	0.9	1.0	2.6	3.6	5.1	7.6	33.4	23.4	6.8	15.6	100	
9)European ash	1.1	7.7	8.4	100	120	2.3	2.5	4.0	4.1	6.3	7.9	9.0	11.4	25.9	17.1	5.4	8.9	100	
10)Maples	1.0	8.1	8.9	100	120	1.1	1.3	8.1	8.2	8.4	9.1	14.1	14.4	16.8	8.9	3.5	8.5	100	
11) Other	5.0	7.5	8.5	80	120	0.3	0.4	4.8	4.7	13.2	10.1	13.0	10.2	17.3	11.2	4.5	11.0	100	
<b>Total</b>	<b>100</b>	8.9	9.8	70	160	5.9	6.7												

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3b: Protective Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)Norway spruce	43.1	4.1	4.5	120	160	DNA	DNA	5.6	5.6	7.6	5.0	5.2	3.4	12.2	11.3	7.3	36.9	100	
2)Scots pine	11.5	4.5	4.9	120	180	DNA	DNA	3.7	3.7	6.0	4.2	3.8	3.0	9.2	10.2	7.2	49.0	100	
3)European beech	6.3	6.0	6.6	140	180	DNA	DNA	3.6	3.7	3.0	3.9	3.7	2.9	10.9	11.0	6.0	51.3	100	
4)Oaks	4.5	3.6	3.9	140	200	DNA	DNA	2.7	2.8	2.9	3.6	3.9	3.7	18.3	19.1	8.0	35.0	100	
5)Birches	2.8	4.2	4.6	80	120	DNA	DNA	3.6	3.6	13.8	8.9	7.7	10.0	29.0	16.1	2.9	4.4	100	
6)European hornbeam	2.7	4.8	5.3	120	200	DNA	DNA	0.7	0.7	1.5	2.3	2.9	4.5	28.3	23.1	6.5	29.5	100	
7)European larch	1.5	6.1	6.7	120	160	DNA	DNA	7.7	7.8	10.5	4.9	7.2	5.3	13.0	10.7	6.6	26.3	100	
8)European ash	1.0	4.0	4.4	120	160	DNA	DNA	5.6	5.7	6.0	6.1	6.3	7.0	19.6	11.4	4.7	27.6	100	
9)Maples	0.9	6.1	6.7	120	160	DNA	DNA	7.1	7.2	5.9	7.4	9.8	10.5	17.1	10.8	4.1	20.1	100	
10)Lindens	0.8	5.6	6.1	100	120	DNA	DNA	2.8	2.9	4.7	7.0	14.8	19.4	27.4	12.5	2.7	5.8	100	
11) Other	24.9	4.0	5.5	80	140	DNA	DNA	4.7	4.7	9.4	6.2	7.1	5.2	11.2	6.8	3.2	41.5	100	
<b>Total</b>	<b>100</b>	4.3	4.7	120	200	DNA	DNA												

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3c: Productive Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)																		-	
2)																		-	
3)																		-	
4)																		-	
5)																		-	
6)																		-	
7)																		-	
8)																		-	
9)																		-	
10)																		-	
11) Other																		-	
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3d: Protective Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)																		-	
2)																		-	
3)																		-	
4)																		-	
5)																		-	
6)																		-	
7)																		-	
8)																		-	
9)																		-	
10)																		-	
11) Other																		-	
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

## **Estimate of Ownership for Planted Forests**

(Refer to Section 6, Working Paper FP35)

We request you to provide in tables 4 (a,b,c,d), the breakdown of ownership in “%” for: Planted components of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective).

The total percentages of ownership categories must tally to 100%

**Table 4a: Planted component of Semi-Natural Forests Productive.** Your new data inputs

Reference year	1990					2000					2005				
Planted components of Semi-Natural Forests Productive	Calculated in Table 2b (%)														
	Figures calculated in table 2b					Figures calculated in table 2b					Figures calculated in table 2b				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	95.8	4.1	0.1	-	100	75.9	1.0	23.1	-	100	75.9	1.0	23.1	-	100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4b: Planted component of Semi-Natural Forests Protective.** Your new data inputs

Reference year	1990					2000					2005				
Planted components of Semi-Natural Forests Protective	Calculated % in Table 2b (%)														
	Figures calculated in table 2b					Figures calculated in table 2b					Figures calculated in table 2b				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	100	0	0	0	100	95	0	5	0	100	95	0	5	0	100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4c: Productive Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Productive Plantation	Reported Area from Table 1 (1000 ha)														
	0					0					0				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4d: Protective Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Protective Plantation	Reported Area from Table 1 (1000 ha)														
	0					0					0				
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Planted Forests Specialist to list reference documents in the references section

## **Estimate of Predominant purpose for Planted Forests**

(Refer to Section 7, Working Paper FP35)

In Questionnaire tables 5 (a, b), for productive and protective categories, please estimate, in %<sup>100</sup> of area, the **Predominant purpose** for:

Planted components of Semi-Natural Forests (table 5a), for figures calculated in table 2b

Plantation Forests (table 5b), for figures provided in table 1.

**Table 5a: Detailed Purpose Estimates for Planted component of Semi-Natural Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 2b (%)				%	%	%
<b>Productive</b>	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	<b>Ind-Sawlog</b>	0	0	0
				<b>Ind-Pulpwood/Fiber</b>	0	0	0
				<b>Ind-Bioenergy</b>	0	0	0
				<b>Ind-Non Wood Prod</b>	0	0	0
				<b>Ind-Unspecified</b>	100	100	100
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	<b>Non-ind-Environmental</b>	100	100	100
				<b>Non-ind-Recreation</b>	-	-	-
				<b>Non-ind-Unspecified</b>	-	-	-
				<b>Non-ind-Fuelwood</b>	-	-	-
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Source: Planted Forests Specialist to list reference documents in the references section

**Table 5b: Detailed Purpose Estimates for Plantation Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 1 (000 ha)				%	%	%
<b>Productive</b>	0	0	0	<b>Ind-Sawlog</b>			
				<b>Ind-Pulpwood/Fiber</b>			
				<b>Ind-Bioenergy</b>			
				<b>Ind-Non Wood Prod</b>			
				<b>Ind-Unspecified</b>			
<b>Total</b>					<b>0</b>	<b>0</b>	<b>0</b>
<b>Protective</b>	0	0	0	<b>Non-ind-Environmental</b>			
				<b>Non-ind-Recreation</b>			
				<b>Non-ind-Unspecified</b>			
				<b>Non-ind-Fuelwood</b>			
<b>Total</b>					<b>0</b>	<b>0</b>	<b>0</b>

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

<sup>100</sup> Estimates of Predominant purpose must tally to 100% for each category

**For transparency in referencing please list below all documents appropriate to completion of information and data for this questionnaire in conformity with the standard list provided in references section of Working Paper 35**

**References (Your new references inputs)**

No plantations.

Douglas fir and other introduced species are admixed only, no pure stands.

Data source: Summary of the Forest management plans, Forest Management Institute, Brandys n. L., 2003.

For felling: Czech Statistical Office, Yearbook 2004, Prague 2005.

Reliability of the assessments – medium.

## **FINLAND**



### **GLOBAL PLANTED FOREST THEMATIC SUPPLEMENT TO FOREST RESOURCES ASSESSMENT 2005**

### ***QUESTIONNAIRE ON PLANTED FORESTS: NATIONAL REPORTING TABLES***

To be read and filled in association with  
Working Paper 35  
to assist in definitions and explanatory notes

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**COUNTRY NAME:** Finland

**Availability of FRA 2005 data on forest cover area**

(Refer to **Section 1**, Working Paper FP35\*)

**Forest type**

Table 1 has been derived from Table 4 (T4) of National Report for FRA 2005

Table 1: Area of Forest as reported in Table T4 of FRA 2005

FRA 2005 Categories	Surface (1000 ha)		
	Forest		
	1990	2000	2005
Primary	1491	1418	1419
Modified Natural	0	0	0
Semi-Natural	20703	21057	21081
Productive Plantation	0	0	0
Protective Plantation	0	0	0

Source: Derived from T4, in FAO 2004/5, Global Forest Resources Assessment update 2005,  
National Country Report

According to the FRA 2005 definitions Planted Forests include the planted component of Semi-Natural Forests and both Productive and Protective Plantation Forests.

Please note that, on the basis of general discussions at the training session of National Correspondents at FAO in Rome on 17-21 November 2003, all Finnish forests were decided to put to category 'Semi-Natural', except those fulfilling the criteria 'Primary'. In the workshops and meetings of the training session, a general opinion was that the boundary between 'Modified Natural' and 'Semi-Natural' is somewhat arbitrary. With a thorough analysis and instructions, a part of Semi-Natural forests could have been classified as Modified Natural. Furthermore, the forests established through plantation or seeding, i.e. planted component of semi-natural, are very similar to forests in the category 'Assisted natural regeneration'.

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\*FAO. 2005. Planted Forests and Trees Working Papers: Global Planted Forest Thematic Supplement to Forest Resources Assessment 2005. *Guidelines for National Reporting Tables for Planted Forests*, Working Paper FP35, Forest Resources Development Service, Forest Resources Division. FAO, Rome

### **Estimate of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests**

(Refer to **Section 2**, Working Paper FP35)

Table 2a, in top rows, reports absolute figures provided in T4 of the National report for Semi-Natural Forests. Please provide the % planted component and % assisted natural regeneration component of Semi-Natural Forests for years 1990, 2000 and 2005<sup>101</sup> (**Your new data inputs in yellow on table**).

**Table 2a: FRA 2005 area of Semi-Natural Forest classification and estimates of “Planted” and “Assisted Natural Regeneration” components of Semi-Natural Forests**

Year	1990			2000			2005		
<b>FRA Semi-Natural Forest</b>	<b>Absolute figures (1000 ha)</b>								
	<b>20703</b>			<b>21057</b>			<b>21081</b>		
<b>Relative figures (%)</b>									
Semi-Natural Forest components	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)
Estimates	<b>19</b>	<b>81</b>	<b>100</b>	<b>23</b>	<b>77</b>	<b>100</b>	<b>25</b>	<b>75</b>	<b>100</b>

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

Planted component includes all forest stands which have been established through planting or seeding. One should note that often these forests, particularly when getting older, are very similar to Modified Natural or even Natural forests with high proportion of naturally originated tree individuals and un-even age and size structure of trees. Furthermore, the forests in the category 'planted' are very similar to forests in the category 'assisted' after a certain age. The figures for 1990 and 2000 come from NFI8 and NFI9 respectively. The figures for 2005 have been predicted using on one hand the area information of forests of 'planted component' with the age of at most 5 years in NFI9, and on the other hand the forest statistics concerning plantations.

<sup>101</sup> The bottom row of table 4a to be completed by the Planted Forests Specialist.

Estimates of planted and assisted natural regeneration components of Semi-Natural Forests must tally to 100%

### **Estimation of Planted component of Semi-Natural Forests to Productive and Protective purposes**

(Refer to Section 3, Working Paper FP35)

**In Table 2b estimate in % the area of Planted component of Semi-Natural Forests<sup>102</sup> allocated to Production and Protection purposes for years 1990, 2000, 2005.** Your new data inputs

Table 2b: Planted component of Semi-Natural Forests to Productive and Protective purposes

Year	1990			2000			2005		
Semi-Natural Forests Planted component	Relative figures (%)								
Estimates	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)	Productive (%)	Protective (%)	Total (%)
	100	0	100	100	0	100	100	0	100

Source: Planted Forests Specialist to list reference documents in the references section

The Planted component of Semi-Natural Forests includes 0,8 % forests having function Biodiversity, 0,1 % having function Social and 0,6 % having function Multiple in NFI9. So, actually only 98,5 % of the component belongs to the group Productive in NFI9. The same figure in NFI8 was 99,7 %

<sup>102</sup> Estimates of Productive and Protective purposes must tally to 100%

**Report MAI, rotation length, harvest volume yield, and age classes distribution for the top10 species in the Planted component of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective)**

(Refer to **Section 5**, Working Paper FP35)

In tables 3 (a, b, c, d), **for year 2005 only**, please provide percentages of the top ten species used in your country.

In table 3a: Provide the top 10 species for **Productive Planted component of Semi-Natural Forests**

In table 3b: Provide the top 10 species for **Protective Planted component of Semi-Natural Forests**

In table 3c: Provide the top 10 species for **Productive Plantation Forests**

In table 3d: Provide the top 10 species for **Protective Plantation Forests**

For each table, please group other remaining species in class 11 named “Other”.

**The total of percentages for the 11 classes must tally to 100%**

For each species reported please provide best absolute data for Mean Annual Increment, Rotation Length and Harvest Volume.

Finally provide an estimate of the age distribution in %.

**The Age distributions must tally to 100%.**

**Table 3a: Productive Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1) Pinus sylvestris	<b>76,4</b>	1,8	8,4	60	140	160	715	8	8	28	28	21	6	2	0			<b>100</b>	
2) Picea abies	<b>18,0</b>	4,3	10,5	50	120	375	915	18	18	26	16	17	3	2	0			<b>100</b>	
3) Betula pendula	<b>4,7</b>	5,5	10,6	40	70	300	550	21	29	26	17	6	1	0	0			<b>100</b>	
4) Betula pubescens	<b>0,4</b>	3,5	7,0	50	65	190	350	10	32	37	4	13	3	0	0			<b>100</b>	
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			
11) Other	<b>0,5</b>							21	14	42	17	3	3	1	0			<b>100</b>	
<b>Total</b>	<b>100</b>							<b>10</b>	<b>11</b>	<b>27</b>	<b>25</b>	<b>19</b>	<b>5</b>	<b>2</b>	<b>0</b>			<b>100</b>	

Source: Planted Forests Specialist to list reference documents in the references section

The minimum and maximum increments for the rotations in different parts of the country and for different tree species vary. The area information comes from NFI9. The treeless regeneration areas are not included. The areas are given in the Finland's main report FRA 2005 and are also included in percentages of Table 2a. The MAI, rotation length and harvest volume figures are based on different studies listed in Reference chapter and collected by prof. Jari Hynynen, Metla.

**Table 3b: Protective Planted component of Semi-Natural Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**  
 Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)																			
2)																			
3)																			
4)																			
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			
11) Other																			
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3c: Productive Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)																			
2)																			
3)																			
4)																			
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			
11) Other																			
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

**Table 3d: Protective Plantation Forests. Species composition (%), Mean Annual Increment (m<sup>3</sup>/ha/year), Rotation Length (years), Harvest volume yield (m<sup>3</sup>/ha) and age class distribution (%). Your new data inputs**

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m <sup>3</sup> /ha/year		Predominant Rotation Length years		Harvest Vol. Yield m <sup>3</sup> /ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	10-20	20-30	30-40	40-50	50-70	70-90	90-100	>100	Total	
1)																			
2)																			
3)																			
4)																			
5)																			
6)																			
7)																			
8)																			
9)																			
10)																			
11) Other																			
<b>Total</b>	<b>100</b>																		

Source: Planted Forests Specialist to list reference documents in the references section

## **Estimate of Ownership for Planted Forests**

(Refer to Section 6, Working Paper FP35)

We request you to provide in tables 4 (a,b,c,d), the breakdown of ownership in “%” for: Planted components of Semi-Natural Forests (Productive and Protective) and Plantation Forests (Productive and Protective).

The total percentages of ownership categories must tally to 100%

**Table 4a: Planted component of Semi-Natural Forests Productive.** Your new data inputs

Reference year	1990				2000				2005						
Planted components of Semi-Natural Forests Productive	Calculated in Table 2b (%)														
	Figures calculated in table 2b				Figures calculated in table 2b				Figures calculated in table 2b						
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
	22	14	64	0	100	25	13	62	0	100	25a	13	62	0	100

Source: Planted Forests Specialist to list reference documents in the references section

The figures for 2005 are same as for 2000.

**Table 4b: Planted component of Semi-Natural Forests Protective.** Your new data inputs

Reference year	1990				2000				2005						
Planted components of Semi-Natural Forests Protective	Calculated % in Table 2b (%)														
	Figures calculated in table 2b				Figures calculated in table 2b				Figures calculated in table 2b						
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100				100	

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4c: Productive Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Productive Plantation	Reported Area from Table 1 (1000 ha)														
	0				0					0					
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100					100

Source: Planted Forests Specialist to list reference documents in the references section

**Table 4d: Protective Plantation Forests. Your new data inputs**

Reference year	1990					2000					2005				
Protective Plantation	Reported Area from Table 1 (1000 ha)														
	0				0					0					
	Ownership (%)														
Ownership	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total	Public	Private Corporate	Small holders	Other	Total
					100					100					100

Source: Planted Forests Specialist to list reference documents in the references section

## **Estimate of Predominant purpose for Planted Forests**

(Refer to Section 7, Working Paper FP35)

In Questionnaire tables 5 (a, b), for productive and protective categories, please estimate, in %<sup>103</sup> of area, the **Predominant purpose** for:

Planted components of Semi-Natural Forests (table 5a), for figures calculated in table 2b

Plantation Forests (table 5b), for figures provided in table 1.

**Table 5a: Detailed Purpose Estimates for Planted component of Semi-Natural Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 2b (%)				%	%	%
<b>Productive</b>	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	<b>Ind-Sawlog</b>	100	100	100
				<b>Ind-Pulpwood/Fiber</b>			
				<b>Ind-Bioenergy</b>			
				<b>Ind-Non Wood Prod</b>			
				<b>Ind-Unspecified</b>			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	<b>Non-ind-Environmental</b>			
				<b>Non-ind-Recreation</b>			
				<b>Non-ind-Unspecified</b>			
				<b>Non-ind-Fuelwood</b>			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Source: Planted Forests Specialist to list reference documents in the references section

The Predominant purpose is to produce high quality sawlog. However, in practice a part of the harvested volume is always pulpwood or fibrewood. The share of pulpwood/fibrewood is higher in thinning cuttings than in final fellings. In first thinings, the harvested volume is often totally pulpwood/fibrewood. The share of sawlog increases in later thinnings. The share of sawlog of harvested volume during the rotation varies approximately between 50 % -75 %. It is higher for coniferous species and for more productive sites and lower for broad-leaved species.

**Table 5b: Detailed Purpose Estimates for Plantation Forests by % of Area. Your new data inputs**

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 1 (000 ha)				%	%	%
<b>Productive</b>	0	0	0	<b>Ind-Sawlog</b>			
				<b>Ind-Pulpwood/Fiber</b>			
				<b>Ind-Bioenergy</b>			
				<b>Ind-Non Wood Prod</b>			
				<b>Ind-Unspecified</b>			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>
<b>Protective</b>	0	0	0	<b>Non-ind-Environmental</b>			
				<b>Non-ind-Recreation</b>			
				<b>Non-ind-Unspecified</b>			
				<b>Non-ind-Fuelwood</b>			
<b>Total</b>					<b>100</b>	<b>100</b>	<b>100</b>

Sources:

- FAO 2004/5, Global Forest Resources Assessment update 2005, National Country Report
- Planted Forests Specialist to list reference documents in the references section

<sup>103</sup> Estimates of Predominant purpose must tally to 100% for each category

**For transparency in referencing please list below all documents appropriate to completion of information and data for this questionnaire in conformity with the standard list provided in references section of Working Paper 35**

**References (Your new references inputs)**

All references listed in Finland's Country Report 2005.

The Finnish National Forest Inventory. 1996-2003. Field Instructions.

Hyvän metsähoidon suosituukset. 2001. Metsätalouden kehittämiskeskus Tapio 2001. (in Finnish)

Gustavsen, H.G. & Mielikäinen, K. 1984. Luontaisesti syntyneiden koivikoiden kasvupaikkaluokittelun valtapiituuden avulla. Summary: Site index curves for natural birch stands in Finland. FF 597:1-20.

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Niemistö, P., Gustavsen, H. & Piironen, M-L. 2005. Stand level growth models for Silver birch cultures (*Betula pendula*) in Finland. Manuscript.

Oikarinen, Matti 1983. Etelä-Suomen viljelyjen rauduskoivikoiden kasvatusmallit. Summary: Growth and yield models for silver birch (*Betula pendula*) plantations in Southern Finland. Commun. Inst. For. Fenn. 113:1-75.

Vuokila, Y. and H. Väliaho (1980). Viljelyjen havumetsiköiden kasvatusmallit. Summary: Growth and yield models for conifer cultures in Finland. Communicationes Instituti Forestales Fenniae **99(2)**: 271 p.

## **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](http://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.
- Working Paper FP/10: *Protecting Plantations from Pests and Diseases.* Ciesla W.M. March 2001.
- Working Paper FP/11: *Forestry Out-Grower Schemes: A Global View.* Race D. and Desmond H. March 2001.
- Working Paper FP/12: *Plantations and Greenhouse Gas Mitigation: A Short Review.* Moura-Costa P. and Aukland L. March 2001.
- Working Paper FP/13: *Future Production from Forest Plantations.* Brown C. March 2001.
- Working Paper FP/14: *Forest Plantation Resources, FAO Data Sets 1980, 1990, 1995 and 2000.* Del Lungo, A. December 2001
- Working Paper FP/15: *Global Forest Plantation Development: Review for FRA 2000.* Vuorinen A.P. and Carle, J.B. April 2002
- Working Paper FP/16S: *Bibliografía Anotada Sobre los Efectos Ambientales, Sociales y Económicos de los Eucaliptos.* Compilación de documentos elaborados en inglés, francés y español entre 1985 y 1994. Marzo de 2002.
- 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.

- Working Paper FP/17E *Annotated Bibliography on Environmental, Social and Economic Impacts of Eucalyptus.* Compilation from English, French and Spanish Literature, 1995 to 1999. Palmberg C., March 2002.
- Working Paper FP/18 *Tropical forest plantation areas 1995 data set.* Pandey D. May 2002.
- Working Paper FP/19 *Teak (*Tectona grandis*) in Central America.* De Camino, R.V., Alfaro, M.M. and Sage, L.F.M. May 2002.
- Working Paper FP/20 *Melina (*Gmelina arborea*) in Central America.* Alfaro, M.M. and De Camino, R.V. May 2002.
- Working Paper FP/21 *Case study of hardwood programmes in Fiji, Solomon Islands and Papua New Guinea.* Hammond, D. May 2002.
- Working Paper FP/22 *Case study of long rotation eucalypt plantations in New South Wales.* Heathcote, R. June 2002.
- Working Paper FP/23 *Case study of the tropical forest plantations of Malaysia.* Krishnapillay, D.B. June 2002.
- Working Paper FP/24 *Hardwood plantations in Ghana.* Odoom, F. June 2002.
- Working Paper FP/25 *Planted Forests Database (PFDB): Structure and Contents.* Varmola, M. and Del Lungo, A. July 2003.
- Working Paper FP/26 *Planted Forest Database: Analysis of Annual Planting Trends and Silvicultural Parameters for Commonly Planted Species.* Del Lungo, A. September 2003.
- Working Paper FP/27E *Role of Planted Forests and Trees Outside Forests in Sustainable Forest Management: Republic of Tunisia - Country Case Study.* Rouchiche, S. and Abid, H. October 2003.
- Working Paper FP/27F *Rôle des Plantations Forestières et des arbres hors forêts dans l'aménagement forestier durable: République de Tunisie - Raport par pays.* Rouchiche, S. and Abid, H. October 2003.
- Working Paper FP/28E *Role of Planted Forests and Trees Outside Forests in Sustainable Forest Management: Republic of Mali - Country Case Study.* Thomas, I. and Samassekou, S. October 2003.
- 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.
- Working Paper FP/29E *Role of Planted Forests and Trees Outside Forests in Sustainable Forest Management: Republic of Ethiopia - Country Case Study.* Thomas, I. and Bekele, M. October 2003.
- 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.
- Working Paper FP/30E *Role of Planted Forests and Trees Outside Forests in Sustainable Forest Management: Republic of Namibia - Country Case Study.* Thomas, I. and Chakanga, M. October 2003.
- Working Paper FP/30F *Rôle des Plantations Forestières et des arbres hors forêts dans l'aménagement forestier durable: République de Namibie - Raport par pays.* I. Thomas et M. Chakanga. October 2003.
- Working Paper FP/31E *Role of Planted Forests and Trees Outside Forests in Sustainable Forest Management: Sultanate of Oman - Country Case Study.* Rouchiche, S. October 2003.

- 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.
- Working Paper FP/32E *Role of Planted Forests and Trees Outside Forests in Sustainable Forest Management: Islamic Republic of Iran - Country Case Study.* Rouchiche, S. and Haji Mirsadeghi, M. A. October 2003.
- Working Paper FP/32F *Rôle des Plantations Forestières et des arbres hors forêts dans l'aménagement forestier durable: République Islamique d'Iran - Raport par pays.* S. Rouchiche. October 2003.
- Working Paper FP/33 *Potential for Fast-Growing Commercial Forest Plantations to Supply High Value Roundwood.* R. James and A. Del Lungo. February 2005.
- Working Paper FP/34 *Netherlands Trust Fund Support to Sustainable Forest Management in Low Forest Cover Countries. - the Role of Planted Forests and Trees Outside Forests in Landscape Restoration in Low Forest Cover Countries.*
- Working Paper FP/35E *Global Planted Forests Thematic Supplement to Forest Resources Assessment 2005. - Guidelines for National Reporting Tables for Planted Forests.* A. Del Lungo and J. Carle. April 2005.
- Working Paper FP/35F *Supplément thématique sur les forêts plantées à l'Évaluation des ressources forestières 2005. - Directives pour l'élaboration des tableaux nationaux d'information sur les forêts plantées.* A. Del Lungo et J. Carle. Avril de 2005.
- Working Paper FP/35S *Suplemento temático sobre los Bosques plantados de la Evaluación de los Recursos Forestales 2005. - Directrices para la elaboración de las tablas informativas nacionales sobre los bosques plantados.* A. Del Lungo y J. Carle. Abril de 2005.
- Working Paper FP/35aE *Global planted forests thematic: country responses to reporting tables for planted forests survey.* A. Del Lungo and J. Ball, 2006.
- 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/37cE *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.

