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 (%)**
	-	**-**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

Table 3a: Productive Planted component of Semi-Natural Forests.

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) NA																		
2) NA																		
3) NA																		
4) NA																		
5) NA																		
6) NA																		
7) NA																		
8) NA																		
9) NA																		
10) NA																		
11) Other NA																		
Total	**100**																	

Table 3b: Protective Planted component of Semi-Natural Forests.

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) NA																		
2) NA																		
3) NA																		
4) NA																		
5) NA																		
6) NA																		
7) NA																		
8) NA																		
9) NA																		
10) NA																		
11) Other NA																		
Total	**100**																	

Table 3c: Productive Plantation Forests.

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) Teak(Tectona grandis)	80	7.3	17.3	40	80	277	320	23	17.6	32.8	19.24	3.02	-	0.7				
2) Pyinkado (Xylia xylocapa)	10	3.0	8.8	60	80	110	155	15	9.6	34.65	32.03	9.54	-	2.37				
3) Padauk(Pterocarpus macrocarpus)	5	NA	NA	NA	NA	NA	NA	5	14.7	58.83	29.44	0	-	0				
4) Pine (Pinus spp:)	2	4	15	60	80	82	91	28	19.2	29.16	17.06	9.98	-	0.71				
5) Eucalyptus camadulensis	1	21	43	15	20	421	500	17	31.8	33.08	16.95	8.15	-	0				
6)																		
7)																		
8)																		
9)																		
10)																		
11) Other								26	18.3	40.17	19.54	1.77	-	1.01				
Total	**100**																	

Source: Forest Research Institute of Forest Department in Myanmar.

Table 3d: Protective Plantation Forests.

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) Cassia siamea	80	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
2) Accacia auriculiformis	5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
3) Pinus spp:	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
4) Grevillea robusta	2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
5 Millettia macrostachya	1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	
6)																		
7)																		
8)																		
9)																		
10)																		
11) Other																		
Total	**100**																	

Cassia siamea = Mezali

Accacia auriculiformis =Auri-sha

Grevillea robusta =Kha-daw-hmi

Millettia macrostachya = Ye-thin-win

Table 4a: Planted component of Semi-Natural Forests Productive.

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

Table 4b: Planted component of Semi-Natural Forests Protective.

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

Table 4c: Productive Plantation Forests.

Reference year	1990					2000					2005				
Productive Plantation	Reported Area from Table 1 (1000 ha)														
	323					571					696				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	100	-	-	-	**100**	100	-	-	-	**100**	100	-	-	-	**100**

Table 4d: Protective Plantation Forests.

Reference year	1990					2000					2005				
Protective Plantation	Reported Area from Table 1 (1000 ha)														
	71					125					153				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	100	-	-	-	**100**	100	-	-	-	**100**	100	-	-	-	**100**

Table 5a: Detailed Purpose Estimates for Planted component of Semi-Natural Forests by % of Area.

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

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)				%	%	%
Productive	323	571	696	Ind-Sawlog	NA	NA	NA
				Ind-Pulpwood/Fiber	NA	NA	NA
				Ind-Bioenergy	NA	NA	NA
				Ind-Non Wood Prod	NA	NA	NA
				Ind-Unspecified	NA	NA	NA
Total					-	-	-
Protective	71	125	153	Non-ind-Environmental	NA	NA	NA
				Non-ind-Recreation	NA	NA	NA
				Non-ind-Unspecified	NA	NA	NA
				Non-ind-Fuelwood	NA	NA	NA
Total					-	-	-

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)*

PHILIPPINES

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

TABLE OF CONTENTS

CONTACT PERSONS

For queries in completing these tables please contact:
Jim Carle, Jim.Carle@fao.org
or
Alberto Del Lungo, Alberto.DelLungo@fao.org

COUNTRY NAME: Philippines

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	829	829	829
Modified Natural	7955	6253	5697
Semi-Natural			
Productive Plantation	389	321	304
Protective Plantation	1391	531	316

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.

* **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[47] (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)**								
	Relative figures (%)								
Semi-Natural Forest components	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**
Estimates	**NDA**	**NDA**	**100**	**NDA**	**NDA**	**100**	**NDA**	**NDA**	**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**

Remarks: There are no available data on Semi-natural Forest Classification as plantations are established in open areas.

[47] **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[48] 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 (%)**
	NDA	**NDA**	**100**	**NDA**	**NDA**	**100**	**NDA**	**NDA**	**100**

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

Remarks: There are no available data on planted component of Semi- Natural Forest. Plantations are established in open areas.

[48] **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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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

Remarks : No data available.

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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

Remarks : No data available.

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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)Gmelina arborea	40	20	30	6	20	237	402											
2)Swietenia macrophylla	5	10	20	17	50	131	167											
3)Paraserianthes falcataria	10	25	35	7	15	158	201											
4)Pterocarpus indicus	5	10	15	25	50	131	167											
5)Leucaena leucocephala	5	9	12	4	8	77	98											
6)Acacia auriculiformis	5	10	25	8	15	114	115											
7)Acacia mangium	5	20	40	6	14	184	235											
8)Pinus kesiya	5	10	15	10	12	187	238											
9)																		
10)																		
11) Other	20																	
Total	**100**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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)Gmelina arborea	40	20	30	6	20	237	402											
2)Swietenia macrophylla	5	10	20	17	50	131	167											
3)Paraserianthes falcataria	10	25	35	7	15	158	201											
4)Pterocarpus indicus	5	10	15	25	50	131	167											
5)Leucaena leucocephala	5	9	12	4	8	77	98											
6)Acacia auriculiformis	5	10	25	8	15	114	115											
7)Acacia mangium	5	20	40	6	14	184	235											
8)Pinus kesiya	5	10	15	10	12	187	238											
9)																		
10)																		
11) Other	20																	
Total	**100**																	

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

Source : 1998. Development and Management of Forest Plantation. A Guidebook: Dept. of Environment & Natural Resources, Ecosystems Research and Dev't. Bureau

Source : 1997. A Working Paper on Asian Dev't. Bank Project, Sectoral Loan 2. Estimated Potential Yields on Various Reforestation Species Based on Classification of Soils In Climatic Type

Source : Thang H.C. 1991. Asean Forest Resource Database- Country Report- The Philippines. Asean Institute of Forest Management. Kuala Lumpur.

Source : NFA 2005. National Forest Resource Assessment- Philippines. Working paper 96. FAO Rome.

Remarks : The Thang (1991) provides figures for plantations for 1988 and these have been adopted for 1990. The NFA (2005) provides latest estimate of area under plantations , these have been assumed for 2005. It is recognised that these assumption lead to aconservative estimate of area under plantations. The figure for 2000 has been estimated through linear interpolation. Further, based on information provided by the country at the November 2004 meeting of National Correspondents, the area of productive plantations in 2003 have been assumed to be 50 percent of the broadleaved (excluding mangrove plantations) and the remaining area of plantations (50 percent of broadleaved + 100 percent of conifer plantations + 100 percent mangrove plantations) has been considered as "protective" plantation.

There are no available information on the percentage of age class distribution of these plantation species, however this activity will be one of the future plan of the FRA. Likewise, there are no information on species composition percentage.

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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					100					**100**					**100**

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

Remarks : No data available.

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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					100					**100**					**100**

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

Remarks : No data available.

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

Reference year	1990					2000					2005				
Productive Plantation	Reported Area from Table 1 (1000 ha)														
	389					321					304				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	80.32	1..96	17.45	0.27	**100**	78.68	7..64	13.68		**100**	61.16	14.15	24.7		**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)														
	1391					531					316				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	80.32	1.96	17.45	0.27	**100**	78.68	7.64	13.68		**100**	61.16	14.15	24.7		**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 %[49] 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			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
Total					100	100	100
Protective	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
Total					100	100	100

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	389	321	304	Ind-Sawlog			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
Total					100	100	100
Protective	1391	531	316	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
Total					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**

[49] **Estimates of Predominant purpose must tally to 100% for reach 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)*

1998. Development and Management of Forest plantation: A guidebook published by the DENR, Ecosystem Research and Development Bureau.
1997. Aworking paper on ADB Project, Sectoral Loan 2. Estimated Potential Yields in Various Reforestation species based on Classification of Soils in Climatic Type

Additional explanations:

Gmelina arborea-40%, Paraserianthes falcataria- 10%, Swietenia macrophylla- 5%, Pterocarpus indicus,Leucaena leuchosephala, Acacia auriculiformis, Acacia mangium, and Benguet pine likewise comprise 5 % of each species while the rest comprise 20%.

Table 5d was not available or not included in the attached questionnaire so have no information on this.

ALGÉRIE

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

TABLE DES MATIÈRES

CONTACTS

Pour poser des questions sur le complètement des tableaux, veuillez contacter:
Jim Carle, Jim.Carle@fao.org
où
Alberto Del Lungo, Alberto.DelLungo@fao.org

NOM DU PAYS: Algérie

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

(Veuillez consulter la **Section 1**, du Document de travail FP35*)

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 et autres terres boisées		
	1990	2000	2005
Forêts primaires			
Forêts naturelles modifiées	2712	2842	2801
Forêts semi-naturelles	299	313	316
Plantation de production	6	8	12
Plantation de protection	614	644	742

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.

*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 absolus 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[50] (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**		
Forêts semi-naturelles selon FRA	**Chiffres absolus (1000 ha)**								
	Estimations de la superficie selon FRA 2005 299			**Estimations de la superficie selon FRA 2005 313**			**Estimations de la superficie selon FRA 2005 316**		
Composants des forêts semi-naturelles	**Chiffres relatifs (%)**								
	Plantés (%)	**Assistés (%)**	**Total (%)**	**Plantés (%)**	**Assistés (%)**	**Total (%)**	**Plantés (%)**	**Assistés (%)**	**Total (%)**
Estimations	**80**	**20**	**100**	**85**	**15**	**100**	**90**	**10**	**100**

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.**

[50] **La dernière ligne du tableau 4a doit être completé 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[51] 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	**Chiffres relatifs (%)**								
Estimations	**De production (%)**	**De protection (%)**	**Total (%)**	**De production (%)**	**De protection (%)**	**Total (%)**	**De production (%)**	**De protection (%)**	**Total (%)**
	2	**98**	**100**	**4**	**96**	**100**	**5**	**95**	**100**

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

[51] **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^3/ha/année), Durée du cycle de rotation (années), rendement du volume de récolte (m^3/ha) et distribution par classe d'âge (%). Vos donnés doivent figurer dans la section jaune

Année de référence: 2005

10 espèces principales plantés	%	Accroisse-ment 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) Pin d'Alep	50	0,5	1,5	50	100	3	5	15	15	20	30	20						
2) Chêne liège	18																	
3) Acacia	10	2	3	20	50	3	5	30	20	40	10							
4) Pin Maritime	5	1	2	50	100	4	6	20	10	10	20	40						
5) Cèdre	3	1,5	3	60	120	5	7	40	20	20	10	10						
6)Pin Pignon	3	3	5	40	60	8	12	20	20	20	40							
7) Peuplier	3	5	8	30	50	10	14	30	20	30	20							
8)Cyprés	3	2	3	30	60	8	10	30	20	10	40							
9) Chêne Afares	2	1	1,5	60	100	2	4	30	20	20	30							
10) Chêne Zeen	2	1	1,5	60	100	2	4	30	20	20	30							
11) Autres	1																	
Total	**100**																	

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^3/ha/année), Durée du cycle de rotation (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	%	Accroisse-ment 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)Pin d'Alep	40	0,5	1,5	50	100	3	5	20	20	10	20	30						
2) Acacia	11	2	3	50	60	3	5	30	20	20	10	20						
3) Cyprés	10	2	3	50	100	6	8											
4) Casuarina	6	4	6	50	100	6	10											
5)Eucalyptus	6	6	8	40	100	10	15											
6)Pin Maritime	5	1	2	70	120	4	6											
7)Peuplier	3	3	5	50	100	8	10											
8)Tamarix	3	3	5	60	100	5	8											
9)Cèdre	2	1,5	2	80	120	4	6											
10)frêne	2	2	4	80	100	3	5											
11) Autres	12																	
Total	**100**																	

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^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 (en 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																		
Total	**100**																	

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	%	Accroisse-ment 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																		
Total	**100**																	

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 calculées dans le tableau 2b					Chiffres calculées dans le tableau 2b					Chiffres calculées dans le tableau 2b				
	Propriété (%)														
Propriété	Publique	Privée		Autres	**Total**	Publique	Privée		Autres	**Total**	Publique	Privée		Autres	**Total**
		Entreprise	Petits propriétaires				Entreprise	Petits propriétaires				Entreprise	Petits propriétaires		
	100				**100**	100				**100**	100				**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	**Calculée en % dans le tableau 2b (%)**														
	Chiffres calculées dans le tableau 2b					Chiffres calculées dans le tableau 2b					Chiffres calculées dans le tableau 2b				
	Propriété (%)														
Propriété	Publique	Privée		Autres	**Total**	Publique	Privée		Autres	**Total**	Publique	Privée		Autres	**Total**
		Entreprise	Petits propriétaires				Entreprise	Petits propriétaires				Entreprise	Petits propriétaires		
	90		8	2	**100**	90		8	2	**100**	90		8	2	**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)														
	Estimation selon FRA 2005					Estimation selon FRA 2005					Estimations selon FRA 2005				
	Propriété (%)														
Propriété	Publique	Privée		Autres	Total	Publique	Privée		Autres	Total	Publique	Privée		Autres	Total
		Entreprise	Petits propriétaires				Entreprise	Petits propriétaires				Entreprise	Petits propriétaires		
	100				100	100				100	100				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)														
	Estimations selon FRA 2005					Estimations selon FRA 2005					Estimations selon FRA 2005				
	Propriété (%)														
Propriété	Publique	Privée		Autres	Total	Publique	Privée		Autres	Total	Publique	Privée		Autres	Total
		Entreprise	Petits propriétaires				Entreprise	Petits propriétaires				Entreprise	Petits propriétaires		
	90		8	2	100	90		8	2	100	90		8	2	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 %[52] la superficie des composants plantés des forêts semi-naturelles, (tableau 5ª) **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			10
				Pâte/fibre industrielle			
				Bioénergie industrielle			
				Produit Forestier non ligneux industriel			90
				Non spécifié industriel			
Total					100	100	100
de protection	Donnée du tableau 2b	Donnée du tableau 2b	Donnée du tableau 2b	Environnement non industriel			90
				Récréation non industrielle			8
				Non spécifié non industriel			2
				Bois de feu non industriel			
					100	100	100

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

[52] **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
	Estimations tirées du Tableau 1 (000 ha)				%	%	%
de production	FRA 2005 estimations (tab 1)	FRA 2005 estimations (tab 1)	FRA 2005 estimations (tab 1)	Grume de sciage industriel			10
				Pâte/Fibre industrielle			
				Bioénergie industrielle			
				Produit forestier non ligneux industriel			90
				Non spécifié industriel			
Total					100	100	100
de protection	FRA 2005 estimations (tab 1)	FRA 2005 estimations (tab 1)	FRA 2005 estimations (tab 1)	Environnement non industriel			90
				Récréation non industrielle			8
				Non spécifié, non industriel			2
				Bois de feu non industriel			
Total					100	100	100

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)

- **Bilan des plantations 2004 /2005 Ministère de l'Agriculture et du Développement Rural – Direction Générale des Forêts**
- **Rapport sur la situation du secteur agricole –Direction des statistiques agricoles et des systèmes d'information- Ministère de l'Agriculture et du Développement Rural – Juillet 2003**
- **Plan National de Reboisement -2000 Direction Générale des Forêts**
- **Bilan des plantations 1980 -1986 – rapport analytique – 1988 Ministère de l'Hydraulique de l'Environnement et des Forêts**
- **A. GHAZI 1988 Les sols salins :possibilités de les valoriser par le reboisement – Bulletin technique forestier de l'Institut National de la Recherche Forestière**
- **A. GHAZI 1977. Le choix des espèces forestières pour le reboisement des zones arides et semi-arides –mémoire d'ingéniorat I N A El Harrach Alger 200 p.**

SUDAN

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

TABLE OF CONTENTS

CONTACT PERSONS

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COUNTRY NAME: Sudan

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	15276,27	14098,2	13509,16
Modified Natural	53466,95	49343,7	47282,07
Semi-Natural	1527,63	1409,82	1350,92
Productive Plantation	5346,69	4934,37	4728,21
Protective Plantation	763,81	704,91	675,46

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.

* **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[53] (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)**								
	FRA 2005 area estimates			**FRA 2005 area estimates**			**FRA 2005 area estimates**		
	Relative figures (%)								
Semi-Natural Forest components	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**
Estimates	**85**	**15**	**100**	**88**	**12**	**100**	**90**	**10**	**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**

[53] **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[54] 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	**20**	**100**	**80**	**20**	**100**	**78**	**22**	**100**

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

[54] **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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) Acacia senegal	40	0 1.1	2.4	25	30	30.0	055.0	12	35	24	29							
2) Acacia seyal	25	0 1.8	03.2	15	25	68.0	088.0	05	08	22	65							
3) Acacia nilotica	15	12.5	20.0	15	30	90.0	104.0	20	10	30	40							
4) Acacia mellifera	8	01.9	03.5	20	35	70.0	095.0	11	25	33	31							
5) A.tortilis spp. tortilis	3	0 1.2	03.7	20	40	35.0	060.0	10	16	40	34							
6)A.tortilis spp.spirocar	3	01.5	02.4	20	40	33.0	058.0	07	09	26	18	40						
7)Fedherbia albida	2	0 4.0	06.1	30	50	65.0	075.0	10	10	15	20	45						
8) Ziziphus	2	0.9	1.0	00	00			00	00	00	00	00						
9)Balanites	1	1.2	1.5	00	00			00	00	00	00	00						
10)Sclerocarya	1	1.5	1.7	00	00			00	00	00	00	00						
11) Other																		
Total	**100**																	

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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) Acacia senegal	28	1.1	2.4	25	35	28.0	45.0	12	12	06	35	35						
2) A. mellifera	24	1.7	3.2	20	45	47.0	56.0	15	10	30	20	25						
3) A. seyal	24	1.8	3.3	25	50	50.0	85.0	13	11	10	14	20	32					
4) A.nilotica	9.5	12.0	15.0	15	40	50.0	75.0	16	29	12	18	25						
5) A. tortilis-tortilis	9.5	1.3	3.5	20	45	60.0	85.0	05	15	15	15	22	28					
6) A. tortilis-siprocarpa	1	1.6	2.4	20	45	25.0	45.0	06	14	15	13	24	28					
7) Fehderbia albida	1	4.0	6.2	40	60	20.0	30.0	07	12	18	18	20	15	10				
8) Ziziphus sp.	1	0.9	1.0	00	00	30.0	50.0	00	00	00	00	00	00	00				
9) Balanites sp.	1	1.2	1.5	00	00			00	00	00	00	00	00	00				
10) Sclerocarya birrea	1	1.5	1.7	00	00			00	00	00	00	00	00	00				
11) Other																		
Total	**100**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) Acacia Senegal	25	01.4	02.6	25	30	050.0	070.0	20	20	15	45							
2) Acacia nilotica	20	15.0	20.0	15	30	100.0	120.0	20	20	25	35							
3) A. seyal	15	0 2.0	0 6.0	15	25	075.0	095.0	10	15	35	40							
4) Eucalyps sp.	10	12.0	14.0	08	15	500.0	618.0	25	40	35	00							
5) A. mellifera	10	02.2	04.0	20	35	080.0	100.0	15	15	20	10	40						
6) Khaya sp.	06	08.5	12.0	35	80	100.0	150.0	05	05	25	15	20	15	10	**05**			
7) Bamboo sp.	05	05.0	07.5	20	30	060.0	065.0	15	30	15	40	00	00	00	**00**			
8) Cupressus sp.	05	15.0	24.0	40	60	315.0	483.0	15	20	10	10	20	25					
9)Tectona grandis	03	02.5	03.5	40	50	098.0	135.0	00	05	10	15	37	33					
10) Ailanthus excelsa	01	06.6	09.4	15	35	110.0	140.0	20	010	010	15	45						
11) Other	00			00	00													
Total	**100**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) Acacia Senegal	30	01.4	02.8	25	035	030.0	040.0	25	15	10	25	25	00					
2) Acacia seyal	20	01.9	04.3	25	050	055.0	075.0	20	10	15	15	15	25	00				
3) Acacia nilotica	10	13.0	21.0	15	040	087.0	100.0	18	10	10	22	20	20	00				
4)Eucalypts sp.	10	10.0	14.0	10	030	400.0	600.0	14	25	25	36	00	00	00				
5) A. mellifera	07	0 2.0	06.0	20	045	070.0	090.0	05	10	20	18	17	30	00				
6) Cupressus sp.	05	14.0	20.0	40	050	300.0	400.0	15	20	10	15	10	30	00	**00**	**00**		
7) Khaya sp.	05	07.0	16.0	40	100	090.0	110.0	08	07	15	15	10	15	10	**10**	**10**	**00**	
8) Bamboo sp.	05	04.0	08.0	20	040	050.0	060.0	15	16	22	21	26	00	00	**00**	**00**		
9) Ailanthus sp	05	06.0	12.0	15	050	100.0	120.0	20	18	12	25	15	10	00				
10) Tectona grandis	03	05.0	08.0	40	070	080.0	110.0											
11) Other	00			00														
Total	**100**																	

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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	94.6	0.4	5	00	**100**	94.6	0.4	5	00	**100**	94.6	0.4	5	00	**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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	98.1	00	1.9	00	**100**	98.1	00	1.9	00	**100**	98.1	00	1.9	00	**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)														
	FRA 2005 estimates					FRA 2005 estimates					FRA 2005 estimates				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	98.9	0.1	1.0	00	**100**	98.9	0.1	1.0	00	**100**	98.9	0.1	1.0	00	**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)														
	FRA 2005 estimates					FRA 2005 estimates					FRA 2005 estimates				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	98.8	0.4	0.8	00	**100**	98.8	0.4	0.8	00	**100**	98.8	0.4	0.8	00	**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 %[55] 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	80%	80%	78%	Ind-Sawlog	22	24	26
				Ind-Pulpwood/Fiber	00	00	00
				Ind-Bioenergy	65	60	59
				Ind-Non Wood Prod	08	11	11
				Ind-Unspecified	05	05	04
Total					100	100	100
Protective	20%	20%	22%	Non-ind-Environmental	69	70	72
				Non-ind-Recreation	05	06	10
				Non-ind-Unspecified	10	12	11
				Non-ind-Fuelwood	16	12	07
Total					100	100	100

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	5346,69	4934,37	4728,21	Ind-Sawlog	61	67	63
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy	15	15	12
				Ind-Non Wood Prod	14	10	14
				Ind-Unspecified	10	08	11
Total					100	100	100
Protective	763,81	704,91	675,46	Non-ind-Environmental	60	68	70
				Non-ind-Recreation	05	06	07
				Non-ind-Unspecified	10	10	10
				Non-ind-Fuelwood	25	16	13
Total					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**

[55] **Estimates of Predominant purpose must tally to 100% for reach 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)*

SWEDEN

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

TABLE OF CONTENTS

CONTACT PERSONS

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Jim Carle, Jim.Carle@fao.org
or
Alberto Del Lungo, Alberto.DelLungo@fao.org

COUNTRY NAME: Sweden

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	4 348	4 600	4726
Modified Natural	-	-	-
Semi-Natural	22 496	22 255	22 135
Productive Plantation	523	619	667
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.

*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[56] (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)**								
	22 496			22 255			22 135		
	Relative figures (%)								
Semi-Natural Forest components	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**
Estimates	**32**	**68**	**100**	**37**	**63**	**100**	**42**	**58**	**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**

[56] **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[57] 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

[57] **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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**N.A**																	**N.A.**

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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**0**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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 Contorta	100	N.A.	N.A.	70	110	N.A.	N.A.	7.4	8.4	30.6	38.1	13.9	1.3	0.3				100.0
2)																		
3)																		
4)																		
5)																		
6)																		
7)																		
8)																		
9)																		
10)																		
11) Other																		
Total	**100**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**0**																	

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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					N.A.					**N.A.**					**N.A.**

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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					0					**0**					**0**

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)														
	523					619					667				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	21.7	67.1	11.2	-	**100**	5.5	83.6	11.0	-	**100**	16.1	72.9	11.0	-	**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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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 %[58] 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			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified	100	100	100
Total					100	100	100
Protective	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
Total					0	0	0

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	523	619	667	Ind-Sawlog			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified	100	100	100
Total					100	100	100
Protective	0	0	0	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
Total					0	0	0

Sources:

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

[58] **Estimates of Predominant purpose must tally to 100% for reach 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 : SLU-Umeå :

(Göran Kempe, Goran.Kempe@resgeom.slu.se

Hans Toet, Hans.Toet@resgeom.slu.se)

Footnotes SLU-Umeå :

Years applied 1990: 1988-1992, 2000: 1998-2002, 2005: Prognosticated data

1990: Calculation methods; equivalent to the results of recently (1998-) introduced NFI-data for the estimations of Forest and Other Wooded Land
2000: According NFI-data for the estimations of Forest and Other Wooded Land

No occurrence of protective Planted Components of Semi-Natural Forests and protective Plantations of Semi-Natural Forests

Calculation methods applied for estimation of Planted Components areas of Semi-Natural Forests for all periods.

During the 90th a large Area in Public ownership changed to Private ownership which in the end of the 90th partly rechanged to Public ownership and around 2005 almost the whole Area will be in Public ownership again.

NORWAY

GLOBAL PLANTED FOREST
THEMATIC SUPPLEMENT TO
FOREST RESOURCES ASSESSMENT 2005

QUESTIONNAIRE ON PLANTED FORESTS:
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To be read and filled in association with
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or
Alberto Del Lungo, Alberto.DelLungo@fao.org

COUNTRY NAME: Norway

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	250	250	250
Modified Natural	-	-	-
Semi-Natural	8658	8796	8875
Productive Plantation	222	255	262
Protective Plantation	n.d.a.	n.d.a.	n.d.a.

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.

*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[59] (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)**								
	8658			**8796**			**8875**		
	Relative figures (%)								
Semi-Natural Forest components	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**
Estimates	**13**	**87**	**100**	**15**	**85**	**100**	**16**	**84**	**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**

[59] **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[60] 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

[60] **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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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	86			60	100			6	9	21	20	22	19	3				
2) Scots pine	14			70	110			6	9	21	20	22	19	3				
3)																		
4)																		
5)																		
6)																		
7)																		
8)																		
9)																		
10)																		
11) Other																		
Total	**100**																	

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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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	67			60	90			1	3	17	21	23	21	14				
2) Sitka spruce	18			50	80					7	50	23	12	8				
3) Contorta pine	7			70	100					33	43	17	7					
4) Abies sp.	3			60	90						27	41	19	13				
5) Larix sp.	2			70	100					29	29		13	29				
6)																		
7)																		
8)																		
9)																		
10)																		
11) Other	3										29	14	43	14				
Total	**100**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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)														
	222					255					262				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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)														
	n.d.a.					n.d.a.					n.d.a.				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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 %[61] 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			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
Total					100	100	100
Protective	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
Total					100	100	100

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	222	255	262	Ind-Sawlog			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
Total					100	100	100
Protective	n.d.a	n.d.a.	n.d.a	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
Total					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**

[61] **Estimates of Predominant purpose must tally to 100% for reach 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)*

Norwegian Ministry of Agriculture and Food 2004. Statistics of planted forest 1952-2003 (Excel-file). Source: Annual reports from the Director of Forestry.

Norwegian Institute of Land Inventory. National Forest Inventory Database.

The Norwegian Forest Seed Station. Sales of seed from the Norwegian Forest Seed station 1961-95. Int. working paper.

LITHUANIA

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

TABLE OF CONTENTS

CONTACT PERSONS

For queries in completing these tables please contact:
Jim Carle, Jim.Carle@fao.org
or
Alberto Del Lungo, Alberto.DelLungo@fao.org

COUNTRY NAME: Lithuania

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	20	21	26
Modified Natural	1493	1520	1548
Semi-Natural	308	342	384
Productive Plantation	84	95	100
Protective Plantation	40	42	41

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.

* **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[62] (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)**								
	308			342			384		
Semi-Natural Forest components	**Relative figures (%)**								
	planted (%)	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**
Estimates	**100**		**100**	**100**		**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**

[62] **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[63] 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 (%)**
	75	**25**	**100**	**75**	**25**	**100**	**75**	**25**	**100**

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

[63] **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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/ha		Age class distribution %									
		Mean		Min		Mean		1-10	11-20	21-30	31-40	41-50	51-70	71-90	91-100	>100	Total
1) Pinus sylvestris	44	7,6		101		320		7	8	9	23	30	18	4	1		**100**
2) Picea abies	46	5,8		71		349		20	29	23	16	8	3	1			**100**
3) Betula pendula	4	5,6		61		256		26	26	15	12	15	6				**100**
4) Populus tremula	1	5,0		41		204		46	35	9	4	4	2				**100**
5) Alnus glutinosa	2	6,1		61		320		12	46	23	14	3	2				**100**
6) Alnus incana	1	7,0		31		151		19	39	19	17	6					**100**
7) Quercus robur	1	4,6		121		329		32	5	8	15	25	8	2	2	3	**100**
8) Fraxinus excelsior	1	5,6		101		239		7	28	33	20	5	4	2	1		**100**
11) Other																	
Total	**100**	6,6				283											

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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/ha		Age class distribution %									
		Mean		Min		Mean		1-10	11-20	21-30	31-40	41-50	51-70	71-90	91-100	>100	Total
1) Pinus sylvestris	63	7,9		111		304		5	8	11	27	29	15	3	1	1	**100**
2) Picea abies	28	6,1		81		344		20	29	23	15	7	5	1			**100**
3) Betula pendula	4	6,0		61		229		16	26	16	15	18	8	1			**100**
4) Alnus glutinosa	1	6,7		61		274		6	43	27	13	7	4				**100**
5) Alnus incana	1	6,8		31		146		13	28	31	20	7	1				**100**
6) Quercus robur	1	5,4		141		305		12	9	10	18	26	14	3	2	6	**100**
7) Fraxinus excelsior	1	5,7		111		-		7	29	20	13	8	13	6	2	2	**100**
8) Tilia cordata	1	5,7		61		193		-	12	29	19	8	6	11	3	12	**100**
11) Other																	
Total	**100**	7,2				247											

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/ha			Age class distribution %									
		Mean		Min		Mean			1-10	11-20	21-30	31-40	41-50	51-70	71-90	91-100	>100	Total
1)) Pinus sylvestris	52	6,4		101		No data			19	8	13	26	22	10	2			**100**
2) Picea abies	44	No data		71		No data			75	15	4	4	2					**100**
3) Betula pendula	1	4,4		61		No data			28	22	18	18	11	3				**100**
4) Alnus glutinosa	2	No data		61		No data			60	32	5	2	1					**100**
5) Quercus robur	1	No data		121		No data			82	7	2	3	5	1				**100**
11) Other																		
Total	**100**	4,3				No data												

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/ha			Age class distribution %									
		Mean		Min		Mean			1-10	11-20	21-30	31-40	41-50	51-70	71-90	91-100	>100	Total
1) Pinus sylvestris	70	7,3		111		No data			10	8	15	31	23	9	3	1		**100**
2) Pinus mugo	4	1,9		111		No data			1	-	1	1	1	-	8	77	11	**100**
3) Picea abies	22	No data		81		No data			54	24	11	6	3	2				**100**
4) Betula pendula	1	4,7		61		No data			20	24	14	17	23	2				**100**
5) Alnus glutinosa	1	No data		61		No data			42	43	11	3	-	1				**100**
6) Quercus robur	1	4,2		141		No data			33	7	10	19	17	9	2	1	2	**100**
7) Tilia cordata	1	4,9		61		No data			-	16	42	14	6	4	5	4	9	**100**
11) Other																		
Total	**100**	6,1				No data												

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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	100				**100**	No data	No data	No data	No data	**100**	No data	No data	No data	No data	**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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	100				**100**	No data	No data	No data	No data	**100**	No data	No data	No data	No data	**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)														
	84					95					100				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	100				**100**	No data	No data	No data	No data	**100**	No data	No data	No data	No data	**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)														
	40					42					41				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	100				**100**	No data	No data	No data	No data	**100**	No data	No data	No data	No data	**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 %[64] 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	75	75	75	Ind-Sawlog	No data	No data	No data
				Ind-Pulpwood/Fiber	No data	No data	No data
				Ind-Bioenergy	No data	No data	No data
				Ind-Non Wood Prod	No data	No data	No data
				Ind-Unspecified	No data	No data	No data
Total				Multiple purpose usage	100	100	100
Protective	25	25	25	Non-ind-Environmental	No data	No data	No data
				Non-ind-Recreation	No data	No data	No data
				Non-ind-Unspecified	No data	No data	No data
				Non-ind-Fuelwood	No data	No data	No data
Total				Multiple purpose usage	100	100	100

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	84	95	100	Ind-Sawlog	No data	No data	No data
				Ind-Pulpwood/Fiber	No data	No data	No data
				Ind-Bioenergy	No data	No data	No data
				Ind-Non Wood Prod	No data	No data	No data
				Ind-Unspecified	No data	No data	No data
Total				Multiple purpose usage	100	100	100
Protective	40	42	41	Non-ind-Environmental	No data	No data	No data
				Non-ind-Recreation	No data	No data	No data
				Non-ind-Unspecified	No data	No data	No data
				Non-ind-Fuelwood	No data	No data	No data
Total				Multiple purpose usage	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**

[64] **Estimates of Predominant purpose must tally to 100% for reach 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)*

Source of information - Database of State Forest Survey Service.

LATVIA

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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CONTACT PERSONS

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Alberto Del Lungo, Alberto.DelLungo@fao.org

COUNTRY NAME: Latvia

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	N.D.A	15,2	13,8
Modified Natural	N.D.A	2238	2282
Semi-Natural	N.D.A	632*	644*
Productive Plantation	N.D.A	0,05	1,24
Protective Plantation	N.D.A	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.

* - for filling in next tables total area of semi-natural forest without temporarily unstocked area was used (in year 2000 – 529281,2 hectares and in year 2005 - 569969,4 hectares). In the report to FRA 2005 unsocked area was distributed proportionally to categories “modified natural” and “semi natural”.

*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[65].

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)**								
	N.D.A			**632**			**644**		
	Relative figures (%)								
Semi-Natural Forest components	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**	**planted (%)**	**assisted (%)**	**Total (%)**
Estimates	**N.D.A.**	**N.D.A.**	**100**	**100***	**0**	**100**	**100***	**0**	**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**

**** - in absolute figure of semi-natural forest only planted forests are included. The proportion of assisted natural regeneration is not registered and it is not significant.***

[65] **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[66] allocated to Production and Protection purposes for years 1990, 2000, 2005.

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 (%)**
	N.D.A.	**N.D.A.**	**100**	**89.1**	**10.9**	**100**	**88.1**	**11.9**	**100**

Source: Planted Forests Specialist to list reference documents in the references section. In figure of forests of protection purposes semi-natural forest areas are included where restrictions of forestry measures are applied.

[66] **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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%).

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	6-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	>100	Total
1) Scots pine	50.06	5,2		101/ 121				5,3	6,4	6,3	5,2	7,3	11,5	18,7	14,6	12,9	4,9	4,0	2,9	**100**
2) Norway spruce	47.37	7,8		81				9,6	9,2	19,3	23,1	24,0	10,6	2,0	0,7	0,6	0,3	0,3	0,3	**100**
3) Silver/white birch	1.80	6,1		51/ 71				31,5	11,1	6,3	5,7	8,6	13,1	12,1	6,1	3,0	1,1	1,0	0,4	**100**
4) European ash	0.22	8,9		81				0,6	3,2	9,5	13,5	24,8	25,8	9,2	2,4	2,1	1,3	3,0	4,6	**100**
5) Larch sp.	0.19			101 /121				0,4	5,3	36,8	14,4	25,0	9,1	2,6	0,8	0,4	0,9	0,5	3,8	**100**
6) Common oak	0.14	4,3		101 /121				5,8	5,8	1,7	3,9	5,2	11,3	9,3	4,2	4,3	6,6	10,0	31,9	**100**
7) Common alder	0.08	6,2		71				6,6	2,0	7,1	13,3	19,3	17,5	13,9	9,5	7,7	1,1	1,5	0,5	**100**
8) Small-leaved lime	0.05			81				0,5	0	0	0,7	2,2	1,4	1,8	2,9	5,4	5,3	17,9	61,9	**100**
9) Poplar sp.	0.03			41				1,1	0,2	0,5	1,7	9,0	68,6	7,5	8,7	2,2	0,5	0	0	**100**
10) Aspen	0.01	7,7		41				80,9	19,0	0,1	0	0	0	0	0	0	0	0	0	**100**
11) Other	0.04							5,7	13,4	8,8	9,0	4,4	4,8	9,5	5,9	8,2	8,0	11,4	10,9	**100**
Total	**100**																			

There is no mean annual increment available for productive semi-natural forests. Therefore mean annual increment per species in all forests is given. Minimal rotation length is defined by Forest law depending on forest site index. There are no data on harvest volume in productive semi-natural forests (only harvest volume in all forests is available).

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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%).

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/ha		Age class distribution %											
		Min	Max	Min	Max	Min	Max	0-5	5-10	11-20	21-30	31-40	41-50	51-60	61-70	71-80	81-90	91-100	>100	Total
1) Scots pine	76,29	5,2		101 /121				0,8	2,0	2,7	4,8	7,8	10,7	19,1	16,5	14,9	8,0	5,2	7,5	**100**
2) Norway spruce	20,86	7,8		81				4,2	7,5	14,2	23,7	26,4	12,2	2,7	1,5	1,4	2,0	1,7	2,5	**100**
3) Silver/white birch	1,19	6,1		51/ 71				9,7	6,2	5,1	4,3	14,3	22,4	14,2	8,4	6,5	1,8	5,1	2,0	**100**
4) Common oak	0,50	4,3		101/ 121				0,3	1,0	0,8	1,3	10,7	7,4	1,6	1,2	1,3	4,1	5,7	64,6	**100**
5) Larch sp.	0,26			101/ 121				0,0	1,9	8,1	11,0	19,7	21,0	5,7	4,0	2,0	0,8	0,8	25,0	**100**
6) Small-leaved lime	0,22			81				0,0	0,0	1,8	8,5	4,1	1,0	1,1	2,8	3,0	1,3	3,1	73,3	**100**
7) European ash	0,19	8,9		81				0,4	0,5	0,8	4,7	8,5	7,1	25,3	4,2	0,9	10,1	7,8	29,7	**100**
8) Common alder	0,17	6,2		71				0,2	0,0	3,3	11,5	25,3	21,1	13,1	11,8	6,1	2,2	3,0	2,4	**100**
9) Poplar sp.	0,08			41				0,0	0,0	0,0	4,6	15,0	45,2	28,0	0,5	4,4	0,7	1,1	0,5	**100**
10) Common maple	0,03			81				1,3	5,3	1,3	11,4	18,3	3,5	0,0	0,0	1,7	2,6	18,8	35,8	**100**
11) Other	0,21							0,1	4,3	3	6,3	19,7	6,6	29,8	4,6	1,5	5,9	2,5	15,7	**100**
Total	**100**																			

There is no mean annual increment available for protective semi-natural forests. Therefore mean annual increment per species in all forests is given. Minimal rotation length is defined by Forest law depending on forest site index. In all protective semi-natural forests forestry operations are restricted. There are no data on harvest volume in protective semi-natural forests (only harvest volume in all forests is available).

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) Silver birch	77,0							100										100
2) Norway spruce	11,2							100										100
3) Scots pine	7,3							100										100
4) Aspen	3,5							100										100
5) Common oak	0,6							100										100
6) European ash	0,1							100										100
7) Grey alder	0,1							100										100
8) Other	0,2							100										100
Total	**100**																	

There are no data on mean annual increment and harvesting volume in plantation forests. Rotation length in productive plantations is not defined. There are no data on harvest volume in productive plantation forests – all stands are young.

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

Source: Planted Forests Specialist to list reference documents in the references section. Plantation forests are planted mostly for production purposes.

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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					100					**100**					**100**

So detailed structure of the ownership of semi-natural forests is not available. According to the data from State Forest Register in year 2005 77,8% of productive semi-natural forests is owned by state, but 22,2% - by other owners.
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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					100					**100**					**100**

So detailed structure of the ownership of semi-natural forests is not available. According to the data from State Forest Register in year 2005 81,0% of productive semi-natural forests is owned by state, but 19,0% - by other owners.

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)														
	N.D.A					0,05					1,24				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					100					**100**					**100**

Practically all productive plantations are owned by private owners.
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)														
	N.D.A					0					0				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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 %[67] 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.

FRA Purposes	1990	2000	2005	Predominant Purpose	1990	2000	2005
	Estimates from table 2b (%)				%	%	%
Productive	N.D.A.	89,1	88,1	Ind-Sawlog	N.D.A.	N.D.A.	N.D.A.
				Ind-Pulpwood/Fiber	N.D.A.	N.D.A.	N.D.A.
				Ind-Bioenergy	N.D.A.	N.D.A.	N.D.A.
				Ind-Non Wood Prod	N.D.A.	N.D.A.	N.D.A.
				Ind-Unspecified	N.D.A.	N.D.A.	N.D.A.
Total					100	100	100
Protective	N.D.A.	10,9	11,9	Non-ind-Environmental	N.D.A.	N.D.A.	N.D.A.
				Non-ind-Recreation	N.D.A.	N.D.A.	N.D.A.
				Non-ind-Unspecified	N.D.A.	N.D.A.	N.D.A.
				Non-ind-Fuelwood	N.D.A.	N.D.A.	N.D.A.
Total					100	100	100

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)				%	%	%
Productive	N.D.A	0,05	1,24	Ind-Sawlog	N.D.A.	N.D.A.	N.D.A.
				Ind-Pulpwood/Fiber	N.D.A.	N.D.A.	N.D.A.
				Ind-Bioenergy	N.D.A.	N.D.A.	N.D.A.
				Ind-Non Wood Prod	N.D.A.	N.D.A.	N.D.A.
				Ind-Unspecified	N.D.A.	N.D.A.	N.D.A.
Total					100	100	100
Protective	N.D.A	0	0	Non-ind-Environmental	N.D.A.	N.D.A.	N.D.A.
				Non-ind-Recreation	N.D.A.	N.D.A.	N.D.A.
				Non-ind-Unspecified	N.D.A.	N.D.A.	N.D.A.
				Non-ind-Fuelwood	N.D.A.	N.D.A.	N.D.A.
Total					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**

[67] **Estimates of Predominant purpose must tally to 100% for reach 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

Reference: Information prepared by The State Forest Service (Source - National Forest register).

ITALY

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

TABLE OF CONTENTS

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COUNTRY NAME: Italy

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	160	160	n.a.
Modified Natural	7934	9143	n.a.
Semi-Natural[68]	n.a.	n.a.	n.a.
Productive Plantation	289[69]	144	146
Protective Plantation	n.a.	n.a.	n.a.

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

*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

[68] In Italy coppice stands account for almost 40% of the total forest cover and produce about 70% of roundwood (mainly fuelwood). Coppice represents the most common traditional silvicultural practice used over the last 2000 years. Most coppice is practiced with native broadleaved tree species, such as oaks, beech, chestnut and hornbeams.
Even though it was not possible to report the detailed breakdown for Italian forests as a whole into modified natural or semi-natural forest classes, coppice was classified as "assisted natural regeneration component of semi-natural forest" and not "planted forest component of semi-natural forest". Coppice management, indeed, is an intensive management system that incorporates, at the same time, both the utilization of wood and stand regeneration, using the same reproductive, genetic materials as the original. Thus, it is not classed as planted forest

[69] The 1990 area of productive plantation, extrapolated from the National Forest Inventory 1985, comprises of 134 100 ha, devoted to wood production, and 154 800 to non wood products (e.g. cork and nuts). The latter plantations are not accounted in 2000 and 2005 figures.

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

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[70] (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)**								
	n.a.			**n.a.**			**n.a.**		
	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**

[70] **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[71] 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			**100**			**100**

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

[71] **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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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) Hybrid Poplars	57	16	21	10.3	11.2	170	220	41	59									100
2) *Eucalyptus* genus	16	7	25	8	15	100	300	30	35	35								100
3) *Juglans regia* L.	10	3	7	35	80			20	25	20	10	10	10	5				100
4) *Prunus avium* L.	3	4	8	40	80			30	35	30	5							100
5) *Pinus radiata* D. Don	4	16	26	20	40					10	60	30						100
6) Pseudotsuga menziesii	2	15	20	30	70	500	1200											
7) Other conifers	8																	
Total	100																	

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

Apart from poplar stands, detailed information on Italian forest plantations is not available. Thus for the compilation of this report not only heterogeneous documents and sources have been used, but also expert estimations have been made in order to assess some parameters.

The most important source for area extent is the ongoing National Forest Inventory (NFI), which provides some provisional results on the most common plantations. It must be said that the relatively small surface devoted to less common species, together with the sampling rate adopted by the NFI, could lead to a potential underestimation of productive plantations. Moreover, being only the two first inventory phases (consisting in photo-interpretation and ground checks to distinguish forest resources from other-land) completed, information on sylvicultural characteristics (structure, age, composition, etc.) is not yet available. The reference year of NFI findings is 2002, when the most of the used ortho-photos were taken. As the situation of planted forest in the last 3 years can be considered stable, the same share of area among species found by the NFI has been applied to the FRA 2005 total extent of productive plantations.

Some details on the different plantations listed in table 3c are given below.

1. Besides the NFI, the area devoted to poplar cultivation is also clearly defined by the fifth 2001 Agricultural census carried out by the National Statistical Institute (ISTAT). Main results are available at the following internet site.

http://www.census.istat.it/wibdsi/docViewWQYFrame.asp?entry=r0&RepoType=Corporate&Hide=&turnTochart=&Page=&DocType=wqy&Back=&Drill=&turnTo=

Sylvicultural details regarding poplar stands (increment, rotation length, ecc.) have been provided by the Poplar Research Institute based in Casale Monferrato, whose site is: http://www.populus.it/

At present, the Populus x Euroamericana clone "I 214" represents about the 80% of the hybrid Poplars grown in Italy. Among the various clones admitted for cultivation the most common are the ones named: "Boccalari, San Martino, Neva and A4A", which represent about the 15% of the extent of the poplar plantations (about 83.000 ha). The most important sites for poplar cultivation are the plains of northern Italy and especially the Po Valley.

2. As regards Eucalyptus plantations, the findings of the NFI strongly differ from what reported in the most updated article published in 1987 by Luigi Boggia (Cellulosa e Carta, n. 5 pgs. 11/17). According to this author, in the late eighties, the area of pure Eucalyptus stands was about 46.000 ha, while at present it results almost halved. Hopefully such discrepancy will be cleared up when the NFI is completed. Other data on Eucalyptus is either retrieved from literature (CSAF, 1990 - *Principali latifoglie da legno.* Edizioni RESS-ENCC, Roma) or assessed by experts. Anyway information on such plantations is quite poor due to the great variability of ecological conditions and to the fact that many of them, mainly established in the sixties and seventies in southern and insular Italy, have been neglected during the last decades not having met the expected productive results. Also for this reason, the sylvicultural characteristics (especially distribution of age class) must be considered just as an indication and refer only to Eucalyptus coppices.
   Most spread species in Italy are: *E. camaldulensis* Dehn., *E. occidentalis* Endl., *E. x trabutii* Vilmorin, *E. globules* Labill, *E. botryoides* Sm., *E. viminalis* Labill., *E. gomphocephala* A. D.C., *E. globules* Labill..

3. Looking at the preliminary results of the NFI a tentative estimate of the area extent of broadleaves plantations for high valuable timber production has been made. Walnut (*Juglans regia* L.) and wild cherry (*Prunus avium* L.) are the two most common species, which have been more and more encouraged in the last years in set-aside or abandoned agricultural land. Due to the fact that these plantations are averagely too young and often made by different species (mixed stands), reliable information on sylvicultural parameters is not available, even if some provisional results can be found in scientific literature (http://www.sisef.it/forest@/pdf/Di_Vaio_291.pdf). Rotation lengths and distribution in age class must be considered as a tentative expert estimate. The area share of walnut and cherry is also based on an expert estimation and could include other minor species belonging to genus such as *Alnus*, *Fraxinus*, *Quercus* and *Robinia* which can be found in pure (usually not exceeding 1 or 2 ha of size) or mixed stands where the two main high valuable broadleaves are predominant.

4. According to the ongoing NFI, the area of *Pinus radiata* D. Don plantations has severely decreased in the last 20 years. In 1981 Eccher (Atti 1° Cong. Naz. "Il legno nelle attività economiche del Pese". Sez. III, 65-69, Roma.) reported that such species was covering about 25.000 ha located in central and southern Italy, while the present area is about 5.800 ha. Sylvicultural and productive characteristics retrieved from literature (CSAF,

1992 - *Conifere.* Edizioni RESS-ENCC, Roma; Eccher A., Ferrara A., 1983 – Pino insigne. *Prime tavole di cubatura.* Cellulosa e Carta, n. 2 pgs. 16/34).

5. Even if in 1981 the area of Douglas fir in Italy was estimated at the beginning of the eighties as about 10.000 ha (AA.VV. 1982. *Le specie forestali esdotiche nella selvicoltura italiana*. Annali dell'Istituto Sperimentale per la Selvicoltura, XII-XIII: 330:491) L, the number of ha recognised so far as productive plantations by the NFI is around 3.000. Sylvicultural details in the table have been retrieved from the mentioned article.

6. In Italy several introduced and native conifers are used in productive plantations, due to the fragmentation and complexity of the existing stands, often mixed, a breakdown for botanical species of these planted forest is impossible. Thus the mention "Other conifers" refers to an aggregated class and therefore the sylvicultural aspects cannot be detailed. Most common species in this group are, in alphabetic order: *Abies alba* Mill., *Cedrus atlantica* (Endl.) Carr., *Cupressus sempervirens* L., *Picea abies* (L.) Karst., *Pinus canariensis* Smith, *P. halepensis* Mill., *P. nigra* Arnold ssp. *laricio* (poiret) Maire, *P. pinaster* Aiton., *P. pinea* L., *P. strobes* L..

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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)														
	289					144					146				
	Ownership (%)														
Ownership	Public	Private		Other	Total	Public	Private		Other	Total	Public	Private		Other	Total
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
	7		93		100	5		95		100	4		96		100

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

The only documented share of ownership for productive plantations is given by the first National Forest Inventory carried out in 1985 (Ministero dell'Agricoltura e delle Foreste - ISAFA. 1988. *Inventario Forestale Nazionale. Sintesi metodologica e risultati*.). Such percentage is considered valid for 1990. As concerns 2000 and 2005, figures have been estimated also taking into consideration the above mentioned afforestation of private agricultural land, which has been characterising the last two decades.

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

Reference year	1990					2000					2005				
Protective Plantation	Reported Area from Table 1 (1000 ha)														
	n.a.					n.a.					n.a.				
	Ownership (%)														
Ownership	Public	Private		Other	Total	Public	Private		Other	Total	Public	Private		Other	Total
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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 %[72] 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			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
Total					100	100	100
Protective	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
Total					100	100	100

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	289	144	146	Ind-Sawlog	35	72	71
				Ind-Pulpwood/Fiber	15	20	20
				Ind-Bioenergy	-	3	4
				Ind-Non Wood Prod	40*	1	1
				Ind-Unspecified	10	4	4
Total					100	100	100
Protective	n.a.	n.a.	n.a.	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
Total					100	100	100

*** Mainly stands specialised for cork or nuts production. Such plantations are not accounted in 2000 and 2005 figures.**
Sources:

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

[72] **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)*

- Ministero dell'Agricoltura e delle Foreste - ISAFA. 1988. *Inventario Forestale Nazionale. Sintesi metodologica e risultati*
- AA.VV. 1982. *Le specie forestali esdotiche nella selvicoltura italiana*. Annali dell'Istituto Sperimentale per la Selvicoltura, XII-XIII: 330:491
- http://www.census.istat.it/wibdsi/docViewWQYFrame.asp?entry=r0&RepoType=Corporate&Hide=&turnTochart=&Page=&DocType=wqy&Back=&Drill=&turnTo=
- Boggia L. . 1987. *Conclusioni sull'eucalitticoltura italiana*. Cellulosa e Carta, n. 5 pgs. 11/17
- CSAF, 1990 - *Principali latifoglie da legno.* Edizioni RESS-ENCC, Roma
- http://www.sisef.it/forest@/pdf/Di_Vaio_291.pdf

NETHERLANDS

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

TABLE OF CONTENTS

CONTACT PERSONS

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COUNTRY NAME: Netherlands

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	0	0	0
Modified Natural	0	0	0
Semi-Natural	341	356	361
Productive Plantation	4	4	4
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.

* **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[73] (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)								
	341			356			361		
	Relative figures (%)								
Semi-Natural Forest components	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)	planted (%)	assisted (%)	Total (%)
Estimates	82	18	100	78	22	100	76	24	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**

Explanation

These figures can only be considered as best professional guess

According to the Dutch NFI (2000-2006) 19% of the Dutch forests are in the process of a transition towards uneven aged stands. In these forest planted trees are often in a process of decline in numbers, this in favour of natural regeneration which are dominating

[73] **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%

now or will dominate in future. These stands are considered as assisted natural regeneration, although planted elements are still clearly visual.

Even-aged stands are considered planted, although the could consist of stands from natural sowing. Planting rows are no more visible in most cases .

Figures only represent the Dutch "High Forests"(83% of total forest area) other forest types are assumed to have the same status as the high forests, although the status is in fact unknown (this to make it possible to tally up to 100%)

According to the NFI 1982 (vierde bosstatistiek) around 16% could be classified as (assisted) natural regeneration. We estimated a 0,4 % decline of planted forests a year. According to this figure table 2a was filled in for the years 1990 and 2005

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[74] 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	**available (%)**	**Not available (%)**	**Total (%)**	**Productive (%)**	**Protective (%)**	**Total (%)**	**Productive (%)**	**Protective (%)**	**Total (%)**
	80	**20**	**100**	**80**	**20**	**100**	**75**	**25**	**100**

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

NR=Not relevant

This table is not relevant in the Dutch case. Originally the largest part of the forest area in the Netherlands is planted with a regular spacing and one or two species in even-aged stands with wood-production as the main purpose. A rapid change, started in the seventies of the 20th century, towards forests for multiple purposes (e.g. nature, recreation, wood production) had an impact on the management of these even-aged stands. The original purpose of wood-production is however still of importance, but is no longer the primary function. The total social services area and the area that first had wood production as the primary function is now included in the multiple purpose area. The planted component of the Semi Natural forest mostly serve multi purposes and in some cases a single function biodiversity. The characteristics of many Dutch forests are no longer related tot a plantation-like forestry, although the were planted. The stands are often a mixture between natural regenerated and planted old trees . Due to selective thinning no planting rows can been seen, only from historical data we know the stands are planted. Since 10 Years clear-cut management systems stop to exist. Foresters stopped planning in straight rotation- managed forest. Instead they plan in diameter distribution, target treediameters , or selective treecutting systems.

[74] **Estimates of Productive and Protective purposes must tally to 100%**

In this case your questionnaire doesn't fit anymore to our forest management systems and datacollection, because it is based on a more plantation based management system, rather than appropriate systems for multipurpose semi nautaral forest

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^3/ha/year), Rotation Length (years), Harvest volume yield (m^3/ha) and age class distribution (%). Your new data inputs

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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 / Scots pine	16,8	3	9	80	120			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
2) Quercus petraea and robur / European oak	11,6	3	9	100	200			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
3) Pseudotsuga menziesii / Douglas fir	5,3	8	18	80	120			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
4) Larix spp. / Larch spp	4,2	7	13	60	80			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
5) Populus spp./Salix spp. / poplar spp. and willow spp.	4,2	8	20	20	50			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6) Betula spp. / Birch spp.	3,2	4	8	40	80			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
7) Pinus spp. (Excl. P. sylvestris) / other Pine spp.	3,2	6	12	80	120			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
8) Fagus sylvatica / European Beech	3,2	6	14	80	150			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
9) Picea spp. / Spruce spp.	2,1	8	16	60	80			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
10) Quercus rubra / Red oak	2,1	6	12	60	80			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
11) Other	5,3	6	10	60	80													
Total	**100**							0,6	3,4	6,7	9,3	11,9	12,9	25,6	**17,3**	**5,5**	**6,8**	**100**

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

These figures only can be given for all the Dutch forests in a total and couldn't been split up between a/b/c/d
Age class distribution is only known for the total forest area and not for the single species.
Instead of age-class distribution DUTCH NFI is using diameter class distribution for each specie.
Planted semi-natural forest are managed as multipurpose forests. Only selective cutting is used as a harvest method, no clear-cut combined with rotation length is specified. Therefore no final Yield Harvest volume can be given
Used percentage in column 2 is the percentage of the growing stock, percentage of age distribution is percentage of area

NOTE from Alberto

- **Figures reported on column 2 have been considered as species area distribution although referring only to the growing stock areas**
- **Total of the species distribution only tallies to 61.2 therefore difference to 100 (38.8%) has been spread all over the reported species**
- **The age class distribution reported below as representative of all the species has been considered as average for all the species reported**

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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

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

Reference year: 2005

Top 10 species planted	%	Mean Annual Increment m^3/ha/year		Predominant Rotation Length years		Harvest Vol. Yield m^3/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																		
Total	**100**																	

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%

No specific data are available to make distinguish as asked in table 4. You may assume that planted semi-natural and planted productive forests will not differ from the other forests types as stated in table below

FRA 2005 Categories	Area (1000 hectares)			
	Forest		Other wooded land	
	1990	2000	1990	2000
Private ownership	169	181	0	0
Public ownership	176	179	0	0
Unknown	0	0	0	0
TOTAL	**345**	**360**	**0**	**0**

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		Other	Total	Public	Private		Other	Total	Public	Private		Other	Total
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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)														
	4					4					4				
	Ownership (%)														
Ownership	Public	Private		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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		Other	**Total**	Public	Private		Other	**Total**	Public	Private		Other	**Total**
		Corporate	Small holders				Corporate	Small holders				Corporate	Small holders		
					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 %[75] 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

No data available to make any distinguish

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			
				Ind-Pulpwood/Fiber			
				Ind-Bioenergy			
				Ind-Non Wood Prod			
				Ind-Unspecified			
Total					100	100	100
Protective	Tab 2b INPUT	Tab 2b INPUT	Tab 2b INPUT	Non-ind-Environmental			
				Non-ind-Recreation			
				Non-ind-Unspecified			
				Non-ind-Fuelwood			
Total					100	100	100

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

[75] **Estimates of Predominant purpose must tally to 100% for reach category**