TABLE 3 SECTORAL REPORT FOR AGRICULTURE, FORESTRY, AND OTHER LAND USE
(Sheet 1 of 1)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CO2	CH_4	N_2O	NO_x	CO	NMVOC
	(Gg)					
3. Total Agriculture, Forestry, and Other Land Use						
A. Livestock (Agriculture)						
1 Enteric Fermentation						
2 Manure Management [(1)]						
B. Land (LULUCF)						
1 . Forest land						
2. Cropland						
3. Grassland						
4. Wetlands						
5. Settlements						
6. Other Land						
C. Aggregate sources and non-CO_2 emissions sources on land[(2)] (Agriculture/LULUCF)						
1. Biomass burning (Agriculture/LULUCF)						
2. ~~Liming~~ (Agriculture or LULUCF)						
3. ~~Urea application~~ (PIPE or Agriculture or LULUCF)						
4. Direct N2O Emissions from managed soils (Agriculture/LULUCF)						
5. Indirect N2O Emissions from managed soils (Agriculture/LULUCF)						
6. Indirect N2O Emissions from manure management (Agriculture)						
7. Rice cultivations (Agriculture)						
8. Other (please specify)						
D. Other (Agriculture/LULUCF)						
1. Harvested Wood Products (LULUCF)						
2. Other (please specify)						

[(1)] Indirect N_2O emissions are not included here but under category 3.C.6.

[(2)] Combined data reported both for Agriculture and LULUCF sector. [Include info on the mapping] Sectoral reports for agriculture and LULUCF provide the data per sector. In general, non-CO_2 emissions from cropland and part of grassland are reported under Agriculture.

Note: The IPCC category codes are used in the table, which are not consistent with the codes used further in the CRF tables for agriculture and LULUCF.

TABLE 3(I) SECTORAL REPORT FOR AGRICULTURE
(Sheet 1 of 2)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH_4	N_2O [5]	NO_x	CO	NMVOC
	(Gg)				
Total Agriculture					
Livestock					
A. Enteric Fermentation					
1. Cattle [1]					
Option A:					
Dairy Cattle					
Non-Dairy Cattle					
Option B:					
Mature Dairy Cattle					
Mature Non-Dairy Cattle					
Young Cattle					
2. Sheep					
3. Swine					
4. Poultry					
Drop down list					
Other					
Buffalo					
Goats					
Camels and Llamas					
Horses					
Mules and Asses					
Other *(as specified in table 3 .A)*					
B. Manure Management					
1. Cattle [1]					
Option A:					
Dairy Cattle					
Non-Dairy Cattle					
Option B:					
Mature Dairy Cattle					
Mature Non-Dairy Cattle					
Young Cattle					
2. Sheep					
3. Swine					
4. Poultry					
Drop down list					
Other					
Buffalo					
Goats					
Camels and Llamas					
Horses					
Mules and Asses					
Other *(as specified in table 3 .B)*					

Note: All footnotes for this table are given at the end of the table on sheet 2.

TABLE 3(I) SECTORAL REPORT FOR AGRICULTURE
(Sheet 2 of 2)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	CH_4	N_2O	NO_x	CO	NMVOC
	(Gg)				
Aggregated sources and non-CO_2 emission sources on land					
C. Rice Cultivation (IPCC category 3.C.7)					
D. Agricultural Soils [2] [4] (IPCC categories 3.C.4-6)					
1. Direct N_2O Emissions from Managed Soils					
2. Indirect N_2O emissions from Managed Soils - [3]					
3. Other *(as specified in table 4.D)*					
E. Prescribed Burning of Savannas (IPCC category 3.C.1)					
F. Field Burning of Agricultural Residues (IPCC category 3.C.1)					
Liming ? (IPCC category 3.C.2)					
Urea application ? (IPCC category 3.C.3)					
D. Other *(please specify)*					

[1] The sum for cattle would be calculated on the basis of entries made under either option A (dairy and non-dairy cattle) or option B (mature dairy cattle, mature non-dairy cattle and young cattle).

[2] See footnote 4 to Summary 1.A of this common reporting format. Parties which choose to report CO_2 emissions and removals from agricultural soils under 4.D Agricultural Soils of the sector Agriculture should report the amount (in Gg) of these emissions or removals in table Summary 1.A of the CRF. References to additional information (activity data, emissions factors) reported in the NIR should be provided in the documentation box to table 4.D. In line with the corresponding table in the IPCC Guidelines (i.e. IPCC Sectoral Report for Agriculture), this table does not include provisions for reporting CO_2 estimates.

[3] Direct N_2O emissions from pasture, range and paddock manure are to be reported in the "4.D Agricultural Soils" category. All other N_2O emissions from animal manure are to be reported in the "4.B Manure Management" category. See also chapter 4.4 of the IPCC good practice guidance report.

[4] A precise mapping of what is covered under agriculture should to be included

[5] For manure management both direct and indirect N_2O emissions are included.

Note: The IPCC Guidelines do not provide methodologies for the calculation of CH_4 emissions and CH_4 and N_2O removals from agricultural soils, or CO_2 emissions from prescribed burning of savannas and field burning of agricultural residues. Parties that have estimated such emissions should provide, in the NIR, additional information (activity data and emission factors) used to derive these estimates and include a reference to the section of the NIR in the documentation box of the corresponding Sectoral background data tables.

Documentation box:

• Parties should provide detailed explanations on the agriculture sector in Chapter 6: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

• If estimates are reported under "4.G Other", use this documentation box to provide information regarding activities covered under this category and to provide reference to the section in the NIR where background information can be found.

TABLE 3(I).A.1 SECTORAL BACKGROUND DATA FOR AGRICULTURE
Enteric Fermentation
(Sheet 1 of 1)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTORS [3]	EMISSIONS
	Population size[1] (1000s)	Average gross energy intake (GE) (MJ/head/day)	Average CH_4 conversion rate (Y_m) [2] (%)	CH_4 (kg CH_4/head/yr)	CH_4 (Gg)
1. Cattle					
Option A:					
Dairy Cattle [4]					
Non-Dairy Cattle					
Option B:					
Mature Dairy Cattle					
Mature Non-Dairy Cattle					
Young Cattle					
2. Sheep					
3. Swine					
4. Poultry					
Drop down list					
Other					
Buffalo					
Goats					
Camels and Llamas					
Horses					
Mules and Asses					
Deer					
Reindeer					
Rabbit					
Other					

Additional information (only for those livestock types for which Tier 2 was used)[a]

Disaggregated list of animals[b] Indicators:		Dairy Cattle	Non-Dairy Cattle	Other *(specify)*	
Weight	(kg)				
Feeding situation[c]					
Milk yield	(kg/day)				
Work	(h/day)				
Pregnant	(%)				
Digestibility of feed	(%)				

[a] See also Tables A-1 and A-2 of the IPCC Guidelines (Volume 3. Reference Manual, pp. 4.31 4.34). These data are relevant if Parties do not have data on average feed intake.
[b] Disaggregate to the split actually used. Add columns to the table if necessary.
[c] Specify feeding situation as pasture, stall fed, confined, open range, etc

[1] Parties are encouraged to provide detailed livestock population data by animal type and region, if available, in the NIR, and provide in the documentation box below a reference to the relevant section. Part should use the same animal population statistics to estimate CH4 emissions from enteric fermentation, CH4 and N2O from manure management, N2O direct emissions from soil and N2O emissions associated with manure production, as well as emissions from the use of manure as fuel, and sewage-related emissions reported in the Waste sector.

[2] Y_m refers to the fraction of gross energy in feed converted to methane and should be given in per cent in this table.

[3] The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into Table

[4] Including data on dairy heifers, if available

Documentation box:
• Parties should provide detailed explanations on the Agriculture sector in Chapter 6: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
• Indicate in this documentation box whether the activity data used are one-year estimates or a three-year averages.
• Provide a reference to the relevant section in the NIR, in particular with regard to:
(a) disaggregation of livestock population (e.g. according to the classification recommended in the IPCC good practice guidance), including information on whether these data are one-year estimates or t
(b) parameters relevant to the application of IPCC good practice guidance.

NIR to include the info from the additional information bo

TABLE 3(I)~~A.2(a)~~ B(a) SECTORAL BACKGROUND DATA FOR AGRICULTURE
CH_4 Emissions from Manure Management
(Sheet 1 of 2)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION							IMPLIED EMISSION FACTORS [4]	EMISSIONS
	Population size	Allocation by climate region [1]			Typical animal mass (average)	VS[2] daily excretion (average)	CH_4 producing potential (Bo)[2] (average)	CH_4	CH_4
		Cool	Temperate	Warm					
	(1000s)	(%)			(kg)	(kg dm/head/day)	(m^3 CH_4/kg VS)	(kg CH_4/head/yr)	(Gg)
1. Cattle									
Option A:									
Dairy Cattle [3]									
Non-Dairy Cattle									
Option B:									
Mature Dairy Cattle									
Mature Non-Dairy Cattle									
Young Cattle									
2. Sheep									
3. Swine									
4. Poultry									
Drop down list									
Other									
Buffalo									
Goats									
Camels and Llamas									
Horses									
Mules and Asses									
Deer									
Reindeer									
Rabbit									
Fur-bearing animals									
Ostrich									
Other									

Additional information (for Tier 2)[a]

Animal category	Indicator	Climate region	Animal waste management system						
			Anaerobic lagoon	Liquid system	Daily spread	Solid storage	Dry lot	Pasture range paddock	Other
Dairy Cattle	Allocation (%)	Cool							
		Temperate							
		Warm							
	MCF[b]	Cool							
		Temperate							
		Warm							
Non-Dairy Cattle	Allocation (%)	Cool							
		Temperate							
		Warm							
	MCF[b]	Cool							
		Temperate							
		Warm							
Swine	Allocation (%)	Cool							
		Temperate							
		Warm							
	MCF[b]	Cool							
		Temperate							
		Warm							
Other livestock *(please specify)*	Allocation (%)	Cool							
		Temperate							
		Warm							
	MCF[b]	Cool							
		Temperate							
		Warm							

[a] The information required in this table may not be directly applicable to country-specific

[b] MCF = Methane Conversion Factor (IPCC Guidelines, (Volume 3. Reference Manual, p. 4.9)). If another climate region categorization is used, replace the entries in the cells with the climate regions for which the MCFs are specified.

[1] Climate regions are defined in terms of annual average temperature as follows: Cool = less than 15°C; Temperate = 15 - 25°C inclusive; and Warm = greater than 25°C (see table 4.2 of the IPCC Guidelines (Volume 3, Reference Manual, p. 4.8)).

[2] VS = Volatile Solids; Bo = maximum methane producing capacity for manure IPCC Guidelines (Volume 3, Reference Manual, p.4.23 and p.4.15); dm = dry matter. Provide average values for VS and Bo where original calculations were made at a more disaggregated level of these livestock categories.

[3] Including data on dairy heifers, if available

[4] The implied emission factors will not be calculated until the corresponding emission estimates are entered directly into table 4

Documentation box:
• Parties should provide detailed explanations on the Agriculture sector in Chapter 6: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and further details are needed to understand the content of table.
• Indicate in this documentation box whether the activity data used are one-year estimates or three-year averages.
• Provide a reference to the relevant section in the NIR, in particular with regard to:
(a) disaggregation of livestock population (e.g. according to the classification recommended in the IPCC good practice guidance), including information on whether these data are one-year estimates or three-year averages.
(b) parameters relevant to the application of IPCC good practice guidance;
(c) information on how the MCFs are derived, if relevant data could not be provided in the additional information box.

TABLE 3(I)~~A.2(b)~~ B(b) SECTORAL BACKGROUND DATA FOR AGRICULTURE Year
N_2O Emissions from Manure Management Submission
(Sheet 1 of 1) Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION													IMPLIED EMISSION FACTORS[1]			EMISSIONS		
	Population size	Nitrogen excretion	Nitrogen excretion per animal waste management system (AWMS) (kg N/yr)										Total N excreted	Total N volatilised	Emission factor per animals			N_2O		
	(1000s)	(kg N/head/yr)	Anaerobic lagoon	Liquid system	Daily spread	Solid storage and dry lot	Pasture range and paddock [2]	Composting	Digesters	Burned for fuel or as waste [3]	Other	...	(kg N/yr)	(kg N/yr)	Direct	Indirect		Direct	Indirect	
																Atmospheric deposition	Nitrogen Leaching and Run-off		Atmospheric deposition	Nitrogen Leaching and Run-off
Cattle																				
Option A:																				
Dairy Cattle																				
Non-Dairy Cattle																				
Option B:																				
Mature Dairy Cattle																				
Mature Non-Dairy Cattle																				
Young Cattle																				
Sheep																				
Swine																				
Poultry																				
Other livestock *(please specify)*																				
mink and polecat, rabbits, fox and raccoon																				
Total N per AWMS																				
Implied EF per AWMS - N2O																				
Direct N2O emissions per AWMS																				

Option 1

[1] The implied emission factor will not be calculated until the emissions are entered directly into table
[2] Direct and indirect N2O emissions associated with the manure deposited on agricultural soils and pasture, range and paddock systems are included under N2O emissions from managed
[3] The emissions associated with the burning of dung are to be reported under fuel combustion, if used as fuel and under waste incineration, if burned without energy recovery.

Documentation box:

• Parties should provide detailed explanations on the Agriculture sector in Chapter 6: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

• Indicate in this documentation box whether the activity data used are one-year estimates or three-year averages.
• Provide a reference to the relevant section in the NIR, in particular with regard to:
(a) disaggregation of livestock population (e.g. according to the classification recommended in the IPCC good practice guidance), including information on whether these data are one-year estimates or three-year averages.
(b) information on other AWMS, if reported.

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION															IMPLIED EMISSION FACTORS [1]			EMISSIONS		
	Population size	Nitrogen excretion rate	Typical animal mass	Nitrogen excretion per animal waste management system (AWMS) (kg N/yr)										N volatilised (4)	N that is lost through leaching and run-off	Emission factor per animals			N_2O		
	(1000s)	(kg N/1000 kg animal mass/day)	(kg/animal)	Anaerobic lagoon	Liquid system	Daily spread	Solid storage and dry lot	Pasture range and paddock [2]	Composting	Digesters	Burned for fuel or as waste [3]	Other	(pit storage, deep bedding, poultry manure with and without litter, aerobic treatment	(kg N/yr)	(kg N/yr)	Direct	Indirect		Direct	Indirect	
																	Atmospheric deposition	Nitrogen Leaching and Run-off		Atmospheric deposition	Nitrogen Leaching and Run-off
Cattle																					
Option A:																					
Dairy Cattle																					
Non-Dairy Cattle																					
Option B:																					
Mature Dairy Cattle																					
Mature Non-Dairy Cattle																					
Young Cattle																					
2. Sheep																					
3. Swine																					
4. Poultry																					
Drop down list																					
Other																					
Buffalo																					
Goats																					
Camels and Llamas																					
Horses																					
Mules and Asses																					
Mink and polecat																					
Rabbit																					
Fox																					
Racoon																					
Other																					
Total N per AWMS																					
Implied EF per AWMS - N2O																					
Direct N2O emissions per AWMS																					

Option 2

[1] The implied emission factor will not be calculated until the emissions are entered directly into table
[2] Direct and indirect N2O emissions associated with the manure deposited on agricultural soils and pasture, range and paddock systems are included under N2O emissions from managed soils (refernce to tab
[3] The emissions associated with the burning of dung are to be reported under fuel combustion, if used as fuel and under waste incineration, if burned without energy recc
(4) Not clear if all MMS are in and which out (e.g. pasture, range and paddock + burned for fuel)

shading

TABLE 3(I)C.7 SECTORAL BACKGROUND DATA FOR AGRICULTURE
Rice Cultivation
(Sheet 1 of 1)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR [1]	EMISSIONS
		Harvested area [2] (10^9 m^2/yr)	Organic amendments added[3] type	Organic amendments added[3] (t/ha)	CH_4 (g/m^2)	CH_4 (Gg)
1. Irrigated						
Continuously Flooded						
Intermittently Flooded	Single Aeration					
	Multiple Aeration					
2. Rainfed						
Flood Prone						
Drought Prone						
3. Deep Water						
Water Depth 50-100 cm						
Water Depth > 100 cm						
4. Other *(please specify)*						
Upland Rice[4]						
Total [4]						

[1] The implied emission factor implicitly takes account of all relevant corrections for continuously flooded fields without organic amendment, the correction for the organic amendments and the effect of different soil characteristics, if considered in the calculation of methane emissions.

[2] Harvested area is the cultivated area multiplied by the number of cropping seasons per year.

[3] Specify dry weight or wet weight for organic amendments in the documentation box.

[4] These rows are included to allow comparison with international statistics. Methane emissions from upland rice are assumed to be zero.

Documentation box:

• Parties should provide detailed explanations on the Agriculture sector in Chapter 6: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

• When disaggregating by more than one region within a country, and/or by growing season, provide additional information on disaggregation and related data in the NIR and provide a reference to the relevant

• Where available, provide activity data and scaling factors by soil type and rice cultivar in the NIR.

TABLE 3(I)C.4-5 SECTORAL BACKGROUND DATA FOR AGRICULTURE
Direct and indirect N2O emissions from Agricultural Soils
(Sheet 1 of 2)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION		IMPLIED EMISSION FACTORS	EMISSIONS
	Description	Value		N_2O
		kg N/yr	kg N_2O-N/kg N [1, 2]	(Gg)
1. Direct N_2O Emissions from Managed Soils				
1. Inorganic N fertilizers(4)	N input from application of inorganic fertilizers to cropland and grassland			
2. Organic N fertilizers(4)	N input from organic N fertilizers to cropland and grassland			
a. Animal manure applied to soils	N input from manure applied to soils			
b. Sewage sludge applied to soils	N input from swage sludge applied to soils			
c. Other organic fertilizers applied to soils	N input from application of other organic fertilizers			
3. Urine and dung deposited by Grazing Animals	N excretion on pasture, range and paddock			
4. Crop residues	N in crop residues returned to soils			
5. Cultivation of organic soils (i.e. Histosols) (2)	Area of cultivated organic soils (ha/yr)			
6. Other				
2. Indirect N_2O Emissions from Managed Soils				
1. Atmospheric Deposition(3)	Volatized N from agricultural inputs of NH3-N			
2. Nitrogen Leaching and Run-off	N from fertilizers and other that is lost through leaching and run-off			

[1] To convert from N_2O-N to N_2O emissions, multiply by 44/28.
[2] Note that for cultivation of Histosols the unit of the IEF is kg N_2O-N/ha. The emissions from cultivation/management of croplands and grasslands are to be included. For definition of organic soils see footnote 4, page 11.6 of volume 4 of 2006 IPCC Guidelines
[3] Only atmospheric deposition of N volatilized from agricultural inputs of N are to be reported here (include NOx associated with burning of savannas and crop residues).
[4] Include application of fertilizers on cropland and grassland. If application to other land categories cannot be separately identified, they should be included here.

Documentation box:
• Parties should provide detailed explanations on the Agriculture sector in Chapter 6: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.
• Provide a reference to the relevant section in the NIR, in particular with regard to:
(a) Background information on CH4 emissions from agricultural soils, if accounted for under the Agriculture sector;
(b) Disaggregated values for FracGRAZ according to animal type, and for FracBURN according to crop types;
(c) Full list of assumptions and fractions used.

TABLE 3(I)~~C.1(a)~~ E SECTORAL BACKGROUND DATA FOR AGRICULTURE

Prescribed Burning of Savannas

(Sheet 1 of 1)

Year

Submission

Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION					IMPLIED EMISSION FACTORS		EMISSIONS	
	Area of savanna burned (k ha/yr)	Average above-ground biomass density (t dm/ha)	Fraction of savanna burned	Biomass burned (Gg dm)	Nitrogen fraction in biomass	CH_4 (kg/t dm)	N_2O (kg/t dm)	CH_4 (Gg)	N_2O (Gg)
Forest land *(specify ecological zone)(1.2)*									
Grassland *(specify ecological zone)(1, 2)*									

(1) If possible, fires on forest land and grassland defined as savanna should be separately identified and reported here. If it is not possible to separate those fires from other forest and grassland fires reported under category 3(II)C.1 ~~4.B.1.~~ Biomass Burning, this should be clearly documented in the documentation box and in the NIR.

(2) Ecological zone stays for…. (pending finalization)

Additional information

	Living Biomass	Dead Biomass
Fraction of above-ground biomass		
Fraction oxidized		
Carbon fraction		

Documentation box:
Parties should provide detailed explanations on the Agriculture sector in Chapter 6: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 3(I)~~C.1(b)~~ F SECTORAL BACKGROUND DATA FOR AGRICULTURE

Field Burning of Agricultural Residues

(Sheet 1 of 1)

Year

Submission

Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA AND OTHER RELATED INFORMATION								IMPLIED EMISSION FACTORS		EMISSIONS	
	Crop production (t)	Residue/ Crop ratio	Dry matter (dm) fraction of residue	Fraction burned in fields	Fraction oxidized	Total biomass burned (Gg dm)	C fraction of residue	N-C ratio in biomass residues	CH_4 (kg/t dm)	N_2O (kg/t dm)	CH_4 (Gg)	N_2O (Gg)
1. Cereals												
Wheat												
Barley												
Maize												
~~Oats~~												
~~Rye~~												
~~Rice~~												
Other (please specify)												
2. Pulses												
~~Dry bean~~												
~~Peas~~												
~~Soybeans~~												
~~Other (please specify)~~												
3 Tubers and Roots												
~~Potatoes~~												
~~Other (please specify)~~												
4 Sugar Cane												
5 Other *(please specify)*												

Documentation box:

Parties should provide detailed explanations on the Agriculture sector in Chapter 6: Agriculture (CRF sector 4) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

new table for liming and urea application if reported under Agriculture

TABLE 3(I)~~C.2 3~~ G SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

CO2 emissions from liming and urea application

(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA Amount applied	IMPLIED EMISSION FACTORS CO_2-C per unit	EMISSIONS CO_2
	Mg/yr	(Mg CO_2-C /Mg)	(Gg)
2. Liming			
Limestone $CaCO_3$			
Dolomite $CaMg(CO_3)_2$			
3. Urea application			

NEW TABLE

TABLE 3(II) SECTORAL REPORT FOR LAND USE, LAND-USE CHANGE AND FORESTRY
(Sheet 1 of 1)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Net CO_2 emissions/removals [1], [2]	CH_4 [2]	N_2O [2]	NO_x	CO	NMVOC
	(Gg)					
B. Land						
1. Forest Land						
1. Forest Land remaining Forest Land						
2. Land converted to Forest Land						
2. Cropland						
1. Cropland remaining Cropland						
2. Land converted to Cropland						
3. Grassland						
1. Grassland remaining Grassland						
2. Land converted to Grassland						
4. Wetlands						
1. Wetlands remaining Wetlands [3]						
2. Land converted to Wetlands						
5. Settlements						
1. Settlements remaining Settlements [3]						
2. Land converted to Settlements						
6. Other Land						
1. Other Land remaining Other Land [4]						
2. Land converted to Other Land						
D. Other *(please specify)* [5]						
1. Harvested Wood Products[6]						
Information item:						
Forest Land converted to other Land-Use Categories						
Grassland converted to other Land-Use Categories						
C. Aggregated sources and non-CO_2 emissions sources on land[8]						
1. Biomass burning						
~~2. Liming~~						
~~3. Urea application~~						
4. Direct N2O emissions from managed soils						
5. Indirect N2O emissions from managed soils						
8. Other						

[1] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+).

[2] For each land-use category and sub-category, this table sums net CO_2 emissions and removals shown in tables 5.A to 5.F, and the CO_2, CH_4 and N_2O emissions showing in tables 5(I) to 5(V).

[3] Parties may decide not to prepare estimates for these categories contained in appendices 3a.3 and 3a.4 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.

[4] This land-use category is to allow the total of identified land area to match the national area.

[5] The total for category 5.G Other includes items specified only under category 5.G in this table as well as sources and sinks specified in category 5.G in tables 5(I) to 5(V).

[6] Parties may decide not to prepare estimates for this category contained in appendix 3a.1 of the IPCC good practice guidance for LULUCF, although they may do so if they wish and report in this row.

[7] These items are listed for information only and will not be added to the totals, because they are already included in subcategories 5.A.2 to 5.F.2.

[8] The emissions listed here are already included in the subcategories under Land. However, the inclusion of the emission here allows viewing of those emissions at national level.

Documentation box:
• Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

• If estimates are reported under 5.G Other, use this documentation box to provide information regarding activities covered under this category and to provide reference to the section in the NIR where background information can be found.

TABLE 3(II) SECTORAL REPORT FOR LAND USE, LAND-USE CHANGE AND FORESTRY Year

LULUCF emissions and removals from advanced Tier III approaches (1) Submission

(Sheet 1 of 1) Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	EMISSIONS/ REMOVALS (5)			Total
		Area	CO_2	CH_4	N_2O	Net CO2 emissions
Land-use categories	Sub-division(2)	(kha)	(Gg)			(Gg CO2 eq)
Total for Land						
A. Forest Land						
1. Forest Land remaining Forest Land						
2. Land converted to Forest Land (10)						
2.1 Cropland converted to Forest Land						
2.2 Grassland converted to Forest Land						
2.3 Wetlands converted to Forest Land						
2.4 Settlements converted to Forest Land						
2.5 Other Land converted to Forest Land						
B. Cropland						
1. Cropland remaining Cropland						
2. Land converted to Cropland (12)						
2.1 Forest Land converted to Cropland						
2.2 Grassland converted to Cropland						
2.3 Wetlands converted to Cropland						
2.4 Settlements converted to Cropland						
2.5 Other Land converted to Cropland						
C. Grassland						
1. Grassland remaining Grassland						
2. Land converted to Grassland (12)						
2.1 Forest Land converted to Grassland						
2.2 Cropland converted to Grassland						
2.3 Wetlands converted to Grassland						
2.4 Settlements converted to Grassland						
2.5 Other Land converted to Grassland						
D. Wetlands						
1. Wetlands remaining Wetlands (7)						
2. Land converted to Wetlands (8)						
2.1 Forest Land converted to Wetlands						
2.2 Cropland converted to Wetlands						
2.3 Grassland converted to Wetlands						
2.4 Settlements converted to Wetlands						
2.5 Other Land converted to Wetlands						
E. Settlements						
1. Settlements remaining Settlements (8)						
2. Land converted to Settlements (9)						
2.1 Forest Land converted to Settlements						
2.2 Cropland converted to Settlements						
2.3 Grassland converted to Settlements						
2.4 Wetlands converted to Settlements						
2.5 Other Land converted to Settlements						
F. Other Land (9)						
G. Other (please specify)						

(1) LULUCF estimates developed with Tier III approaches may be reported in this table if the domestic approaches involve significant enhancement over the default approach.
Data reported in this table represent anthropogenic emissions/removals. By default, all emissions/removals reported in this table will be the same as in the table [3(II)]. Parties may choose to enter alternate values. Totals for the LULUCF sector in the cross cutting summary tables 1.A and 2 will be linked to

(2) Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

(3) Emissions are reported with a possitive sign and removals with a negative sign.

(4) Parties may decide not to prepare estimates for these categories contained in appendices 3a.2, 3a.3 and 3a.4 of the IPCC GPG for LULUCF, although they may do so if they wish.

(5) This land-use category is to allow the total of identified land area to match the national area.

Table 3(II)B. LAND TRANSITION MATRIX

Areas and changes in areas between the previous and the current inventory year [1]

FROM: / TO:	Forest land (managed)	Forest land (unmanaged)	Cropland (managed)	Grassland (managed)	Grassland (unmanaged)	Wetlands (managed)	Wetlands (unmanaged)	Settlements	Other land	**Final area**
TO:	**(kha)**									
Forest land (managed)[2]										
Forest land (unmanaged)										
Cropland (managed)[3]										
Grassland (managed)[4]										
Grassland (unmanaged)										
Wetlands (managed)[5]										
Wetlands (unmanaged)										
Settlements[6]										
Other land[7]										
Initial area										
Net change[8]										

[1] For Parties using reporting approach 1 for representing land areas, only data on the initial and final area per land use should be filled in. Notation key "NA' should be used in such cases for the specific land use transitions, allowing for the formulas in the cells for final and initial areas to be overwritten.

[2] Forest land includes all land with woody vegetation consistent with thresholds used to define forest land in the national GHG inventory. It also includes systems with a vegetation structure that currently fall below, but in situ could potentially reach the threshold values used by a country to define the forest land category.

[3] Cropland includes cropped land, including rice fields, and agro-forestry systems where the vegetation structure falls below the thresholds used for the forest land category.

[4] Grassland includes rangelands and pasture land that is not considered cropland. It also includes systems with woody vegetation and other non-grass vegetation such as herbs and brushes that fall below the threshold values used in the forest land category. The category also includes all grassland from wild lands to recreational areas as well as agricultural systems, consistent with national definitions

[5] Wetlands include areas of peat extraction and land that is covered or saturated by water for all or part of the year (e.g. peatlands) and that does not fall into the forest land, cropland, grassland or settlements categories. It includes reservoirs as a managed sub-division and natural rivers and lakes as unmanaged sub-division.

[6] Settlements include all developed land, including transportation infrastructure and human settlements of any size, unless they are already included under other categories.

[7] Other land includes bare soil, rock, ice and all land areas that do not fall into any of the other five categories.

[8] Net change is the final area minus the initial area for each of the conversion categories shown at the head of the corresponding column. In the final area column the net change equals zero.

TABLE 3(II)B.1 SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY
Forest Land
(Sheet 1 of 1)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA		IMPLIED CARBON-STOCK-CHANGE FACTORS							CHANGES IN CARBON STOCK							
Land-Use Category	Sub-division[1]	Total area[2] (kha)	Area of organic soil[2] (kha)	Carbon stock change in living biomass per area[3] [4]			Net carbon stock change in dead wood per area[4]	Net carbon stock change in litter per area[4]	Net carbon stock change in soils per area[4]		Carbon stock change in living biomass[3] [4]			Net carbon stock change in dead wood[4]	Net carbon stock change in litter[4]	Net carbon stock change in soils[4] [6]		Net CO_2 emissions/ removals[8] [9]
				Gains	Losses	Net change			Mineral soils[5]	Organic soils	Gains	Losses	Net change			Mineral soils	Organic soils[7]	
				(Mg C/ha)							(Gg C)							(Gg)
A. Total Forest Land																		
1. Forest Land remaining Forest Land																		
2. Land converted to Forest Land[10]																		
2.1 Cropland converted to Forest Land																		
2.2 Grassland converted to Forest Land																		
2.3 Wetlands converted to Forest Land																		
2.4 Settlements converted to Forest Land																		
2.5 Other Land converted to Forest Land																		

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Forest Land report the cumulative area remaining in the category in the reporting year.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] Implied carbon-stock-change factors for mineral soils are calculated by dividing the net C stock change estimate for mineral soil by the difference between the area and the area of organic soil.

[6] When Parties are estimating fluxes for organic soils but cannot separate these fluxes from mineral soils, these fluxes should be reported under mineral soils.

[7] The value reported for organic soils is estimated as a flux. For consistency with other entries in this column, these fluxes should be expressed in the unit required in this column, i.e. in Gg C.

[8] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO2 removals to be negative (-) and for net CO2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[9] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[10] A Party may report aggregate estimates for all conversions of land to forest land when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for grassland conversion should be provided in table 5 as an information item.

Documentation box:
Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 3(II)B.2 SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY
Cropland
(Sheet 1 of 1)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA		IMPLIED CARBON-STOCK-CHANGE FACTORS						CHANGES IN CARBON STOCK						
Land-Use Category	Sub-division [1]	Total area [2] (kha)	Area of organic soil [2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area [4]	Net carbon stock change in soils per area [4]		Carbon stock change in living biomass [3], [4], [6]			Net carbon stock change in dead organic matter [4] [7]	Net carbon stock change in soils [4] [8]		Net CO_2 emissions/ removals [10] [11]
				Gains	Losses	Net change		Mineral soils [5]	Organic soils	Gains	Losses	Net change		Mineral soils	Organic soils [9]	
				(Mg C/ha)						(Gg C)						(Gg)
B. Total Cropland																
1. Cropland remaining Cropland																
2. Land converted to Cropland [12]																
2.1 Forest Land converted to Cropland																
2.2 Grassland converted to Cropland																
2.3 Wetlands converted to Cropland																
2.4 Settlements converted to Cropland																
2.5 Other Land converted to Cropland																

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.
[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Cropland report the cumulative area remaining in the category in the reporting year.
[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.
[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).
[5] Implied carbon-stock-change factors for mineral soils are calculated by dividing the net C stock change estimate for mineral soil by the difference between the area and the area of organic soil.
[6] For category 5.B.1 Cropland remaining Cropland this column only includes changes in perennial woody biomass.
[7] No reporting on dead organic matter pools is required for category 5.B.1. Cropland remaining Cropland.
[8] When Parties are estimating fluxes for organic soils but cannot separate these fluxes from mineral soils, these fluxes should be reported under mineral soils.
[9] The value reported for organic soils is estimated as a flux. For consistency with other entries in this column, these fluxes should be expressed in the unit required in this column, i.e. in Gg C.
[10] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.
[11] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.
[12] A Party may report aggregate estimates for all land conversions to cropland, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land and grassland conversion should be provided in table 5 as an information item.

Documentation box:
Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 3(II)B.3 SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY Year

Grassland Submission

(Sheet 1 of 1) Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA		IMPLIED CARBON-STOCK-CHANGE FACTORS						CHANGES IN CARBON STOCK						
Land-Use Category	Sub-division [1]	Total area [2] (kha)	Area of organic soil [2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area [4]	Net carbon stock change in soils per area [4]		Carbon stock change in living biomass [3], [4], [6]			Net carbon stock change in dead organic matter [4] [7]	Net carbon stock change in soils [4] [8]		Net CO_2 emissions/ removals [10] [11]
				Gains	Losses	Net change		Mineral soils [5]	Organic soils	Gains	Losses	Net change		Mineral soils	Organic soils [9]	
				(Mg C/ha)						(Gg C)						(Gg)
C. Total Grassland																
1. Grassland remaining Grassland																
2. Land converted to Grassland [12]																
2.1 Forest Land converted to Grassland																
2.2 Cropland converted to Grassland																
2.3 Wetlands converted to Grassland																
2.4 Settlements converted to Grassland																
2.5 Other Land converted to Grassland																

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Grassland report the cumulative area remaining in the category in the reporting year.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] Implied carbon-stock-change factors for mineral soils are calculated by dividing the net C stock change estimate for mineral soil by the difference between the area and the area of organic soil.

[6] For category 5.C.1 Grassland remaining Grassland this column only includes changes in perennial woody biomass.

[7] No reporting on dead organic matter pools is required for category 5.C.1 Grassland remaining Grassland.

[8] When Parties are estimating fluxes for organic soils but cannot separate these fluxes from mineral soils, these fluxes should be reported under mineral soils.

[9] The value reported for organic soils is estimated as a flux. For consistency with other entries in this column, these fluxes should be expressed in the unit required in this column, i.e. in Gg C.

[10] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net C removals to be negative (-) and for net C emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[11] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[12] A Party may report aggregate estimates for all land conversions to grassland, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land conversion should be provided in table 5 as an information item.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 3(II)B.4 SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY Year
Wetlands Submission
(Sheet 1 of 1) Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED CARBON-STOCK-CHANGE FACTORS					CHANGES IN CARBON STOCK					
Land-Use Category	Sub-division [1]	Area[2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area[4]	Net carbon stock change in soils per area [4]	Carbon stock change in living biomass[3] [4]			Net carbon stock change in dead organic matter[4]	Net carbon stock change in soils [4]	Net CO_2 emissions/ removals [5] [6]
			Gains	Losses	Net change			Gains	Losses	Net change			
			(Mg C/ha)					(Gg C)					(Gg)
D. Total Wetlands													
1. Wetlands remaining Wetlands[7]													
2. Land converted to Wetlands[8]													
2.1 Forest Land converted to Wetlands													
2.2 Cropland converted to Wetlands													
2.3 Grassland converted to Wetlands													
2.4 Settlements converted to Wetlands													
2.5 Other Land converted to Wetlands													

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.
[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Wetlands report the cumulative area remaining in the category in the reporting year.
[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.
[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).
[5] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.
[6] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.
[7] Parties may decide not to prepare estimates for this category contained in appendix 3a.3 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.
[8] A Party may report aggregate estimates for all land conversions to wetlands, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land and grassland conversion should be provided in table 5 as an information item.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 3(II)B.4 SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY
Wetlands
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION			EMISSIONS [5]		
Land-Use Category	Sub-division [1]	Area[2] (ha)	CO_2	CH_4	N_2O	CO_2 [3]	CH_4 [4]	N_2O [5]
			(kg/ha)			(Gg)		
D. Total Wetlands								
1. Wetlands remaining Wetlands[7]								
1.1 Peatland remaining Peatlands								
1.2 Flooded Land remaining Flooded Land								
2. Land converted to Wetlands[8]								
2.1 Land converted to Peat Extraction								
2.1 Forest Land converted to Peatlands								
2.2 Cropland converted to Peatlands								
2.3 Grassland converted to Peatlands								
2.4 Settlements converted to Peatlands								
2.5 Other Land converted to Peatlands								
2.2 Land converted to Flooded Land								
2.1 Forest Land converted to Flooded								
2.2 Cropland converted to Flooded Land								
2.3 Grassland converted to Flooded Land								
2.4 Settlements converted to Flooded								
2.5 Other Land converted to Flooded								
2.3 Land converted to Other Wetlands								
2.1 Forest Land converted to Other								
2.2 Cropland converted to Other								
2.3 Grassland converted to Other								
2.4 Settlements converted to Other								
2.5 Other Land converted to Other								

NEW TABLE

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.
[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Wetlands report the cumulative area remaining in the category in the reporting year.
[3] There is no default methodology for estimating CO_2 emissions from Flooded land remaining Flooded land.
[4] There is no default methodology for estimating CH_4 emissions and information for the methods is provided in appendix 3, volume 4 of the 2006 IPCC Guidelines
[5] The N2O emissions from Flooded Land are included in the estimates of indirect $_2$O from agricultural or other run-off, and waste water.

TABLE 3(II)B.5 SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY
Settlements
(Sheet 1 of 1)

Year
Submission
Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED CARBON-STOCK-CHANGE FACTORS					CHANGES IN CARBON STOCK					
Land-Use Category	Sub-division [1]	Total area[2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area[4]	Net carbon stock change in soils per area [4]	Carbon stock change in living biomass [3], [4], [5]			Net carbon stock change in dead organic matter[4]	Net carbon stock change in soils [4]	Net CO_2 emissions/ removals [6] [7]
			Gains	Losses	Net change			Gains	Losses	Net change			
			(Mg C/ha)					(Gg C)					(Gg)
E. Total Settlements													
1. Settlements remaining Settlements [8]													
2. Land converted to Settlements [9]													
2.1 Forest Land converted to Settlements													
2.2 Cropland converted to Settlements													
2.3 Grassland converted to Settlements													
2.4 Wetlands converted to Settlements													
2.5 Other Land converted to Settlements													

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Settlements report the cumulative area remaining in the category in the reporting year. In this category the cumulative area is annual.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] For category 5.E.1 Settlements remaining Settlements this column only includes changes in perennial woody biomass.

[6] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbon stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[7] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[8] Parties may decide not to prepare estimates for this category contained in appendix 3a.4 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.

[9] A Party may report aggregate estimates for all land conversions to settlements, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land and grassland conversion should be provided in table 5 as an information item.

Documentation box:
Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 3(II)B.6 SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY Year

Other land Submission

(Sheet 1 of 1) Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED CARBON-STOCK-CHANGE FACTORS					CHANGES IN CARBON STOCK					Net CO_2 emissions / removals [5] [6]
Land-Use Category	Sub-division [1]	Total area [2] (kha)	Carbon stock change in living biomass per area [3] [4]			Net carbon stock change in dead organic matter per area [4]	Net carbon stock change in soils per area [4]	Carbon stock change in living biomass [3] [4]			Net carbon stock change in dead organic matter [4]	Net carbon stock change in soils [4]	
			Gains	Losses	Net change			Gains	Losses	Net change			
			(Mg C/ha)					(Gg C)					(Gg)
F. Total Other Land													
1. Other Land remaining Other Land [7]													
2. Land converted to Other Land [8]													
2.1 Forest Land converted to Other Land													
2.2 Cropland converted to Other Land													
2.3 Grassland converted to Other Land													
2.4 Wetlands converted to Other Land													
2.5 Settlements converted to Other Land													

[1] Land categories may be further divided according to climate zone, management system, soil type, vegetation type, tree species, ecological zone or national land classification.

[2] The total area of the subcategories, in accordance with the sub-division used, should be entered here. For lands converted to Other Land report the cumulative area remaining in the category in the reporting year.

[3] Carbon stock gains and losses should be listed separately except in cases where, due to the methods used, it is technically impossible to separate information on gains and losses.

[4] The signs for estimates of gains in carbon stocks are positive (+) and of losses in carbon stocks are negative (-).

[5] According to the Revised 1996 IPCC Guidelines, for the purposes of reporting, the signs for removals are always negative (-) and for emissions positive (+). Net changes in carbo stocks are converted to CO_2 by multiplying C by 44/12 and changing the sign for net CO_2 removals to be negative (-) and for net CO_2 emissions to be positive (+). Note that carbon stock changes in a single pool are not necessarily equal to emissions or removals, because some carbon stock changes result from carbon transfers among pools rather than exchanges with the atmosphere.

[6] Where Parties directly estimate emissions and removals rather than carbon stock changes, they may report emissions/removals directly in this column and use notation keys in the stock change columns.

[7] This land-use category is to allow the total of identified land area to match the national area.It includes bare soil, rock, ice and all land areas that do not fall into any other of the other five land-use categories.

[8] A Party may report aggregate estimates for all land conversions to other land, when data are not available to report them separately. A Party should specify in the documentation box which types of land conversion are included. Separate estimates for forest land and grassland conversion should be provided in table 5 as an information item.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 3(II)C.2-8 SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY
Aggregate sources and non-CO_2 emissions sources on land [N_2O emissions from managed soils]
(Sheet 1 of 1)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Sub-division(1)	ACTIVITY DATA			IMPLIED EMISSION FACTORS		EMISSIONS (3)	
					~~CO_2-C per unit~~ (2)	N_2O-N emissions per unit	~~CO_2~~	N_2O
		Description	Unit	Value	~~(Mg CO_2-C /Mg)~~	(kg N_2O-N/kg N)(3)	~~(Gg)~~	(Gg)
C. Aggregate sources and non-CO_2 emissions sources on land								
~~2. Liming~~								
		~~Limestone $CaCO_3$~~	~~Mg/yr~~					
		~~Dolomite $CaMg(CO_3)_2$~~	~~Mg/yr~~					
~~3. Urea application~~		~~Urea application~~	~~Mg/yr~~					
4. Direct N_2O Emissions from managed soils(3)								
Inorganic N fertilizers		N input from application of organic fertilizers (applied to all lands excluding applications to cropland and grassland)	kg N/yr					
Organic N fertilizers		N input from organic N fertilizers to (applied to all lands excluding applications to cropland and grassland)	kg N/yr					
N mineralization/immobilization associated with loss/gain of soil organic matter resulting from change of land use or management of mineral soils(2)		Area	ha/yr					
Drainage/management of organic soils (i.e., Histosols)(3)		Area	ha/yr					
5. Indirect N_2O Emissions from managed soils								
Atmospheric deposition		N volatilized from managed soils from inputs of N (synthetic N fertilizers; organic N applied as fertilizer; and N mineralization/immobilization associated with loss/gain of soil organic matter resulting from change of land use or management of mineral soils)	kg N/yr					
Nitrogen Leaching and Run-off		N leaching/runoff from managed soils (i.e. from synthetic N fertilizers; organic N applied as fertilizer; and N mineralization/immobilization associated with loss/gain of soil organic matter resulting from change of land use or management of mineral soils)	kg N/yr					
8. Other (please specify)								

NEW TABLE

(1) The table is developed to accommodate the reporting at national level. If the Party selects to report 3.C categories at the level of land categories, the relevant land categories should be specified. The table allows flexibility for each individual activity.

(2) The category (soil disturbance) also includes changes to cropland and grassland

(3) The category includes emissions associated with loss/gain in soil organic matter resulting from land use change in all land categories. Grasslands and croplands are excluded for other sources of N input.

Documentation box:

TABLE 5 (I) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AN Year

Direct N_2O emissions from N fertilization[1] of Forest Land and Other Submission

(Sheet 1 of 1) Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS [4]
Land-Use Category [2]	Total amount of fertilizer applied (Gg N/yr)	N_2O-N emissions per unit of fertilizer (kg N_2O-N/kg N)[3]	N_2O (Gg)
Total for all Land Use Categories			
A. Forest Land [5] [6]			
1. Forest Land remaining Forest Land			
2. Land converted to Forest Land			
G. Other ***(please specify)***			

Merged in table 3(II)C

[1] Direct N_2O emissions from fertilization are estimated using equations 3.2.17 and 3.2.18 of the IPCC good practice guidance for LULUCF based on the amounts of fertilizers applied to forest land.

[2] N_2O emissions from N fertilization of cropland and grassland are reported in the Agriculture sector; therefore only Forest Land is included in this table.

[3] In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

[4] Emissions are reported with a positive sign.

[5] If a Party is not able to separate the fertilizer applied to forest land from that applied to agriculture, it may report all N_2O emissions from fertilization in the Agriculture sector. This should be explicitly indicated in the documentation box.

[6] A Party may report aggregate estimates for all N fertilization on forest land in the category Forest Land remaining Forest Land when data are not available to report Forest Land remaining Forest Land and Land converted to Forest Land separately.

Documentation box:
Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (II) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY Year

Non-CO_2 emissions from drainage of soils and wetlands[1] Submission

(Sheet 1 of 1) Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA	IMPLIED EMISSION FACTORS		EMISSIONS [5]	
Land-Use Category [2]	Sub-division [3]	Area (kha)	N_2O-N per area [4] (kg N_2O-N/ha)	CH_4 per area (kg CH_4/ha)	N_2O (Gg)	CH_4 (Gg)
Total all Land-Use Categories						
A. Forest Land [6]						
Organic Soil						
Mineral Soil						
D. Wetlands						
Peatland [7]						
Flooded Lands [7]						
G. Other (please specify)						

Merged in tables 3(II)C and 3(II)B.4

[1] Parties may decide not to prepare estimates for these categories contained in appendices 3a.2 and 3a.3 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.

[2] N_2O emissions from drained cropland and grassland soils are covered in the Agriculture tables of the CRF under Cultivation of Histosols.

[3] A Party should report further disaggregations of drained soils corresponding to the methods used. Tier 1 disaggregates soils into "nutrient rich" and "nutrient poor" areas, whereas higher-tier methods can further disaggregate into different peatland types, soil fertility or tree species.

[4] In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

[5] Emissions are reported with a positive sign.

[6] In table 5, these emissions will be added to 5.A.1 Forest Land remaining Forest Land.

[7] In table 5, these emissions will be added to 5.D.2 Land converted to Wetlands.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (III) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Year

N_2O emissions from disturbance associated with land-use conversion to cropland [1]

Submission

(Sheet 1 of 1)

Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS [4]
Land-Use Category [2]	Land area converted	N_2O-N emissions per area converted [3]	N_2O
	(kha)	(kg N_2O-N/ha)	(Gg)
Total all Land-Use Categories [5]			
B. Cropland			
2. Lands converted to Cropland [6]			
Organic Soils			
Mineral Soils			
2.1 Forest Land converted to Cropland			
Organic Soils			
Mineral Soils			
2.2 Grassland converted to Cropland			
Organic Soils			
Mineral Soils			
2.3 Wetlands converted to Cropland [7]			
Organic Soils			
Mineral Soils			
2.5 Other Land converted to Cropland			
Organic Soils			
Mineral Soils			
G. Other *(please specify)*			

Merged in table 3(II).C

[1] Methodologies for N_2O emissions from disturbance associated with land-use conversion are based on equations 3.3.14 and 3.3.15 of the IPCC good practice guidance for LULUCF. N_2O emissions from fertilization in the preceding land use and new land use should not be reported.

[2] According to the IPCC good practice guidance for LULUCF, N_2O emissions from disturbance of soils are only relevant for land conversions to cropland. N_2O emissions from Cropland remaining Cropland are included in the Agriculture sector of the good practice guidance. The good practice guidance provides methodologies only for mineral soils.

[3] In the calculation of the implied emission factor, N_2O emissions are converted to N_2O-N by multiplying by 28/44.

[4] Emissions are reported with a positive sign.

[5] Parties can separate between organic and mineral soils, if they have data available.

[6] If activity data cannot be disaggregated to all initial land uses, Parties may report some initial land uses aggregated under Other Land converted to Cropland (indicate in the documentation box what this category includes).

[7] Parties should avoid double counting with N_2O emissions from drainage and from cultivation of organic soils reported in Agriculture under Cultivation of Histosols.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF Sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 5 (IV) SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CH

Year

CO_2 emissions from agricultural lime and urea application [1]

Submission

(Sheet 1 of 1)

Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA	IMPLIED EMISSION FACTORS	EMISSIONS [3]
Land-Use Category	Total amount applied (Mg/yr)	CO_2-C per unit of lime [2] (Mg CO_2-C /Mg)	CO_2 (Gg)
Total all Land-Use Categories [4], [5], [6]			
B. Cropland [6] [7]			
Limestone $CaCO_3$			
Dolomite $CaMg(CO_3)_2$			
C. Grassland [6] [8]			
Limestone $CaCO_3$			
Dolomite $CaMg(CO_3)_2$			
G. Other *(please specify)* [6] [9]			

[1] CO_2 emissions from agricultural lime application are addressed in equations 3.3.6 and 3.4.11 of the IPCC good practice guidance for LULUCF.

[2] The implied emission factor is expressed in unit of carbon to facilitate comparison with published emission factors.

[3] Emissions are reported with a positive sign.

[4] If Parties are not able to separate liming application for different land-use categories, they should include liming for all land-use categories in the category 5.G Other.

[5] Parties that are able to provide data for lime application to forest land should provide this information under 5.G Other and specify in the documentation box that forest land application is included in this category.

[6] A Party may report aggregate estimates for total lime applications when data are not available for limestone and dolomite.

[7] In table 5, these CO_2 emissions will be added to 5.B.1 Cropland remaining Cropland.

[8] In table 5, these CO_2 emissions will be added to 5.C.1 Grassland remaining Grassland.

[9] If a Party has data broken down to limestone and dolomite at national level, it can report these data under 5.G Other.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 3(II).C.1 SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY

Year

Biomass Burning [1]

Submission

(Sheet 1 of 1)

Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA			IMPLIED EMISSION FACTOR			EMISSIONS [5]		
	Description[3]	Unit	Values	CO_2	CH_4	N_2O	CO_2 [4]	CH_4	N_2O
Land-Use Category[2]		(ha or kg dm)		(Mg/activity data unit)			(Gg)		
Total for Land-Use Categories									
A. Forest Land									
1. Forest land remaining Forest Land									
Controlled Burning									
Wildfires									
2. Land converted to Forest Land									
Controlled Burning									
Wildfires									
B. Cropland									
1. Cropland remaining Cropland[6]									
Controlled Burning									
Wildfires									
2. Land converted to Cropland									
Controlled Burning									
Wildfires									
~~2.1. Forest Land converted to Cropland~~									
~~*Controlled Burning*~~									
~~*Wildfires*~~									
C. Grassland									
1. Grassland remaining grassland[7]									
Controlled Burning									
Wildfires									
2. Land converted to Grassland									
Controlled Burning									
Wildfires									
~~2.1. Forest Land converted to Grassland~~									
~~*Controlled Burning*~~									
~~*Wildfires*~~									
D. Wetlands									
1. Wetlands remaining Wetlands[8]									
Controlled Burning									
Wildfires									
2. Land converted to Wetlands									
Controlled Burning									
Wildfires									
~~2.1. Forest Land converted to Wetlands~~									
~~*Controlled Burning*~~									
~~*Wildfires*~~									
E. Settlements [8]									
F. Other Land [9]									
G. Other (please specify)									

[1] Methodological guidance on burning can be found in sections 3.2.1.4 and 3.4.1.3 of the IPCC good practice guidance for LULUCF.

[2] Parties should report both controlled/prescribed burning and wildfires emissions, where appropriate, in a separate manner.

[3] For each category activity data should be selected between area burned or biomass burned. Units for area will be ha and for biomass burned kg dm. The implied emission factor will refer to the selected activity data with an automatic change in the units.

[4] If CO_2 emissions from biomass burning are not already included in tables 5.A - 5.F, they should be reported here. This should be clearly documented in the documentation box and in the NIR. Double counting should be avoided. Parties that include all carbon stock changes in the carbon stock tables (5.A, 5.B, 5.C, 5.D, 5.E and 5.F), should report IE (included elsewhere) in this column.

[5] Emissions are reported with a positive sign.

[6] In-situ above-ground woody biomass burning is reported here. Agricultural residue burning is reported in the Agriculture sector.

[7] Includes only emissions from controlled biomass burning on grasslands outside the tropic~~(prescribed savanna burning is reported under the Agriculture sector)~~(forest land and grassland defined as savanna should be reported under the Agriculture sector).

[8] Parties may decide not to prepare estimates for these categories contained in appendices 3a.2, 3a.3 and 3a.4 of the IPCC good practice guidance for LULUCF, although they may do so if they wish.

[9] This land-use category is to allow the total of identified land area to match the national area.

Documentation box:

Parties should provide detailed explanations on the Land Use, Land-Use Change and Forestry sector in Chapter 7: Land Use, Land-Use Change and Forestry (CRF sector 5) of the NIR. Use this documentation box to provide references to relevant sections of the NIR if any additional information and/or further details are needed to understand the content of this table.

TABLE 3(II)D SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY Year

Harvested wood products Submission

(Sheet 1 of 1) Country

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	ACTIVITY DATA							EMISSIONS
	Annual Change in stock of HWP in use from consumption	Annual Change in stock of HWP in SWDS from consumption	Annual Change in stock of HWP in use produced from domestic harvest	Annual Change in stock of HWP in SWDS produced from domestic harvest	Annual Imports of wood, and paper products + wood fuel, pulp, recovered paper, roundwood/chips	Annual Exports of wood, and paper products + wood fuel, pulp, recovered paper, roundwood/chips	Annual Domestic Harvest	CO_2
	ΔC HWP IU DC	ΔC HWP SWDS DC	ΔC HWP IU DH	ΔC HWP SWDS DH	Pim	Pex	H	
	(Gg C/yr)							(Gg)
1990								
…..								

NEW TABLE

TABLE 3(II)D SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY Year

Harvested wood products (HWP) [15] Submission

(Sheet 1 of 2) Country

APPROACH A [1]

GREENHOUSE GAS SOURCE AND SINK CATEGORIES[2]	HWP in use (IU) from domestic consumption				Net-emissions/ removals from HWP in use
	Gains[3]	Losses [3]	half-life[4]	Annual change in stock (ΔC HWP IU DC)	
	(Gg C)		(yr)	(Gg C)	(Gg CO_2)
1. Sawnwood					
... [5]					
... [5]					
2. Wood based panels					
... [5]					
... [5]					
3. Paper and paperboard					
... [5]					
... [5]					
TOTAL HWP consumed domestically (ΔC HWPdom IU DC)					

Information item: [14]

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HWP in solid waste disposal sites (SWDS) from domestic consumption[6]				Net CO_2 emissions/ removals from HWP in SWSD	Net CO_2 emissions/ removals from HWP from domestic consumption (IU+SWSD)
	Gains[3]	Losses [3]	half-life[8]	Annual change in stock (ΔC HWP SWSD DC)		
	(Gg C)		(yr)	(Gg C)	(Gg CO_2)	(Gg CO_2)
HWP in SWDS[7]						

APPROACH B [9]

GREENHOUSE GAS SOURCE AND SINK CATEGORIES[2]	HWP in use from domestic harvest				Net-emissions/ removals from HWP in use
	Gains[3]	Losses [3]	half-life[4]	Annual Change in stock (ΔC HWP IU DH)	
	(Gg C)		(yr)	(Gg C)	(Gg CO_2)
1. Sawnwood					
... [5]					
... [5]					
2. Wood based panels					
... [5]					
... [5]					
3. Paper and paperboard					
... [5]					
... [5]					
TOTAL HWP from domestic harvest (ΔC HWP IU DH)					
HWP produced and consumed domestically (ΔC HWPdom IU DH)[10]					
1. Sawnwood					
... [5]					
... [5]					
2. Wood based panels					
... [5]					
... [5]					
3. Paper and paperboard					
... [5]					
... [5]					
Total					
HWP produced and exported (ΔC HWPexp IU DH)[10]					
1. Sawnwood					
... [5]					
... [5]					
2. Wood based panels					
... [5]					
... [5]					
3. Paper and paperboard					
... [5]					
... [5]					
Total					

Information item: [14]

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HWP in solid waste disposal sites (SWDS) produced from domestic harvest[6]				Net CO_2 emissions/ removals from HWP in SWSD	Net CO_2 emissions/ removals from HWP from domestic harvest (IU + SWDS)
	Gains[3]	Losses [3]	half-life[8]	Annual change in stock (ΔC HWP SWDS DH)		
	(Gg C)		(yr)	(Gg C)	(Gg CO_2)	(Gg CO_2)
HWP in SWDS[7]						

APPROACH C [11]

GREENHOUSE GAS SOURCE AND SINK CATEGORIES[2]	HWP in use from consumption			
	Gains[3]	Losses [3]	half-life[4]	Annual change in stock (ΔC HWP IU DC)
	(Gg C)		(yr)	(Gg C)
1. Sawnwood				
... [5]				
... [5]				
2. Wood based panels				
... [5]				
... [5]				
3. Paper and paperboard				
... [5]				
... [5]				
TOTAL				

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	Additional variables			Net CO2 emissions/ removals from HWP in use[12]
	Annual Domestic Harvest (H)	Annual Imports of wood, and paper products + wood fuel, pulp, recovered paper, roundwood/chips (Pim)	Annual Exports of wood, and paper products + wood fuel, pulp, recovered paper, roundwood/chips (Pex)	
	(Gg C)	(Gg C)	(Gg C)	(Gg CO_2)

Information item: [14]

GREENHOUSE GAS SOURCE AND SINK CATEGORIES	HWP in solid waste disposal sites (SWDS) from domestic consumption[6]				Net CO_2 emissions/ removals from HWP in SWSD	Net CO_2 emissions/ removals from HWP (IU+SWSD)[12]
	Gains[3]	Losses [3]	half-life[8]	Annual change in stock (ΔC HWP SWSD DC)		
	(Gg C)		(yr)	(Gg C)	(Gg CO_2)	(Gg CO_2)
HWP in SWDS[7]						

[1] Approach to estimate net-emissions from the overall HWP pool from domestic consumption within the reporting country

[2] Includes solid wood products (sawnwood, wood based panels) and paper and paperboard only, as defined in Table 12.5 of IPCC 2006 GL Vol.4

[3] Gains refers to annual carbon inflow to HWP pool, losses refers to annual carbon outflow from HWP pool

[4] Half-lives are needed when applying flow data methodology as suggested in IPCC 2006 GL Vol.4 (Table 12.1).
Following default half-lives may be used for HWP in use: sawnwood 35yrs, wood-based panels 25yrs, paper and paperboard 2 yrs (based on Table 3a.1.3 IPCC GPG 2003)

[5] Subcategories such as land area classification may be used

[6] Data on HWP in SWDS may be provided on a voluntary basis. It excludes the carbon in methane emissions (C**H**) which is reported in the waste sector.

[7] Waste subcategories as suggested in IPCC 2006 GL Vol.5 Ch. 2.3.1 may be used

[8] cf. IPCC 2006 GL Vol.5 Table 3.4

[9] Approach to estimate net-emissions from HWP pool from domestic harvest

[10] A Party may choose to separately report HWP for domestically produced and consumed, and domestically produced and exported HWP

[11] Approach to estimate net-emissions from HWP within the reporting country

[12] See Equations used in IPCC 2006 HWP Spreadsheet model: H - (H - Pim - Pex - ΔC HWP IU DC) * -(44/12)

[13] See Equation used in IPCC 2006 HWP Spreadsheet model: H - (H - Pim - Pex - ΔC HWP IU DC - ΔC HWP SWSD DC) * -(44/12)

[14] Information reported in this table as an information item should be used to check consistency with the estimation in the waste sector

[15] A Party should only provide data for the approach it has chosen to use for reporting on harvested wood products.

Documentation box: …

Note: Information as outlined in the table below should be provided where a Tier 1 or 2 method has being used (cf. IPCC 2006 GL Vol.4). The conversion factors used Where activity data are derived from Tier 3 method, information should be provided on the models used.

TABLE 3(II)D SECTORAL BACKGROUND DATA FOR LAND USE, LAND-USE CHANGE AND FORESTRY
Harvested wood products (HWP) [1]
(Sheet 1 of 2)

HWP activity data [2]

	Sawnwood			Wood-Based Panels			Paper and Paperboard		
	Production	Imports	Exports	Production	Imports	Exports	Production	Imports	Exports
year	m3	m3	m3	m3	m3	m3	metric-t	metric-t	metric-t
1964									
1965									
1966									
1967									
1968									
1969									
1970									
1971									
1972									
1973									
1974									
1975									
1976									
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2004									
2005									
2006									
2007									
2008									
2009									

Factors used to convert from product untis to carbon

Sawnwood	
... [3]	
... [3]	
Wood based panels	
... [3]	
... [3]	
...	
Paper and paperboard	
... [3]	
... [3]	

[1] This table is only included for the latest reported inventory year in the CRF.

[2] Information should be provided on how activity data dating from the year 1900 to the first year of the tabulated time series has been computed (cf. IPCC 2006 GL Vol.4 Equations 12.1 and 12.6).

[3] Subcategories may be used