

TABLE 5.A SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY
Changes in Forest and Other Woody Biomass Stocks
(Sheet 1 of 1)

Greenhouse Gas Source and Sink Categories				Activity Data							Implied Emission Factors		Emissions	
Tropical		Enter appropriate national tree species groups below	Area of forest/biomass stocks		Average annual growth rate				Conversion factor dry matter to carbon [t C/ t dm]	Implied carbon uptake factor	Ca	E		
					Stemwood overbark [m³/ha]	Conversion factor stemwood vol. overbark to dry-weight wood [t dm/m³]	Expansion factor dry-weight wood to total tree biomass [t dm/t dm] ⁽¹⁾	Total tree biomass¹ increment [t dm/ha]						
			[1000 ha]											
Plantations	Acacia spp.	Sum	FAO	National										
	Eucalyptus spp.	Sum												
	Tectona grandis	Sum												
	Pinus spp	Sum												
	Pinus caribaea	Sum												
	Mixed Hardwoods	Sum												
	Mixed Fast-Growing Hardwoods	Sum												
	Mixed Softwoods	Sum												
Other managed forest	Moist	Sum												
	Sesonal	Sum												
	Dry	Sum												
Other (specify)		Sum												
Total annual tropical growth increment [Gg C]														
[Gg CO₂]														

TABLE 5.A 2 SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY
Changes in Forest and Other Woody Biomass Stocks
(Sheet 1 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES				ACTIVITY DATA					IMPLIED EMISSION FACTORS	ESTIMATES	
TEMPERATE AND BOREAL		Enter appropriate national tree species groups below	Area of forest/biomass stocks		Average annual growth rate				Conversion factor dry matter to carbon [t C/ t dm]	Implied carbon uptake factor	Carbon uptake increment
					Stemwood overbark [m³/ha]	Conversion factor stemwood vol. overbark to dry-weight wood [t dm/m³]	Expansion factor dry-weight wood to total tree biomass [t dm/t dm] ⁽¹⁾	Total tree biomass¹ increment [t dm/ha]		[t C/ha]	
			FAO	National							
Temperate plantations		Sum									
Other managed temperate forest	Evergreen	Sum									
	Decidious	Sum									
Other temperate (specify)		Sum									
Total annual temerate growth increment (Gg C)											
Total annual temerate growth increment [Gg CO2]											
Boreal		Sum									
Total annual boreal growth increment (Gg C)											
Total annual boreal growth increment [Gg CO2]											
Non-forest trees		sum									
Total annual non-forest growth increment (Gg C)											
Total annual non-forest growth increment [Gg CO2]											
Total annual tropical growth increment [Gg C]											
Total annual temerate growth increment (Gg C)											
Total annual boreal growth increment (Gg C)											
Total annual non-forest growth increment (Gg C)											
Total annual growth increment (Gg C)											
[Gg CO₂]											

TABLE 5.A 3 SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY
Changes in Forest and Other Woody Biomass Stocks
(Sheet 3 of 3)

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		Amount of biomass removed				IMPLIED EMISSION FACTORS	ESTIMATES
		[m³]	Conversion factor wood vol. to dry-weight wood [t dm/m³]	Expansion factor dry-weight wood to total wood biomass [t dm/t dm] ¹	Total wood biomass removed [kt dm]	Carbon emission factor [t C/t dm]	Carbon release [Gg C]
Country specific refinement to be entered							
Biomass removed in commercial harvest	sum						
Roundwood overbark							
Roundwood underbark							
Stemwood overbark							
Stemwood underbark							
Traditional fuelwood consumed							
Other wood use							
Harvesting residues and natural loss (including fires without LUC)							
Total Biomass Consumption from Stocks [Gg C]							
						[Gg CO ₂]	
Net annual carbon release (+) or uptake (-) [Gg C]							
Net CO ₂ emissions (+) or removals (-) [Gg CO ₂]							

⁽¹⁾ Total tree biomass is including: stem, branches, roots,(to be added)

Additional information	
Managed forest area [% of total forestland area]	
Minimum BHD of trees included in the calculation of increment [cm]	
Uncertainty value for estimates: Carbon uptake increment [SEM]	
Uncertainty value for estimates: Carbon release [SEM]	
Uncertainty value for estimates: net annual carbon release or uptake [SEM]	
Carbon stock in wood products (Stock approach)	
CO ₂ emissions prevented due to delayed decay in wood products (Flow approach)	
CO ₂ emissions prevented due to delayed decay in wood products (Production approach)	

TABLE 5.B SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY

Forest and Grassland Conversion
(Sheet 1 of 1)

Year:

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA AND OTHER RELATED INFORMATION								IMPLIED EMISSION FACTORS						EMISSIONS								
		Annual loss of area and biomass				Post burning regrowth	Decay of above- and belowground biomass ⁽¹⁾				Burning			Decay			Burning			Decay				
		Area converted annually	Annual net loss of biomass ^[2]	Quantity of biomass burned			Average area converted	Average annual net loss above ground	Average annual net loss below ground	Average quantity of biomass left to decay	On site			Off site	above ground CO ₂	below ground CO ₂	On site			Off site	above ground	below ground CO ₂		
				On site	Off site						On site	CO ₂	CH ₄				N ₂ O	CO ₂	CH ₄				N ₂ O	CO ₂
		Vegetation types		(kha)	(kt dm)	(kt dm)	(kt dm)	(kt dm)	(kha)	(t dm/ha)	(t dm/ha)	(kt dm)	(t/ha)						(Gg)					
Tropical	Wet/Very Moist										0.00	0.00	0.00	0.00		0.00								
	Moist, short dry season										0.00	0.00	0.00	0.00		0.00								
	Moist, long dry season										0.00	0.00	0.00	0.00		0.00								
	Dry										0.00	0.00	0.00	0.00		0.00								
	Montane Moist										0.00	0.00	0.00	0.00		0.00								
	Montane Dry										0.00	0.00	0.00	0.00		0.00								
Tropical Savanna/Grasslands											0.00	0.00	0.00	0.00		0.00								
Temperate	Coniferous										0.00	0.00	0.00	0.00		0.00								
	Broadleaf										0.00	0.00	0.00	0.00		0.00								
	Mixed Broadleaf/ Coniferous										0.00	0.00	0.00	0.00		0.00								
Grasslands											0.00	0.00	0.00	0.00		0.00								
Boreal	Mixed Broadleaf/ Coniferous										0.00	0.00	0.00	0.00		0.00								
	Coniferous										0.00	0.00	0.00	0.00		0.00								
	Forest-tundra										0.00	0.00	0.00	0.00		0.00								
Grasslands/Tundra											0.00	0.00	0.00	0.00		0.00								
Other (please specify)											0.00	0.00	0.00	0.00		0.00								
											0.00	0.00	0.00	0.00		0.00								
Total																		0.00	0.00	0.00	0.00			0.00

⁽¹⁾ Activity data are for default 10-year average. Specify the average decay time which is appropriate for the local conditions, if other than 10 years

^[2] If not reported as harvest in Table 5.A

Emissions/Removals	On site	Off site
Immediate carbon release from burning	0.00	0.00
Total On site and Off site (Gg C)	0.00	
Delayed emissions from decay (Gg C)	0.00	
Total annual carbon release (Gg C)	0.00	
Total annual CO ₂ emissions (Gg CO ₂)	0.00	

Additional information

Fractions	On site	Off site
Fraction of biomass burned (average)		
Fraction which oxidizes during burning (average)		
Carbon fraction of aboveground biomass (average)		
Fraction left to decay (average)		
Nitrogen-carbon ratio		

Note: Parties not using the IPCC default should fill in the background tables to the extent possible.
Parties using country specific methods and models should report them in a transparent manner, i.e. used methodology should be described in the National Inventory Report (NIR).
Double accounting with tables 5.A and 5.D has to be avoided.

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TABLE 5.C SECTORAL BACKGROUND DATA FOR LAND-USE CHANGE AND FORESTRY
Abandonment of Managed Lands
 (Sheet 1 of 1)

Year:

GREENHOUSE GAS SOURCE AND SINK CATEGORIES		ACTIVITY DATA AND OTHER RELATED INFORMATION						IMPLIED EMISSION FACTORS		ESTIMATES	
		Total area abandoned and regrowing ⁽¹⁾		Annual rate of aboveground biomass growth		Carbon fraction of aboveground biomass		Rate of aboveground biomass carbon uptake		Annual carbon uptake in aboveground biomass	
		first 20 years (kha)	>20 years (kha)	first 20 years (t dm/ha)	>20 years (t dm/ha)	first 20 years	>20 years	first 20 years (t C/ha/yr)	>20 years (t C/ha/yr)	first 20 years (Gg C/yr)	>20 years (Gg C/yr)
Original natural ecosystems											
Tropical	Wet/Very Moist							0.00	0.00		
	Moist, short dry season							0.00	0.00		
	Moist, long dry season							0.00	0.00		
	Dry							0.00	0.00		
	Montane Moist							0.00	0.00		
	Montane Dry							0.00	0.00		
Tropical Savanna/Grasslands								0.00	0.00		
Temperate	Mixed Broadleaf/Coniferous							0.00	0.00		
	Coniferous							0.00	0.00		
	Broadleaf							0.00	0.00		
Grasslands								0.00	0.00		
Boreal	Mixed Broadleaf/Coniferous							0.00	0.00		
	Coniferous							0.00	0.00		
	Forest-tundra							0.00	0.00		
Grasslands/Tundra								0.00	0.00		
Other (please specify)								0.00	0.00		
								0.00	0.00		
Total annual carbon uptake (Gg C)										0.00	
Total annual CO ₂ removal (Gg CO ₂)										0.00	

⁽¹⁾ If lands are regenerating to grassland, then the default assumption is that no significant changes in above-ground biomass occur.

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 Double accounting with tables 5.A and 5.D has to be avoided.

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TABLE 5.D - SECTORAL BACKGROUND DATA FOR LAND USE CHANGE AND FORESTRY
Soil Carbon Emissions and Removals from Soils
(Sheet 1 of 1)

Year

A	B	C	D	E	F	G	H	I	J	K	L	M
GREENHOUSE GAS SOURCE AND SINK CATEGORIES					ACTIVITY DATA AND OTHER RELATED INFORMATION			IMPLIED EMISSION FACTOR	ASSOCIATED DATA ON EMISSIONS ⁽¹⁾			
Climate	Soil type	Current management system	Previous management system ⁽³⁾	Other activities (eg liming of agricultural soils)	Area with soil carbon changes (net emissions/removals) and/or other GHG emissions	Time to reach new equilibrium	Carbon gain or loss ⁽⁴⁾	Implied average uptake or loss rate	Associated CH ₄ emissions	Associated N ₂ O emissions	Implied CH ₄ emission factor	Implied N ₂ O emission factor
					ha	Years	Gg CO ₂ /yr	Mg CO ₂ /ha/yr	Gg/yr	Gg/yr	Mg/ha/yr	Mg/ha/yr
Specify a climate type used by IPCC ⁽²⁾	Enter appropriate soil type below the main categories	forest/tillage/grassland/semi-natural/upland crops/pasture/others	one of entries in col C.		Enter area and sum for the main categories	Enter 20 yrs as default OR national value assumed for linearised transition OR time for 99% change under exponential curve OR specify 'Continuous' for organic soils undergoing sustained loss or liming	from default assumptions or national model	=1000H/F	from default assumptions or national model	from default assumptions or national model	=1000I/F	=1000K/F
	mineral soil											
	Organic soil											
	Agricultural soil											
				Totals:	=sum(colF)		=sum(colH _{net})	=1000*sum(colI)/sum(colH _{net})				

⁽¹⁾ For greenhouse gases not already reported in Table 4 or 4.D (if available)

⁽²⁾ Eg cold temperate dry, warm temperate dry, tropical moist or other type described in the IPCC 96 Guidelines, see pp5.31 ff of Workbook.

⁽³⁾ For organic soils where sustained loss/increase of soil carbon is occurring enter the same agricultural or forestry use (eg upland crops, pasture/forest) in this column and the previous column.

⁽⁴⁾ Net annual carbon release (+) or uptake (-) [Gg C] ; Net CO₂ emissions (+) or removals (-) [Gg CO₂].

Note: Parties not using the IPCC default should fill in the background tables to the extent possible.

Parties using country specific methods and models should report them in a transparent manner, i.e. used methodology should be described in the National Inventory Report (NIR).

Double accounting with tables 5.B and 5.C has to be avoided.

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